

**DEATH AND DYING PATIENTS: EXPERIENCES AND COPING MECHANISMS OF
UNDERGRADUATE DIAGNOSTIC RADIOGRAPHY STUDENTS DURING WORKPLACE
LEARNING**

by

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Thesis submitted in fulfilment of the requirements for the degree

DOCTOR OF RADIOGRAPHY

in the

FACULTY OF HEALTH AND WELLNESS SCIENCES

DEPARTMENT OF MEDICAL IMAGING AND THERAPEUTIC SCIENCES

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY

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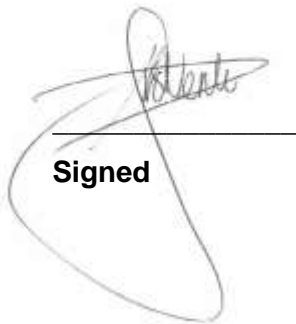
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DECLARATION

I, **Riaan van de Venter**, declare that the contents of this thesis represent my own work, and that the thesis entitled, ***Death and dying patients: experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning***, has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.



Signed

5 February 2021

Date

I OPENED A BOOK

*“I opened a book and in I strode.
Now nobody can find me.
I’ve left my chair, my house, my road,
My town and my world behind me.
I’m wearing the cloak, I’ve slipped on the ring,
I’ve swallowed the magic potion.
I’ve fought with a dragon, dined with a king
And dived in a bottomless ocean.
I opened a book and made some friends.
I shared their tears and laughter
And followed their road with its bumps and bends
To the happily ever after.
I finished my book and out I came.
The cloak can no longer hide me.
My chair and my house are just the same,
But I have a book inside me.”*

Julia Donaldson

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20 November 2020

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MLC Munro

ACKNOWLEDGEMENTS

I would like to acknowledge the input of each of the following individuals and support mechanisms that encouraged, motivated and supported me throughout this doctoral journey.

To each participant that so generously told me their stories about their experiences and coping with death and dying patients during workplace learning, with such bravery, thank you for giving me the privilege to enter your intimate world. As I present your stories to the world, I trust that I have provided a valid representation of your experiences.

Professor Penelope Engel-Hills, your unconditional support and motivation are appreciated. Your continuous challenging of my thinking have assisted me to mature as a scholar in radiography. Thank you for walking alongside me to the end.

Professor Louise Stroud, thank you for the emotional support when times were dark and it seemed that I was drowning. Your constant reminder that I should go where my passion lies were most helpful to keep me going. I am forever grateful for your insights and encouragement to persevere.

The Office of Research Development at Nelson Mandela University is thanked for awarding me a Research Development Fund (RDF) grant towards this doctoral study.

Dr Charmaine Williamson, thank you for the sterling independent coding you have done. Your mentoring, support and friendship are also appreciated.

Mrs Leonie Munro, thank you for the editing you have done as well as your mentoring encouragement to never be afraid of taking up a challenge.

To my colleagues, Hayley, Sydney, Wilma, thank you for always so willingly listening to my thoughts, my moans, and providing valuable insights that clarified my subconscious assumptions and blind spots many a time.

Mrs Razana Williams, thank you for giving me some space at work to complete this study.

To my friends and acquaintances, that supported my journey, thank you. I appreciate you all.

ABSTRACT

Death and dying is an often neglected area in the radiography theoretical and workplace learning curriculum. Yet, it is estimated that approximately 50% of all deaths are encountered in healthcare establishments. Literature highlights that the phenomenon of death and dying is experienced differently by different people. How healthcare professionals experience and cope with death and dying patient encounters in the workplace have been studied for more than a decade. However, no evidence could be found of a similar study done in the South African diagnostic radiography context. This and classroom interactions with my students spurred me to conduct a study in this area with a specific focus on undergraduate diagnostic radiography students.

The aim of this study was to investigate the experiences and coping mechanisms, and the nature of this relationship, of undergraduate diagnostic radiography students pertaining to death and dying patients in the workplace, and to identify support strategies to assist students to cope better with death and dying patients.

To achieve this aim, a qualitative, exploratory-descriptive, contextual research design was used. Sixteen undergraduate diagnostic radiography students (n=16) were purposively sampled at one higher education institution in South Africa. Reflective journaling and individual, face-to-face, semi-structured interviews using an adapted format of the Mmogo-technique™ were utilised as data gathering methods. The data was analysed using an inductive, thematic analysis. Five themes and 13 sub-themes were identified. Strategies were employed to ensure trustworthiness and ethical integrity during the research process.

Theme one relates to the participants' sense-making, meaning construction and elicited affective responses during their experiences with death and dying patient encounters. Participants appraised these experiences to make sense thereof. They also created meaning using the quest hero narrative metaphor. Their appraisal of the experience elicited an array of positive and negative affective responses. Theme two relays participant- and workplace-related factors that contributed to how the participants would appraise their experiences with death and dying patients during workplace learning (WPL). These factors were categorised as being inconsequential, mitigating or aggravating the negative connotations attached to such experiences. While theme three conveys the emotion-focused, problem-focused and appraisal-focused coping mechanisms that the participants used to cope with their experiences with

death and dying patients during workplace learning. Theme four provides a description and discussion of the relationship that was identified between the participants' experiences and coping. Theme five presents recommendations that the participants put forth that they believe will facilitate their effective coping with death and dying patient encounters during workplace learning. A literature control and the theoretical framework underpinning the study (i.e., the transactional model of Lazarus and Folkman) was used to locate the findings of this study in relation to the available and accessible body of knowledge.

The findings, literature and theoretical framework underpinning the study were used to inform the development of support strategies to facilitate the effective coping of undergraduate diagnostic radiography students in relation to death and dying patient experiences they may encounter during workplace learning. The conceptual framework of Dickoff, James and Wiedenbach was used as a theoretical premise to develop the education and empowerment for coping (EEC) support strategies. The strategies comprise two main support strategies with five and four functional strategies, respectively. The first main strategy covers educational strategies that can be developed and implemented to facilitate undergraduate diagnostic radiography students' understanding of death, dying, grief and effective coping as well as patient care and management. The second main strategy encompasses empowerment strategies that facilitate the development of a support culture for undergraduate diagnostic radiography students to facilitate their coping with death and dying patients. To enhance the credibility of these strategies, a review was conducted by a panel of five reviewers using evaluation criteria proposed by Chinn and Kramer.

I reflected on six germane lessons I learnt during my doctoral journey. A summary of the findings in relation to each of the four objectives underpinning the study, the limitations of the study, recommendations for future research and implications for practice are provided in the final chapter of this thesis.

In conclusion, novel findings were presented in this thesis. These findings provide the first insights, from a South African perspective, about undergraduate diagnostic radiography students' experiences and coping with death and dying patients whilst they are in the clinical setting for WPL. Furthermore, the relationship between their experiences and identified coping, can potentially inform the creation of a diagnostic radiography specific theory in this regard. The proposed education and empowerment for coping (EEC) support strategies can form the basis for implementing changes at higher education institutions and clinical training sites to

facilitate effective coping of undergraduate diagnostic radiography students in respect of death and dying patient incidents that they may face during WPL.

KEYWORDS AND PHRASES

- Diagnostic radiography
- South Africa
- Trauma
- Stress
- Coping
- Wellbeing
- Qualitative study
- Visual methodology
- Clinical training

DISSEMINATION, RESEARCH OUTPUTS AND APPOINTMENTS

Below is a list of the conference presentations and publications that emanated from this research to date, as well as international appointments based on my experience as a doctoral candidate and researcher.

van de Venter R, Engel-Hills P & Stroud L. *Effective coping with death and dying patients during workplace learning: Suggestions by undergraduate diagnostic radiography students at one university in South Africa*. [e-Poster]. British Institute of Radiology Annual Congress 2020, 4–6 November 2020, virtual congress, United Kingdom.

van de Venter R, Engel-Hills P & Stroud L. *The cyclical relationship of undergraduate diagnostic radiographers' experiences and coping with death and dying patients during workplace learning*. [Podium]. Nelson Mandela University Faculty of Health Sciences Research Conference, 16 October 2019, Port Elizabeth, Nelson Mandela University North Campus Conference Centre, South Africa.

van de Venter R, Engel-Hills P & Stroud L. *Experiences and coping of undergraduate diagnostic radiographers with death and dying patients during workplace learning: The cyclical phases*. [Poster]. RSSA-SORSA Imaging Congress 2019, 15–18 August 2019, Cape Town, Century City Convention Centre, South Africa.

van de Venter, R., Engel-Hills, P. & Stroud, L. *'I am a hero on a quest': Experiences of undergraduate diagnostic students when faced with death and dying in the work place*. [Podium]. RSSA-SORSA Imaging Congress 2019, 15–18 August 2019, Cape Town, Century City Convention Centre, South Africa.

van de Venter R, Engel-Hills P & Stroud L. 2019. The Mmogo-method: application, experiences, and lessons learnt in researching radiography students' experiences and coping with death and dying. *Journal of Medical Imaging and Radiation Sciences*, 50(3):359–364. <https://doi.org/10.1016/j.jmir.2019.06.045>.

International appointments

A three-year term appointment (2020 to 2023) as a member of an international advisory group (IAG) associated with the UK-based journal *Radiography*.

A two-year term appointment (August 2020 to 2022) as an associate editor for the Canadian-based journal, *Journal of Medical Imaging and Radiation Sciences*.

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired immunodeficiency syndrome
APA	American Psychological Association
ARRT	American Registry of Radiologic Technologists
BA	Bachelor of Arts
BCHD	Buffalo City health district
BTech	Bachelor of technology
CHCs	Community health centres
CHE	Council on Higher Education
CPD	Continuing professional development
CPR	Cardiopulmonary resuscitation
CPUT	Cape Peninsula University of Technology
CT	Computed tomography
CXRs	Chest x-rays
DABDA	Denial, anger, bargaining, depression, acceptance
DHET	Department of Higher Education and Training
DID	Digital imaging department
DPhil	Doctor of Philosophy
DRad	Doctor of Radiography
DUT	Durban University of Technology
EAP	Employee assistance programme
EEC	Education and empowerment for coping
EEG	Electroencephalography
EI	Emotional intelligence
ELOs	Exit-level outcomes
EMG	Electromyography
EMS	Emergency medical personnel
EOLC	End-of-life care
ERP	Event-related cognitive potentials
etc.	Et cetera
FDG-PET	¹⁸ Fluorodeoxyglucose positron emission tomography
fMRI	Functional magnetic resonance imaging
FRC	Faculty Research committee

FREC	Faculty research ethics committee
HCP(s)	Healthcare professional(s)
HEI(s)	Higher education institution(s)
HEQF	Higher Education Qualifications Framework
HEQSF	Higher Education Qualifications Sub-Framework
HIV	Human immunodeficiency virus
HPCSA	Health Professions Council of South Africa
ICU	Intensive care unit
IHME	Institute for Health Metrics and Evaluation
KBH	Karl Bremer Hospital
KEVIII	King Edward VIII
MDTs	Multi-disciplinary teams
MEDUNSA	Medical University of South Africa
MTech	Master of Technology
NCD	Non-communicable disease
NDoH	National Department of Health
NHI	National health insurance
NICU	Neonatal intensive care unit
NMBHD	Nelson Mandela Bay health district
NMMU	Nelson Mandela Metropolitan University
NMU	Nelson Mandela University
NQF	National Qualification Framework
OSCEs	Objective structured clinical evaluation(s)
PBRCT	Professional Board of Radiography and Clinical Technology
PGCert	Postgraduate certificate
PHC	Primary health care
ProfCert	Professional certificate
PTSD	Post-traumatic stress disorder
PVS	Persistent vegetative state
REC-H	Research ethics committee: human
SADAG	South African Depression and Anxiety Group
SAHO	South African History Online
SAMDC	South African Medical and Dental Council
SAQA	South African Qualifications Authority

SCCDC	Student counselling, career and development centre
SDG(s)	Sustainable Developmental Goal(s)
SKAVBs	Skills, knowledge, attitudes, values and behaviours
SoR	The Society of Radiographers
SORSA	Society of Radiographers of South Africa
TB	Tuberculosis
UHC	Universal health care
UK	United Kingdom
UN	United Nations
UNISA	University of South Africa
UOFS	University of the Orange Free State
UP	University of Pretoria
US	United States
WDTL	Work-directed theoretical learning
WHO	World Health Organization
WIL	Work integrated learning
WPL	Workplace learning
ZPD	Zone of proximal development

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CHAPTER 1: OVERVIEW OF THE STUDY

“to tell one’s own story, a person needs others’ stories. We were all, I realized, wounded storytellers” – Arthur W. Frank, The Wounded Storyteller.

1.1 INTRODUCTION

During classroom discussions with undergraduate diagnostic radiography students, it became apparent that they had difficulty coping with situations involving death and dying during their workplace learning (WPL) blocks in the clinical environment. Some expressed that they recognised that they were grieving the death of a patient. They highlighted that although they felt like they had come to terms with the experience, they found themselves pondering about the incident. This made them realise that they had not fully accepted the experience. They admitted that they did not always know how to handle the situation. They expressed feelings of anxiety, self-blame, and even fear of going back into their WPL blocks. Personal observations revealed that these students were sometimes not even aware that they were grieving about a death and dying experience that they had been faced with. It was noticed that these experiences had a negative influence on the academic and professional domains of some students. Students indicated that the most troublesome aspect of experiencing death and dying situations is the acuity, and suddenness, of the incident and the associated emotional trauma, which left them in a state of shock and helplessness.

WPL is integrated into the four-year curriculum of the professional degree offered at the higher education institution (HEI) in South Africa where this study was conducted. Students are required to apply their learning from theory-based teaching, as well as learning of clinical skills and/or competencies, into practice during their WPL. Therefore, a perceived double, parallel transition is expected of them. The one transition is adapting as a university student and they must simultaneously become a skilled healthcare professional (HCP). During these transitions, they are faced with actual patients. Depending on the level of study, students frequently use self-taught or observed coping mechanisms (for example, meditation, isolation, and avoiding certain patient-types and examinations in the workplace). The students mentioned that these coping mechanisms do not always seem to be effective. They also referred to the fact that there is sometimes a lack of support to help them effectively deal with death and dying situations. This could be ascribed to the fact that the current radiography curriculum is more task-orientated. The affective development of a student does not therefore necessarily receive explicit attention. It is not unreasonable to argue that the task-orientated focus of the current

radiography curriculum results in an imbalance in the holistic development of students, which raises the concern of whether or not they are adequately prepared for practice.

This chapter functions as a roadmap of the completed research study. The research problem is identified against the backdrop of substantiating literature to provide the context, rationale and significance of the study. The research questions that originated from the research problem, the aim and objectives, are also provided. Furthermore, my philosophical assumptions and position statement are described to provide further context for the choice of topic and method of inquiry. In addition, the following are briefly outlined: operationalisation of pertinent concepts to the context of this study; the theoretical framework; research design and methods; strategies to ensure trustworthiness and ethical research; the support strategies developed, and an outline of the thesis.

In this and subsequent chapters use is made of single inverted commas for emphasis or for specialised words. Double inverted commas are used for direct quotations of words, phrases and sentences. Verbatim comments of the participants are in italics. Square brackets are used for personal comments or clarification of participants' comments.

1.2 BACKGROUND

Undergraduate diagnostic student radiographers are required to complete compulsory WPL as part of their undergraduate education and training. During WPL students encounter various clinical scenarios and patient types, including death and dying patients.

Individuals engaging in higher education studies are educated and trained to use their newly acquired skill set to earn a living and perform in their career. They should also be more broadly capacitated to contribute to their communities' development, growth and transformation. Furthermore, it is important that they develop expertise in their respective subject fields and are able to mediate the process of achieving positive health-related outcomes of a broader society. Educational opportunities at institutions of higher learning should be conducive to the spectrum of learning so that participants in higher education studies can identify, analyse, evaluate, construct and use knowledge acquired effectively to deal with various situations that they face in the real world of work (Beekman, 2016:4–5).

WPL is a mandatory component of radiography students' education and training. Relatively early in their studies students are exposed to the requisite dynamics of a clinical environment.

During their clinical placements, they experience an array of scenarios and patients. Each scenario involves a healthcare team and patient who come with their individual needs and demands, which therefore makes a clinical environment rather unpredictable and daunting. A clinical environment can be regarded as daunting because students are there to complete clinical hours as well as having to meet programme specific skills, knowledge and competencies and other programme-related expectations (Naylor, Ferris & Burton, 2016:131; Rowe, Frantz & Bozalek, 2012:e216; Delany & Watkin, 2009:411–412; McAllister & McKinnon, 2009:371). Further complicating the fairly unnerving and changeable workplace environment are the intrapersonal factors relating to the students themselves. Therefore, one should also be mindful that personal factors pertaining to the students' own life can have an impact on their workplace performances (often called the spill-over effect) (Rothmann & Bumann, 2014:518). Considering these factors, it is evident that a clinical environment is stressful. Notwithstanding these issues, there are the potential and/or actual intense interpersonal relationships that HCPs form with their patients often resulting in prioritisation of patients' needs above their own (Lemaire & Wallace, 2017:1; McAllister & McKinnon, 2009:371).

In the light of the radiographic context, WPL is no different to WPL practises in other health-related fields. In terms of the nature of professional practices of radiographers and radiography students, interactions are of short duration with patients. One can therefore argue that the intensity and concentration of time that students interact with patients may also be considered as an added stressor to the student radiographer-patient relationship with regard to completing the procedure as well as being mindful of a patient's individual needs and expectations.

Another key factor is that students have to use their newly acquired theoretical knowledge to implement and apply in a clinical setting. However, the application and implementation of theoretical knowledge to a clinical environment is not a linear and clearly delineated process; students have to take into account various factors pertaining to each patient, practice, environment, profession-specific norms, knowledge, technological and practice advances including other role players that students may interact with; all of which are more often than not reasonably varied (Egan & Jaye, 2009:107; Van de Wiel, Van den Bossche, Janssen & Jossberger, 2011:81–83; Billet, 2001a:446–447). This situation is even further complicated by the tacit indoctrination of perfectionism and idealism of education and training programmes. In this regard, in situ personal observations paint an image that there is no room for error, frailty or even ambiguity (Rowe, Frantz & Bozalek, 2012:e216; Scott, Hirschiner, Cox, McCoig, Brandt & Hall, 2009:325; Goldberg, Kuhn, Andrew & Thomas, 2002:287–288). One cannot deny the

need to maintain a high standard of work ethic. However, the uncertainty brought about by the clinical environment that HCPs find themselves in can also not be rejected. Humans and ecologically anchored interventions are not static beings by nature.

In terms of the contexts described above, one can appreciate that when student radiographers are exposed to situations where they encounter death or dying patients, they may face heightened levels of stress. Spanish nursing students found it difficult and stressful to process, cope and provide care to patients in death situations (Edo-Gual, Tomás-Sábado, Bardallo-Porras & Monforte-Royo, 2014:3501). A United Kingdom (UK) study reported that student radiographers, regardless of age and work experience, found it rather difficult to deal and work with very ill patients (Hyde, 2015:244–246).

These considerations place an increased obligation on higher education institutions (HEIs) and accredited WPL sites to take greater responsibility for enhancing optimal wellbeing of students so that they may, by implication and in reality, function appropriately within their clinical setting. Clearly one of the most pivotal experiences, in a clinical environment for any HCP and students, is the experience of death and dying.

Death and dying is a global, human phenomenon underpinned by multiple causal factors. These factors manifest in terms of risk factors, namely, psychosocial, cultural, environmental, physical, economic and political, as well as the disease process itself. The sum total of these factors needs to be considered when care for a patient is planned, suggested and/or implemented (World Health Organization [WHO], 2018:4–12; Mthembu, 2013:2–3). An international comparative study demonstrated that a mean of 54% of deaths across 45 populations are hospital-based deaths (Broad, Gott, Kim, Boyd, Chen & Connolly, 2013:257). Kent, Anderson and Owens (2012:1259) found in their study among New Zealand nurses that 61% of the participants experienced their first death and dying patient encounter during their undergraduate training. Considering the South African context in relation to the global sphere, death and dying becomes relevant since approximately 90% of deaths globally, mainly due to injuries, occur in low and middle-income developing countries, which includes the continent of Africa with the countries that are among those most affected (Norman, Matzopoulos, Groenewald & Brashaw, 2007:649). However, causes of death are numerous and not only due to injuries. Across the world causes of death can be thematised to the following seven overarching classes: reproductive, maternal, new-born and child health; infectious diseases; noncommunicable diseases and mental health; injuries and violence; lack of access to

universal health coverage and inadequate health systems; environmental risks; and health risks and outbreaks (WHO, 2018:4).

South Africa as a country is faced with a quadruple burden of disease: human immunodeficiency virus (HIV) infections and acquired immunodeficiency syndrome (AIDS) and tuberculosis (TB); high maternal, neonatal and child mortality and morbidity; a rise of non-communicable disease; and high levels of violence and trauma (National Department of Health [NDoH], 2017:10). Considering the mortality rate and causes of death in South Africa, a 2016 report from Statistics South Africa that was released in 2018, indicates that 456 612 deaths were recorded. Of these 226 062 (49.5%) occurred either in a hospital, nursing home, emergency or outpatient room or were cases declared dead on arrival; whereas 103 313 (22.6%) occurred at a person's home; 127 237 (27.9%) were unspecified or occurred elsewhere (Maluleke, 2016:7,16). The Eastern Cape is ranked third if one considers the provinces in South Africa with the most deaths recorded (66 067 [14.6%]), with the most recorded in Gauteng (21.3%) (Maluleke, 2016:18). This report also enumerated that most deaths are due to non-communicable diseases (57.4%) followed in order by communicable diseases (31.3%), and external causes (11.2%) of mortality (e.g., accidents, homicide and suicide), respectively (Maluleke, 2016:29). A recent article, in a local Port Elizabeth community newspaper, *Port Elizabeth Express*, indicated that 264 individuals face violent contact crime and approximately 11 people are murdered daily in the Eastern Cape province. This further adds to the possible deaths and dying patients that HCPs may have to take care of in the province (Dorfling, 2019:1–2).

It is also important to place death and dying as a more theoretical set of constructs, emanating from multiple lenses. Death and dying, it is posited, elicits a vast array of experiences, underpinned by a variety of theoretical and actual perspectives. These perspectives are influenced by an individual's culture and religion, as well as personal and contextual views (Hoelterhoff & Chung, 2017:644–645; Cozzolino, Blackie & Meyers, 2014:421; Klass, 2014:1; Curry, 2003:5; Garibay, n.d.:85–86). Florian and Mikulincer (2004:66–68) state that demographic factors can explain individual variations in how death is perceived.

In considering these conceptual dimensions, Florian (1985:133–141) argues that individuals express and attach meaning to death based on the factors postulated above. Scott (2018: para 2) provides an interpretation that when a person is exposed to a stressful situation (e.g., death and dying) and perceives their available resources to be inadequate, in relation to the demands

of the situation, they will experience the event as more taxing. This therefore means that when student radiographers are faced with death and dying situations in the workplace they have to firstly reconcile their own view in respect of a patient regarding death and dying, and secondly, provide the highest standard of care as required of a radiographer to the patient in this situation. This is not an easy task because the multifaceted nature and meaning attached to death and dying by various individuals are very different (Florian & Mikulincer, 2004:69). One can therefore argue that the multifaceted meaning attached to death and dying gives rise to a multitude of both negative and positive experiences related to death and dying in the workplace, as attested to by literature (Lemaire & Wallace, 2017:1; Charlton, 1995, as cited in Atienza, Cruz, Mallabo-Peregrino & Reñosa, 2016:12; Nia, Lehto, Ebadi & Peyrovi, 2016:2–3; Çevik & Kav, 2013:e63; Sinclair, 2011:186; Terry & Carroll, 2008:760; Schneiderman, Ironson & Siegel, 2005:607; Dunn, Otten and Stephens, 2005:97).

It can be argued that to ensure the health of a population, equal care and support should be in place to maintain and attain a healthy HCP workforce. This is because if a healthcare workforce faces challenges with their personal health, they cannot optimally function to meet the expectations of their workplace in conjunction with their patients' individual needs resulting in an overall contribution to ill-health of the population in the end (Mthembu, 2013:1–8). Similarly, a case can be put forward regarding health sciences students, more specifically radiography, that special attention to their wellbeing should be given due to additional stressors related to their programme of study as this can also impact on their overall health and performance.

Being exposed to traumatic and/or emotionally taxing events often requires those encountering these experiences to portray themselves in a particular manner in their workplace. This, and the experience of death and dying itself, can have a variety of consequences. HCPs, and student radiographers, more often than not have to combine professional, physical and emotional skills when dealing with patients (Hutchinson, 1984:88–89). They are expected to enact, suppress or even perform a particular set of emotional displays as required in their workplace in the name of professionalism. This could result in burnout and evoke feelings that they are emotionally artificial (Barry & Yuill, 2016:279). Lemaire and Wallace (2017:1) maintain that the wellbeing of HCPs is part and parcel of professionalism and should enjoy the same attention as technical skills, to foster a working environment that is conducive to promoting optimal working conditions for them and to simultaneously encourage enhancement of patients' experience. Finding interventions to improve the wellbeing of HCPs are rather problematic

because the full impact of these experiences is not often spoken about and varies from person to person (Barry & Yuill, 2016:280).

It is not unreasonable to argue, given the South African and global statistics, that, by implication, student radiographers are progressively, and perhaps in a more concentrated time, exposed to death and dying patients during WPL. The manner in which students will react and cope with these situations is dependent on a multitude of factors. If not noticed and acted on, their inability to effectively cope with death and dying can have devastating repercussions for the student radiographers, the patients they interact with and the department they work in. Furthermore, this will impact on their ability to perform to the required and expected standard and may also have an impact on their development as a professional and their personal wellbeing. Consequently, gaining an understanding of students' experiences and coping with death and dying in the workplace, became relevant and important to inform interventions to assist students to effectively cope with this demand in practice and to cultivate resilience.

1.3 RATIONALE AND SIGNIFICANCE

The envisaged terrain of this study, pertaining to student experiences of death and dying in the workplace and how they cope with this, has been studied globally for more than a decade (cf. Chapter 4). I noted that some studies made explicit calls for research focussing on the issue of death and dying and how students cope with these experiences to inform education and training interventions in order to assist students to become better equipped to handle these situations. The postulated arguments are that expanding curricula in this regard can assist in reducing the impact and emotional fatigue that these stressful encounters bring about, as well as inform to facilitate students' understanding of their attitudes towards death and dying and foster more effective coping strategies (for example, Atienza et al., 2016:12; Nia et al., 2016:7; Edo-Gual et al., 2014:3501; Çevik & Kav, 2010:e58). Rooda, Clements and Jordan (1999:1683–1687) explicitly argue for strategies to address the multidimensionality and complexity of HCPs' views regarding death and dying in the workplace since their views originate from personal, professional and organisational foundations. Most of the literature reviewed on experiences and coping with death and dying in the workplace involved the nursing, emergency medical care, and medical professions (cf. 4.3). There is a dearth of literature involving diagnostic radiographers that focused explicitly on death and dying patients. Only one study was found in the literature. It reported the findings that emanated from a structured workshop involving UK diagnostic radiography students (De Witt, 2015). No South African studies could be found involving diagnostic radiography students with a focus on how they experience and cope with

death and dying patients in the workplace. This study therefore aimed to contribute to the body of knowledge, in lieu of the absence of empirical data, by providing some insights into the manner in which undergraduate diagnostic radiography students in the Eastern Cape cope with experiences related to death and dying patients. According to Edo-Gual et al. (2014:3506) it is important to gain insights of the immediate social and cultural contexts in which students find themselves in order to understand what their pertinent experiences are and how these influence their ability to cope with death and dying.

The above perspectives strengthen my argument that all facets of radiographic practice require equal attention through education and training in order to prepare and equip students to be able to thrive in the workplace to meet its environment demands that can be placed on an individual. Therefore, exploring the combinations of theory, practice and methodology, as elucidated above, is timely, given that such perspectives are absent in the present diagnostic radiography body of knowledge.

1.4 STATEMENT OF THE PROBLEM

Informal student narratives highlighted that undergraduate diagnostic radiography students struggle to cope with death and dying experiences in their workplace, and this impacts more negatively than positively on their professional development. Their experiences may also, by inference, impact indirectly and/or directly on the academic and personal domains of their development. Anecdotal evidence further highlights the somewhat lack of support, in their clinical environment and at the HEI, to help students cope with these clinical environment experiences, which in turn leads to negative attitudes towards their career choice and their inability to thrive academically and professionally. This may well be ascribed to the fact that the current radiography programme's focus is on the technical and task-related aspects of radiography that makes students being able to do the required procedures effectively. The affective development of students does not receive the same attention, which raises the concern of whether they are then holistically prepared for practice and their future career to effectively deal with the unpredictability of a clinical environment.

1.5 RESEARCH QUESTIONS

The following research questions emanated from the problem statement.

- What are the experiences of undergraduate diagnostic radiography students, regarding death and dying patients in the workplace?
- How do undergraduate diagnostic radiography students cope with death and dying patients in the workplace?
- What is the nature of the relationship between undergraduate diagnostic radiography students' experiences and coping mechanisms, related to death and dying patients in the workplace?
- Which support strategies need to be in place to assist undergraduate diagnostic radiography students to cope with their experiences regarding death and dying patients in the workplace?

1.6 AIM

The aim of this study was to investigate the experiences and coping mechanisms, and the nature of this relationship, of undergraduate diagnostic radiography students pertaining to death and dying patients in the workplace; and to identify support strategies to assist students to cope better with death and dying patients in the workplace.

1.7 OBJECTIVES

Based on the problem statement, aim and stated research questions, there were four objectives in the study.

- To explore and describe the experiences of undergraduate diagnostic radiography students regarding death and dying situations in the workplace.
- To explore and describe the coping mechanisms adopted and employed by undergraduate diagnostic radiography students to deal with death and dying situations in the workplace.
- To describe the nature of the relationship between undergraduate diagnostic radiography students' experiences and coping mechanisms pertaining to death and dying patients in the workplace.
- To develop and describe support strategies to facilitate coping with death and dying in the workplace, by undergraduate diagnostic radiography students.

1.8 CONTRIBUTIONS OF THE STUDY

The study provides baseline insights because it is the first of its kind of how undergraduate diagnostic radiography students, at a single HEI in South Africa, experience and cope with death and dying patients during WPL. The relationship between the participants' experiences and coping can potentially inform the generation of a theory specific to diagnostic radiography. The study proposes the education and empowerment for coping (EEC) support strategies that could be used to facilitate undergraduate diagnostic radiography students' preparedness to effectively cope with death and dying patients during their WPL placements, which can inform practices at both higher education institutions and accredited hospitals where students are placed for WPL.

1.9 CONCEPT CLARIFICATION

Concept clarification enables a researcher to define the most prominent theoretical concepts according to a researcher's understanding and assumptions and to operationalise the theoretical concepts in accordance with the context of a study. This includes terms that seem to be outwardly straightforward (Polit & Beck, 2018:44–45; Botma et al., 2010:272). The following concepts are defined and operationalised in the context of this study.

- **Compassion**

The Merriam-Webster Dictionary (2020) defines compassion as a sympathetic cognisance of another person's suffering with an aspiration to mitigate it. In this study, compassion is operationalised as the dynamic that underpinned the support strategies that were developed as part of this study's objectives. Compassion therefore drives the actions of agents to achieve the ultimate terminus of the support strategies for the benefit of the recipients (cf. Chapters 8).

- **Coping**

The manner in which individuals deal with or attempt to overcome situations is referred to as coping (Merriam-Webster Dictionary, 2020). Coping is contextualised as the explicit or hidden behaviours student radiographers use to respond to death and dying situations that they experience in their place of work. Coping in this study is also referred to using terms such as coping mechanisms or coping strategies.

- **Culture**

Culture can be described as a specific set of common customary and shared beliefs, attitudes, values, social norms, practices, goals and conventions, shared by individuals in a particular

place or institution. This definition is adopted as the operational definition in this study (Merriam-Webster Dictionary, 2017).

- Death and dying

The denotative meanings of death in the Merriam-Webster Dictionary (2017) are an instance of dying, the end of life, or an instance of the loss of life. Dying refers to a patient being terminally ill and near death (Merriam-Webster Dictionary, 2018). In the context of this study, the concept is operationalised as death and/or dying patients that a student encountered in their workplace (i.e., in the radiology department, wards or theatre). These encounters may involve a student's direct and/or indirect participation in examining a patient (i.e., a student have examined the patient themselves or assisted a staff member to complete the examination). The cause of death of adult and paediatric patients, respectively, may be acute or chronic, traumatic or non-traumatic.

- Education and training

Education relates to the theoretical and practical learning of specific knowledge, skills, values and attitudes at an institution; training pertains to the process of tutoring and coaching of specific skills to a person in the phase of becoming a professional in a particular field in the workplace (Surbhi, 2015:n.p; Guzman, 2009:92). In this study education refers to the theoretical and practical learning that takes place in a four-year professional degree programme at a South African HEI in diagnostic radiography. Training encompasses the compulsory WPL that forms part of the curriculum of this programme.

- Experience

Experience is defined as events one has personally lived through, encountered, observed or actively participated in (Merriam-Webster Dictionary, 2020). Experience in this study is events a student encountered when patients have died or were dying, and how the student subsequently experienced and coped with these situations.

- Support strategies

According to the Merriam-Webster Dictionary (2017) support is the act of assisting someone by providing encouragement, love, et cetera (etc.). The Merriam-Webster Dictionary (2017) further defines a strategy as a meticulous plan or technique for achieving a certain goal, usually over a long period of time. According to Sudsawad (2007:15) specific strategies should be implemented following research-based recommendations to bring about improvement in practice. For the purposes of this study, support strategies refer to the education and empowerment for coping (EEC) support strategies developed as part of objective four of this

study (cf. 1.7) to assist undergraduate diagnostic radiographers to cope with death and dying situations during workplace learning.

- Undergraduate diagnostic radiography student

Adler and Carlton (2016:7) describe a radiographer as a healthcare professional who is responsible for the production of radiographic images, using x-rays and magnetic and radio waves, of the human body to assist a clinician with a diagnosis. In this study, radiography student refers to a student enrolled and registered at a single HEI in South Africa for a four-year professional degree in diagnostic radiography and registered as a student radiographer with the Health Professions Council of South Africa (HPCSA) under the Professional Board of Radiography and Clinical Technology (PBRCT).

1.10 PARADIGM, PHILOSOPHICAL ASSUMPTIONS AND MY POSITION STATEMENT

Thomas Kuhn states that a paradigm dictates a research plan by prescribing what can be regarded as valid research problems as well as the acceptable solutions to the problems (Mouton, 2014:15). I am of the view that intertwined with the paradigm that one selects to guide one's study design and methods, is one's position in relation to the study you conducted. This is known as one's subjectivity statement. I like to call this my position statement and it has a twofold purpose. Firstly, it assists with researcher reflexivity so that a researcher can consciously reflect and be mindful of how their own value systems and background influences their study. Secondly, as Peshkin (1988:17–18) explains, a researcher's position statement should be reflective and be developed throughout a research process and not when data have been gathered and analysed. Peshkin (1988:17) maintains that this will allow a researcher to be consciously aware of how their values and beliefs influence their study. Peshkin (1988:18) also warns that each new research context will evoke a different subset of 'subjective I's' which then makes one's subjectivity statement context dependent by implication. A subjectivity statement provides other scholars with information to further assess the trustworthiness of the study conducted (Preissle, 2008:845). Cresswell (2014:5) argues that it is important for a researcher to outline their philosophical assumptions and position in relation to their study. Each researcher brings their own views and beliefs to a study and that it will ultimately influence their approach to inquiry in answering the research questions posed. This section therefore describes my paradigmatic perspective and position for my study.

1.10.1 Paradigm and philosophical assumptions

My assumptions are rooted in the social constructivist paradigm (Polit & Beck, 2018:9; Wisker 2009:62–63). This paradigm has ontological, epistemological, methodological and axiological implications underpinning the research design and methods employed, as well as how the findings are presented (Polit & Beck, 2018:9; Ormston, Spencer, Barnard & Snape, 2014:2–8,11–13; Chilisa & Kawulich, 2012:55–56; Wisker, 2009:88).

Social constructivism, as a paradigm, aims to explore and understand the social world of participants involved in a study and the meaning they make of their interactions with their social world, in its natural state. Therefore, a researcher ascribing to this paradigm, constructs meanings and interpretations based on those of the participants (Lincoln, Lynham & Guba, 2018:216). By doing this I was able to give a truthful, holistic and consensual account of the multiple reconstructions of the participants with a focus of enumerating the meaning they attached to the phenomenon being studied (Gray, Grove & Sutherland, 2017:70; Ormston et al., 2014:12; Lincoln, Lynham & Guba, 2018:216; Wisker, 2009:91). Social constructivism also represents a school of thought, which, ultimately guided the research design and methodological choices I made in answering the study's research questions (Chilisa & Kawulich, 2012:51). Another important characteristic in terms of social constructivism is that human experiences are dynamic and change over time and within a context, depending on various factors (Wisker, 2009:91). Table 1.1 below outlines my philosophical assumptions related to four characteristics underpinning the social constructivist worldview, as postulated by Chilisa and Kawulich (2012:54–56).

Table 1.1: My philosophical assumptions

Assumption	Application
Epistemology (the participant-researcher relationship and nature of knowledge)	Knowledge is social constructed and therefore subjective. Hence truth is based on the coalescing of multiple realities based on how human beings shape and create their own experiences. These different human experiences are constructed by a process of structuring and idealisation depending on the historical, social and political processes surrounding us (Polit & Beck, 2018:9; Flick, 2015:25; Cresswell, 2014:8; Green & Thorogood, 2014:17; Chilisa & Kawulich, 2012:56). In research, knowledge is therefore co-created between researcher and participant based on interpretations of the interaction between the two parties (Lincoln, Lynham & Guba, 2018:221).

<p>Ontology (the nature of reality)</p>	<p>Reality is relative and dependent on multiple cognitive constructions. These constructions are reflective of individuals' lived experiences, context and other people that they have interacted with in society. Therefore, as a researcher I had an obligation to engage with my participants in a manner so as to create knowledge that would reflect their intersubjective realities (Gray, 2018:22; Chilisa & Kawulich, 2012:56; Lincoln, Lynham & Guba, 2018:220–221). Therefore, context and time free impressions are not possible.</p>
<p>Methodology (the processes involved in the inquiry to attain knowledge)</p>	<p>Methodologically new knowledge is generated using hermeneutic and dialectic approaches to inquiry (Lincoln, Lynham & Guba, 2018:222). Qualitative approaches to inquiry are more suitable as this design and methodological approach aim to understand people's experiences in a natural setting, in its entirety within the context in which a phenomenon is experienced (Polit & Beck, 2018:9; Chilisa & Kawulich, 2012:56). Data gathering methods of interviewing, visual methodologies and journaling are thus favourable (Lincoln, Lynham & Guba, 2018:222). I also believe that a research process is fluid and the nature of knowledge is subjective. Therefore, a statement detailing my position in relation to the study can contribute to the trustworthiness of the study conducted (Chilisa & Kawulich, 2012:56). By implication, data analysis procedures use an inductive reasoning approach to elucidate a comprehensive description of the phenomenon under study from the participants' perspectives (Polit & Beck, 2018:9). Thick and rich descriptions or participant recruitment and ethics are also imperative since a researcher gathers most of the data in qualitative research inquiries (Chilisa & Kawulich, 2012:56).</p>
<p>Axiology (the role of values in the inquiry)</p>	<p>I believe that values are relative and no one person's values are wrong but merely different. Taking cognisance of the subjective nature of knowledge and socially constructed intersubjective nature of reality, I cannot deny that a study of this nature is value-laden and value-bound. Therefore, it is important to provide a description of the strategies that were employed to ensure trustworthiness of the study as well as detailing my own position with regard to the study (Chilisa & Kawulich, 2012:56; Lincoln, Lynham & Guba, 2018:224).</p>

In conclusion, these implications for the research design and methodology that are brought about by the social constructivist paradigm meant I was obliged to proceed and conduct the

study in a systematic manner because the social world of participants is not orderly. I have an obligation to provide the findings of my study in a clear, unambiguous and truthful manner. This is necessary so that the scientific community and audiences can understand the phenomenon studied so that they can, if they wish to, use the information presented in my findings. I further acknowledge that the presentation of this thesis is a representation of my version of the truth due to my interactions with the participants and the meanings they attached to the phenomenon. I am also mindful that researchers following a similar study, but who may have different value systems, may provide different points of view and analyses of the data gathered. The primary purpose of this inquiry was to seek an understanding of the phenomenon from the participants' perspectives. The findings are not necessarily generalisable but may be transferable to other similar environments.

1.10.2 Researcher position statement

A description of who I am in relation to my study and the participants is presented. I am a person, a diagnostic radiographer, an educationalist and a researcher. The content of the position statement follows the characteristics proposed by Preissle (2008:845), namely, personal characteristics, achieved characteristics, experiences relevant to the phenomenon studied, perspectives germane to the participants, as well as how I believe my characteristics and experiences may demarcate, enrich or restrict the findings of the study conducted.

1.10.2.1 My position as a person

I am a 31-year-old, gender non-conforming, white middle-class individual. I was born and live in Port Elizabeth in the Eastern Cape province of South Africa. As a drag performer and artist, I frequently engage in advocacy activities with the view of being a change agent to facilitate social justice, equality, dignity and mental wellbeing among all individuals in society around us. This is so that we can have a more tolerable and harmonious environment to live in where there is mutual respect and solidarity between all. However, for me to do this I had to develop perseverance, a high emotional intelligence and resilience, to face external demotivating and destructive forces. These characteristics described above also influenced the reason for entering the healthcare profession. I have a strong affinity to help those in a vulnerable state in order to be part of their journey of getting better.

In 2011, I completed a National Diploma in Diagnostic Radiography at the formerly known Nelson Mandela Metropolitan University (now the Nelson Mandela University[NMU]). With a strong desire to continuously stay abreast in my chosen career and, being committed to life-

long learning I commenced a Bachelor of Technology in Diagnostic Radiography degree in 2012 and completed it in 2013 at the Nelson Mandela Metropolitan University (NMMU). I continued progressing in my career by starting a Master of Technology degree in Radiography in 2014, at NMMU. I also became more active in the Society of Radiographers of South Africa (SORSA) by representing the Port Elizabeth Branch at national council level. I always hold myself to the highest standard of work and, because of my type A personality, this assisted me in obtaining all the qualifications mentioned *cum laude*. During the time that I practiced as a diagnostic radiographer, I also developed a strong interest in medical law and bioethics and had a strong desire to gain a deeper understanding of healthcare regulations in South Africa. I completed modules in medical law and forensic medicine through the University of South Africa (UNISA), for non-degree purposes. The year 2015 saw me making a career focus change into academia as well as completing my master's degree. Enhancing my professional profile in 2016 I studied for and obtained a postgraduate diploma in tertiary education at UNISA. My aim was to enhance my skill set and gain greater understanding of what academia would entail for me. I also completed some short courses in medical and research ethics. My life goal has always been to obtain the highest qualification to be conferred upon me in my chosen career. Therefore, to fulfil this goal I registered for a Doctor of Radiography (DRad) degree at the Cape Peninsula University of Technology (CPUT) in May 2017. To achieve these goals to match my personality and life trajectory that I have set out took dedication, compromise, motivation, support, resilience, and some setbacks.

Reflecting on my personal identity has therefore made the topic for this study a rather obvious one. In the sense that dealing with various clinical situations by HCPs requires resilience and also support. The characteristics encompassed in my identity assisted me in analysing the data gathered from the participants' perspectives; I am a holistic viewer of life that has other peoples' interests and lived experiences are at heart. In addition, my interaction with various individuals of all walks of life made it easier for me to conduct the data gathering process to understand the participants' experiences and ways of coping with death and dying in the workplace.

1.10.2.2 My position as diagnostic radiographer

During my time in the clinical environment I worked at all levels of healthcare establishments in our public-sector healthcare system. During my undergraduate training and education, I completed my WPL at an academic hospital (Frere Hospital) in East London in the Eastern Cape province. My community service, during 2012, was completed at Uitenhage Provincial Hospital, a regional hospital just outside of Port Elizabeth. After community service, I continued

to work in the public sector in and around Port Elizabeth at regional and primary healthcare (PHC) level. During my time in PHC I rotated between five different community health centres (CHCs). I gained exposure to all imaging modalities in diagnostic radiography and interacted with HCPs across a multitude of specialities.

Considering death and dying relative to my time in the clinical setting, I distanced myself from these situations in the sense that I did not think much of it. In a way I normalised these scenarios; dark humour was often the order of the day. There were the odd occasions where I would be shocked. When I was a student and these situations occurred I calmly asked those around me what they would like me to do and I did it. Sometimes, due to my theoretical knowledge, I would simply follow protocol as taught. On the other hand, it should be noted that my favourite area to work in was the accident and emergency department. I am of the opinion that it kept me on my feet and engaged with my patients. What I did as student when faced with death and dying continued in my daily practice as a radiographer. However, during my education and training death and dying was not a topic covered nor was there any focus on how one can effectively cope with these situations in the workplace. The main focus of my training was technical skills development.

At present, students at the HEI, where this study was conducted, are more exposed to affective skill development in order to assist them to cope with their workplace setting holistically. However, the focus is still very much on technical skill development and competence.

Being consciously aware of my own experiences assisted me during my data analysis to look at the participants' utterances more closely to provide an account of their voices. Therefore, I have bracketed my own experiences from interfering. I did realise after data analysis that I could relate to more experiences of the students than I initially thought I would be able to.

1.10.2.3 My position as educationalist

I am an associate lecturer, on contract, at a HEI where only diagnostic radiography programmes are offered. Currently, we present a four-year professional bachelor's degree programme at undergraduate level and a full research dissertation master's degree programme. My teaching and learning, as well as research involvement, span the full complement of programmes. I am responsible for supervising bachelors and masters research projects. I also facilitate the following modules that are part of the undergraduate bachelor's programme: professional practice I and II; pathology and imaging analysis I and II; and

advanced pattern recognition which is an elective in fourth year. My research activities are closely intertwined with my teaching and learning activities in order to develop my academic legacy that I want to leave behind in my profession. As a believer of lifelong learning I regularly participate at various workshops and congresses. I also enrol in short courses to continuously develop my skills.

The phenomenon studied in this doctoral thesis emanated from classroom discussions during a professional practice II lecture on death and dying. Listening to my students' experiences led, and almost obliged, me to embark on gaining a deeper understanding of this phenomenon in view of facilitating holistic development of my students so that they can be more equipped to cope and adapt in the various clinical contexts that they may find themselves in.

In addition, I am a strong believer that HCPs cannot provide effective care to their patients or perform optimally at work if their own wellbeing is not in optimal condition. Therefore, I have developed a strong affinity for looking closer at my teaching and learning approaches to ensure students' affective domain of being is also developed in co-existence with skill and knowledge development. My passion for affective issues affecting student training and education motivated me to do an in-depth analysis from the participants' perspective to enable me to meet all the objectives of this study by always keeping the participants' needs in mind. Therefore, the credibility of the study is increased as I continuously bracketed myself to maintain an outsider perspective even though I was actively involved in all stages of the study.

1.10.2.4 My position as researcher

My research interests can be grouped under the umbrella of professional education and professional practice, with a special focus on role extension, wellbeing and affective development, radiation protection, infection control and gender diversity integration. Since my goal is to stay abreast of my profession and develop a memorable academic legacy, I am striving to develop my niche area in the often silent topics diagnostic radiographers face or that face the profession. Furthermore, I regard myself as a controversial topic researcher and tend to embark on phenomena that not many have researched before me or where others fear to tread. This, therefore, has a direct implication for embarking on the topic of death and dying for my doctoral study. I also envisage continuing my research in this area to look at various characteristics underpinning this phenomenon to facilitate resilience among diagnostic radiographers and develop strategies to achieve this. Furthermore, I tend to incorporate creativity into my work which keeps me motivated and focused on the task at hand. Qualitative

research gives me that liberty. I am of the opinion that my affinity to the human element and professional interactions in the workplace context has contributed to my choice of research design and methodology. Being mindful of the preceding description, I see these aspects as facilitators that enabled me to conduct the study to the best of my ability to provide the audiences, that will engage with my work, with a rigorous and truthful account of the phenomenon studied and how it was done to arrive at the findings presented.

Considering the four domains that I have consciously divided myself (i.e., my subjective I's), as a whole being, should be seen as interrelated domains and not mutually exclusive entities. These domains represent my personal and professional identity in relation to the study for my doctoral degree. I believe by being transparent regarding my position in this elaborate manner contributes to the trustworthiness of the conducted study. Underpinning these four domains described are the following values: accountability, responsibility, open-mindedness, adaptiveness, willingness, altruism, teamwork, trust, dignity, respect and equality. In sum, to be holistic HCPs we need to be prepared and supported accordingly. If every HCP is not enabled to face the reality of a clinical setting, then they are in fact disabled to perform optimally. Therefore, this doctoral study is in a sense a call for social responsiveness to educate and train diagnostic radiographers that are equally able to look after their own wellbeing as they are that of the clients they serve and care for.

1.11 THEORETICAL FRAMEWORK

A theory is used as a premise to assist in framing, underpinning and informing one's research and helps to interpret and make meaning of the findings that emerged from the data gathered (LoBiondo-Wood & Haber, 2018:69; Lacey, 2015:22; Wisker, 2009:61). The theoretical framework used for this study was Lazarus and Folkman's transactional model of stress, appraisal and coping, conceptualised in 1984. The theoretical framework, and its application to this study, are discussed in-depth in Chapter 5. The theoretical extensions of my study, in relation to this theoretical framework, are alluded to and explained in Chapter 7 during the literature control when the findings are discussed and again summarised in Chapter 11.

1.12 RESEARCH METHODOLOGY

The research design flows directly from the aim and research questions of the study to be conducted. It provides an outline of the study as well as dictates the methodology utilised to obtain appropriate and rich data and then to analyse and interpret the findings in order to answer the research questions and achieve the aim and objectives of the study. The

methodology includes the systematic steps that a researcher took to conduct the study (Brink, van der Walt & van Rensburg, 2018:81).

A qualitative inquiry, utilising an explorative-descriptive and contextual approach, was the research design to investigate the phenomenon of how undergraduate diagnostic radiography students experience and cope with death and dying in the workplace. To gather data, a purposive sampling strategy was employed to sample 16 students across the four levels of study of the bachelor's degree programme at the research site. Data were gathered using two methods: reflective journaling, and the Mmogo-method™ interviewing technique. Data were analysed using content thematic synthesis. A full exposition of the research design and methodology are provided in Chapter 6.

1.13 THE DEVELOPMENT OF THE EEC SUPPORT STRATEGIES

The EEC support strategies were developed using the conceptual framework based on the work of Dickoff, Wiedenbach and James (1968). The developed strategies were also subjected to a peer review process consisting of five panel members with experience and expertise related to the phenomenon studied and methodology used. The criteria that the panel used to review the strategies were based on the criteria proposed by Chinn and Kramer (2018) and are discussed in Chapter 8. The conceptual framework of Dickoff, James and Wiedenbach is described in detail in Chapter 8. The support strategies developed as per objective four (cf. 1.7) of this study are discussed in Chapter 9, together with the peer review process.

1.14 TRUSTWORTHINESS

The criteria of Guba and Lincoln's model of trustworthiness (Polit & Beck, 2018:295–296) have been used and the strategies to ensure credibility, confirmability, dependability and transferability, respectively, are described in Chapter 6.

1.15 ETHICAL CONSIDERATIONS

Researchers have an obligation to protect participants' human rights and social wellbeing during studies and must ensure that the benefit of a study outweighs the risk (Brink, van der Walt & van Rensburg, 2018:27–28). The strategies employed to ensure that the ethical standards and requirements were met are discussed in Chapter 6.

1.16 OUTLINE OF THESIS CHAPTERS

Figure 1.1 provides a brief indication of the chapter layout of the rest of the thesis to follow from Chapter 2 to Chapter 11. The title of each chapter is included and followed by a synoptic explanation of the chapter content.

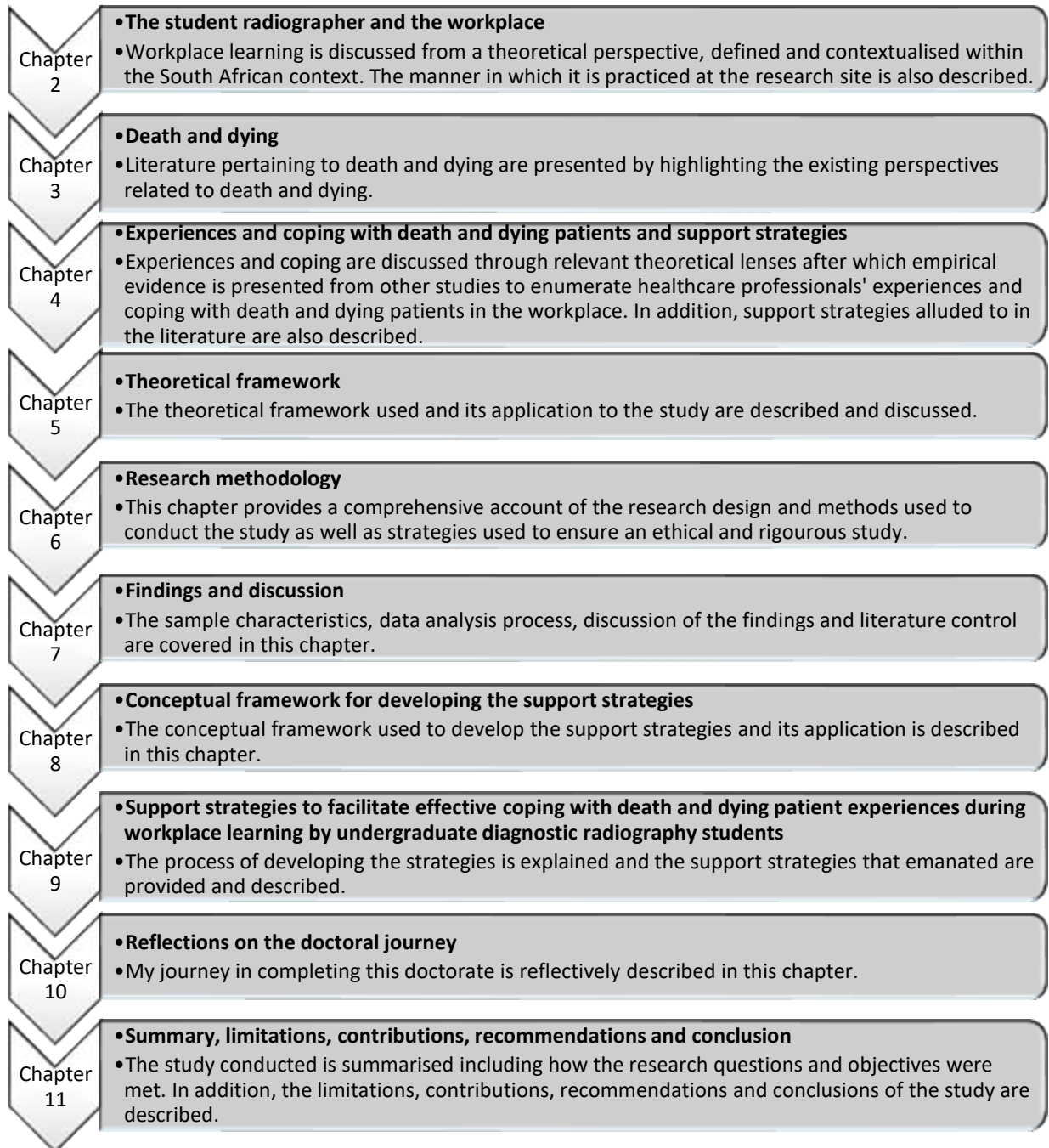


Figure 1.1: Outline of thesis chapters.

1.17 CONCLUSION

This chapter has provided a concise overview of the study conducted against a contextual background to highlight the importance for studying the phenomenon. The research questions, aim, and objectives, that stemmed from the problem statement, are stated. In addition, the contributions of the study have been highlighted. Lastly, an outline of the rest of the thesis to follow was presented. Chapter 2 is the first of three literature review chapters. Each underpinning concept of the phenomenon studied is discussed in Chapters 2 to 4.

CHAPTER 2: THE STUDENT RADIOGRAPHER AND THE WORKPLACE

2.1 INTRODUCTION

This chapter is the first of three literature review chapters. A brief description of the presentation of the reviewed literature sets the scene for the literature review chapters. Thereafter, workplace learning (WPL) and work-integrated learning (WIL) are conceptualised from a theoretical perspective by considering underlying educational theories and the characteristic components of WPL. A more applied exposition of WPL is provided by focussing on the exit-level outcomes, curriculum, purpose and practises at the research site.

2.2 LITERATURE REVIEW PRESENTATION

The three literature review chapters are presented as a general narrative literature review (Onwuegbuzie & Frels, 2016:23-24). Each literature review chapter deals with a single underpinning concept of the phenomenon that was studied. Although these concepts have been separated to facilitate the flow of the argument, one should remain cognisant that these concepts are interrelated and not mutually exclusive from one another. Figure 2.1 demonstrates the relatedness of the three literature review chapters. Onwuegbuzie and Frels (2016:23-24) describe a general narrative literature review as a summation and critique of relevant and recent body of knowledge on a phenomenon studied, without necessarily providing an integration of qualitative and quantitative findings. These reviews tend to provide an overview of what is known at present about the phenomenon studied at various levels; pertinent results, and conceptual/theoretical and/or methodological contributions. Hart (2014:13) and Kumar (2019:58) concur with this view. The guidance for these literature types is usually the research questions, aims and objectives (Onwuegbuzie & Frels, 2016:24). Furthermore, the search strategy, inclusion criteria, and critical appraisal processes, are not ordinarily provided for narrative literature review types (Onwuegbuzie & Frels, 2016:24). Therefore, I opted not to include it in the write up of this thesis. My aim is to provide a theoretical grounding to highlight the significance of the study conducted in a South African diagnostic radiography context. Therefore, I used the structural layout proposed by Hofstee (2006:94–96) to organise the literature review chapters, as far as possible, so as to further aid in the logical flow of my argument.

Each literature review chapters commences with a broad theoretical view of the concept discussed in the respective chapters. This mainly relates to theoretical underpinnings and perspectives. Thereafter, literature is organised: moving from more general related works

through to the most specific works related to the phenomenon studied. More detail is provided to the works that are more related to this study's topic. Similarly, the more general related works are covered in less detail (Hofstee, 2006:94–96). The conclusion of each literature review chapter is a succinct commentary of the available literature, and, by implication, highlights the existing gap and significance of this study (Hofstee, 2006:98).

The literature review commenced as a general search of relevant literature to explore what was available on the phenomenon studied and what the existing gap was in the body of knowledge. These were then documented. Once the data analysis was completed, a focused literature review was done for two reasons. To ensure comprehensiveness of the body of literature that underpins this study; and to ensure that the data analysis remained as inductive as possible for a true exposition of the participants' views on their experiences and coping with death and dying patients during WPL. The content in the literature review chapters is a result of iteration throughout the research journey.

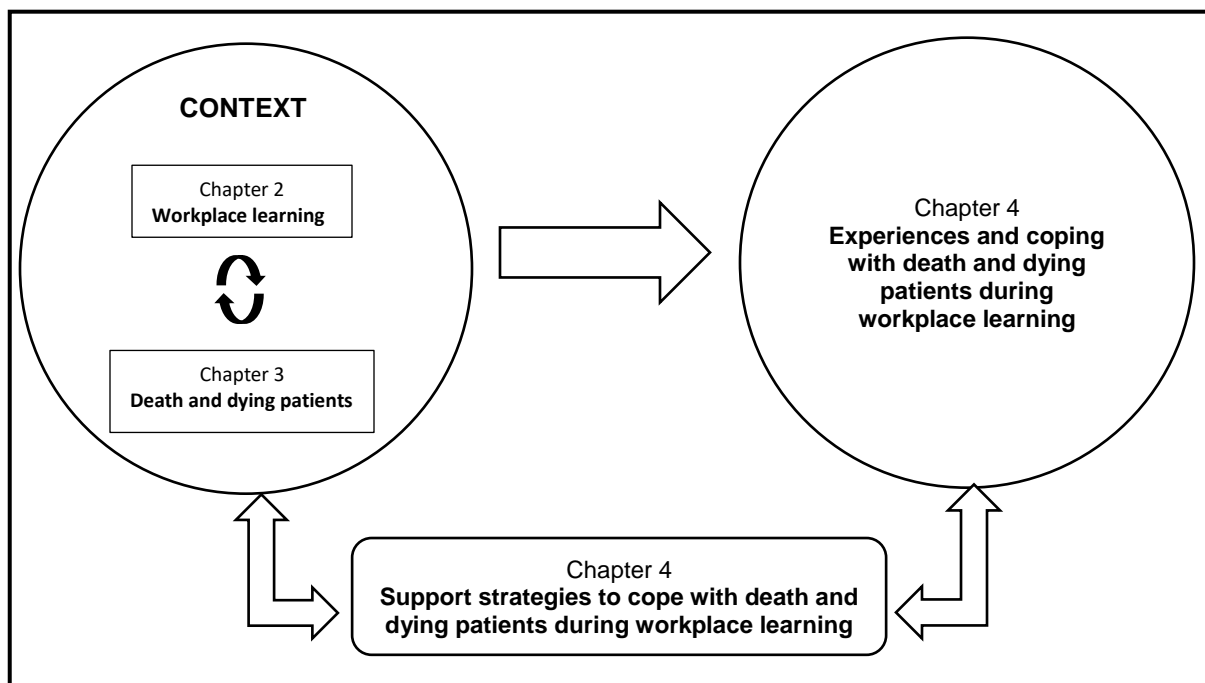


Figure 2.1: Interrelatedness of the three literature review chapters' respective concepts.

2.3 WORK-INTEGRATED LEARNING AND WORKPLACE LEARNING DEFINED

Work-integrated learning (WIL) is a collective term for a range of curricular, didactic and assessment strategies. Its primary focus is facilitation of the process, for students, of integrating formal theoretical knowledge obtained at a higher education institution (HEI), with knowledge gained in the work or professional context (Winberg, Engel-Hills, Garraway & Jacobs, 2011:4).

It can also be seen as an educational method that aligns theoretical and work-based practices for the reciprocated advantage of both students and workplaces in order to enhance student learning (Winberg et al., 2011:4; Engel-Hills, Garraway, Jacobs, Volbrecht & Winberg, 2010:slide 3). Examples of teaching and learning modes that are included under the WIL umbrella are presented in Table 2.1.

Table 2.1: Examples of teaching and learning modes included under the WIL umbrella (Adams, 2012:1; Winberg et al., 2011:4)

<ul style="list-style-type: none">• Action learning• Internships• Cooperative education• Cooperative learning• Experiential learning• Inquiry learning• Inter-professional learning• Practicum/clinical placements• Problem-based learning• Project-based learning• Scenario learning• Service learning• Team-based learning• Virtual or simulated WIL• Work-based theoretical learning• Work experience• Workplace learning
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Of note is the notion that there should be congruence between what students are formally taught at a HEI and what the needs are of practice (Winberg et al., 2011:4). Therefore, WPL is one teaching and learning strategy subsumed under WIL.

2.3.1 Workplace learning

Billet (1994:11) defines WPL as a learning mode that allows students to acquire vocational knowledge and skills during their engagement with real-life scenarios in a workplace setting, under the supervision of more skilled peers or specialists in the field (usually called a clinical educator, clinical facilitator, teacher mentor, supervisor or preceptor. Billet (1996:43; 1994:11) argues that there is a need for deliberate, goal-directed activities that outline the knowledge and skills that students should attain. It can subsequently be appreciated that students must engage in some form of critical reflection to determine which experiences they view as useful and beneficial. Students can thus transfer the knowledge gained from one situation to another (Winberg et al., 2011:19). Furthermore, a HEI and workplace setting (i.e. accredited WPL centres) have a mutual responsibility to ensure that these goals are achieved, to ensure that students are adequately socialised into their chosen profession (Billet, 1996:43–44). The

context in which students find themselves influences their learning and understanding as it models students' thinking and behaviour related to various situations that they face (Billet, 2000:272; Billet, 1996:43). Adams (2012:1) describes WPL as a learning process that takes place in a workplace setting that allows students to implement their professional roles in an authentic professional environment. Adams (2012:1) highlights that WPL fulfils an important role to facilitate the contextualisation of formal learning that happens at the HEI for students to appropriately apply their acquired knowledge in the work setting. This is in keeping with the literature: Billet (2002a:61) and Northern Illinois University (n.d:1) highlighted the social dimensions of WPL that facilitate the attainment of specific knowledge and skills as well as the development of unintentional, contextual-based knowledge, skills, attitudes, values and behaviours. Being mindful of the preceding characteristics of WPL it arguably brings about implications for student development.

2.4 WORKPLACE LEARNING (WPL) AND STUDENT DEVELOPMENT

WPL can both facilitate and inhibit student development relative to achieving the required skills, knowledge, attitudes, values and behaviours (SKAVBs) as prescribed by the learning outcomes. As noted above (cf. 2.3.1) students also frequently develop unintentional SKAVBs due to the workplace milieu they find themselves in. WIL, and WPL by implication, become important to ensure that the graduates' process of professional identity development and workplace readiness are facilitated, to effectively cope with the demands of the working environment (Winberg et al., 2011:6). WPL has additional benefits and limitations that can contribute to the level of student development.

2.4.1 Benefits of workplace learning for student development

Billet (1995:22) opined that students have the opportunity to develop a repertoire of goal-securing procedures in relation to the intended SKAVBs, over time, under the guidance of expert others and peers who ordinarily offer tentative solutions to reach a specific goal of the task at hand. This brings about the notions of modelling, coaching, reflection and support, and active engagement with authentic tasks. Furthermore, WPL assists students to solve complex clinical based problems and help them deal with the uncertainty brought about in the clinical setting (Billet, 1995:22–23).

According to Adams (2012:1) WPL can assist in reducing the attrition rate since students gain an understanding of their chosen career's demands as well as gain some insight into

opportunities of possible career pathways. Students have the opportunity to explore, practice and master their intended SKAVBs in authentic real-life settings, as well as being able to transfer the knowledge gained to other scenarios. Shaw, Crampton, Rees and Monrouxe (2018:102–103) are of the opinion that WPL also benefits students to internalise professionalism relative to the dynamic and culturally-laden clinical environment and results in embodiment of professionalism through social and situation guided construction. Students do not merely act professionally but become professionals with internalised attitudes, values and behaviours associated with healthcare professionals and their respective disciplines.

According to (Winberg et al., 2011:6) there are four domains pertaining to WPL that can be beneficial for students, and can be follows:

- academic in terms of increased motivation, greater performance and thinking across disciplines;
- personal relative to enhanced communication skills, teamwork and leadership;
- career-oriented regarding development of professional identity, employability and competitiveness, professionalism and role clarification; and
- skill-related in relation to gaining vocational knowledge and skill, and competence.

WPL is not without limitations and one should be cognisant about these in order to develop an effective WPL curriculum to meet the intended SKAVBs.

2.4.2 Limitations of workplace learning for student development

According to Billet (1995:24–26) there are several limiting factors that can influence the efficacy of WPL for student development. The first relates to inappropriate knowledge resulting in undesirable and inappropriate SKAVBs. This may be due to the embodied organisational culture and if a student were exposed to these negative practises long enough, they may adopt these too. The organisational culture and embodied values of a clinical context have a significant limiting role on student development (Billet, 1995:24).

Secondly, students' access to appropriate and required clinical experiences and procedures can also limit their development. There could be barriers to their access. Either by those required to mentor and guide students or simply lack of frequency of the experiences and procedures in a particular clinical setting. This may result in students not developing the required SKAVBs that are envisioned. A well-organised learning curriculum is therefore required to outline the guided experiences needed (Billet, 1995:24). A well organised WPL

curriculum also needs expert others (i.e., peers) that are willing to mentor and support students to achieve the goals required. One method to reduce reluctance by staff to assist students is to provide definite role clarification and responsibilities to alleviate the fear of displacement and loss of status among staff (Billet, 1995:24). If there is insufficient know-how to fulfil the required role of advisor, coach, and mentor then a student will not have the necessary support to experiment and achieve the outcome of the goal-directed activities of the WPL curriculum (Billet, 1995:24). Lastly, radiography is subject to advancements on almost a daily basis therefore the depth of understanding by various stakeholders of these new developments in the field is not uniform. This may be a limiting factor as students may receive varied views and perspectives; optimal student development may not necessarily be achieved as only procedural knowledge is usually imparted and not conceptual knowledge (Billet, 1995:25).

Considering the factors put forth by Billet this further substantiates the view of Winberg et al. (2011:19) that if one element in the learning process is absent, then students' learning becomes deficient and, developing the required SKAVBs is not possible. It can be argued that a WPL curriculum should take cognisance of the limitations of potential clinical placement sites to optimise student development with the available resources in mind.

2.4.3 Strategies to aid in the success of workplace learning and optimal student development

Winberg et al. (2011:9) postulate that WIL, and therefore WPL, aim to actively link formal, academic teaching and learning that occurs at a HEI with that of the world of work. Hence, there is a need for constructive alignment and integration between discipline-focused and professional-focused educational strategies that students are exposed to. If this is ensured then theory and practice can be brought together in a more meaningful manner since the curriculum can be developed to align with workplace demands (Winberg et al., 2011:16; Biggs, 1999:63–70). This underscores the assertion that students should be afforded a strong theoretical and conceptual grounding related to clinical situations that they may encounter in the workplace, as this assists in providing a holistic learning process and cycle (Winberg et al., 2011:21; Billet, 1995:25). Differently put, students should be prepared theoretically to be able to achieve the learning outcomes practically in the real-world clinical setting. Being mindful of these requirements, there are some recommendations about strategies that can be implemented to enhance the success of WPL in relation to optimal student development.

2.4.3.1 Reflection

For the embodiment of professionalism and development of students' professional identity it is important to facilitate reflection opportunities. Reflection can assist students to make sense of their clinical experiences including underlying complexities, as well as to become consciously aware of the disjunction between the formally taught curriculum and workplace culture and practices (i.e., hidden curriculum), and the consequences thereof. This calls for clinical educators to empower students to critically question the negative impacts of the hidden curriculum on their own professionalism but also to subsequently ensure the necessary support measures are put in place to mitigate the possibility of victimisation of students (Shaw et al., 2018:107–108). Winberg et al. (2011:15) are of the opinion that reflection on clinical experiences is the epicentre of WPL curricula which helps students to transfer their academic knowledge to the workplace, and vice versa. Curriculum developers should also be reflective on the access that they have to expertise to develop activities to reduce the probability of inappropriate knowledge limiting student development (Billet, 1995:24).

2.4.3.2 Active engagement and hands-on experiences

Students should be encouraged to use their senses to get them actively engaged in the task at hand as it provides them with first-hand experience. This enables internalisation of professional norms, values, and ethics by means of visual, auditory and tactile stimuli. This can be linked with reflection discussed previously (cf. 2.4.3.1) where students are given the opportunity to verbalise how they would go about handling particular clinical scenarios, with a focus on how they would engage with the scenario and its impact on their reactions professionally and emotionally (Shaw et al., 2018:107–108). Students' competence should also be considered to determine whether they can complete a task independently or require supervision.

2.4.3.3 Scaffolding of experiences to foster independence

Necessary support mechanisms should be put in place for students to achieve tasks progressively and more independently. This means the degree of supervision should decrease to facilitate the process. This can be achieved by organising the experiences that students are exposed to in the clinical setting starting with fundamentals and moving towards more complex experiences (Goldszmidt & Lingard, 2018:115,119–120). Exposure to experiences should be representative of the full complement of students' course of work (Billet, 1995:25).

2.4.3.4 Support

Students should be afforded opportunities to integrate their theoretical knowledge within the workplace. Billet (2001b:213) suggested that those learning and those guiding the learning should mutually encourage active participation in a learning process. Staff should be encouraged to act as mentors to both facilitate student learning and to move the profession as a whole forward. Through guided learning at work, active engagement is encouraged, and this can later translate in transfer of learning to other situations (Billet, 2002b:34). Staff and other peers should act as role models, mentors, coaches or guides to put students on the right path to complete the task at hand in an appropriate manner (Winberg et al., 2011:15; Billet, 1995:23).

Coaching is another strategy of support related to WPL. It involves guidance and feedback to students on personal, professional, and educational developmental matters to facilitate the process of providing safe and suitable patient care (Trumble, 2018:136). It should focus on all developmental domains of a student in relation to WPL. Feedback and guidance should therefore focus on the affective (considering students' emotional response to their performance), effective (considering the aspects that students regard as effective), reflective (challenging students' performance and prompt them to describe what they would do differently next time) and objective (a coach's objective observations and critique on how students can better their performance) aspects of students' performance in relation to the task at hand (Trumble, 2018:144–145).

Simulation is advocated as a support strategy to prepare students for the workplace. It involves a purpose-designed scenario replicating an authentic real-life situation in an interactive manner; so that it can evoke workplace related experiences (Nestel & Gough, 2018:176). This also relates with Billet's (1995:23) assertion that students should be exposed to and have access to a variety of authentic activities to develop their SKAVBs as required in their discipline and work environment. Simulation can work well in cases where there is lack of availability of expertise and activities and new advancements; students will be able to develop both conceptual and procedural knowledge in an authentic environment (Billet, 1995:24).

2.4.3.5 Curriculum design

A WPL curriculum should be integrated in the formal teaching and learning programme at the HEI. It requires alignment between teaching, learning, and assessment. WPL should be seen as a deliberately, goal-driven programme designed to act as a catalyst in bridging the theory-practice-gap that allows students to explore and master the SKAVBs required in their discipline

and chosen career. This calls for cooperation between a HEI and accredited clinical sites where WPL happens (Billet, 2016:125–126; Adams, 2012:2; Winberg et al., 2011:15). Such cooperation is required and imperative to ensure that a WPL curriculum remains dynamic and flexible to be current given the work environment at the time, so that graduates are holistically workplace ready, as well as equipped with procedural and conceptual knowledge to function, adapt and cope with their workplace demands and needs (Billet, 2016:126).

Considering the opportunities and barriers that WPL learning hold for student development, and the subsequent strategies to optimise student development through WPL, it is fitting to have an understanding of the underlying educational philosophy and theories of WPL.

2.5 EDUCATIONAL THEORIES UNDERPINNING WORKPLACE LEARNING

Educational theories provide explanations of how individuals learn and how one should subsequently then teach, depending on the premise of departure (i.e., theoretical and epistemological perspectives) for each theory. Using educational theories can enable educators to design programmes accordingly (Bates, 2016:3; University College Dublin, n.d.:para 1). This section highlights the major contributions of, mainly contemporary and seminal, educational theories and philosophies underpinning WPL. It adds another layer of understanding to the characteristics of WPL, as described in the preceding sections, and for the other sections in the chapter.

2.5.1 Knowles: andragogy

Knowles' adult learning theory was developed with a view of assisting the maximisation of adults' learning experiences. There is an emphasis on problem-based and collaborative learning between facilitators of learning and those learning. This calls for active involvement of adult learners in the selection of content and delivery of learning experiences (Aubrey & Riley, 2016:90; Bates, 2016:60). The theory makes important assertions to be mindful of with regard to the characteristics of adult learners.

Knowles maintains that adult learners are self-directed and responsible for their own life and conscious about how others view them. They have a need to be valued and respected as the opposite may result in resentment and resistance. They also have a desire to need the value of particular learning experiences and tasks as well as what they need to learn. If a correct stimulus is provided, adults may be motivated to want to learn. Knowles holds that adult learners are internally motivated to engage in learning since they have particular needs and

goals and therefore focus on meeting these. They also bring a vast repertoire of experiences to their learning which can become valuable resources of learning. Learning activities should be problem-based and task-centred as adults are learning to achieve their goals and needs in life (Aubrey & Riley, 2016:91–92; Bates, 2016:60–61).

The implications are to actively involve learners in their learning experiences and encourage them to use their past experiences in completing learning tasks to meet their needs and goals. Supporting learners in doing this will motivate them to learn as they can relate and see the relevance thereof (Bates, 2016:61).

2.5.2 Dewey: experience and education

Dewey started the progressive education movement in the 1930s when he postulated that learning does not only occur when individuals are exposed to pre-determined knowledge but also through their actual life experiences (Bates, 2016:18; Dewey, 1938:89). He argued for didactic models where individuals are active participants in the learning process, where they can reflect on their experiences to transfer what they learned to other situations, so that they can become active members of their community of practice and overall society (Aubrey & Riley, 2016:6). Therefore, individuals should learn by doing (Aubrey & Riley, 2016:11). However, there is a need for an individual's learning to be guided to discern appropriate and useful experiences to facilitate their learning and growth; continuous interaction between the one learning and the one providing learning is required (Bates, 2016:18). This calls for coaching to assist those learning to reflect on their current and past experiences in order to be mindful of how these can shape future courses of action (Bates, 2016:19).

2.5.3 Kolb: experiential learning

Similar to other experiential learning theories, Kolb (1984:20) places subjective experience and consciousness at the centre of learning. It combines experience, perception, cognition and behaviour. Kolb (1984:38) believes that learning is a process of knowledge creation and recreation through transformation of experience. Individuals learn by encountering primary experiences first-hand and make evaluations thereof to direct future action by means of reflection, abstract conceptualisation and experimentation (Trumble, 2018:140; Aubrey & Riley, 2016:156). This is important according to Kolb since experience on its own is not sufficient for learning to occur (Winberg et al., 2011:7). Kolb points out that a transactional process between individual and environment is what creates an experience. Learning transforms an experience in both subjective (internal to the person) and objective (environmental) form, which influences

attitudes and purpose of an individual (Kolb, 1984:34–35, 38). Kolb holds that learning is cyclical; according to Aubrey and Riley (2016:158–159) and Trumble (2018:140) learning occurs as follows.

- The individual actively engages in a task (concrete experience or doing).
- The individual consciously reviews and reflects on the experience of engaging with the task (reflective observation or observing).
- The individual tries to theorise what they have observed during the experience (abstract conceptualisation or thinking).
- The individual attempts to implement their theory about their observations during the experience in future tasks that they face.

Key to Kolb's theory is reflection to facilitate cognitive and professional development, which closely links to Schön's theoretical underpinnings of reflection-in-action and reflection-on-action (Aubrey & Riley, 2016:161), as well as that learning is socially situated (Aubrey & Riley, 2016:162).

2.5.4 Schön: the reflective practitioner

In his book, *The reflective practitioner: how professionals think in action*, Schön (1983:24) alluded to three components underpinning professional knowledge: discipline or basic science; applied science; and skills and attitudes. The basic sciences component encompasses the fundamental principles on which the applied sciences component builds which entails discipline specific procedures and solutions. The skills and attitudinal component refers to the actual performance and provision of services to clientele (Schön, 1983:24). However, professionals daily make numerous judgements intuitively by recognising patterns and reflecting on past experiences to transfer lesson learnt to future scenarios. Often this is because of tacit knowing-in-action where professionals cannot completely give accurate descriptions of what they do but they go about it as they have a particular feel for it (Schön, 1983:49). Professionals also think about what they are doing as well as while they are doing it (Schön, 1983:50). During this process of thinking professionals reflect on their understandings that are implicit to their action, those emerging from the action, critiques on their action and then how it can be restructured and reorganised for future action (Schön, 1983:50). This brings about the notion that individuals can become aware of their implicit knowledge and learn from their experience in their particular working environment when faced with conflicting and unique experiences. It is from these experiences that connections are made between theory and practice (Bates, 2016:268). According to Aubrey and Riley (2016:142) it is through critical self-reflection that learning, and

improvement of professional practice occurs. Reflection assists a professional to learn from and address complex workplace-related situations (Aubrey & Riley, 2016:147). Two important concepts emanate from Schön's work, which assist in gaining new insights in an individual's experiences and shape their future action (Bates, 2016:268).

- Reflection-on-action which entails evaluation of past experiences with the view to improve future practice.
- Reflection-in-action which refers to thinking while doing in order to think on one's feet and to improvise.

Schön's work made an explicit call to move beyond the technical-rational model of professional education to allow for more dynamic teaching practices to better align with the rapid, ever-changing advancement of the workplace. Teaching should therefore be more socially situated and contextualised, reflective and learner-centred which should be transferred to the curriculum design, learner and provider of learning (Lawrence-Wilkes & Ashmore, 2014:12).

2.5.5 Lave and Wenger: situated learning and communities of practice

Socially situated learning theory claims that individuals learn better when they actively participating in an experience instead of passively receiving knowledge. Learning also occurs relative to the learning environment in which activities stimulate meaning creation. According to Aubrey and Riley (2016:170) this socially contextualised process to learning is what Lave and Wenger referred to as legitimate peripheral participation. Individuals get involved with other practitioners in their field to develop their professional practice. Legitimate peripheral participation encompasses all the activities, identities, artefacts and rites of passages that individuals are exposed to or take part in in pursuit of becoming part of the particular community (Aubrey & Riley, 2016:170). This community is known as the community of practice, which represents the authentic environment representing the real-world of work (Aubrey & Riley, 2016:170). At the centre of learning there are therefore relationships between people. In this often unintentional rather than deliberate contextual learning also takes place. Therefore, organisational culture plays a role in the way that individuals construct professional knowledge and SKAVBs as it shapes their individual disposition and physical behaviour (Aubrey & Riley, 2016:170, 175; Northern Illinois University, n.d.:para 3–4). When individuals actively engage in a particular community of practice this enables them to fit in, know how to contribute, acquire skills and how to change their community, as they move from novice to more experienced practitioner (Aubrey & Riley, 2016:173).

2.5.6 Ericsson: deliberate practice

Deliberate practice holds that enhancing one's performance to become more knowledgeable and skilful in your field, and later an expert, means that learning should go beyond merely practising specific tasks repeatedly. Ericsson, Krampe and Tesch-Romer (1993:367–368) argue that acquisition and improvement of skills, and therefore learning, requires a mentor or coach to supervise the performance of a specific task by an individual. A coach should allow adequate time and opportunities for practising the task to be performed in order to meet the outcome appropriately. Importantly, this practise should be coupled with time for problem-solving as well as feedback from a mentor or coach in order to further refine and enhance an individual's performance. Buffering this is motivation to improve and refine one's skills, on the part of the individual learning (van de Wiel, Van den Bossche, Janssen & Jossberger, 2011:82–83; Ericsson, Krampe & Tesch-Romer, 1993:367–368). The outcome of this process of deliberate practice is argued to foster reflective practice whereby an individual can monitor, control and evaluate their performance, as well as enable high-quality autonomous practice (van de Wiel, Van den Bossche, Janssen & Jossberger, 2011:82–83; Ericsson, Krampe & Tesch-Romer, 1993:367–368). Van de Wiel et al. (2011:83) add that deliberate practice, and therefore learning, entails reactive learning that is prompted by contextual stimuli which an individual consciously interrogates, reflects on and then seeks ways to solve the situation that is faced. This process is based on formal, informal and non-formal education. The role of a mentor or coach is therefore to maximise a learner's performance by providing sufficient and appropriate support, as well as an environment conducive of learning and opportunity for a learner to safely venture beyond their comfort zone (Trumble, 2018:141).

2.5.7 Vygotsky: scaffolding

Scaffolding is an application form of Vygotsky's concept of a zone of proximal development (ZPD) (Aubrey & Riley, 2016:51). A ZPD is described as the distance between a learner's actual development measured by independent problem solving and the level of potential development determined through assisted problem solving under the guidance of or in collaboration with a more capable peer (Aubrey & Riley, 2016:51). Learning is a developmental process that is socially situated opposed to being solely dependent on the cognitive development and abilities of a learner. Vygotsky maintains that learning first occurs interpersonally before it occurs intrapersonally and is internalised (Aubrey & Riley, 2016:48,51).

Scaffolding then is the nature of temporary assisted problem solving that is provided to a learner under the guidance or in collaboration with a more capable peer or mentor (Aubrey & Riley,

2016:51; Maybin, Mercer & Stierer, 1992:21). The aim of this active practice is to assist learners to successfully meet a particular learning outcome so that they can meet these learning outcomes independently in the future. Once a learner is successful in meeting the learning outcomes the guidance from a more capable peer is reduced. The latter then adopts a motivating role to encourage the learner to attempt more developmental tasks in which the acquired SKAVBs are applied. Importantly the more capable peer must be consciously aware of the learner's capabilities and needs at all times (Aubrey & Riley, 2016:51–52). Maybin, Mercer and Stierer (1992:23) caution that scaffolding is only applicable if a task is well-defined and has finite goals to be achieved.

2.6 HISTORY OF RADIOGRAPHY EDUCATION AND WORKPLACE LEARNING IN SOUTH AFRICA 1895 – PRESENT

X-radiation (a.k.a. x-rays) was discovered by Wilhelm Conrad Röntgen in Germany on 8 November 1895. The discovery was publicly announced for the first time on 5 January 1896 (Chodos, 2001:para 4; Bensusan, 1967:778). The first x-ray apparatus was imported from England by Mr A. Walsh from the Port Elizabeth Amateur Photographic Society (this is considered to be the first x-ray equipment brought to South Africa). Upon the arrival of the x-ray apparatus a successful trial run happened on 13 August 1896 (de Villiers, 2000:12; Bensusan, 1967:778). Similar to the first radiographic image by Röntgen [his wife's hand], the first radiographic image taken was a six-minute exposure of Mr A. Walsh's hand (Plug, 2014:para 3; Chodos, 2001:para 3). In 1897, the first x-ray equipment was constructed by the firm Siemens and Halske (Bensusan, 1967:779). Not much attention was given to the safe use of the equipment and the effects of x-rays during this novel and experiential time; x-ray images were taken of people as a form of entertainment (Bensusan, 1967:779).

In the early 1920s it was realised there was a need for education of those operating x-ray machinery as up until then little or no medical training had been provided. Sister Beatrice Merrigan was the first American to pass the certification examination of the American Registry of Radiologic Technologists (ARRT) and she was the first radiographer in the world (Lee, 2015:16; Engel-Hills, 2005a:24). In the United Kingdom (UK), Kathleen [Kitty] Clark was the first qualified radiographer after she successfully completed the Society of Radiographers' (SoR) examination in 1922 (Thomas & Banerjee, 2013:27; Price & Paterson, 2020:185).

The British Society of Radiographers established a branch in South Africa in 1930, which was responsible for formal training of radiographers in South Africa. The first British examination

was successfully completed by May Winfred Tompkins in London, in 1933, after which she returned to Johannesburg. She completed her training under the tutelage of Kathleen Clark from the UK (Tompkins, 1974:3). Upon her return she was put in charge of education and training of radiographers in South Africa (Engel-Hills, 2005a:24). She played a pivotal role in the development of the South African radiography profession. She was solely responsible for the initial training of radiographers and establishing the Society of Radiographers of South Africa (SORSA) (Friedrich-Nel, 2012:18). By 1939, forty-six radiographers had qualified in South Africa (Johannesburg and Cape Town) driven by a need during World War II in North Africa (Engel-Hills, 2005a:24). In terms of radiography education and WPL, during the 1940s emphasis of training and education was approximately 90% workplace-oriented and 10% theory (Engel-Hills, Garraway, Jacobs & Winberg, 2012: slide 25). In the 1950s, Schools of Radiography offered a two-year diagnostic radiography diploma in Durban, Port Elizabeth, Cape Town and Johannesburg to white, English-speaking students. Afrikaans-speaking students had to complete the two-year course at the University of the Orange Free State (UOFS) or the University of Pretoria (UP). Students at UOFS and UP had opportunities of becoming dual qualified in diagnostic radiography and radiotherapy. In contrast, it was only until the 1960s before radiography education and training for Afrikaans-speaking, white students started at the Karl Bremer Hospital (KBH) in the Western Cape as well as the two-year national diploma for non-white students at the School of Radiography at King Edward VIII (KEVIII) Hospital. The School of Radiography at KEVIII was the only training institute for non-white students during this time. The School of Radiography at KBH moved to Tygerberg Hospital in the mid-1970s. Non-white students were only afforded this opportunity during the 1970s at a School of Radiography at Somerset Hospital in the Western Cape. During the 1950s to the mid-1980s black students had the opportunity of obtaining a one-year qualification in supplementary diagnostic radiography at Chris Hani Baragwanath Hospital (formerly Baragwanath Hospital) in Soweto. This programme was also provided for black students during the 1970s to the mid-1980s at Edendale Hospital in Pietermaritzburg (L Munro 2020, personal communication, 20 May). In the mid-1980s training of supplementary diagnostic radiographers in South Africa ceased. All of the above qualifications consisted of formal lectures and workplace learning (i.e., clinical hours) (F Isaacs 2020, personal communication, 11 July; L Munro 2020, personal communication, 20 May). The first South African examination was written in 1953. The final South African examination comprised theory, practical and oral assessments. Students had to write both the British and South African examinations to ensure reciprocity up until 1961. During 1962 and 1963 candidates had the choice to sit for the British examination if they so wished. Full reciprocity from Britain was only attained by 1964. South African

radiographers could also further their qualification during the mid-1960s by travelling to London to sit for the UK higher diploma examination. The South African Department of National Education took over education matters and issuing of radiography qualifications around 1968 from the Department of Education, Arts and Science (L Munro 2020, personal communication, 20 May; Tompkins, 1974:4).

As radiography education advanced, gradually radiography schools were established in Cape Town, Durban, Port Elizabeth, East London, Pretoria and Bloemfontein (Tompkins, 1974:3). In 1976, the three-year national diploma replaced the two-year national diploma. It was during 1978, when Schools of Radiography started to offer the three-year national diploma. During the late 1970s it was also when the South African Medical and Dental Council (SAMDC) professional board for radiography prescribed 3500 clinical hours for the three-year national diploma; this was decreased many years later. The professional board was also responsible for accrediting training hospitals and undertaking regular inspections to ensure that training hospitals were still in good standing to maintain their accreditation. The then Medical University of South Africa (MEDUNSA), now Sefako Makgatho Health Sciences University, started offering this three-year qualification in circa 1980s (L Munro 2020, personal communication, 20 May).

Up until the early 1980s radiography students received training at the hospital where they were based and worked. The curriculum was between 25% and 33% theory-oriented and the rest dedicated to WPL (Engel-Hills, Garraway, Jacobs & Winberg, 2012:slides 26–27). A shift from most of hospital-based Schools of Radiography to technikons occurred during the 1980s. Hence, all students had to be registered with a technikon/university. Not all lectures occurred at a technikon/university campus. Some continued to offer lectures at professional board accredited training hospitals (F Isaacs 2020, personal communication, 11 July; L Munro 2020, personal communication, 20 May). This move came with challenges for radiography educators as they had to become more knowledgeable with educational discourse and formal learner guides outlining exactly what the learning outcomes are and how students will be assessed. Based on the Natal Technikon (now Durban University of Technology [DUT]) model, a two-day workshop was hosted by the late Prof Marita Horak (employed at the Port Elizabeth Technikon) in 1989 in Port Elizabeth where standardised learner guides were developed, as well as the core competencies (essential and desired) that educators wanted students to achieve during clinical assessments (L Munro 2020, personal communication, 20 May). It was also around 1989 that technikons were responsible for managing and conferring radiography qualifications

and no longer the Department of National Education (L Munro 2020, personal communication, 20 May). The qualifications on offer during the 1980s and 1990s were the three-year national diploma and three-year degree in radiography, respectively (Health Professions Council of South Africa [HPCSA], 2016b:5). The qualifications were offered through formal lectures and experiential learning by way of WIL, with a big WPL component. During the late 1980s students could also further their education and training by obtaining a national higher diploma, which was later replaced by the bachelor of technology (BTech) degree qualification (L Munro 2020, personal communication, 20 May).

In post-apartheid South Africa, the need arose for social transformation in society to align higher education curricula as well as teaching and learning practices to enable students to adapt and operate within the changing landscape, both socially and professionally (Engel-Hills, 2005b:67). Radiography education followed suit to align itself with legislative changes. The first of the post-apartheid changes was the publication of the National Qualification Framework (NQF) in 1995 brought about by the South African Qualifications Authority (SAQA) Act 58 of 1995. This framework obliged students to meet specific learning outcomes and assessment criteria, regardless of the institution at which they study, to be awarded the qualification. The qualifications focused on what the student can do (HPCSA, 2016b:4). However, this was not enough since the radiological and radiographic environment advances almost daily, and therefore the radiography curricula should stay abreast with these advancements (Engel-Hills, 2005a:24). As the millennium dawned there were more legislative changes which affected radiography education and qualification offerings. A recent change was the replacement of the Higher Education Qualifications Framework (HEQF) by the Higher Education Qualifications Sub-Framework (HEQSF) (HPCSA, 2016b:5). This led to the national diploma and BTech degree being replaced with four-year professional bachelor's degrees, in order to align radiography qualifications with the new HEQSF (HPCSA, 2016b:5–6). The introduction of the HEQSF resulted in the disposal of the standardised national curriculum for all institutions and each HEI offering radiography-related programmes is responsible to develop their own curricula (HPCSA, 2016b:6).

These new degree programmes are NQF level eight (8) qualifications on the HEQSF and have higher theoretical and research orientated components compared to the previous qualifications (Council on Higher Education [CHE], 2013:32). The purpose of the qualification in general is to equip students with professional training and professional practice for their chosen career, as well as with an opportunity to progress to postgraduate studies (CHE, 2013:32). The

professional body may also prescribe particular rules pertaining to qualifications. There should be definite emphasis on providing students with procedural knowledge related to the chosen career as well as facilitating the ability to apply the procedural knowledge in the professional context. Hence, the inclusion of WIL in the degree programme, of which WPL is one component (CHE, 2013:32). The arrangement of the WIL (inter alia WPL) curriculum is also dependent on the nature and purpose of a qualification, NQF level, programme objectives and outcomes, institutional capacity to provide WIL opportunities and the systems and structures available at accredited clinical placement sites (CHE, 2013:16). In addition, the development of the WIL curriculum should consider all learning outcomes and assessment criteria of the qualification programme (CHE, 2013:16). Du Plessis (2019:22) adds that thorough planning is required to ensure a well-rounded, developed WIL curriculum to facilitate the process of reaching the intended end-goal of the curriculum.

The next section covers the curriculum requirements, exit-level learning outcomes and associated assessment criteria of the four-year professional degree programme in diagnostic radiography since the research study is a South African, diagnostic radiography orientated study and the participants of the study are enrolled for this degree programme.

2.7 CURRICULUM REQUIREMENTS, EXIT-LEVEL LEARNING OUTCOMES AND ASSOCIATED ASSESSMENT CRITERIA IN SOUTH AFRICA

The professional board of radiography and clinical technology (PBRCT) of the HPCSA established a task team to draft the curriculum requirements, exit-level learning outcomes (ELOs) and associated assessment criteria for a bachelor's degree in diagnostic radiography. A successful application was made to SAQA to approve such a degree. The various institutions offering the bachelor's degree in diagnostic radiography still had the obligation to seek internal institutional approval, SAQA registration, approval from the PBRCT of the HPCSA, as well as Department of Higher Education (DHET) and CHE approval to offer the respective qualification at the institution (HPCSA, 2016b:6). The purpose of the degree programme is to 'develop a competent learner who has a thorough grounding in knowledge and skills required for the diagnostic radiography profession and who has gained experience in applying such knowledge and skills in the appropriate workplace context' (South African Qualification Authority [SAQA], 2015:1). The programme has foundational, practical and reflexive components embedded in the exit-level learning outcomes (SAQA, 2015:2). The rationale for the programme being necessary in all healthcare sectors (public and private) in South Africa is to provide holistic patient care as part of multidisciplinary teams (MDTs) (SAQA, 2015:1). These aspects therefore

bring specific curriculum requirements, ELOs, and associated assessment criteria that guide HEIs in developing their respective qualification programmes.

2.7.1 Curriculum requirements

The core and fundamental components of the curriculum should revolve around ELOs one to eight (Table 2.2) and are compulsory for all students enrolled for the programme.

Table 2.2: Exit-level learning outcomes for the bachelor's degree in diagnostic radiography (SAQA, 2015:2)

- | |
|---|
| <ol style="list-style-type: none">1. Perform routine and specialised radiographic procedures to produce images of diagnostic quality.2. Access, organise and present information applicable to the radiography context in order to record, retrieve and communicate patient data.3. Evaluate the quality of routine and specialised radiographic images and perform image interpretation to identify normal and abnormal appearances.4. Plan, develop and apply total quality management appropriate to the diagnostic radiography context.5. Perform safe and effective patient care in accordance with the patient's needs and departmental protocol to provide a quality service and to maintain the welfare of the patient.6. Apply the principles of human rights, ethics and relevant medical law which ensure the wellbeing of the patient.7. Apply the principles, specific knowledge, skills and values related to one of the chosen electives as listed.8. Conduct research. |
|---|

This component must make up for a minimum of 440 credits of the total programme. The programme has an elective 40 credits component. It covers research on a topic relevant to students or as prescribed by the respective HEI, and theoretical knowledge and skills in one or more of the following areas as offered by the HEI.

- Contrast media administration
- Advances in computed tomography
- Advances in magnetic resonance imaging
- Interventional radiology
- Advanced pattern recognition
- Fusion imaging
- Small and medium business enterprises.

WPL is a compulsory part of the South African professional degree in radiography as a component of the WIL curriculum. A student must be placed by the HEI that offers the programme at an HPCSA accredited clinical training centre with accredited mentorship (SAQA, 2015:2, 5). For students to be awarded the qualification they need to demonstrate competence in meeting the ELOs of the qualification that they are enrolled for; the HEI can assess these

competencies either in an integrated fashion (using a variety of assessment methods) or incorporate them in the research project (SAQA, 2015:2).

2.7.2 Exit-level learning outcomes

Table 2.2 is from the SAQA document for the bachelor's degree in diagnostic radiography and it lists the eight ELOs for the programme. Associated with these are seven critical cross-field outcomes (also known as generic outcomes or critical outcomes). These are outlined in Table 2.3, as obtained from the SAQA document. They are generic outcomes that inform teaching and learning as well as curriculum developers and learners to develop the capacity for life-long learning. They are not discipline specific hence are broad, general outcomes, for example problem-solving and working in teams (Nkomo, 2000:18). The ELOs also have associated assessment criteria as prescribed by the PBRCT of the HPCSA in the SAQA document (SAQA, 2015:3–4) and are highlighted in the following section (cf. 2.7.3).

Table 2.3: Critical cross-field outcomes (SAQA, 2015:2–3)

<ol style="list-style-type: none">1. Identify health problems in the context of diagnostic radiography and suggest and implement a solution or plan of action in order to solve the problem professionally will be promoted through effective and safe patient care practices in accordance with the patient's needs by taking into consideration ethical principles as well as human rights and medical law requirements.2. Perform professional duties with confidence in collaboration with other health care professionals and where appropriate assume leadership in tasks or projects in order to promote efficient and effective service delivery and total quality management in the radiography profession as well as the healthcare service in general.3. Keep up with the current trends and changing needs of Diagnostic Radiography service on a regional, national and international level by undertaking research or fostering a research climate within the radiography profession.4. Contribute towards and facilitate continuing professional development of Diagnostic Radiography staff by either engaging in research or fostering the research environment and encouraging teamwork among radiographers and other healthcare professionals.5. Communicate effectively in the learning and health care environment by demonstrating competency and skills necessary for use of technology and associated accessories necessary for transfer or sharing of information among healthcare workers and other stakeholders so as to deliver quality patient care and facilitate management processes.6. Use science and technology in order to improve Diagnostic Radiography practice through efficient organizational and management skills for both patient's information and any other information necessary to efficient healthcare service delivery.7. Demonstrate an understanding of Diagnostic Radiography principles in order to solve practical problems within radiography will be promoted by the competent performance of routine and specialised radiographic procedures.
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2.7.3 Associated assessment criteria

Associated assessment criteria indicate how each ELO should be assessed to deem a student enrolled for the programme competent. There are eight associated assessment criteria corresponding to each ELO with varying numbers of sub-criteria. An outline of the associated assessment criteria extracted from the SAQA document for the bachelor's degree in diagnostic radiography (SAQA, 2015:3–4) is presented in Table 2.4.

Table 2.4: Associated assessment criteria for the exit-level learning outcomes (SAQA, 2015:3–4)

<p>Associated Assessment Criteria for Exit Level Outcome 1</p> <p>1.1 Request form is interpreted for validity and knowledge of relevant radiographic terminology, anatomy, physiology and pathology to help in selecting appropriate techniques for the production of images necessary for providing diagnostic information to assist in patient management.</p> <p>1.2 Accessory equipment and imaging systems are selected and appropriately utilized to specific positioning techniques to ensure optimal exposure factors are selected and adapted to produce images of diagnostic quality.</p> <p>1.3 Radiation protection and safety measures are effectively applied to each radiographic technique and procedure.</p> <p>1.4 Routine and specialized radiographic techniques and procedures with and without contrast media are prepared for and performed competently.</p> <p>1.5 Aseptic techniques are demonstrated for routine and specialised examinations.</p> <p>Associated Assessment Criteria for Exit Level Outcome 2</p> <p>2.1 Information technology skills are demonstrated to record, retrieve and communicate patient data.</p> <p>2.2 Data is compiled, and information is scientifically presented.</p> <p>2.3 Information technology is effectively communicated within the radiographic context.</p> <p>2.4 Relevant information is selected and critically evaluated.</p> <p>Associated Assessment Criteria for Exit Level Outcome 3</p> <p>3.1 Radiographic images are evaluated for diagnostic quality according to relevant evaluation criteria and to ensure that the images conform to the medico-legal requirements.</p> <p>3.2 Images are evaluated for normal and abnormal radiographic appearances by applying integrated knowledge of anatomy, physiology and pathology.</p> <p>3.3 Corrective measures to the radiographic techniques are applied where necessary.</p> <p>3.4 Radiographic appearances are communicated to the referring health care professional to enable further patient management.</p> <p>3.5 Independent judgement and discretion in the performance of additional radiographic views are exercised where justified.</p> <p>Associated Assessment Criteria for Exit Level Outcome 4</p> <p>4.1 Principles of quality assurance and quality control are demonstrated in the development of departmental protocols.</p> <p>4.2 Equipment and accessories are selected, ordered and maintained within an available budget to provide an efficient and cost-effective service.</p> <p>4.3 Communication and co-operation between all role players is effectively developed and maintained to provide an optimal service.</p> <p>4.4 Performance management strategies are developed in a manner which shows an understanding of management principles and current relevant legislation.</p> <p>4.5 Departmental records and statistics are accurately maintained in accordance with the departmental and professional council requirements.</p> <p>4.6 Integrated knowledge of management, technology and legislation is demonstrated in the ability to design and equip a new, or alter an existing, diagnostic facility.</p> <p>Associated Assessment Criteria for Exit Level Outcome 5</p> <p>5.1 Patient is assessed relevant to presenting clinical condition and appropriate action taken.</p> <p>5.2 The cultural and psychological diversity of patients are respected to ensure a quality service is provided.</p> <p>5.3 A simple but professional explanation of the radiographic procedures is given to the patient before, during and after the procedure to ensure the co-operation of the patient.</p> <p>5.4 Optimal patient care is applied before, during and after the procedure.</p> <p>5.5 Effective written, verbal and non-verbal communication skills during interaction with patients and health care team members are demonstrated.</p> <p>5.6 Skills and knowledge of first aid are demonstrated as and when applicable.</p> <p>5.7 Signs and symptoms of contrast media reaction are recognised, appropriate action taken and assistance in emergency medicine following such reactions is demonstrated.</p> <p>Associated Assessment Criteria for Exit Level Outcome 6</p> <p>6.1 Psychological, cultural and ethical considerations of the patient and their families are recognised and acted upon in a professional manner.</p> <p>6.2 Rights of the patient, as entrenched in the Bill of Rights, the Patients Charter and relevant medical law is protected, and confidentiality maintained.</p>

Assessment criteria for Exit Level Outcome 7

- 7.1 Apply and integrate the principles and/or philosophy of the subject into related activities.
- 7.2 Apply the specialised techniques required to achieve the contextual objective.
- 7.3 Apply quality assurance principles to ensure optimal results within the context of the subject.

Associated Assessment criteria for Exit Level Outcome 8

- 8.1 Research principles and methodology in the field of Diagnostic Radiography research are demonstrated in the form of a research proposal and project.
- 8.2 Relevance of the research is in line with national needs and biomedical ethical policies and procedures.
- 8.3 Suitable resources are critically evaluated and used to facilitate the research project.
- 8.4 Findings and conclusions are presented in oral and written formats in accordance with established research practice.

Assessment criteria can be met using an integrated assessment method that comprises a variety of assessment methods to ensure that competency is demonstrated for all the ELOs of the programme and, by implication, the critical cross-field outcomes. The following characteristics need to underpin an integrated assessment.

- Assessing the extent to which students can competently operate and practice in the clinical environment that is effective, appropriate and safe for both professionals and patients.
- The assessment should measure the extent to which students have integrated their professional role with their theoretical and procedural knowledge and skills.
- There should be opportunities afforded to the student to reflect both in-action and on-action to develop the ability to be a reflective practitioner (SAQA 2015:4).

Providing a well-rounded programme is very much dependent on resources, systems and capacity in place both in practice as well as at the HEI at which the programme is offered (cf. 2.6). WPL learning at the research site is discussed below because the study focusses on an event that occurs in the workplace.

2.8 WORKPLACE LEARNING PRACTISES AT THE RESEARCH SITE

WPL is integral to professional education and training; it aims to develop professionalism and expertise by students enrolled for these programmes at HEIs (Weber, 2013:1). Professionalism refers to the characteristics unique to the profession that one practices which includes all SKAVBs; a profession is characterised with a strong commitment to the wellbeing of others, a high degree of autonomy and self-regulation, and mastery of a specific body of knowledge and skills (Thistlethwaite & McKimm, 2016:3; McQuoid-Mason & Dhali, 2011:59). Various modes of learning influence the development of a professional identity and are buffered by contextual stimuli and intra, inter, and transpersonal factors. These influence the manner in which students achieve the intended ELOs of a WPL curriculum. The design and implementation of a WPL

curriculum plays a crucial role in the learning process in developing competency and coping with the demands of practice. Education and training related to WPL does not only occur in a workplace context. Preparation should begin in the classroom by way of work-directed theoretical learning (WDTL) (Winberg et al., 2011:32).

The practises regarding WPL at the research site are discussed in the section to follow. Throughout the discussion, where appropriate, critique is incorporated with reference to sections discussed and outlined earlier in this chapter, to identify the existing strengths and deficiencies.

The HEI (research site) is accredited by the HPCSA for 44 clinical placements at six hospitals in the Eastern Cape, located in the Nelson Mandela Bay, Buffalo City and Oliver Reginald (O.R.) Tambo districts, respectively. Students are placed at the beginning of their first year of study at one of the six hospitals for a four-year cycle. They are placed at a specific hospital for the duration of their studies. If students repeat a year this directly influences the number of placements at a particular clinical training site (Department of Radiography, 2018:1). Students from outside the Nelson Mandela Bay area, where the HEI is situated, including international students, are usually placed at clinical training sites in the Nelson Mandela Bay. Those residing in the Nelson Mandela Bay district are placed at clinical training sites in the Buffalo City and O.R. Tambo districts. Various factors are considered that may result in a deviation from this default practice (Department of Radiography, 2018:1–2). Clinical tutors at the various clinical training sites are informed of the students allocated to them. Students conduct their WPL at their allocated training sites during clinical blocks. Students are in a clinical environment carrying out professional tasks as per the curriculum for the particular level of study across the four-years. They are exposed to a real-working environment from first year. The time spent in a working environment gradually increases as a student progresses through the four levels of study. The time that students spend in clinical environment is aligned with the notional hours attached to the clinical practice module, the syllabus and to facilitate competency as recommended in the curriculum requirements of the SAQA document (cf. 2.7.1). Students engage in various assessment methods for WPL and WIL to provide evidence that ELOs are met. These methods include simulation assessments, tutorials, logbooks, reflective journals, projects, clinical assessments, worksheets, and objective structured clinical evaluations (OSCEs) (Department of Radiography, 2018:6,8,10,12).

Upon review of the learning outcomes for the respective clinical practice modules across the four levels of study it was found that the focus is on procedural knowledge and skill development with no particular emphasis on attitudinal, value and behavioural development (Department of Radiography, 2018:5,7,9,11). Students' affective domain does not necessarily receive a balanced opportunity for development. This leaves somewhat of a deficiency in the WIL/WPL curriculum and is not fully congruent with the purpose and ELOs of the PBRCT of the HPCSA approved qualification (cf. 2.7). For the rest of the ELOs the WIL/WPL curriculum satisfies every aspect regarding procedural skill and knowledge. What is lacking is dealing with clinical scenarios related to patients' conditions and associated SKAVBs that are required to ensure safe patient care practices for the ultimate wellbeing of both patient and professional, be it physical or psychological. Hence, this makes room for unintentional learning to occur in practice in a non-formal manner. The non-formal learning of unintentional SKAVBs are not always safe or appropriate, which may ultimately influence the students' professional identity and practices.

2.9 CONCLUSION

Workplace learning provides a milieu for a variety learning experiences. Individuals perceive these experiences differently due to the multitude of intra, inter, and transpersonal characteristics that exist in different workplaces. Both an individual and contextual stimuli are what constitute the learning experience in terms of WPL education theory. WPL holds definite benefits, limitations and developmental characteristics for students. It has always been part of the various radiography qualifications offered in South Africa. It is still in its infancy and has room for improvement in relation to the ever-changing social and professional landscape. The current degree programme offered in diagnostic radiography in South Africa has prescribed requirements that need to be met in order to deem a student competent to practice. HEIs offering this qualification therefore develop their qualification programmes using these requirements as a guideline. The WPL practises at the research site have strengths and weaknesses especially in relation to the topic of this study. This study is timely and can offer new insights towards improvement of practice not only at the research site but also nationally.

In the next chapter death and dying, from various theoretical perspectives, are conceptualised to offer a potential perspective to gain insight into why different individuals experience the same stimulus differently.

CHAPTER 3: DEATH AND DYING

3.1 INTRODUCTION

Dying and death are an inescapable part of life and are beyond human beings' complete control (Barry & Yuill, 2016:263–264). All of us, and particularly those in healthcare, at some point in our professional lives, will be faced with or experience death and dying of patients. Our understanding of death and dying differ vastly across social classes, gender, ethnicity and the particular context. Social transformations and developments driven by history, dynamics within society, and global trends, also influence the ways in which we understand, experience and cope with death and dying (Barry & Yuill, 2016:280–281). We respond through bereavement, grief and/or other associated coping mechanisms to various extents, in order to abandon attachment to a loss experienced. This is no different in the social healthcare environments where the experiences of healthcare professionals (HCPs) cannot be escaped.

The previous chapter provided a discussion on workplace learning (WPL). It and this current chapter provide theoretical insights into the context of the experience (i.e., death and dying encounters) and coping by undergraduate diagnostic radiography students as this is the focus of this study. As discussed in Chapter 2, both workplace-related and human factors influence student learning. Similarly, an individual's worldviews and other socio-cultural factors influence how one experiences death and dying. Theoretical explanations provide an account for these varying experiences and coping.

Death and dying are covered in this chapter, as well as the associated bereavement and grief from various perspectives, to highlight the existing views in the current body of knowledge. The focus of the discussion is of literature that is pertinent to the research space where this study was conducted. To understand the research space, a brief description of the population, disease burden profile, and health system, is necessary to preface the discussion. The chapter concludes by underscoring and contextualising the importance of death and dying in healthcare.

3.2 THE SOUTH AFRICAN POPULATION, DISEASE BURDEN AND HEALTH SYSTEM

This section provides a contextual background with regard to South African demographics, disease burden, and health system, to provide contextual insights to the relevance of the phenomenon of death and dying that underpins this study.

3.2.1 Population and disease burden profile: relevance of death and dying

South Africa is geographically located at the most southern tip of Africa. It has an estimated population of 57.73 million; with 62% between 15 and 59 years of age. In terms of gender 51% of the population is female. The national racial classification's profile is: 81% is ethnically black, 9% coloured, 8% Caucasian, and 3% Asian and Indian. Of the nine provinces Gauteng has the highest inhabitants (14.7 million), the Eastern Cape has the fourth highest population (6.5 million), and the Northern Cape the lowest (1.2 million). The average life expectancy of South Africans is 64.2 years (Statistics South Africa, 2018:slides 1–34). The country is considered the most culturally diverse nation worldwide; each cultural sub-group has their own customs and beliefs. There are 11 official languages in South Africa (South African History Online [SAHO], 2017:para 1).

In terms of the current disease burden profile the Institute of Health Metrics and Evaluation communicable, maternal, neonatal, and nutritional are the disease groups responsible for most 2017 deaths and disability in South Africa (Institute for Health Metrics and Evaluation [IHME], 2017:para 6). Non-communicable diseases and injuries followed these disease groups. HIV/AIDS, neonatal disorders, lower respiratory tract infections, and interpersonal violence, were ranked as the top 2017 four causes of death and disability in South Africa (IHME, 2017:para 6). The pre-disposing factors that contribute to the current disease burden profile of the country can be summarised from highest to lowest as: behavioural, metabolic and environmental/occupational risk factors (IHME, 2017:para 7). The estimated number of deaths in 2018 was reported as 522 157 (Statistics South Africa, 2018:slides 1–34). A 2018 report, which used 2016 data, indicates that 88.8% of deaths were due to natural causes and a minority due to unnatural causes (BusinessTech, 2019:para 20). According to a 2017 world mortality report only 25% of deaths occurred among individuals that were 65 years and older in Africa; the lowest globally (United Nations [UN], 2017:8). When comparing the sub-Saharan Africa region to the world, the percentage of deaths from birth to 60 years of age is 78%, and 22% for people over 60 years of age. In South Africa 68% of deaths occur in the age range from birth to 60 years, and 33% in people over 60 years of age (UN, 2017:10,12). These statistics illustrate the need for research to be conducted in terms of the experiences and coping of HCPs in view of them being exposed to the inevitable phenomena of death and dying. In other words, preparation of HCPs is necessary in order for them to cope appropriately with these experiences.

3.2.2 The South African health system

Most South Africans (84%) are dependent on public sector healthcare services; the remainder (16%) make use of private sector facilities (Mahlathi & Dlamini, 2015:1). Compounding this scenario is the limited human resources, finances, equipment and technology in the public sector, and the corresponding lack of access to appropriate and adequate treatment and services (Shisana, 2018:5). President Ramaphosa, in his 2018 presidential health summit report, stated that the health system is in crisis and requires improvement; there should be an integrative effort at various levels and among various stakeholders to strengthen the state of the health system (Shisana, 2018:5–6).

This disparity between public and private sector and the crisis situation to access to appropriate, timely and effective healthcare services should be more equitable with the introduction of the government-led proposed National Health Insurance (NHI). The aim of the NHI is to provide universal healthcare coverage (UHC) for all South African citizens which is in line with the 2030 sustainable developmental goal (SDG) number three: 'good health and wellbeing' (National Department of Health [NDoH], 2017:1; WHO, 2019:para 1). This will not be adequate if the healthcare workforce is not looked after and prepared for practice in a 21st century healthcare system, and, by implication the 4th industrial revolution (WHO, 2015:1). Tichenor (2020:e748) highlights that local capacity development is necessary to achieve UHC, whilst remaining cognisant of the local healthcare contexts, and values to achieve equitable health.

The preparation of HCPs for practice should meet the demands and needs of the current healthcare system and enable them to cope with the demands and needs of the system in the future. This would foster a healthier workforce which will contribute to the overall enhancement of the health status of the population (WHO, 2015:1,6). This therefore calls for transformation of health profession education, developing retention strategies of HCPs, as well as maximising the quality and performance of existing ones. HCPs should therefore be educated and trained to be more responsive to socio-cultural determinants of health as well as enabled to identify health needs in order to promote and prevent disease instead of being limited to a curative orientation (WHO, 2015:12). Policies should be developed and implemented to facilitate retention and attraction of HCPs where needed. Strategies should be considered for improving their performance. When these policies and strategies are developed consideration should be given to systemic, institutional, as well as intrapersonal human factors that influence the performance of HCPs and the subsequent quality of care they provide. One of the other key

drivers that should underpin these policy development decisions is fostering motivation and resilience among HCPs in a transparent, accountable and proportionate manner appropriate for the context (WHO, 2015:13–16).

3.3 THEORETICAL CONCEPTUALISATION OF HOW PEOPLE COPE WITH DYING AND DEATH

Dying and death affects everyone in some way or another, whether it is a terminally ill patient or a HCP interacting with a patient (Parkes & Prigerson, 2010:15–32; Kübler-Ross, 2009:1–8). Theorists have developed theoretical understandings on how individuals experience and cope with death and dying. Literature attests that coping with the dying and death, and associated experiences, are psychologically, biologically and socially situated and which can be viewed from various perspectives (cf. 3.4) (Wilson & Kirshbaum, 2011:559–560). Changes in the way that these phenomena are theorised in this field correspond to the evolution of society and modern-day healthcare practices (Rose & Ryan, 2016:13).

Some of the earliest work was done by Freud, when he investigated mourning and melancholia. He maintained that individuals mourn the loss of loved ones or any other loss in a heterogeneous manner; there is no one-size-fits-all definition. Freud also identified that environmental factors play a role in the way people mourn their loss. However, in some individuals melancholia, which is a clinical condition, may develop instead of mourning (Dozois, 2000:167–168; Freud, 1949:152–170). Later Freud nullified some of his theoretical conceptions related to melancholia, which further demonstrates that how we make sense of experiences and subsequently cope with these experiences are context dependent and fluid in relation to time (Dozois, 2000:193).

Kübler-Ross postulated a five-stage theory on grief, that terminally ill people experience. The five-stages are: denial, anger, bargaining, depression and acceptance (DABDA). Her stage theory received critique of being an oversimplification of grief and lacking scientific rigour and evidence (Stroebe, Schut & Boerner, 2017:468). Kübler-Ross (2009:ix) does warn in her book *On death and dying. What the dying have to teach doctors, nurses, clergy and their own families*, that all people do not go through these stages in a linear fashion and some never reach certain stages. Stroebe, Schut and Boerner (2017:467) do acknowledge the contribution that Kübler-Ross's work made. However, arguments are put forth for the need of a more theoretical explanation and clarification of limitations. Kübler-Ross's theory, according to some publications, should be abandoned in its current state by HCPs, as a reference, due to the

potential harmful effects it can have as there is a lack of tangible application of the theory (Corr, 2018:10; Stroebe, Schut & Boerner, 2017:467–468). Arguments do exist that Kübler-Ross's work contains important lessons to take note of when conceptualising how individuals cope with death and dying. Each individual constructs meaning and copes with death and dying in a unique manner. HCPs can only effectively care and assist those dying or coping with death and dying if they listen actively to determine the psychosocial needs of the individual. All individuals need to learn from those experiencing or coping with death and dying, so that they can come to know themselves as vulnerable, finite, mortal beings as well as adaptable, resilient and interdependent individuals (Corr & Corr, 2019:para 19). Corr (2018:1–13) does highlight that there are alternative theories and perspectives in current literature. These alternative perspectives recognise that grief is not universal but individualised; there are multiple factors affecting individuals' sense-making of the experience of loss and subsequent coping. Corr and Corr (2019:para 20) add that these alternative perspectives aim to appreciate complexity and individuality inherent to experiences and coping related to these phenomena. The focus has shifted to transformation and growth instead of passive coping (Corr, 2018:8).

Parkes and Prigerson (2010:7) describe the grieving process as usually starting with emotional numbness and a sense of illusoriness and denial. Thereafter, yearning occurs together with guilt and worry, followed by a period of disorganisation and hopelessness. All these feelings and phases decline the more acceptance of the loss grows. Parkes and Prigerson (2010:7) opines that the preceding clinical picture is person, culture, and context dependent and can be different from one person, place or family compared to another. Contrasted with this perspective on grief are the respective model of Corr and Doka. Corr (2018:4) hypothesised that a person has to fulfil certain tasks in coping with dying or terminal illness.

Corr's task-based approach to coping with dying represents activities that a person needs to fulfil to a greater or lesser extent as the individual sees fit. The four primary areas of task work encompassed in Corr's model are presented below (Corr, 2018:5; Doka, 2013a:26–27; Corr, 1992:85–88).

- Physical – the satisfaction of bodily needs and reduction of physical distress that are consistent with other values.
- Psychological – the maximisation of psychological security, autonomy and richness in living.

- Social – sustaining and enhancing interpersonal attachments that are important to the person and to address the social implications of dying.
- Spiritual – fostering hope by identifying, developing and reaffirming sources of spiritual energy.

One can appreciate that Corr presents a series of tasks, and not a stage-based model. The tasks need to be fulfilled in a non-sequential manner, where the sequence is largely determined by an individual coping with dying on an ad hoc basis. Corr (1992:89) highlights that coping extends beyond a dying person to include all individuals drawn into the experience of dying and this includes HCPs. To assist all those involved in a dying experience requires active listening, observation and assessment since no-one can predetermine another individual's coping (Corr, 1992:89). Samson and Siam (2008:427) add that Corr's model represents an approach that concentrates on the reconstruction of an affected person's existence instead of a prescriptive path towards how this reconstruction should be done. Tasks should be satisfied as part of normal human existence.

In contrast is Doka's phase-based model in relation to life-threatening illness. This model includes a larger context than Corr's one (Corr, 2018:4–5; Doka, 2013a:6). All five phases are buffered by psychosocial variables pertaining to a person; the nature of the disease, its progression and treatment; and the developmental context in which a person finds themselves. The five phases of Doka's model are presented below (Corr, 2018:4–5; Doka, 2013a:6–10).

- Pre-diagnostic phase entails recognition of initial indicators of the illness, associated risk, management of anxiety and uncertainty, and developing and following through a specific health-seeking plan.
- Acute phase relates to understanding the disease and actively searching, optimising, fostering, developing and incorporating methods to cope with the changes brought about by the disease and its effects on the self and others.
- Chronic phase encompasses a person managing the side-effects and treatment related to the disease as well as maximising social support. Furthermore, such a person needs to be free to express their feelings and concerns.
- Recovery phase is where a person must deal with the after-effects of the disease and associated anxieties regarding relapse, reconstructing their life and redefining relationships with those caring for them.

- Terminal phase is when a person finds meaning in life and death. Here they focus on coping with all disease-related issues, opt for other interventions to treatment and prepare for death.

According to Corr (2018:5–6) Doka's phase-based model includes a person at various levels of being and therefore facilitates empowerment of a dying person. Like Corr's model, the tasks subsumed in each phase do not follow a linear sequence because a dying individual decides how and when each task is fulfilled. These two task-based models further demonstrate why there is a need to move away from the stage approach in order to have a more holistic view about grief associated with death and dying. This is achieved by referring to tasks that are satisfied on a unique trajectory determined by an individual and context they find themselves in, instead of having definite stages occurring in a linear, sequential manner, as this is too simplistic (Doka, 2013a:6). Doka (2013b:22) acknowledges that these task and phase-based models are not widely applied in gaining insight into the dying process thus advocates for further work to be done to determine its applicability and refine it from thereon.

Walter (1996:7) in his account of grief of the dead, has a model underpinned by two tenets: purpose, and process. According to him the purpose of grief fulfils the role of facilitating the construction, and even reconstruction, of a memoir, which helps the living assimilate memory of the dead in their continuing lives. Process involves talking about the deceased with those who knew the deceased to move on without the deceased in their life. He further maintains that this is in alignment with postmodern society, which necessitates that people continuously reconstruct their self to move along with the ever-changing social background they find themselves in.

Stroebe and Schut (1999) argue that there are still gaps in the theories developed up to the time of developing their dual process model of coping with bereavement (Stroebe & Schut, 1999:197). The focus of their model is how individuals come to terms with the loss of someone close to them. People move between loss-orientated (deals with the loss of the deceased person) and restoration-orientated (entails what needs to be dealt with and how to deal with it) stressors to cope with (Stroebe & Schut, 1999:212–216). This coping occurs in the context of everyday life of a bereaved person and this sometimes assists the person to steer away from grieving for some time. A bereaved person moves between these two stressors in an oscillating fashion, which entails avoidance and confrontation of various stressors to a greater and lesser extent in order to cope with the loss of a deceased. The authors argue that the oscillating fashion of coping, between stressors, assists in optimal adjustment over time and this is

beneficial for a bereaved person's physical and mental wellbeing (Stroebe & Schut, 1999:216). They emphasise that socio-cultural variables influence how people experience and cope with the loss of a loved one (Stroebe & Schut, 1999:219–220). By implication, one can appreciate that grieving the loss of someone is a cognitive appraising task influenced by context, person-related factors, and resources available, which subsequently leads to making sense of the experience and a bereaved person's subsequent coping.

In 2008 a proposed comprehensive task-based model was published. It was developed from previous works on coping with dying, stress and illness (Samson & Siam, 2008:427). The model was for all stakeholders involved in dealing with patients with major chronic illness; its aim was to provide holistic insight into how one adapts when suffering from a chronic major illness (Samson & Siam, 2008:426). It comprises five major components that starts with the source of stress and ends with coping skills and an outcome. Briefly each component pertains to the following (Samson & Siam, 2008:427–429).

- Component one considers an individual's personal characteristics, background, physio-socio-cultural environment and announcement of the diagnosis of major chronic illness as sources of stress.
- Component two entails a cognitive appraisal activity related to the announcement/stressor.
- Component three, the crux of the model, involves the subsequent adaptive tasks that an individual need to adopt to effectively cope with the stressor. The tasks are physical, psychosocial and vocational in nature. The adaptive task adopted largely depends on an individual's appraisal of the stressor.
- Component four involves coping skills that are the mental or physical means that an individual will use to achieve the identified adaptation task(s) in component three.
- Component five portrays the outcome. There are two possibilities: a positive outcome when the diagnosis is integrated with a greater sense of normalcy when the individual has a greater sense of control; a negative outcome refers to a degree of psychological decline when an individual cannot re-establish a sense of normalcy or regain a sense of control over the course of their life.

Two more recent theoretical frameworks on grief concur with the assertions postulated by the theories described above. Furnes and Dysvik (2010:136–139) agree with the postulations that dealing with the loss of someone to death or dealing with chronic pain requires a bereaved or

sufferer to relearn their world by adapting to integrate this new aspect into their life to achieve a sense of normality. Maddrell (2016:183) agrees that the experiences and coping with death and dying is an interchange between physical context and psychosocial factors.

The models described all primarily focus on a dying person, a person diagnosed with a terminal illness or the bereavement of those that lost someone close to them. Family, friends and HCPs are a secondary focus.

In terms of sourcing literature one theorist published a model that pertains specifically to the grieving process of HCPs. Papadatou's (2000:69–72) model holds that health professionals' sense and meaning making, which are associated with a patient's death, are largely influenced by an interplay between their personal worldviews, beliefs and attitudes related to life and those of their workplace. When there is a perceived congruence between the views, beliefs and attitudes of a workplace and those of HCPs, albeit it not necessarily a healthy harmony, it acts as validation and reinforcement for HCPs' grieving patterns and behaviours. The opposite is true when there is misalignment. This highlights the impact that an organisational culture has on the grieving process; it greatly influences how HCPs opt to grieve about the death of patients. The model also highlights that support from colleagues, or the institution itself, influences HCPs' grieving. Support or the lack thereof can have positive and/or negative impacts. Another concept that links to Papadatou's work is disenfranchised grief, which was coined in 1987 by Doka. It refers to a bereaved individual's feeling of being unable, or not permitted, to grieve their loss because they feel it is not socially validated, publicly observed or openly acknowledged (Doka, 2002; Doka, 1987:455–469). Disenfranchised grief highlights how workplace culture, values, beliefs and worldviews can further impact HCPs' grieving of death in the workplace.

It can be appreciated that the experiences of and coping with death and dying are multifaceted and individualised. There are various universal factors that influence the experiences and subsequent coping. These factors are intrapersonal and contextually bound based on historical, psychosocial and physical characteristics. The notion of linear stage-based grieving has been discredited due to the complexity of experiences and coping with death and dying. Therefore, more non-sequential, task-based models were developed to account for the multitude of influencing factors on the grieving process.

A brief description of various views on and about death and dying, from different fields, is provided for further contextualisation and understanding of the variations in experiencing and coping with death and dying.

3.4 PERSPECTIVES ON DEATH AND DYING

It has been theorised that a multitude of factors influence how people experience and cope with dying and death. Therefore, one can argue that by adopting a specific view of death and dying can also add a variation of dimensions to our experiences. This section provides an overview of relevant perspectives on death and dying as the aim is to substantiate and understand why different people experience and cope with dying and death differently.

3.4.1 Philosophical perspectives

San Filippo (2006:6) maintains that if we want to gain a more comprehensive understanding of the manner in which human beings experience death, we need to review philosophical reasoning related to this phenomenon. The phenomenological school of thought is relevant since the focus of this thesis relates to how undergraduate diagnostic radiography students experience and cope with death and dying during WPL. Drawing on the seminal works and ideas of Heidegger, Husserl, Sartre, Merleau-Ponty and some modern-day philosophers, a synoptic, philosophical perspective regarding death and dying is provided.

Heinämaa (2015:100) maintains that phenomenology provides insights into death as an endpoint, event, interruption and threat. According to San Filippo (2006:8–9) Heidegger warns that not much emphasis should be placed on the afterlife since continued existence after physical existence is not guaranteed, no matter what one's actions were whilst alive. This warning therefore has two implications with regard to fearing death. The first is that death is a threat to one's existence. The second is the realisation of one's non-existence that is a prerequisite to liberating oneself from the anxiety associated with the fear of death. These implications can be argued to hold truth because death itself is not a loss. Rather loss refers to the lived experiences of those that remain behind as they mourn the absence of the deceased being present in the same world (Heidegger, 1962:282). Heidegger (1962:281) advanced Husserl's intuitive ideas of experiencing death and dying. Heidegger argues that *Dasein* (being there) can be objectively experienced during the death of another person when certain interpretations about one's own death can be made. However, Heidegger (1962:283) refutes the claims made by his predecessors that one can authentically interpret one's own death with the knowledge of another's death. So therefore, one's own death remains an indeterminant

phenomenon since one can only spuriously talk about death based on subjective appraisals and awareness of different death and dying experiences (McDonnell, 2011:104, 109–110). This is convergent with Sartre's idea that it is the person themselves who decide the attitude they hold in relation to death (Howells, 2010:137). From a Husserlian phenomenological standpoint, experiencing death is embodied in both subjective and objective perception of being. Death is not seen as a singular event. It is an occurrence in an intersubjective space in time because the dead or dying person cannot experience or live through the phenomenon of death or dying; instead it is observed and experienced by others during that particular time (Heinämaa, 2015:105; Dodd, 2010:54–56). Hence, our knowledge about our own death and mortality is based on observations and activities associated with others' deaths. This then intertwines our lived experiences with the socio-cultural contexts we find ourselves in at specific points in time (Heinämaa, 2015:111–112). Drawing on Merleau-Ponty's work, according to Ratcliffe (2019:659), the social world in which people find themselves during times of death and dying experiences appears to be integral to how individuals grieve. This is because it helps those that remain behind to come to terms with their loss, as they can easily become entrapped in the temporal presence of the deceased. The social world provides opportunities for people not to dwell on the absence of the deceased, but instead to find new directions of being in and toward the world (Ratcliffe, 2019:658–659).

There are differences in phenomenologists' work drawn on above. However, their work is also complementary which urges one to consider the phenomenon of death and dying from a variety of perspectives (i.e., person in relation to different socio-cultural milieu at particular space in time), to fully understand it, due to its inherent complexity (Luper, 2019). In present day, death is believed to mark the end of one's life; reflection helps us to make sense of the significance of death in our own lives to the extent that it liberates us to immerse ourselves in the life we are yet to live (Mason, 2011:para 10).

3.4.2 Religio-cultural and spiritual perspectives

The role of culture, religion and spirituality in relation to death and dying is well documented. It is believed that spirituality and religion help those dying to have greater internal control over the dying process where they give control over to a higher deity (Koenig, 2002:20). A Brazilian study found that religion helped families to be more hopeful and optimistic about their children's life-threatening disease prognosis; they believed that a higher being has healing powers that will help their terminally ill children (Bouso, Serafim & Misko, 2010:159–160). Also evident from literature is that religion and spirituality provide a useful framework for individuals to make

sense of their terminal-illness and to make related decisions about their healthcare, which further helps them to cope with their imminent death and its associated uncertainties (Puchalski & O'Donnell, 2005:115, 119). Walsh, King, Jones, Tookman and Blizard (2002:4) found in their study that individuals that have stronger religious and spiritual beliefs resolved their grief more rapidly compared to people with little to no such beliefs. The implications for healthcare professionals would thus involve cognisance of the role that religion, culture and spirituality plays in grief so that a more patient-centred approach to care can be adopted.

The more common religious/spiritual and cultural views on death and dying are described below. Although death and dying is an inevitable experience for all human beings, the manner in which different traditions and cultures interpret death and dying vary considerably. The ways in which different traditions use different methods to grieve the death of an individual are vast. These range from the manner in which a deceased is buried, the type and time of a funeral, and even the manner in which a deceased has to be dressed (Bryant, 2018:para 1; Loddon Mallee regional palliative care consortium, 2011:1–16; San Filippo, 2006:18–24). The discussion below focusses more on how death and dying are conceived in common religious/spiritual and cultural traditions to gain insight into conceptualisation of death and dying to interpret the findings obtained during this study. Table 3.1 provides an overview of the essential underpinnings of how different religions and cultures view death and dying.

Table 3.1: Religio-cultural and spiritual perspectives regarding death and dying*

	After life	Meaning attached to death/ dying
Buddhism	<ul style="list-style-type: none"> • When individuals die, they are reborn again into another life • An individual's actions on earth create a force known as karma, which determines the life an individual will be reborn into • Good karma results in higher existence in life after death 	<ul style="list-style-type: none"> • Death is an experience leading to spiritual growth • The ultimate goal is to reach nirvana which is the ultimate state of peace due to a holistic understanding of the nature of reality
Hinduism	<ul style="list-style-type: none"> • Believe in reincarnation • At death an individual's soul simply moves from the one body to the next in view of reaching Brahman. • It is an individual's current actions and thoughts that determine the nature of the individual's next life 	<ul style="list-style-type: none"> • Do not fear death • Dying is seen as fulfilment of life and celebrations to prepare for the inevitability of death • It as a life event that one prepares for death is a series of changes that an individual pass through during their lifetime to reach Brahman or Moksha: ultimate reality and liberation from death and rebirth
Islam	Believes in life after death in the form of an individual's soul leaving their body at the moment of death	<ul style="list-style-type: none"> • Death is also the will of Allah • Death is the end of biological life and the continuation of the soul that lives on in a resting state until judgement day with Allah

		<ul style="list-style-type: none"> • Death of someone is a loss to the whole Muslim community and not just the family and friends of the deceased
Judaism	<ul style="list-style-type: none"> • Focus on present life and not life after death since Judaism holds that everyone simply lives and dies once • The deceased will face judgement day with God and will either go to heaven or end up in hell based on the worth of the individual's life as decided by God 	<ul style="list-style-type: none"> • Bodily death occurs before death of the soul • Death is part of life and God's will
Christianity	<ul style="list-style-type: none"> • After death come, before God, face-to-face, and be judged. Based on God's judgement they will enter an eternity of happiness in heaven or an eternity of sadness and despair in hell. • Variations in Christianity exist in terms of how God will admit his followers and believers into heaven. Some Christian teachings refer to an unconscious sleep from which God will awaken his followers and take them to heaven for eternity 	

(Berkley Center for Religion, Peace & World Affairs, 2020; Bryant, 2018:para 7–8; Loddon Mallee regional palliative care consortium, 2011:4–7,9–11,13,15; San Filippo, 2006:20–24).

From the perspectives presented in Table 3.1 we can recognise that life after death is integral to all. The descriptions and how it happens differ from the various perspectives. Therefore, sanctity of life is the centre of all these views. The philosophical perspectives (cf. 3.4.1) provide some reasoning that gives some grounding for these differing perspectives in religion, spirituality and culture.

3.4.3 Anthropological perspectives

The simple cessation of bodily function is one part of dying and death. The other intertwined aspect to dying and death is that it is a social event that prepares a person for life after death (Appel, 2011:20; Simpson, 2011:3). According to Simpson (2011:3) Hertz holds that how people make sense of the death of a community member is influenced by their beliefs, value systems and worldviews. Subsequently, this influences the symbolisms, mythology and rituals that various people attach to dying and death. This supports Varisco's (2011:206) view that death has a social function. Varisco (2011:206) explains that the social function entails how a corpse is cared for, as well as the rituals and rites of passages accompanying the death of a community member and how the community is involved. He maintains that regardless of religious views, each person should be open-minded to recognise that this will always influence the way anyone creates meaning and sense about dying and death (Varisco, 2011:206). Considering an anthropological perspective on religion and death, it seems that there is a dominant cross-cultural view that the way people construct meaning of death is influenced by

both social and individual factors (Varisco, 2011:206). Since there is a social dimension to death, it is also the view of Varisco that a community has a shared responsibility to care for others (Varisco, 2011:206–207). Hertz's work, as highlighted by Simpson (2011:5), underscores that one should be cognisant of the fact that the way people interpret death, and create meaning thereof, changes with time and will influence subsequent attitudes, rituals, myths and symbols used.

3.4.4 Sociological perspectives

Faunce and Fulton (1958:205) were the initial thinkers to argue that death and dying is the epicentre of a cultural complex. The latter comprises groups of interconnected social behaviours which function together in a constant and meaningful manner. This cultural complex provides the premise of departure for individuals that are part of the particular complex to make meaning and sense of death and dying, as well as shape attitudes towards death and dying. Subsequently, the role of functionaries, death rites, rituals and related practises are also shaped and influenced by this cultural complex (Faunce & Fulton, 1958:205). The death of an individual should be seen as part of a bigger social-situated arrangement surrounding death (Faunce & Fulton, 1958:205). The social context in which phenomena occur is therefore important to understand why people interpret and respond to phenomena in a specific manner. If the social context in which dying, death, bereavement and grief took place is ignored then a distorted and incomplete understanding of how people experience dying, death bereavement and grief results. This is because all individuals are born into pre-existing societies that have a definite influence on the individual's life experiences. Further illumination of this assertion is when we consider emotions, in relation to dying, death, bereavement and grief.

Emotions are argued to be a sociological concept since they are formed, experienced and triggered within a given social context. The social processes and structures encompassed in a social context influence how people construct and express their emotions in response to a stimulus (Thompson et al., 2016:172–173). Further to this, it is important for individuals to belong to a specific group because it gives them a sense of belonging and legitimation of their position in relation to death and dying; it facilitates their sense-making of encountered experiences as well as offers guidance regarding the norms and practices that are acceptable within a given social milieu where the specific group find themselves (Thompson et al., 2016:175). It is therefore not unreasonable to argue that considering both intrapersonal and social factors, to gain a holistic understanding of how individuals experience and cope with the

dying and death, is a more credible reflection of the phenomenon, as opposed to only studying either intrapersonal factors or social factors.

3.4.5 Psychological perspectives

The insights that psychology bring to the understanding of death and dying are classified in three categories: psychoanalytic, humanistic, and existential. The contributions of each of these are highlighted below.

3.4.5.1 *Psychoanalytic perspectives*

Drawing on Freud's work, San Filippo (2006:10) explains that people utilise two cognitive defence mechanisms to deal with death and dying. The first being denial since this helps an individual to not think about death until its inevitability is no longer possible. Secondly, people also use illusions to create acceptable alternative conceptions of death to avoid the unpleasantness associated with death. San Filippo (2006:10) highlights that Freud maintained that people can more easily speak and accept others death than their own since they cannot conceive and accept their own mortality. On the other hand, Jung holds that human beings should become more aware of death so that they cannot deny its reality, which ultimately could facilitate the acceptance of the normality of death as part of life (Jung, 1989:326). Considering Jung's perspective, the mechanisms postulated by Freud can then be argued to decrease or repress a human being's awareness about the reality of death; they therefore find it more difficult to come to terms with death. If one considers the work of Kelly the argument is not quite so simple. This is because the manner in which people experience and cope with death is dependent on a person's personal experiences and cultural factors. Kelly argues that individuals constantly adapt their interpretations based on the impact that changes in their environment have on their current conception of death (Cherry, 2020; Kelly, 1977:359). Kelly's views converge with those of Bowlby's attachment theory (Mallon, 2008:7) regarding the influence that one's environment and relationships with other people have on one's meaning creation of death. Bowlby highlights that both current and past losses influence one's response to a death experience and how an individual creates meaning and subsequently cope with it. Bowlby notes that whether separation from another person is temporary or permanent, a sense of connection remains (Mallon, 2008:10), which by implication can be situated within the religious views on life after death if the loss is permanent (cf. 3.4.1–3.4.2).

3.4.5.2 Humanistic perspectives

Maslow and Rogers greatly influenced humanistic psychological view on death and dying. Zalenski and Raspa (2006:1123–1124) explain that according to Maslow death and dying is less feared by individuals that perceive that they have lived a fulfilling and purposeful life. Rogers (1980:87–88) concurs with the view that the circumstances surrounding dying exacerbate the fear of death instead of dying itself. Individuals who are unaccepting of their lives protect themselves from the threat of death by using defence mechanisms of denial and illusions as postulated by Freud (cf. 3.4.5.1) (San Filippo, 2006:15).

3.4.5.3 Existential perspectives

The existential perspectives of psychology maintain that an individual faced with dying and death should find meaning and a purpose for their suffering. It is argued that by doing this then the reality of dying and death is better accepted. Therefore, it requires a person to constantly reconstruct their perceptions, attitudes, values, life schemes and meaning attached to dying and death (Tomer, 1992:482; Frankl, 1968:122).

The brief exposition of psychological schools of thought teaches us that creating meaning about death and dying is multifaceted and a complex interplay between present and past innate human and environmental factors.

3.4.5.4 Positive psychology perspectives

The intention of positive psychology is to mediate a change in psychology to begin building positive qualities instead of simply only focusing on illness reparation to obtain full human functioning (Seligman & Csikszentmihalyi, 2014:280). Current positive psychology perspectives are rooted in Seligman's PERMA well-being theory (Seligman, 2011). PERMA is an acronym for positive emotion, engagement, relationships, meaning and accomplishment, which are posited to be the elements of well-being. The main goal of this theory is to increase flourishing through increasing positive emotion, engagement, meaning, positive relationships and accomplishment (Seligman, 2011:16–25). In relation to grief and bereavement, positive psychology can be used to assist individuals to reconstruct their experiences with death and dying in more positive terms, which may assist them to live engaging and meaningful lives, and to facilitate a process of post-traumatic growth, which in turn can elicit more positive emotions, a sense of accomplishment, and lead to positive relationships (Roberts, Thomas & Morgan, 2016). A likely outcome then is resilience and good adjustment to emotionally taxing experiences such as terminal illness (Aspinwall & MacNamara, 2005:2552, 2554).

3.4.6 Developmental age perspectives

Levinson's theory of life structures provides useful theoretical tenets to understand how age could potentially influence how adults experience death and dying. Birth to 22 years of age is considered pre-adulthood where a person develops progressively to a more independent, responsible adult. Between 17 and 22 years early adult transition occurs, where early adulthood gets underway and a person modifies their relationships with their significant others and starts finding their social order as an adult (Levinson, 1986:5). From approximately 17 to 45 years of age individuals enter early adulthood. During this era, they experience the era of adulthood that Levinson describes as "of greatest energy and abundance and of greatest contradiction and stress" (Levinson, 1986:5). This is because internal aspirations are continuously buffered against demands by family, community and society; many a time the costs to an individual equals or exceeds the benefits of this era of adulthood. From about 40 to 45 years of age individuals make a midlife transition. During this transition they are believed to become more compassionate and thoughtful and less terrorised by the tensions between internal ambitions and external demands (Levinson, 1986:5). Middle adulthood is between 40 and 65 years of age where individuals have relatively self-sufficient and satisfying personal and social lives. They also take on the responsibility of developing young adults for later eras of adulthood (Levinson, 1986:6).

Considering Levinson's work in relation to death, dying, grief and bereavement one could therefore argue that early adulthood may be accompanied by more intense experiences. The latter are due to the greater number of conflicts that exist for individuals in that era in terms of internal drives and external stresses since early adulthood is characterised by balancing self, community and greater society so as to locate oneself in the world as an independent, social being.

3.4.7 Biological/medical perspectives

Historically death of a person was declared when an individual had no pulse, did not breathe and their pupils were fixed. This was known as the cardiopulmonary standard (Simpson, 2011:7; Sarbey, 2016:743–744). This criterion is still used globally today. However, biomedical advances and technology allow for the induction of artificial body functions, like breathing by using a mechanical ventilator. A more modern western originating criterion was developed to take account of the technological advancements in medicine. This criterion, used in many countries across the world, to declare someone dead is the persistent vegetative state (PVS). An individual is in a PVS when they have no awareness of the self and environment, which is

frequently associated with sleep-wake cycles, as well as either partial or complete preservation of the functions of the hypothalamus and brainstem (Ashwal et al., 1994:1499). In addition, an individual does not voluntarily respond to external stimuli (aural, visual or physical) (Bender, Jox, Grill, Straube & Lulé, 2015:235; Ashwal et al., 1994:1499). Thus, the person has no higher brain function (Sarbey 2016:747). More clinical diagnostic tests are also being considered and used in the assessment and diagnosis of PVS, inter alia functional magnetic resonance imaging (fMRI), ¹⁸F-fluorodeoxyglucose positron emission tomography (FDG-PET), electroencephalography (EEG), eye tracking, event-related cognitive potentials (ERP) and electromyography (EMG). These methods cannot provide one hundred percent definitive assessment and diagnosis of PVS but can enhance detection. It is proposed that more clinical studies are required (Bender et al., 2015:236–241). This modern-day criterion is not free from ethical questions or cultural taboos. Some cultures in the East, like the Japanese, consider an individual to be alive since their cardiopulmonary functions are still intact (Simpson, 2011:7–8). The opposing views highlight the importance that culture, and context impact on how one attempts to conceptualise death.

3.4.8 African perspective

There are variations across Africa therefore is discussion is of a limited African perspective that refers to the entire continent of Africa and its global diaspora, in general. In African cultures death is not seen as the obliteration of life. Instead, the deceased individual's condition of existence morphs into a different state to join their ancestors in the company of the Almighty creator of life. Many African beliefs are also rooted in Christianity and some hold onto more westernised views around death and dying (Rickens, 2017:2–3; Baloyi & Makobe-Rabothata, 2014:236; San Filippo, 2006:19). Although death is seen as part of everyday life by African cultures, it remains a challenging and emotionally charged situation to deal with. To this extent African cultures have an extensive repertoire of symbols, rituals and rites of passages to remember, celebrate and mourn the death of a community member (Baloyi & Makobe-Rabothata, 2014:234–237; San Filippo, 2006:19–20).

The majority of African cultures venerate the life of the deceased to the extent where the deceased becomes an important extension of the living (Rickens, 2017:3). One could ascribe this to the belief that the deceased has an actual presence and influence on the lives of the living left behind (Baloyi & Makobe-Rabothata, 2014:235). In some cultures, nicknames are also given death, for example, 'the wicked one' and 'the fair judge' (Jimoh, 1985:76). The use of more positive connotations is preferred as death is seen as a very negative concept in African

culture (Baloyi, 2014:3). In African cultures, the cause of death is not only classified as natural or unnatural; but added to this is death due to witchcraft and sorcery and being fetched by the ancestors (Baloyi, 2014:3–4). Death is also argued to be a social phenomenon that brings community members, regardless of relationship, together in unity. This is very characteristic of Ubuntu and its associative characteristic of communalism (Baloyi, 2014:7). Jimoh (1985:77) notes that storytelling and folklore are also very important facets that influence peoples' attitudes and conceptions about death from generation to generation.

These cultural aspects to how Africans conceive and cope with death and dying are often misunderstood in social structures and processes, and the workplace, that are mainly based on Eurocentric cultural norms (Baloyi & Makobe-Rabothata, 2014:232). This calls for greater effort to recognise, respect and understand the multicultural perspectives related to the conceptualisation of death and dying so as to support all affected (Baloyi & Makobe-Rabothata, 2014:241).

3.5 IMPORTANCE OF DEATH AND DYING RELATED TO HEALTHCARE PROFESSIONALS

Approximately half of all deaths in South Africa occur in healthcare establishments (cf. 1.2). This occurrence is congruent with the social transformation of society towards medicalisation of death, hence more people die in the care of HCPs as compared to at home with their families (Rose & Ryan, 2016:13). Death and dying become important to HCPs. They are faced with this almost daily in the course of their work and must deal with these situations to ensure appropriate and effective care of the people in healthcare facilities. Death and dying is not a universal concept and everyone experiences, copes with and conceptualise death and dying differently. Therefore, the experience and coping with death and dying have no universal truth. Only strands of similarity exist in how people create meaning of this phenomenon from their own point of view based on personal factors, worldview, beliefs, values, attitudes and the environment in which they find themselves. The importance of death and dying, in terms of secularisation, rationalisation, individualisation, medicalisation, and emotional labour, is discussed next.

3.5.1 Secularisation, rationalisation, individualisation and medicalisation of death and dying

As society transforms with time, death and dying are becoming more controlled, scientific phenomena instead of normal social occurrences. This brings about the notion that death and

dying is more secularised, rationalised, individualised and medicalised in the society that we find ourselves in today.

3.5.1.1 *Secularisation of death and dying*

The industrial revolutions and urbanisation of society have initiated a trend of death and dying as more of a non-religious stance as opposed to religious views. People are more concerned with technical or individual understandings of death and dying in society today (Barry & Yuill, 2016:271). This can be ascribed to the rationalisation, individualisation and medicalisation of death and dying.

3.5.1.2 *Rationalisation of death and dying*

Rationalisation of death and dying relates to the more controlled and governed approach at the expense of human emotion and naturalness, usually associated with death and dying. In this thinking death and dying is an object of bureaucracy and categorisation as opposed to being contextualised in private emotional frameworks. The disadvantage of this is that it does not assist an individual to effectively cope with experiences of death and dying (Barry & Yuill, 2016:270–271).

3.5.1.3 *Individualisation of death and dying*

Death and dying in modern society are more self-orientated and less focused on the wider community. People make decisions regarding their life as they want and wish to instead of considering the wider community in their decisions. The implication of this is that individuals start to lose relationships with others who could potentially be the much-needed emotional support required when faced with scenarios of death and dying (Barry & Yuill, 2016:271).

3.5.1.4 *Medicalisation of death and dying*

Historically death and dying were explained in terms of religion. Today death and dying have become more of a medical or health-oriented problem. Death and dying are being colonised by the medical and healthcare professions and are considered a medical event instead of a social phenomenon. Hence, more people die in healthcare establishments under the care of health professionals (Barry & Yuill, 2016:271).

In terms of these modern facets that contribute to our conception of death and dying, means that HCPs also need to be cognisant of the situation of them being exposed to death and dying due to the medicalisation of death and dying. They are also need by way of organisational

culture and education to remain objective. The latter speaks to the rationalisation of death and dying where a patient becomes an object of their medical condition, the healthcare system and care they receive. The care that patients receive are further influenced by their liberty to make self-directed decisions about their medical conditions, and society's desire to understand medical conditions within scientific and humanistic terms, opposed to religious terms. Each patient will therefore present with their own needs, desires and expectations of a healthcare system and professional that cares for them. One can therefore argue that this can be emotionally arduous for HCPs; yet at the same time it is part and parcel of their daily work routine.

3.5.2 Care of the patient: the emotional labour

At some point in time an HCP is faced with a dying patient who dies. Facing these situations in the workplace comes at an emotional cost and affects HCPs in some or other way. Various factors impact on how each HCP may be affected as not all experience the same emotions as discussed in this and the previous chapter. This point is elaborated on in the next chapter (cf. 4).

The emotional labour theory of Hochschild comes to mind when we consider the emotional cost of death and dying on HCPs in their workplace. According to Hochschild's definition, emotional labour is the performance and suppression of emotions as and when required in a workplace setting, even if a HCP does not experience those emotions at the time in question (Barry & Yuill, 2016:279). This therefore requires HCPs to almost play a specific role in the name of patient care (Yang & Chang, 2008:881). Working with one's emotions is increasingly becoming popular in a modern-day workplace instead of only relying on physical skills. Emotional labour can result in burnout, job dissatisfaction, and lack of commitment to an employer. The reason for this is that HCPs start feeling detached from their true emotions and feelings and those of others (Barry & Yuill, 2016:279; Bayram, Aytac & Dursun, 2012:300, 303–304; Yang & Chang, 2008:879, 881). One can conclude that the care of a patient will be negatively impacted if the wellbeing of HCPs is not promoted in order to facilitate their coping abilities with death and dying in the workplace.

3.6 CONCLUSION

Truth is not universal within our postmodern society. Urbanisation and other societal transformations have brought different views to death and dying. These changes also have influenced how and where we are faced with death and dying situations. There are theories on how people experience death and dying, as well as various schools of thought on this phenomenon. The clear trend is that our belief system and worldviews impact on our attitudes, behaviours, experiences and coping regarding death and dying. As per the theme that emerged from the previous chapter on WPL, the social context that people find themselves in further adds as a factor that influences our experiences and coping with death and dying. Interacting and caring for patients that are terminally ill or when faced with a situation where a patient died, requires a certain amount of emotional labour from HCPs. This can be quite a challenge.

Evidence of how HCPs experience and cope with death and dying in their workplace is presented in the next chapter. Support strategies, which can be put in place to assist in providing effective means of coping for HCPs to ensure their optimal wellbeing in their workplace, are also discussed.

CHAPTER 4: DEATH AND DYING: EXPERIENCES, COPING AND SUPPORT STRATEGIES

4.1 INTRODUCTION

Diagnostic radiographers and students daily make decisions regarding various circumstances related to care, examinations and management of patients. These decisions include informed spontaneous ones, which are often necessary in emergency situations, like death and dying scenarios. These decision-making processes are driven by both emotions and rational thought, due to our neural circuitry and associated physiological processes (Goleman, 1995:15–20). These decisions can be rather stressful and radiographers and students continuously need to find ways to cope with these events.

The multitude of perspectives and theoretical explanations were discussed in the preceding chapter in terms of how people and HCPs experience and cope with death and dying phenomena. The importance of these phenomena in healthcare was also described. Workplace learning can influence the experiences and coping of students. It was discussed in Chapter 2 in terms of the context in which death and dying occur. A discussion on how HCPs experience and cope with death and dying patients in the workplace is addressed in this chapter. An outline of support strategies that could be put in place to enhance the wellbeing of HCPs is presented as it pertains to the current accessible body of literature (cf. 4.5). Theoretical perspectives and empirical evidence are used. Concluding the chapter is an interpretation of the available literature to further highlight the existing gap and significance of the study conducted.

4.2 CONCEPTUALISING STRESSORS, STRESS EXPERIENCES AND COPING

Stressors, stress experiences and coping can be viewed from various theoretical perspectives. It is understood that stress and coping are interrelated. This section provides an overview of some of the common theoretical explanations.

4.2.1 Stressors and stress experiences

Stressors refer to any environmental stimulus or experience that invokes stress or emotional difficulty (Cambridge Dictionary, 2019; Schneiderman, Ironson & Siegel, 2005:607; Lazarus & Folkman, 1984:2). They threaten an individual's wellbeing and ability to cope with them (Weiten, Dunn & Hammer, 2018:63). The way an individual experiences a stressor can be dependent on their interpretation or appraisal of the stressor; shared situational circumstances

with others and/or acculturation. These factors can have a negative or positive impact on an individual (Weiten, Dunn & Hammer, 2018:64–66, 78–83). This recent description of stress, which was adopted in this study, is what has emanated from years of work on understanding and conceptualising stress (hereinafter referred to as stress experience). Some of the main contributory works to this understanding of stress follows.

A stress experience is theorised to be a stimulus, a response, and/or a transaction. The latter indicates some relational aspect between a human being and the milieu they find themselves in (Biggs, Brough & Drummond, 2017:351; Walinga, 2014:687–689; Lazarus & Folkman, 1984:12–20). The most accepted underlying theoretical perspective of stress is that it is a reciprocal transaction between a stimulus (i.e., stressors) and subsequent response, when a stressor evokes a feeling of threat or results in loss or harm (Weiten, Dunn & Hammer, 2018:63). Seyle's work, and that of Holmes and Rahe, has been criticised for the disregard of how human beings subjectively experienced objective stressors as well as the role of coping mechanisms as mediators for the stress experience encountered. These weaknesses have been examined and considered by theorists, such as Lazarus and partners, who advocate that stress is a transaction between an individual and their environment. They maintain that stress is not a mere external stimulus nor a common pattern of physiological, behavioural or subjective responses; it is more psychological and transactional in nature (Walinga, 2014:687–689; Krohne, 2002). As presented at the beginning of this section stress is a subjective experience influenced by various factors involving both a person and context hence is relevant in terms of these tenets of the psychologically orientated theories. One can further argue that this influences the approach to coping that individuals adopt to mediate their stress experience. The range of responses to stress experiences can include: emotions (negative and positive); changes in one's physiology and bodily homeostasis; and behavioural changes. The latter in terms of stress experiences is regarded as more voluntary and constitutes coping. The other two groups of responses are more automatic reactions to a stress experience. All three groups of responses may be healthy or harmful (Weiten, Dunn & Hammer, 2018:70–78).

4.2.2 Coping

Coping can be described as a response to handle stress experiences faced by an individual to mitigate feeling overwhelmed or helpless in these situations (Howe, 2008:104; Folkman & Moskowitz, 2004:745). One or more of the following three broad responses can be adopted by an individual in relation to a stress experience they had: modifying or changing the experience's characteristics that are problematic; making meaning of the problematic characteristics of the

experience to neutralise it; managing the emotional consequences (Weiten, Dunn & Hammer, 2018:95; Howe, 2008:104). Lazarus and Folkman (1984:19) argue that one's ability to cope with a situation is dependent on an individual's appraisal of the stressor faced. Howe (2008:104) argues that there are three interdependent responses involved in coping: cognitive, behavioural, and emotional. It can, therefore, be argued that these perspectives highlight that coping is influenced by external stimuli and is also controlled internally by individuals themselves. This then brings about the notion that not every individual will experience a similar situation in the same manner. The transactional nature of stress is a reciprocal relationship where environment and individual both equally influence how an individual experiences stress and subsequently copes with it (Biggs, Brough & Drummond, 2017:351).

Some individuals may adopt a variety of strategies to cope with their stress experiences. Cheng (2003:425; 2001:814) highlights that coping flexibility (i.e., the use of multiple coping mechanisms to cope with a stress experience) is more effective than using only one coping mechanism continuously to deal with stress experiences. Coping flexibility assists an individual to adopt the most effective coping mechanism for the particular stress experience they are faced with (Cheng, 2003:425). This converges with the transactional nature of stress due to the dynamism between person and environment, as indicated previously. Cheng (2003:425; 2001:828–829) found that the impact of stress experiences on an individual's wellbeing is also reduced due to coping flexibility. According to Weiten, Dunn and Hammer (2018:64) adopting a variety of coping strategies could be due to the additive effect of stress; where the demand of a few minor stressors collectively causes strain on an individual. The success of coping with a stress experience encountered cannot be guaranteed as the adaptive nature of an individual to the experience is dependent on the nature of that situation (Weiten, Dunn & Hammer, 2018:96).

Classifications and nomenclature for coping strategies are not as clear cut. Literature indicates that there are about 100 taxonomies and in excess of 400 distinct coping mechanisms proposed (Stanislowski, 2019:1; Weiten, Dunn & Hammer, 2018:95; Skinner, Edge, Altman & Sherwood, 2003:216). The prevailing categories of coping mechanisms are problem-focused and emotion-focused coping (Stanislowski, 2019:1; Folkman & Moskowitz, 2004:751–752; Skinner, Edge, Altman & Sherwood, 2003:221,226). These categorisations have been discouraged (Skinner, Edge, Altman & Sherwood, 2003:216), but they are still used today (Stanislowski, 2019:1; Carver & Connor-Smith, 2010:685–687). Perhaps this could be ascribed to the significant role that Lazarus and Folkman played in the conceptualisation of stress and

coping (Biggs, Brough & Drummond, 2017:351,357). Appraisal-focused coping (or meaning-focused coping) was added in the revisions of Lazarus and Folkman's original 1984 theory (Folkman, 1997:1216–1218; Folkman, 2008:5–11). It is included in the taxonomy proposed by Carver and Connor-Smith (2010:685–687). Each of these three categories are outlined below in terms of description and examples of coping strategies encompassed in each (Table 4.1). The examples provided are by no means an exhaustive list.

Table 4.1: Coping taxonomy and examples*

Category of coping	Description of category	Examples of coping strategies
Problem-focused coping	Steps or practical strategies taken by the individual to eliminate, escape or reduce the impact of the stressor. This type of coping is also most favourable for long-term coping.	<ul style="list-style-type: none"> • Seeking advice and information to help individuals cope with stress • Finding solutions to solve the problem systematically • Time management enhancement • Cultivating self-control • Assertiveness
Emotion-focused coping	Coping with an end goal of curtailing the distress because of the triggers caused by the stressor. Put differently, emotion-focused coping aims at decreasing and managing the intensity of negative or upsetting emotions rather than solving the challenging situation itself, and therefore these strategies only make one feel better oppose to eliminating the source of one's distress. Emotion-focused coping is often used in situations out of our control, such as death and dying in the workplace.	<ul style="list-style-type: none"> • Releasing repressed emotions by crying or yelling, for example • Relaxation activities like meditation or jogging • Distraction tactics to forget about the stress experience • Managing antagonistic feelings • Seeking emotional support to gain reassurance • Distancing

Appraisal-focused coping (or meaning-focused coping)	The individual encountering a stress experience draws on their values and belief systems or ascribe positive meaning to everyday events and reorganise life priorities, as well as reminding themselves of the benefits of stress. In turn, this elicits positive emotions which restores resources that influence the individual's appraisal of the encounter to sustain coping over-time and relief distress.	<ul style="list-style-type: none"> • Dark humour • Positive self-talk • Rational thinking • Positive reinterpretations of the stress experience • Using religion to interpret the experience
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* Weiten, Dunn & Hammer, 2018:103; Biggs, Brough & Drummond, 2017:357–358; McLeod, 2015; Walinga, 2014:690; Galor, 2012:n.p; Carver & Connor-Smith, 2010:685.

Although there are constructive coping mechanisms, some individuals adopt ineffective coping mechanisms which could have several negative impacts. Some examples could be impaired task performance, burnout, mental illness as well as physical illness (Weiten, Dunn & Hammer, 2018:78–82). In terms of a healthcare practice environment, increased levels of stress can result in an increased risk for medical errors as well as a decline in the quality of care to patients, and even workplace aggression and violence (Walinga, 2014:699). When constructive coping mechanisms are adopted there is opportunity for an individual to develop and become more resilient, courageous, tolerant, mentally tough and persistent, as well as have the ability to thrive (Weiten, Dunn & Hammer, 2018:82; Walinga, 2014:693). One should be mindful that the following factors can also influence the coping strategies that individuals adopt: social support, hardiness, and optimism. An individual will feel more reassured that they have adequate resources to cope with the stress experience, which can result in a more positive appraisal of the stress experience. This in turn could lead to an individual having increased resistance to severe stress (Weiten, Dunn & Hammer, 2018:83–86; Walinga, 2014:693; Carver & Connor-Smith, 2010:683). Educational interventions should be implemented with respect to social support, emotional management, and cognitive approaches, to confront and resolve stressors encountered, in order to enable individuals to have the necessary support to cope with stress experiences they face (Walinga, 2014:680). Together with the implementation of these interventions, an organisational culture, in which a person finds themselves, should also be of such a nature that it nurtures resilience among HCPs to allow them to cope with stressors, like death and dying patients (Walinga, 2014:701).

4.3 EXPERIENCES OF HEALTH PROFESSIONALS RELATED TO DEATH AND DYING PATIENTS

The current accessible body of literature, pertaining to how HCPs experience and cope with death and dying patients in their workplace, is presented below. The purpose is to highlight the gap in the literature in terms of the significance of this study. Support strategies to coping with these experiences are also presented.

4.3.1 Making sense of the experience with death and dying patients

Hutchinson (1984:88–89) reported that nurses working in a neonatal intensive care unit (NICU) used an interplay between logical reasoning, emotions and technical skills in order to make sense and create meaning of their experiences with death and dying patients in their workplace environment to facilitate their coping process. The postulated reasons being that nurses need to care for their patients using their professional skills as well as reflect on the impact that their care has on themselves and patients. This gives rise to the emotional aspects of their care for neonates and reasons for their care, which helps them maintain equilibrium between compassion and technical competence (Hutchinson, 1984:88–89). In terms of a diagnostic radiography context there is similarity between being equipped to use the technology to carry out a procedure whilst providing patients with the best care possible. Being faced with adversity and occupational stressors is not excluded from a diagnostic radiographic context (Ballinger, Comello & Vealé, 2008:11). The short, task-focused interaction that radiographers have with patients might pose a challenge to developing relationships with their patients and the provision of compassionate, patient-centred care. What is important is to realise that patients are human beings with feelings; they should definitely be part of a radiographer's focus because compassion is a characteristic of a HCP, albeit stressful and emotionally arduous (Hendry, 2019:269; Raaschou, Pilegaard, Klausen & Danielsen, 2019:308; Strudwick, 2019:para 2–4). Making sense of death and dying related experiences in radiography is also technically, cognitively and emotionally situated, and can have different impacts on different individuals in different clinical settings (Trad, 2014:92,95–97; Ballinger, Comello & Vealé, 2008:11–12). Spirituality and religion also facilitate the process of meaning creation those who believe their Creator is in control, as noted by Lekalakala-Mokgele (2018:153–154). This was discussed in the previous chapter (cf. 3.4.2) when death and dying, as a construct, was conceptualised.

Another way in which individuals create meaning around death and dying experiences is by using metaphors. One explanation posited for their use is that it enables an individual to transfer meaning from one experience to another. This tends to occur frequently when talking about

sensitive, taboo, subjective or abstract phenomena. The type of metaphors used are influenced by a variety of personal and social factors, which are said to enable individuals to place their experience in context or 'frame' their experience (Demjén, Marszalek, Semino & Varese, 2019:17; Roos, 2009:17; Moss, Moss, Rubinstein & Black, 2003:S290; Froggatt, 1998:332–333). A metaphor figuratively conveys how a person conceptualises a reality they have created (Froggatt, 1998:333). It enables us to understand how a person makes sense of a particular experience when one investigates emotions and emotional work (Demjén, Marszalek, Semino & Varese, 2019:17; Froggatt, 1998:333). When considering the phenomenon of experiencing death or dying patients, in the workplace, battle and journey metaphors are relevant. A battle metaphor is used to convey how a person has an antagonistic relationship with various factors that forms part of their experience. Rose and Ryan (2016:85) state a journey metaphor regularly accompany experience narratives around death and dying. It suggests the experience is a path travelled without suggesting any antagonistic relationship among the factors that form part of the experience (Demjén, Marszalek, Semino & Varese, 2019:17–18). These metaphors are used to show how an individual is portrayed regarding an experience in terms of how they position themselves in relation to the experience and surrounding factors (Demjén, Marszalek, Semino & Varese, 2019:18).

Metaphors are closely linked to storytelling and narratives in a workplace. The use of metaphors and stories are part of a coping process related to experiences (Bosticco & Thompson, 2005:11). Individuals tell stories for the same reason that they use metaphors; to make sense of their experiences so that they can create links between themselves, their environment and others, as well as to mitigate a feeling that nothing happened (Bosticco & Thompson, 2005:3). Stories also convey norms, values and attitudes towards a particular phenomenon in a work environment. They can also assist individuals to reflect on lessons learnt from their experience, and this then should influence future practises (Lee & Foo, 2007:2).

One can appreciate that these meaning construction methods that are used by individuals to make sense of their experiences with death and dying patients in their workplace are underpinned by evaluative, cognitive processes, known as cognitive appraisals. These appraisals are influenced by a person's beliefs, attitudes and goals, as well as factors unique to a situation in which an experience is encountered. An individual then attaches a particular level of significance to their experience in order to apply particular coping mechanisms to deal with and adapt to an experience, to be able to carry on doing their work (Park & Folkman, 1997:122–123; Lazarus & Folkman, 1984:31–36).

4.3.2 Impact of death and dying patient experiences in the workplace

Literature covers both negative and positive experiences that are elicited by death and dying situations experienced by HCPs in their workplace. Meier, Back and Morrison (2001:3007) state if HCPs' emotions are not attended to when they care for the seriously ill then this can result in disengagement on the part of HCPs' poor judgement and distress which impacts on their overall wellbeing. Bull (2016) blogged that she started questioning her competence as a nurse after experiencing her first death experience. Such emotions could result in burnout, which is a negative outcome (Lemaire & Wallace, 2017:1). Sources for burnout could have intrapersonal and situational dimensions, and the consequences are varied. For students, their learning environment, supervisors and other practitioners they work with influence the probability of them being prone to burnout. If a learning environment is poor, supervision is inadequate, and students witness maladaptive behaviours then their risk of developing burnout is increased. Burnout can also affect the level of care that patients receive (Lemaire & Wallace, 2017:1; Houpy, Lee, Woodruff & Pincavage, 2017:1; Schneiderman, Ironson & Siegel, 2005:607).

Another common result of exposure to death and dying is death anxiety which is signified by becoming anxious and feeling overwhelmed in these situations. Another explanation for this fear and anxiety pertaining to death in the workplace could be as a result of lack of focus and attention that end-of-life care (EOLC) enjoys in educational programmes for HCPs (Atienza, Cruz, Mallabo-Peregrino & Reñosa, 2016:12; Çevik & Kav, 2013:e63). This could result in lower retention rates of HCPs, poor communication and a diminished personal health and quality of life (Nia, Lehto, Ebadi & Peyrovi, 2016:2–3). In more severe cases, if HCPs are exposed to traumatic events, like death and dying, they may develop post-traumatic stress disorder (PTSD), depression and anxiety (Houpy, Lee, Woodruff & Pincavage, 2017:1; Schneiderman, Ironson & Siegel, 2005:609,612–614). There is also an increased risk to developing cardiovascular disease, upper respiratory tract disease, and exacerbation of existing autoimmune diseases (Schneiderman, Ironson & Siegel, 2005:609, 612–614). As a means to cope with these situations, HCPs may opt to engage in binge eating, substance and alcohol abuse and other bad habits (American Psychological Association [APA], 2013:1–2). The impact on an organisation would be underperforming and demotivated employees; they may feel disempowered and this could then negatively impact the quality of patient care by way of compassion fatigue and preventable errors (Thibeau, 2019:365; Figley, 2002:1440).

A Swedish study found that first year nursing students experienced the thought of death more frightening than the actual experience; not enough time could be allocated to be present, physically and emotionally, with a dying patient because of other tasks to be performed, which subsequently could evoke strong emotions (Ek et al., 2014:511–512). These authors found that students were also more aware of their own feelings when dealing with death and dying. They felt somewhat anxious and helpless as they could not always establish what patients were thinking or experiencing yet they were expected to maintain patient wellbeing during these experiences (Ek et al., 2014:513; Whitehead, 2014:272–273). In terms of these findings, one could ascribe them to what Ulla et al. (2003:318) found, namely, HCPs perceive the emotional aspects of care more importantly as opposed to the biomedical aspects. As described in the previous section (cf. 4.3.1) this may not however necessarily hold true to all HCPs due to the varying roles they play in the care and management of patients. A Swedish study found emotional distress to be prevalent among HCPs following adverse events (Ullström, Sachs, Hansson, Øvreteit & Brommels, 2014:325). Their findings concur with those of Terry and Carroll (2008:760) in their British study among first year nursing students.

Smith-Han, Martyn, Barrett and Nicholson (2016:1) found that medical students in Otago experienced death as emotionally diminishing, and ordinary, rather than traumatic. According to Gallagher et al. (2014:3–4) an Australian study on nursing students found that the students' experiences were dependant on how they perceived the death of a patient. If they perceived the death as good, they generally handled it better as opposed to a bad, sudden death (Gallagher et al., 2014:3–4). Their findings concur with those of nursing related study conducted in the UK (Shorter & Stayt, 2010:159, 162–163). Psychological hardening is another experience some hospice workers experienced in a study conducted in India, especially newer qualified hospice workers (Loiselle & Sterling, 2011:250). The inability to cope with traumatic events in a clinical environment, such as the death of a patient, may give rise to what is known as the second victim phenomenon (Scott, 2011:2). It is usually associated with medical error or unanticipated patient outcomes resulting in adversity (e.g., death of a patient), where a HCP is traumatised by the situation. The second victim (i.e., HCP) usually experiences feelings of incompetence, guilt or inadequacy, and frequently does not have any support or anyone to go to for guidance in coping with the situation they were faced with. Some participants even described it as a life-changing experience and an “emotional rollercoaster” (Meller, Parker, Hatcher & Sheehan, 2019:306; Scott, 2011:1–3). These views were also expressed in an Irish

study among trainee doctors working in a paediatric intensive care unit (French-O'Carroll, Feeley, Crowe & Doherty, 2019:78).

Besides the intense emotional distress that death and dying experiences cause, there is also elicitation of moral distress, according to Rushton (2017:11) which is brought about by the conflict between institutional disenfranchisement of grief, workplace barriers and responsibilities, and the HCPs' personal moral judgment of the situation at hand. This further complicates the experience for them and intensifies the impact of the experience, and affects professional behaviour; they tend to become inattentive, impatient, irritable and emotionally exhausted, often having professional negligence and medical malpractice lawsuits as the consequence (Meller, Parker, Hatcher & Sheehan, 2019:302; Lai, Wong & Ching, 2018:7; Davies, 2016:i5597).

A South African study found that student nurses experienced intrapersonal turmoil due to emotions and feelings evoked by caring for a dying patient; their interpersonal relationships were also affected in this process because they experienced anger and perceived insensitivity and lack of respect from colleagues in the caring for a dying patient (van Rooyen, Laing & Kotzé, 2005:35). A South African study on nursing students' experiences of caring for women with stillbirths found that these experiences had negative psychological effects on them resulting in emotional trauma and feelings of guilt, helplessness and anxiety (Morake, Phiri & Van der Wath, 2016:969). Regardless of how well one knows a patient's history the prevalence of emotional and psychological distress is still high as highlighted in a review article on forensic radiography (Glaysheer, Vallis & Reeves, 2016:e214).

We now turn to positive impacts of death and dying experiences. Dunn, Otten and Stephens (2005:97) found that the more nurses worked with dying patients the more positive their experience with the situation was. Interestingly they found no statistically significant difference of nurses' attitudes towards either death or dying. A UK study found that students also perceived death and dying situations as a learning opportunity (Terry & Carroll, 2008:760). A study by Anderson, Williams, Bost and Barnard (2008:1227) reported that medical students found that exposure to death and dying patients impacted positively on their attitudes toward these experiences and also enhanced their knowledge. Canadian hospice workers explained how their encounters with death were positive in terms of cultivating new meaning for life and self-discovery which in turn influenced their practices positively (Sinclair, 2011:186).

4.3.3 Factors influencing healthcare professionals' experiences related to death and dying patients in the workplace

The impact of experiencing death and dying patients in the workplace is influenced by various factors, which also influence the manner in which HCPs ultimately cope with these experiences. The contributing factors in the literature are discussed below.

4.3.3.1 Healthcare professional-related factors

According to Ulla et al. (2003:329–331) the manner in which HCPs appraise dying differs from person to person. The reasons were their professional and personal development in their workplace. Dunn, Otten and Stephens (2005:97) found that nursing participants in their study indicated that their practical knowledge learned from their clinical experience, over time, influenced their experience and caring for dying patients more positively. An Indian study in 2011 found that personal views, values, beliefs, occupational experience and socio-economic status contribute to how death and dying are perceived and subsequently handled by hospice workers (Loiselle & Sterling, 2011:250). A study among Spanish nursing students found their attitudes towards death and dying influenced how they experience it (Hanzeliková Pogrányivá, Garcíá López, Conty Serrano, López Davilla Sánchez, Barriga Martín & Martín Conty, 2014:145).

4.3.3.2 Preparation to handle death and dying experiences

Meier, Back and Morrison (2001:3007) argue that the manner in which medical doctors are trained creates an asymmetrical picture that all that matters is the patient. A Spanish study among nursing students found that lack of preparation to deal with death and dying in the workplace played a role in how they experienced death and dying scenarios (Hanzeliková Pogrányivá et al., 2014:145). A study involving South African emergency medical personnel reported a similar finding (Minnie, Goodman & Wallis, 2015:12). An interprofessional study among health sciences students reported that the curriculum of their respective qualifications did not have enough teaching and learning about how to handle death and dying scenarios in the workplace (Nelson, Wright, Abshire & Davidson, 2018:851; Vicensi, 2016:69). There is therefore an obligatory need to assist trainees in the healthcare professions to recognise their emotions consciously in order to be able to fulfil their role as a carer. This should enable them to develop resilience and maintain patient-centred care (Bandeira, Cogo, Hildebandt & Badke, 2014:400). Van der Wath and du Toit (2015:7) stated that students who engaged in active learning opportunities experienced increased levels of sensory and emotional awareness related to death and dying. There must be availability, access and provision of training and

education interventions in dealing with death and dying as this positively contributes to HCPs' coping with death and dying (Nia et al., 2016:2; Mutto et al., 2014:1137; Gallagher et al., 2014:6). The disenfranchisement and silent culture around death and dying and its impact on HCPs can then be then be mitigated (Ramvi & Gripsrud, 2017:1; Marcella & Kelley, 2015:4–7; Anderson & Gaugler, 2007:311–312). The traditional apprenticeship model (Flynn & Philip, 2017:para 2) is not adequate since the impact of death and dying experiences are quite severe.

4.3.3.3 Patient-related factors

A study involving South African emergency medical personnel found that a patient type (e.g., adult or child) contributed to how the participants perceived and subsequently handled death and dying patients (Minnie, Goodman & Wallis, 2015:12). A study of nurses however indicated the inevitability of a patient's death contributed to how they experienced the situation, which resulted in emotional turmoil and a need for self-preservation (Curcio, 2017:11–12). Some individuals do not find the age of the person to affect the manner in which they experience death and dying (Lekalakala-Mokgele, 2018:151). The proximity of HCPs own death compared to that of a patient, as well as the patient type (adult or child) that HCPs encounter are regarded as influencing factors in relation to experiences with death and dying patients (Meller, Parker, Hatcher & Sheehan, 2019:307). The type of relationship that nurses formed with their patients contributed to their grieving process when losing a patient, as well as on their professional and personal development. If the relationship was meaningful, the experience of death was more stressful, opposed to a short patient-nurse interaction (Meller, Parker, Hatcher & Sheehan, 2019:307).

4.3.3.4 Workplace-related factors

Wallace, Lemaire and Ghali (2009:1714) highlighted that workload and organisational bureaucracy contributed to the stressfulness of workplace-based experiences which negatively impact personal and professional wellbeing as well as patient care. Loisele and Sterling (2011:250) found in their study among Indian hospice workers that workplace interventions that are in place to facilitate coping with death and dying were contributing factors of how they perceived the experience. Several international studies found that participants alluded to the fact that collegiality and an organisational support culture contributed to coping with death and dying experiences (Ullström et al., 2014:325; Ek et al., 2014:509; Terry & Carroll, 2008:760; French, 2004:13). According to Davies (2016:para 5) an organisational culture around attitudes toward expressing emotions and grief around death of patients influences how the experience impacts HCPs, since they fear to be seen as weak, unprofessional or even shameful. Medical

students in an American study expressed that poor team dynamics and difficult clinical events aggravated their stress experience (Houpy, Lee, Woodruff & Pincavage, 2017:5). Having support systems available in the workplace mitigate the stressfulness of the experience (Meller, Parker, Hatcher & Sheehan, 2019:306–308). Radiography students in the UK expressed unfamiliarity with a clinical environment was a contributing factor in the coping process of daily clinical situations they face (Morgan, 2015:1). In addition, students felt that they did not have a voice in practice, and therefore were reluctant to speak about their feelings and experiences, to staff and mentors. Houpy, Lee, Woodruff and Pincavage (2017:7) reported similar expressions from medical students. The situation, in radiography, is further complicated by the highly unpredictable environment of a diagnostic imaging department (DID) where students, and newly qualified radiographers, transitioning from being a student, are still developing their professional identity (Naylor, Ferris & Burton, 2016:131). This all could contribute to occupational stress experiences and ultimately the quality of work life and the efficiency of a radiographer, or other HCP, as highlighted by studies conducted in America and Ghana (Ashong, Rogers, Botwe & Anim-Sampong, 2016:112; Meier, Back & Morrison, 2001:3008). In radiography and nursing studies it was found that the roles and responsibilities accompanying each phase of transitioning from a student to a qualified practitioner, and from a newly qualified practitioner to a more a senior practitioner, influenced how one copes with experiences in the workplace (Johnson, Makanjee & Hoffmann, 2019:a1280; Naylor, Ferris & Burton, 2016:131; van Rooyen, Jordan, ten Ham-Baloyi & Caka, 2018:35).

Factors and their impact, in terms of influencing how HCPs perceive death and dying, appear to be substantial with respect of their influence on how HCPs cope with such experiences. However, with appropriate support mechanisms in place, effective coping mechanisms can be used to foster resilience and empower HCPs at various levels.

4.4 MECHANISMS USED TO COPE WITH DEATH AND DYING PATIENTS IN THE WORKPLACE

The experiences of death and dying that HCPs and students face in their workplace are influenced by certain unique individual characteristics and external environmental stimuli. This compounded situation gives rise to certain coping mechanisms or strategies being adopted by HCPs to handle the situation. Contemporary literature distinguishes between emotion-focused, problem-focused, and appraisal-focused coping mechanisms (cf. 4.2.3). Participants in studies globally, including Africa and South Africa, as reported in the reviewed literature, used a mixture of emotion-focused coping, problem-focused coping, and appraisal-focused coping strategies.

Emotion-focused coping mechanisms were the most often used. This could possibly be due to the strong emotions and feelings that stress experiences like death and dying can elicit from HCPs.

4.4.1 Emotion-focused coping mechanisms

Literature reports that several emotion-focused coping mechanisms were used by those providing care and health services to patients. French (2004:19) found that UK-based radiotherapists used escape-avoidance mechanisms (e.g., exercise, alcohol, comfort eating, distractive activities, going on holiday) to cope with stressful situations in their workplace. Shorter and Stayt (2010:163–165) found that nurses in their study preferred informal support structures to help them cope as opposed to formal support structures; they perceived it to be more difficult to be open in a formal setting. They also used emotional dissociation to deal with death and dying by “putting on their objective, professional mode mask.” Hospice workers in an Indian study described that open dialogue amongst inexperienced and more experienced colleagues facilitated their process of coping (Loiselle & Sterling, 2011:250). A Swedish study, by Ek et al. (2014:509), reported that nursing students preferred opportunities for debriefing and open reflective discussions in order to translate a distressing experience into that of a worthwhile learning experience so as to confront and deal with death and dying throughout their educational pathway; similar findings were reported by Smith-Han et al. (2016:1) in terms of medical students in New Zealand. South African emergency medical personnel used more emotion-focused coping mechanisms to avoid distressing emotional stimuli (e.g., focussing more on patient management and protocol related to the condition as opposed to a patient’s condition itself), as the debriefing and support provided were inadequate (Minnie et al., 2015:16–17). UK studies involving radiographers found that a variety of coping mechanisms were used. These mechanisms, according to De Witt (2015), Reeves and Decker (2012:78–80), and Strudwick (2011:137), involve distancing, reductionist language, exercise, speaking about experiences with peers, and seeking professional help. Radiographers in a Ghanaian study frequently used exercise, meditation and relaxation techniques as coping strategies to deal with work-related stressors (Ashong et al., 2016:116). Avoidance mechanisms are used as a distractor, as reported by Glaysher et al. (2016:e214) in their review article on forensic radiography, so that emotionally distressing stimuli of remembering corpses that are dealt with are not revoked. According to Chiaravalloti (2018:3) normalising death, taking a break in between patients, and to grieve, should be considered, including engaging in relaxation activities.

4.4.2 Problem-focused coping mechanisms

Radiotherapists in a UK study used social support and discussions with colleagues to cope with experiences in their workplace, in addition to other strategies such as confrontative coping (expressing anger physically or verbally, for example), self-control by gathering information to understand the situation and reassure themselves (French, 2004:19). Nursing students found that formal learning and teaching on end-of-life care issues enabled them to create meaning about the experience in order for them to ultimately cope with the experience (Van der Wath & du Toit, 2015:5).

4.4.3 Appraisal-focused coping mechanisms

Radiotherapists use positive reappraisal techniques to reinterpret their experience of death and dying (French 2004:19). Radiographers in UK-based studies used rational thinking and dark humour (De Witt 2015; Reeves & Decker, 2012:78-80; Strudwick, 2011:137). According to Vicensi (2016:67) Brazilian nurses use the teaching of religion as a way to cope with death and dying experiences in the workplace, since they believe patients move into the next phase of their journey as a human.

4.5 SUPPORT STRATEGIES CURRENTLY USED TO PROCESS EXPERIENCES WITH DEATH AND DYING PATIENTS

Considering the variety of meanings and impacts constructed around experiencing death and dying in the healthcare sector, with the associated contributory factors and coping strategies used, literature advocates that support strategies should be used. These strategies should aim to enfranchise HCPs' grief experiences, as well as facilitate humanising emotions so that their emotions can be recognised timeously in order to take appropriate steps to maintain wellbeing and compassionate care. Literature from 1998 to 2017 reports that strategies should foster resilience among HCPs in the face of death and dying encounters in their workplace (Ramvi & Gripsrud, 2017:1; Marcella & Kelley, 2015:1; Van der Wath & du Toit, 2015:1; De Witt, 2015; Bandeira, Cogo, Hildebrandt & Badke, 2014:400; Loiselle & Sterling, 2011:250; Anderson & Gaugler, 2007:301; Khaneja & Milrod, 1998:909). Moores, Castle, Shaw, Stockton and Bennett (2007:942) suggest that these strategies should be incorporated into undergraduate curricula as well being offered as in-service training on a continuous basis for junior and other qualified HCPs. The call for support strategies incorporation in curricula at undergraduate level is even more important considering the diagnostic radiography context in South Africa. This is the first study of its kind to formally develop support strategies through research because none could

be located in the literature. The current curriculum at the research site focuses more on procedural knowledge related to the technical aspect of diagnostic radiography (cf. 2.8).

Dunn, Otten and Stephens (2005:103) maintain that patient care skills can be acquired through practical learning and that formal theoretical teaching and learning was not warranted. Anderson, Williams, Bost and Barnard (2008:1230) point out that workplace acculturation can result in negative attitudes developing towards death and dying; formal instruction is therefore still required as a workplace environment does not always have the necessary supportive mechanisms in place. A number of ways in which HCPs can be supported is reported in international literature. One such intervention is mindfulness training to develop emotional awareness and manage the emotive aspects of healthcare delivery (De Witt, 2015; Bailey, Murphy & Porock, 2011:3364). Nursing and radiography focused studies revealed that guided reflection on experiences and, explicitly including teaching of compassionate care, are methods that can enhance students' ability to deal with situations involving death and dying. This is because it allows them to critically reflect on their competencies, the situation they were faced with and how optimal care could have been delivered (Bleiker, Knapp, Hopkins & Johnston, 2016:260; Smith, James, Brogan, Adamson & Gentleman, 2016:1; Adamson & Dewar, 2015:155). White (2017:S41) found in a UK-based radiotherapy study that modules that focus on end of life care issues in radiography should be incorporated in the taught curriculum because WPL alone does not sufficiently fulfil this role.

Costello (2001:59) points out that curriculum content should include opportunities for students to gain knowledge and insight into physical, spiritual and psychosocial needs of a patient in order to treat a patient as a holistic human being who is more than their medical ailment. From a South African nursing perspective, de Swardt, du Toit and Botha (2012:1) argue that critical reflection, as a means to support HCPs, is required to facilitate the process of coping with distressing experiences in the workplace. Kemp et al. (2019:1) concur with the argument of providing both theoretical and practical opportunities for students to gain skills, knowledge, attitudes, values and behaviours (SKAVBs) to appropriately deal with death and dying to maintain positive wellbeing.

Khaneja and Milrod (1998:913–914) suggest, from a medical point of view, role-play activities and other formal instructional interventions should be integrated into the curriculum, as well as there being formal workplace programmes to support HCPs when they are faced with death and dying patients. Terry and Carroll (2008:760) suggest that good role modelling and pastoral

care by mentors could be another way in which students' ability could be enhanced to deal with death-related scenarios in practice. Grant and Kinman (2014:29) highlight that any methods that may be used to enhance emotional resilience and awareness may enhance job satisfaction, wellbeing and retention of those pursuing a career in the helping professions. Studies, from 2011 to 2017, with medical students participants in Sri Lanka, Iran, and Malaysia, respectively, all maintain the development of emotional awareness, resilience and emotional management may improve students' performance and overall success in an academic programme, and by implication also their professional practice (Ranasinghe, Wathurapatha, Mathangasinghe & Ponnampereuma, 2017:1; Chew, Zain & Hassan, 2013:1; Fallahzadeh, 2011:1461).

Interprofessional education is a prominent strategy that can offer support in cases of death and dying experiences. It enhances understanding of personal, professional and interprofessional roles in relation to death and dying patients. In addition, students gain better insight into the various roles each HCP plays in the dying process of patients they work with. This further creates a sense of collegiality among students and improves their confidence when faced with these experiences as they have a perceived support network early on in their careers (McIlwane, Scarlett, Venters & Ker, 2007:e151; Greenstreet, 2005:281). One can therefore argue that this can then mitigate the negative impacts that death and dying experiences have on HCPs.

An educational strategy that is gaining momentum in radiography, and even health sciences programmes, is the creation of safe learning environments to acquire the necessary SKAVBs of adverse events through simulation (Shiner, 2018:262). Simulation-based education is a strategy used to imitate a real-life scenario to enable students to acquire particular SKAVBs before interacting with actual patients. These sessions happen in three phases as presented below (Shiner, 2018:262).

- The briefing, where the purpose of the simulation is explained, and the intended learning outcomes are provided.
- The intervention, which is the actual scenario or task.
- Debriefing, where students are given opportunity to reflect on the experience and where feedback is provided to students on the strengths and areas requiring improvement.

When using this strategy, the necessary support mechanisms need to be in place in case the simulation becomes overwhelming and distressing for students. Hence, students need to be

adequately briefed and debriefed (Shiner, 2019:294; Marshall & McIntosh, 2018:153–155; Shiner, 2018:262). Simulations on death of patients are high-risk scenarios as students can become self-critical of their performance and this could influence their learning and possibly future practice and attitudes towards death scenarios. Therefore, great care is required to prepare students before an activity and debrief them afterwards by providing reassurance (Marshall & McIntosh, 2018:155). Shiner (2019:299) highlights that without appropriate and adequate preparation and debriefing students run the risk of developing early burnout due to cognitive overload; this should be curbed early.

Considering workplace initiatives, continuing education programmes, and establishing a supportive workplace culture, have been proposed. The aim being to destigmatise the attitudes around emotional labour associated with care and to keep abreast with practice demands and needs and to mitigate death anxiety among HCPs (Weurlander, Lönn, Seeberger, Broberger, Hult & Wernerson, 2018:74; Loisel & Sterling, 2011:254; Dunn, Otten & Stephens, 2005:103). McCreight (2005:439), and Ali (2017:13–21) indicated that active policies should also be developed and implemented, as well as formal, professional debriefing as workplace initiatives to support and assist staff process their grieving. Reflective practice should be habitual to provide personalised patient-centred care in relation to a patient's psychosocial needs (McCreight, 2005:446). Kaushik (2018:544) emphasises that any workplace initiatives developed and implemented should be based on the principles of sustainability and proactiveness to prevent the negative impacts of death and dying experiences, instead of attempting to react to them. An Australian commentary in a radiotherapy context maintains that workplace initiatives should draw on the principles of positive organisational psychology so that they engage with staff to establish their needs and work-related stressors, in order to provide opportunities to minimise and eliminate them (Hunter, Wright & Pearson, 2019:139).

4.6 CONCLUSION

The experiences with death and dying patients in the workplace for HCPs, and students, are varied. These experiences are dependent on person, socio-cultural and other organisational related factors that can either mitigate or aggravate an experience for each individual. Therefore, HCPs in various working environments make sense and create meaning of these experiences differently. Based on their interpretation of the experience, with due influence of the contributory factors, HCPs then adopt certain coping mechanisms. This argument has been substantiated throughout this chapter from a theoretical and empirical point of view. The literature reviewed in the two preceding chapters provided further background as to how the

structure of workplace learning programmes, and the conceptualisations around death, dying, bereavement and grief can give rise to the varied of experiences and ways of coping. This chapter then concludes with support strategies alluded to in the current body of literature that can possibly be used to foster resilience among HCPs in the face of death and dying experiences that they may encounter in their workplace.

This study is therefore significant as there is lack of literature that directly relates to undergraduate diagnostic radiography students' experiences and coping with death and dying patients encountered whilst in a clinical setting. The theoretical framework that was used as a lens to interpret and make sense of the findings that emanated is outlined in the next chapter.

CHAPTER 5: THEORETICAL FRAMEWORK

5.1 INTRODUCTION

Theories assist researchers to view social problems from a different or particular perspective (Salmons, 2019:26). The reason is to explain or describe how and/or why an event transpires (Salmons, 2019:24). Theories as frameworks represent broad, general explanatory context to explain a phenomenon being studied (Regoniel, 2016:14). Using a theory acts as a support mechanism in framing, underpinning, and informing your interpretation and sense-making of the findings that emerge from the gathered data (LoBiondo-Wood & Haber, 2018:69; Lacey, 2015:22; Wisker, 2009:61). Reflecting on the corpus of theoretical and empirical perspectives (cf. chapters 2 – 4) engaged with, and my philosophical assumptions (cf. 1.10.1), I am aware that I consciously looked for relationships and interactions between and among the various concepts related to the phenomenon studied that I came across. A theoretical perspective, which is common and prominent in the current understanding of stress and coping, is the transactional model of Lazarus and Folkman (1984). Their theoretical framework best captured the relationships and interactions in reviewed literature. It was thus deemed the most appropriate to use as a lens to frame and inform my interpretations and methodological choices in this study. The tenets of this model, together with a demonstration of its applicability to the phenomenon studied, are described in this chapter.

5.2 THE TRANSACTIONAL MODEL OF LAZARUS AND FOLKMAN

The transactional model of Lazarus and Folkman was based on the premise of certain efforts, i.e. behavioural or psychological, that people use to master, tolerate or condense stressful events (Baqutayan, 2015:482). The transactional model holds that an individual and environment are in a dynamic, reciprocal, joined relationship (Lazarus & Folkman, 1984:293). Stress, cognitive appraisal, and coping, are concepts that are central to this model.

5.2.1 Stress

Lazarus and Folkman (1984:19) conceptualised stress as an interaction of an individual and environment, which is considered by the individual as either challenging or exceeding his/her available resources (i.e., our ability to cope) and threatening his/her wellbeing. An individual and environment are both component parts of a stress experience, which makes the tenet of the experience a transaction (cf. 4.2.1). A stress experience therefore gives rise to a cognitive appraisal to make sense of an encounter that an individual experienced in a certain place at a particular time.

5.2.2 Cognitive appraisal processes

Cognitive appraisal is described as an evaluative process focused on creating meaning of an encounter, as well as categorisation of the encounter and its various façades, in relation to wellbeing (Lazarus & Folkman, 1984:31). The transactional model further divides cognitive appraisal into two overlapping phases, primary and secondary appraisal, that occur somewhat in tandem.

Primary appraisal refers to an evaluation and categorisation of an encounter regarding its relevance to one's wellbeing, and may be perceived as being irrelevant, positive or stressful (Lazarus & Folkman, 1984:32). If an appraisal is irrelevant the coping process is halted because an individual perceives that the stress experience poses no threat to their wellbeing. However, if the encounter is perceived as being negative then coping will ensue as there is a perceived threat, harm/loss or challenge of some sort to the individual related to their wellbeing, and this warrants the mobilisation of a coping strategy. If an experience is appraised as positive, then coping mechanisms are also employed in the form of positive emotions since a coping effort has a favourable outcome. Coping strategies may be in the form of joy when an encounter is positive, or fear and anxiety in the case of negative appraisals of stress experiences (Lazarus & Folkman, 1984:32–33).

Secondary appraisal involves a cognitive evaluation regarding internal and external coping options and available resources to best handle an encounter faced so as to modify, change or neutralise it into a more positive experience to enhance an individual's wellbeing. Put differently, secondary appraisal enables an individual to consider available options to establish the most effective manner to cope with a situation, and then use a particular coping mechanism that will achieve the aim or a combination of coping mechanisms to achieve the desired result. It is the interplay between primary and secondary appraisals of a stress experience that contributes to an individual's experience of stress in a particular setting they find themselves and that influences the coping mechanisms used (Lazarus & Folkman, 1984:35–36). Of importance is that a number of person and environment-related factors influence cognitive appraisal processes.

5.2.2.1 Factors influencing cognitive appraisal processes

The factors influencing a cognitive appraisal of a stress experience pertain to an individual that encountered the experience, and the specific environment in which the experience took place (Lazarus & Folkman, 1984:55, 83; Lazarus, 1993:243–244). The appraisal of a stress

experience can be positively or negatively influenced by the interplay between the person and the setting (Lazarus & Folkman, 1984:115–116).

➤ Person-related factors

Person-related factors pertain to an individual's beliefs and commitments (Lazarus & Folkman, 1984:55). Beliefs refer to personally or culturally constructed epistemological and ontological perspectives about reality that influence the way in which we make sense of the world around us (Lazarus & Folkman, 1984:63). Commitments, in turn, describe an individual's value that they attach to something which thus influences the choices they make to maintain this valued ideal or achieve a specific goal (Lazarus & Folkman, 1984:56). These two factors influence the appraisal process of a stress experience by assisting an individual to make sense of their experience, and associated emotions and coping strategies, and by providing a foundation for an individual to evaluate the possible consequences of their views and choices related to their experience. These factors enable an individual to establish what is significant to enhance their wellbeing (Lazarus & Folkman, 1984:55). One should note that a person's beliefs and commitment regarding a phenomenon may sometimes also have negative consequences due to the value and belief they attach to it; their appraisal of the stress experience may then result in perceived threat/harm to their wellbeing (Lazarus & Folkman, 1984:80).

➤ Environment-related factors

Environmental-related factors work interdependently of person-related factors in influencing the appraisal of a stress experience (Lazarus & Folkman, 1984:81). These factors potentially influence the appraisal process to the extent that a stress experience is perceived possibly damaging, hazardous, hostile or challenging to a person (Lazarus & Folkman, 1984:82) in relation to a person's commitments and beliefs. Lazarus and Folkman's transactional model focusses on the following situation factors.

- Novelty, whereby an individual has never had a previous appraisal of a similar stress experience, through direct or vicarious encounters, and therefore does not appraise the encounter as a threat or challenge (Lazarus & Folkman, 1984:83).
- Event uncertainty relates to the probability that an event's occurrence impacts on the appraisal process since the evaluation of an event is not solely dependent on the environment but is interdependent between person and environment (Lazarus & Folkman, 1984:87–88).

- Temporal factors (imminence, duration, temporal uncertainty) relate to the time aspect of a stress experience. Imminence relates to the amount of time there is before an encounter occurs, duration is the length of exposure to the encounter and temporal uncertainty describes when an incident will occur (Lazarus & Folkman, 1984:92, 98, 101). These three factors influence the appraisal of a stress experience by an individual to a greater or lesser extent in relation to other situational and person factors (Lazarus & Folkman, 1984:115–116).
- Ambiguity explains the situation that exists when an individual does not have enough clarity or information to make an appraisal of a stress experience encountered. Person factors then dominate in creating meaning of the experience and appraisal of the encounter (Lazarus & Folkman, 1984:103, 116).
- Timing refers to the point in time that a stress experience is encountered in a person's life as well as being cognisant of other events that may also have occurred in the distant or recent past or in tandem with the current experience. Timing is a situation factor that helps us gain insight into why people apply significance or insignificance to similar or different stress experiences at particular points in time (Lazarus & Folkman, 1984:108).

The above demonstrates that the process of coping with a stress experiences is dynamic and iterative. Furthermore, it emphasises that there is an active and dual relationship between person and environment. This then brings to light coping: the third central concept to this transactional model.

5.2.3 Coping

Lazarus and Folkman (1984:141–142) define coping as a process that involves the use of cognitive and behavioural strategies to manage external and internal appraisal as threatening, harming or challenging to an individual's wellbeing and their ability to cope with the stress experience. Coping is sub-divided into two forms: emotion-focused, and problem-focused. The former involves regulation of an emotional distress evoked by an encounter when an individual perceives the encounter to be out of their control and they are unable to manage the source of the problem. Problem-focused coping involves handling a problem responsible for the distress by using specific activities to alleviate the circumstances perceived as stressful, challenging or harming (Baqtayan, 2015:482; Lazarus & Folkman, 1984:150–153). Folkman (2008:357) included meaning-focused coping in a revised version of the original transactional model. Meaning-focused coping refers to methods of coping that draw on a person's belief systems, values and existential life goals in order to create meaning and make sense of stress

experiences which elicit positive emotions. This allows a person to ascribe positive meaning to experiences and remind themselves of the benefits of stress as a way of sustaining coping and wellbeing (Biggs, Brough & Drummond, 2017:357; Folkman, 2008:7). There are thus three categories of coping that individuals engage with according to the transactional model.

Resources, in the context of the transactional model, can be grouped as properties of a person and environmental. Those relating to a person can be physical (e.g., health and energy), psychological (e.g., beliefs) or competencies (e.g., problem-solving and social skills). Categories of environmental factors include social support and material resources (Lazarus & Folkman, 1984:157). Some individuals may however not have these resources, or, the demands of the encounter exceed their available resources. Such a person then faces restrictions called constraints that include personal constraints (e.g., worldviews and psychological deficits), environmental constraints (e.g., money, absence of support networks), and the level of the threat on the continuum from minimal to extreme (Lazarus & Folkman, 1984:165–167). The event outcome is then favourable or unfavourable; the latter outcome elicits further distress as an individual is unable to determine the most effective and appropriate coping mechanism to manage the stress experience and restore wellbeing. When the outcome is favourable positive emotions are evoked and wellbeing is restored (Folkman, 2008:6; Folkman, 1997:1217). Unfavourable outcomes result in reappraisals of an encounter based on new information emanating after the initial appraisal of the stress experience (Lazarus & Folkman, 1984:150).

5.2.4 Reappraisal and positive emotions

Folkman (2008:6–7) maintains that reappraisal occurs until positive emotions are elicited, and an individual has fully integrated the experience with their own belief and value systems. This thus closely links to the manner in which an individual makes sense and creates meaning of their stress experience (Folkman & Moskowitz, 2004:766). Once this happens an individual appraises their stress experience as irrelevant or benign; restores their resources to cope and then sustains coping as well as physical and mental wellbeing (Folkman, 2008:6, 11; Folkman & Moskowitz, 2004:766; Folkman, 1997:1217).

5.3 APPLICATION OF THE THEORETICAL FRAMEWORK

Figure 5.1 depicts the application of the framework in this study.

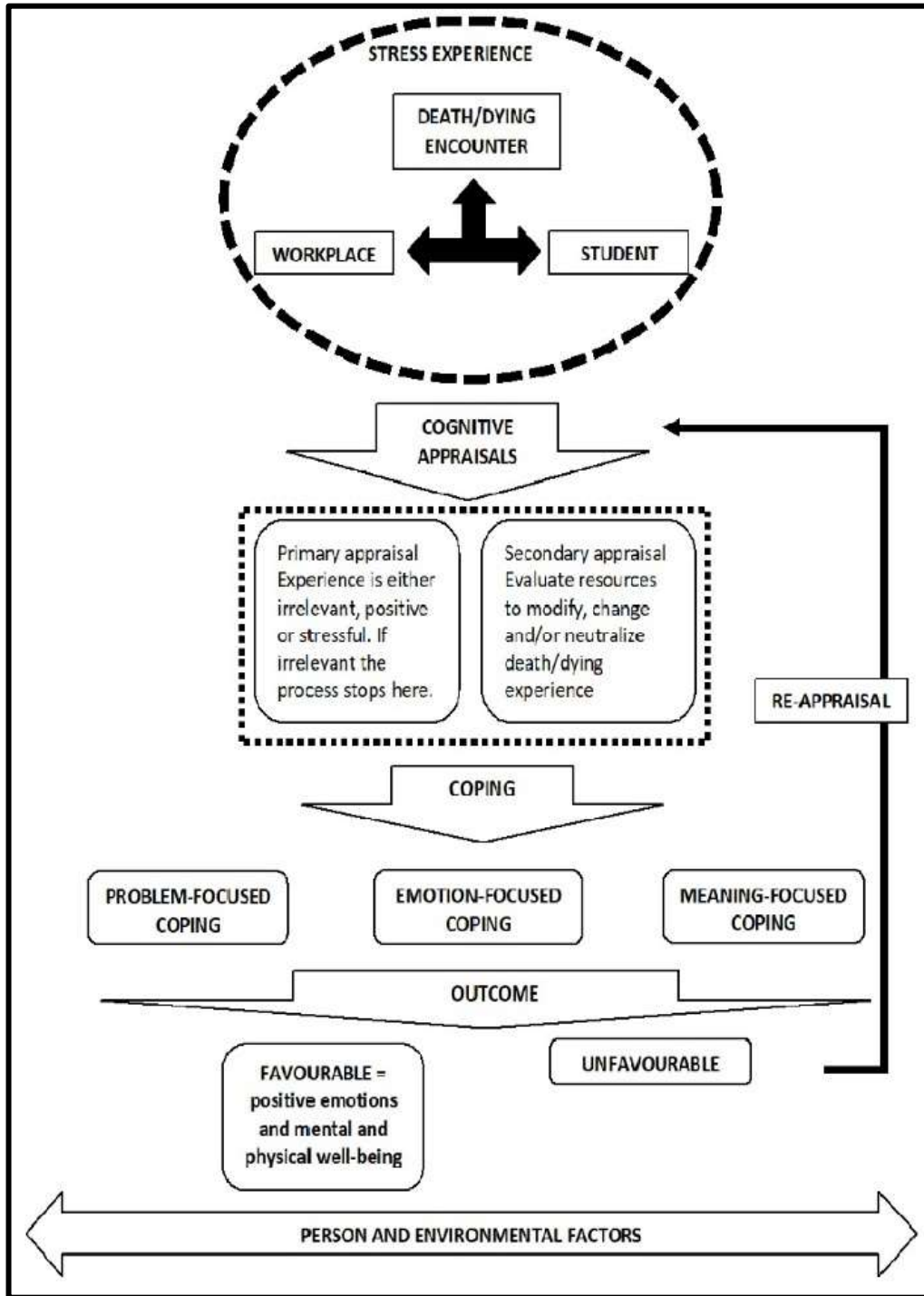


Figure 5.1: Application of the theoretical framework to this study.

As shown in Figure 5.1 it can be argued that death and/or dying situations, which students face in the workplace, are stress experiences. Students appraise these situations against the background of personal and workplace-related characteristics. Firstly, by evaluating the significance of the situation and then almost concurrently, evaluating and deciding on options to best manage this. This appraisal process corresponds to their experiences in terms of death and dying. This experience then directly informs their coping process and the coping strategies that they would use to manage their specific situation in the context in which it occurs. The strategies they use may focus on the cause of their distress (i.e., problem-focused coping); they may concentrate on regulating the emotional distress caused by the situation (i.e., emotion-focused coping); or they may choose to draw on their belief and value systems to make sense and construct meaning of the experience (i.e., meaning-focused coping). It is important to be mindful that there are individualistic and situational factors, as well as resources and constraints, that contribute to a student's coping of the death and dying situation in the workplace; this therefore makes the coping process unique for each person; even unique for the same person in various time spaces (Lazarus & Folkman, 1984:293).

5.4 CONCLUSION

A description of the transactional model of stress, appraisal and coping developed, by Lazarus and Folkman, was presented in this chapter. The revisions added by Folkman were included to present an updated version of the model. The model, as a theoretical framework for this study, was applied to the phenomenon studied. A discussion of the research design and methods used to conduct this study is presented in the next chapter. The discussion pertains to the research questions, aim, and objectives

CHAPTER 6: RESEARCH METHODOLOGY

6.1 INTRODUCTION

Theory was explored in the previous chapters for several reasons, namely, to highlight the gap in the body of knowledge, to substantiate the significance, rationale and contribution for this study, as well as to underpin the research questions, aim and objectives of this study. The research design and methods that were used to achieve the aim and objectives, and to answer the research questions underpinning this study, are the focus of this chapter.

Research methodology includes the research design and methods used to conduct a study to satisfy the research questions, aim and objectives (Gray, 2018:772). In other words, for this study an appropriate research methodology had to be used to address the research questions (cf. 1.5), aim (cf. 1.6), objectives (cf. 1.7), philosophical assumptions (cf. 1.10), and theoretical framework (cf. 5). In this chapter research design and methods implemented, with justification, are explained in terms of this study. Also covered are ethics, and trustworthiness strategies that were implemented to ensure a trustworthy and rigorous research.

6.2 ETHICAL APPROVAL AND CLEARANCE TO CONDUCT THE STUDY

When the Faculty Research Committee (FRC) of the Health and Wellness Sciences faculty at the Cape Peninsula University of Technology (CPUT) approved the proposal an application for ethics approval was made to the Faculty Research Ethics Committee (FREC) of the CPUT. Thereafter, letters requesting permission to conduct research at the relevant HEI (i.e., research site) were submitted to the institutional Research Ethics Committee: Human (REC-H), Deputy Vice Chancellor of Research and Engagement and the Head of Department of the Department of Radiography to provide access to the target population. In other words the gatekeepers had to ensure that the research would be conducted in an ethical manner during interactions with the undergraduate diagnostic radiography students. The letters requesting permission and letters granting approval can be found at the end of the thesis (Addenda A – G). The ethics principles that were adhered to in this study are discussed in detail later in this chapter.

6.3 RESEARCH DESIGN

Research design is an overall plan to conduct a research study to answer particular research questions and meet the aim and objectives underpinning a research study (Gray, Grove & Sutherland, 2017:52). This choice influences the selection of a sampling strategy, data gathering, and data analysis. In addition, it influences the conclusions, which can be drawn

from the findings, and the scope of recommendations (Gray, Grove & Sutherland, 2017:52). Gray (2018:35) maintains that a research design is informed by the philosophical assumptions underpinning the study (cf. 1.10). A qualitative method of inquiry, with an exploratory-descriptive, and a contextual approach, was used for this study. Justification for this research design is presented below.

6.3.1 Qualitative research

A qualitative research design aims to provide an in-depth, systematically interpreted description of the social world of the research participants after exploring and gaining insight into the multiple, constructed realities of the participants regarding the phenomenon being studied (Polit & Beck, 2018:184; Gray, Grove & Sutherland, 2017:89; Holloway & Wheeler, 2017:3; Ormston et al., 2014:4). A qualitative inquiry is done to either gain new insights about phenomena that were studied before or may involve phenomena that very little or nothing is known about (Gray, 2018:163–164). A comprehensive descriptive account of the phenomenon explored is interpreted and understood from the participants' perspective, which are informed by their knowledge, attitudes, beliefs, perceptions, meanings, and interpretations (Holloway & Wheeler, 2017:3; Creswell, 2014:185–186). Holloway and Wheeler (2017:3) refer to this as focusing on the emic perspective or insider's view. By honouring the voice of research participants, a researcher is able to retain the complexity and nuance of the uniqueness of this phenomenon (Ormston et al., 2014:4). This warrants a researcher using inductive logic to make sense of the data gathered during the analysis process to ensure openness to the narratives of the participants in order to present an authentic account based on their utterances (Gray, 2018:19–20). A qualitative inquiry was needed for this study as the purpose was to explore and describe participants' experiences related to death and dying patients during workplace learning (WPL) and their subsequent coping. An inductive thematic analysis of the data would therefore provide a rich and thick description of the participants' experiences and means of coping related to death and dying patients during WPL, whilst being cognisant of the contexts in which these experiences occurred.

Since qualitative research is context-specific researchers should be context sensitive and immerse themselves into the natural setting of the participants. The rationale is twofold. It enables them to gain rich data during data gathering; and enables insight into how personal and social settings influence how participants make sense of and interpret their experiences. Immersion allows a researcher to gather the data in such a manner so that it provides in-depth, accurate descriptions of the phenomenon studied from the participants' perspectives; a

researcher is knowledgeable about the setting they should bracket themselves and be mindful of their own assumptions (LoBiondo-Wood & Haber, 2018:89, 93; Holloway & Wheeler, 2017:4–5). The preceding also justifies, by implication, that the findings of this study would not necessarily be generalisable (Nieuwenhuis, 2016:123).

A researcher is immersed and involved as the main research tool; this means a researcher-participant relationship is intimate, and equality is a cornerstone of this important relationship (Holloway & Wheeler, 2017:4). There is therefore an obligation by a researcher to be reflexive throughout the process and to explicitly acknowledge their stance in relation to their study (Polit & Beck, 2018:184; Ormston et al., 2014:4; Holloway & Wheeler, 2017:4). To ensure that I remained reflexive throughout the research process, my philosophical assumptions and position statement are included (cf. 1.10). Bracketing, as a means to maintain credibility of the study, was implemented by using a reflective journal and reflective notes during data gathering and analysis. This reflexivity was also ensured by being theoretically sensitive by being insightful, knowing what was relevant and seeing the phenomenon being studied holistically while remaining open to the environmental prompts in the field (Gray, 2018:175), and by conducting a thorough literature review (cf. 2.2).

6.3.2 Exploratory-descriptive research

Gray, Grove and Sutherland (2017:70) hold that exploratory-descriptive approaches to qualitative inquiries are conducted to address a social reality that requires a new strategy to solve an existing issue or need, by seeking the perspectives of individuals most affected by the phenomenon of interest. An exploratory study is used when a researcher intends to study phenomena that are not well understood, where there is little evidence available about the nature of phenomena, or to provide initial insights, or 'hunches', about phenomena of interest. Exploratory research aims to give insight into the manner that a phenomenon of interest is expressed, and this assists a researcher to provide a general representation based on the individual actualities of the research participants (Polit & Beck, 2018:12; Bhattacharjee, 2012:9; Fouché & de Vos, 2011:96). Descriptive research approaches assist a researcher to provide an in-depth narrative-based representation of the phenomenon explored, as it occurs in its natural setting, including underlying relationships that exist, but with no explanation of the rationale as to why an event occurs (Gray, 2018:37). Similar to exploratory research approaches, descriptive approaches are ideal when little is known about a phenomenon or it has not yet been clearly defined for a given context (Polit & Beck, 2018:11). The descriptive representation of a phenomenon being studied is informed by research participants'

construction of meanings and interpretations (Bhattacharjee, 2012:9). An exploratory-descriptive approach, in relation to qualitative research, is applicable when the aim is to investigate and present descriptive accounts of phenomena that not much is known about from the research participants' stance.

Due to the lack of research and evidence on the experiences of undergraduate diagnostic radiography students regarding their experiences of and coping with death and dying patients during WPL, an exploratory-descriptive study was therefore justified. The literature review further highlighted this lack of evidence (cf. 4). This study provides an initial understanding of how undergraduate diagnostic radiography student experience and cope with death and dying patients during WPL in South Africa. The findings of this could inform future research to be conducted in this area. The participants' perspectives are presented in narrative format using verbatim quotations in italics, and visuals emanating from interviews and reflective journaling used as data gathering methods under the appropriate themes and sub-themes that emerged from the data analysis process. The findings enabled me to achieve the fourth objective of this study. To develop, and to describe support strategies for undergraduate diagnostic radiography students, in order to facilitate their coping with death and dying patients during WPL (cf. 1.7).

6.3.3 Contextual research

According to Mason and Dale (2011:31), a contextual research study provides the way the relationship between participants in their environment are conceptualised. They (2011:31) add that an immediate setting in which participants find themselves and the tasks they are asked to perform act as the stimuli for their actions and responses in the situation, and it is this entire situation which becomes the data that need to be analysed. Ritchie and Ormston (2014:31) argue that an exploratory-descriptive approach to a qualitative inquiry forms part and parcel of contextual research, as it strives to identify and describe the nature of the phenomenon being considered in its natural setting. Contextual research focuses on recognising what exists in the social world as well as the way in which it establishes itself. The principle aim of these studies is to examine and describe these interpretations of social phenomena as experienced by research participants and understood by them based on their personal and social contexts (Ritchie & Ormston, 2014:31). Holloway and Wheeler (2017:4–5) underscore that contextualisation is important because of the intense involvement of a researcher in the study. They hold that if a researcher understands the context, then such a researcher will also better comprehend the participants' interpretations and grasp their construction of meanings of a particular phenomenon being investigated. A contextual research approach is appropriate for

a qualitative inquiry since it is context-bound and this requires immersion of a researcher into the milieu of the research participants so as to further understand and make sense of the data gathered (cf. 6.3.1). An in-depth description of the context of this study is provided in the next chapter (cf. 7.2.1).

6.4 PHASES OF THE STUDY

Table 6.1 presents the phases of the study. The objectives that were achieved in each phase, and associated methods used, are also enumerated. Objectives one and two (cf. 1.7) are subdivided into two sub-objectives for the purpose of illustration of the actions achieved during each phase.

Table 6.1: Phases of the study and the associated objectives and methods

Phase	Objectives	Methods
Phase one: data gathering	<ul style="list-style-type: none"> Explore the experiences of undergraduate diagnostic radiography students regarding death and dying situations in the workplace. Explore the coping mechanisms adopted and employed by undergraduate diagnostic radiography students to deal with death and dying situations in the workplace. 	Sampling, recruitment, reflective journaling and interviewing, and the pilot study
Phase two: data analysis and discussion	<ul style="list-style-type: none"> Describe the experiences of undergraduate diagnostic radiography students regarding death and dying situations in the workplace. Describe the coping mechanisms adopted and employed by undergraduate diagnostic radiography students to deal with death and dying situations in the workplace. Describe the nature of the relationship between undergraduate diagnostic radiography students' experiences and coping mechanisms pertaining to death and dying patients in the workplace. 	Thematic analysis and literature control
Phase three: support strategy development	<ul style="list-style-type: none"> Develop and describe support strategies to facilitate coping with death and dying in the workplace, by undergraduate diagnostic radiography students. 	Conceptual framework of Dickoff, James and Wiedenbach and a review panel

6.5 RESEARCH METHODS

This section provides a detailed description of the methods and specific steps that were used to conduct this study to satisfy the research questions, aim and objectives (Maree & van der Westhuizen, 2013:34).

6.5.1 Phase one: data gathering

To explore how undergraduate diagnostic radiography students experience and cope with death and dying patients during WPL, an appropriate target population had to be identified from which a sample could be drawn.

6.5.1.1 Target population

Target population refers to all individuals, and/or events that meet the sampling criteria of a specific research study (Botma, Greeff, Mulaudzi & Wright, 2010:124). Gray, Grove and Sutherland (2017:53) describe a target population as the full group of people that embodies the focus of one's research study.

For this study, the target population included all undergraduate diagnostic radiography students (n=106) who were enrolled for a four-year professional degree at a single HEI in South Africa, and who had experienced at least one death or dying patient scenario during WPL. All students participate in WPL as a compulsory component of the degree programme. They are placed at one of six accredited clinical training sites in the Eastern Cape for the duration of their studies of the degree programme. A breakdown of the number of students enrolled for year 1 to year 4 is presented in Table 6.2.

Table 6.2: Number of enrolled students per level of study in the programme

Level of study	Number of students (n)	
Year 1	32	
Year 2	29	
Year 3	27	
Year 4	18	
	TOTAL	106

6.5.1.2 Sampling strategy and sample size

Sampling refers to the selection by a researcher of a subset of a target population to participate in a research study (Gray, Grove & Sutherland, 2017:53). Qualitative research studies usually employ non-probability strategies; the aim is to select participants that should provide information-rich accounts related to the phenomenon of focus (Polit & Beck, 2018:199; Flick, 2015:11–12). This would then provide possible answers to the research questions in order to achieve the aim and objectives of a study. Samples are also usually small in size because a researcher uses a qualitative study to discover meaning of a phenomenon from multiple realities and not to generalise the findings in relation to the target population (Polit & Beck, 2018:199). Onwuegbuzie and Leech (2010:882–883) maintain that case-to-case transfer generalisations are possible as a researcher can make generalisations based on similarities found in relation to other studies, as well as analytic generalisations to demonstrate how the findings pertaining to the purposively selected sample, and associated context, relate to wider theoretical constructs of particular theories. In terms of this study these are congruent with the

literature control to be done in the findings and discussion chapter (cf. 7), as well as the theoretical contribution made by this study (cf. 1.8).

For this study, a criterion-based purposive sampling strategy was used to recruit participants. This was to ensure that the participants had the relevant experiences related to the phenomenon of interest (i.e., experiences related to death and/or dying patients during WPL) (Babbie 2016:187; Nieuwenhuis, 2013:79). This in turn ensured that the participants were best able to provide information required to achieve the aims and objectives of the study (Gray, Grove & Sutherland, 2017:255). Participants were selected, and included in the sample, based on predetermined inclusion and exclusion criteria (Polit & Beck, 2018:200; Gray, Grove & Sutherland, 2017:255). Students who did not fulfil the inclusion criteria were excluded. The inclusion criteria to select student participants were as follows.

- Any student regardless of personal characteristics or the place where they were doing their WPL.
- Students had to have encountered at least one death and/or dying patient incident during WPL in their clinical environment.
- Students had to be willing to voluntarily share their experiences with the researcher.
- Students had to give the researcher consent to access their reflective journal for research purposes, as well as be willing to participate in an interview with the researcher. Their reflective journal entries had to fulfil the requirements of the Gibbs' cycle of reflective writing (cf. 6.5.1.4.1).

Criterion-based purposive sampling was the most appropriate sampling strategy due to the nature of the phenomenon being studied, since there were a limited number of informants to participate in this study during the data gathering period (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2015:534). An explicit sample size was not indicated during the initial conceptualisation of the study as it was not clear how many participants would have had the required experience during the data gathering period. Theoretical sufficiency was used as a guiding principle. According to Braun and Clarke (2019:1) the number of participants needed to achieve theoretical sufficiency cannot necessarily be determined before analysis of the data since meaning of the phenomenon of interest is constructed through the interpretation of the narratives of the participants and not mined from the data in a predetermined, checklist-like manner. Literature reports that the sample size of most qualitative studies is frequently based on theoretical data saturation. Data saturation is described as the point during the data

gathering phase where data gathered no longer provide new insights or new emerging themes, which inform the research questions. Data gathering ceases when information redundancy occurs (Polit & Beck, 2018:201; Nieuwenhuis, 2013:79). Data saturation can be more accurately labelled as theoretical sufficiency, as one is never able to know everything about a particular topic (Polit & Beck, 2018:201; Gray, Grove & Sutherland, 2017:352). Theoretical sufficiency, therefore, had to be achieved to provide an accurate descriptive representation of the participants' experiences and coping regarding death and dying patients during WPL. This required the researcher to gather and analyse data concurrently to establish the point of theoretical sufficiency. The following factors are determinants of theoretical sufficiency: how much a participant is willing to share with the researcher (i.e., interviewer), the nature of the study, the participants ability to effectively relay information about their experience, and the amount of data sources being used (Polit & Beck, 2018:201; Gray, Grove & Sutherland, 2017:352). In terms of the factors influencing theoretical sufficiency, two data gathering sources were used involving undergraduate students across the four levels of study in the degree programme.

Regarding rigour and ethics, some authors maintain that criterion-based purposive sampling aids in enhancing the trustworthiness and research ethics of a study since each potential participant has an equal chance of being included in the study as well as being selected methodically using inclusion criteria, and by doing this the concerns of selection bias and justice are addressed (Houser, 2012:424; Daniel, 2012:87–88; Cohen & Crabtree, 2006; Barbour, 2001:1116).

6.5.1.3 Participant recruitment

Emails were sent to potential participants once ethical approval had been granted by the relevant gatekeepers (cf. 6.2). The qualification code email address, generated by the HEI where the study was conducted (i.e., research site), was used. I thought that using the group email address would possibly reduce or even eliminate a feeling of coercion amongst students. Therefore, the email was directed to the group and not individuals. The email served to raise awareness about the study, to invite students to indicate their interest and willingness to participate, and to provide them with the participant information letter (Addendum H).

As soon as students indicated their willingness to participate and agreed to the expectations, their reflective journals were accessed. All students are required to complete a reflective journal for each level of study. They follow the reflective writing cycle of Gibbs (cf. 6.5.1.4.1). They are

required to make weekly entries related to clinical experiences, good or bad, that were significant for them in each particular week. When I accessed the reflective journals of those who had indicated their willingness to participate in the study, I searched for entries regarding death and dying experiences. The names of the students that had such entries were noted. Thirty-eight students were identified as having one or more relevant reflective journal entry. Table 6.3 provides a breakdown of the number of students identified per level with relevant reflective journal entries.

Table 6.3: Number of students per level of study with relevant reflective journal entries

Level of study	Number of students (n)
Year 1	10
Year 2	11
Year 3	11
Year 4	6
Total	38

I then contacted these students by email to inform them that relevant entries had been accessed from their reflective journals and that they were invited to an interview to share their experiences and coping regarding death and dying patients during WPL. The blind carbon copy (bcc) email function was used to communicate with the students as a group. This meant they all received the same email. The use of the bcc function and singular format of the email (i.e., dear participant) assisted me to maintain participant anonymity. In this email communication they were asked to use the 'yes/no' voting buttons to indicate whether they would avail themselves to be interviewed. The invitation was sent three times at 10-days apart to the 38 students. Three declined the invitation and 15 did not respond (n=18 out of n=38). Recruitment for the interview was terminated after the third invitation. Twenty (n=20) thus indicated that they were willing to avail themselves for an interview. The reflective journal entries of those that declined to be interviewed or did not respond to the invite were not included as data sources. The inclusion criteria for participant inclusion required them to avail themselves for an interview in addition to using their reflective journal entries (cf. 6.5.1.2).

During the recruitment process the students were asked whether they would prefer an independent interviewer. All (n=20) preferred being interviewed by the researcher as they were of the opinion that they would be more comfortable speaking to someone they knew as opposed to someone they did not know.

Each participant (n=20) was sent an email to arrange interview dates and times. The interview appointments were scheduled during office hours, at a time convenient to each participant,

whilst they were attending their theory block at the university. The interview times were when the participants did not have academic lectures to ensure that they did not miss any lecture time due to their participation. Each interview took place in an empty office, on campus where students attend theory lectures, and away from familiar staff and students, so as to maximise student privacy, anonymity and confidentiality. The door of the venue was also closed and locked at all times so that no passer-by could see or hear what was shared by a participant. A 'do not disturb' sign was placed on the door. All participants approved of this arrangement.

Each was provided with an explanation regarding an independent observer to be present during their respective interview. They had to indicate whether they were comfortable with this arrangement (cf. 6.5.1.4.2). One did not approve of the presence of the independent observer.

6.5.1.4 Data gathering

There is no one-size-fits all approach when considering what constitutes trauma to an individual. Being traumatised by a stress experiences varies from person-to-person (Hamilton & Dinat, 2015:119). In other words, the perception of what is a traumatic experience to any individual is subjective (Wade & Schenck, 2012:340). According to Hamilton and Dinat (2015:119) individuals start processing a stress experience after 48 hours. Some prefer to talk about their experiences as a means of processing the encounter (Hamilton & Dinat, 2015:119). In view of this the selection of data gathering methods had to be suitable to minimise harm and distress to the participants in terms of a death and dying patient experience encountered by undergraduate diagnostic radiography students during WPL. Reflective journaling, and individual face-to-face interviews, were deemed appropriate. The data gathering methods were thus appropriate because only those participants, who indicated they would be comfortable sharing their experiences, were included in the sample. They had the autonomy to make that decision, and the option to withdraw from the study at any time. Due to the inherent subjectivity of the participants' experiences, these data gathering methods afforded them the opportunity to describe and explain in their own words their experiences and coping with death and dying patients. The use of two data gathering methods meant that the trustworthiness of the study was enhanced by means of crystallisation (also referred to as data triangulation). Crystallisation refers to data gathering and analysis, to represent a phenomenon of interest, from the perspective of multiple realities and construction of meanings of participants in order to gain an in-depth understanding of the phenomenon from their point of view (Nieuwenhuis, 2016:121–122).

The next two sections explain how the two data gathering methods, reflective journaling and interviews, were operationalised to gather information-rich data to find possible answers to the research questions underpinning the study.

6.5.1.4.1 Reflective journaling

Qualitative inquiries, from a social constructivist perspective, aim to understand phenomena of interest holistically and comprehensively, being cognisant of the socio-cultural context in which the phenomena occur (cf. 1.10; 6.3.1). Therefore, in an attempt to gather more immediate data from the participants, regarding their experiences and coping with death and dying patients during WPL, reflective journaling was apt to address this need. Bashan and Holsblat (2017:2, 4) state that reflective journal entries also capture more subtle nuances about participants' experiences and coping that were not necessarily relayed during face-to-face interviews or by any other means. The participants in this study were able to express their experiences and coping in their own manner. They could share what they felt.

Reflective journaling is a prerequisite for all students enrolled for the four-year degree programme at the research site for each level of study. They are required to reflect on at least one clinical scenario, good or bad, that was significant for them for each week whilst in their respective workplace. They use an A5 notebook to document their reflections. Reflective journaling was therefore not an extra task for them. Their journals were accessible to the researcher with the permission of the relevant gatekeepers (cf. 6.2). For the purpose of structuring the reflective journal entries an adapted version of Gibbs' cycle (Figure 6.1) was used (Williams, Woolliams & Spiro, 2012:90–91). Gibbs' cycle is an adaptation of Kolb's experiential learning cycle to emphasise the importance of feelings and emotions in learning, as well as to facilitate the transfer and generalisation of knowledge from one situation to another (Williams, Woolliams & Spiro, 2012:90).

The participants were required to reflect on the six questions that encompass Gibbs' cycle, and then they had to provide comprehensive, written accounts addressing these questions in their reflective journal (Le May & Holmes, 2012:142; Williams, Woolliams & Spiro, 2012:94–95). The fifth question of Gibbs' cycle was amended to include an additional part to the question. The participants were able to provide other methods that could be used to optimise their coping with a death and/or dying patient encounter. Le May and Holmes (2012:141) add that reflection is a form of evaluative reflective practice where one critically appraises what one has done and how one could do it differently in the future. This aligns with Lazarus and Folkman's transaction

model of stress, appraisal and coping, which was used as the theoretical framework for this study (cf. 5).

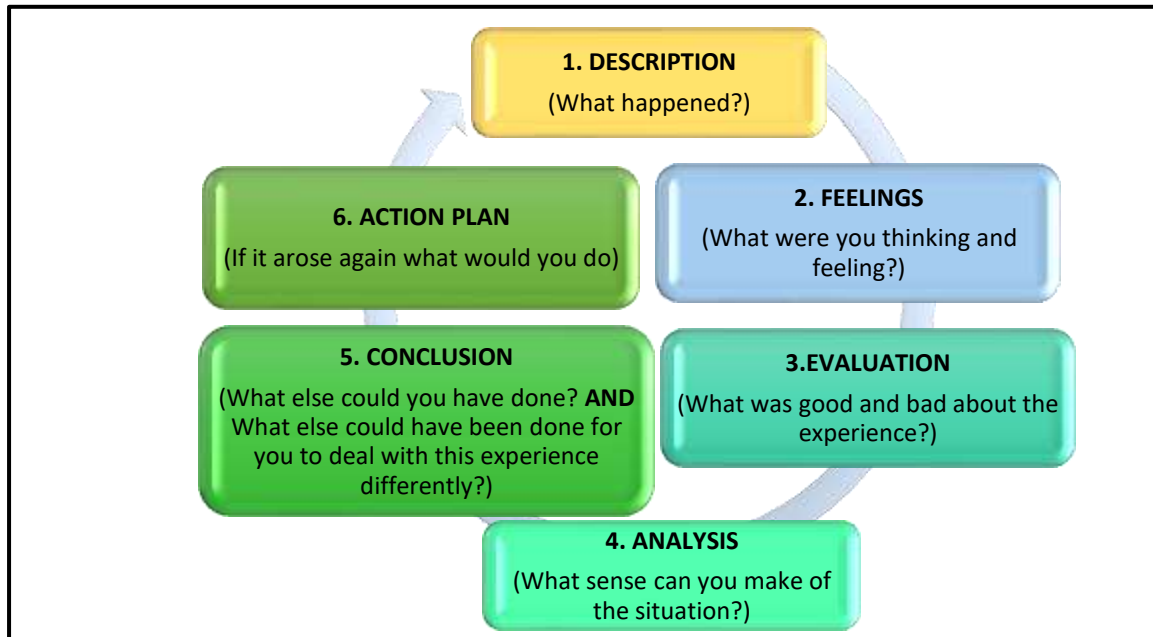


Figure 6.1: Adapted Gibbs' reflective cycle used to structure participants' reflective journal entries.

Twenty students (n=20) agreed to be interviewed and their reflective journal entries were accessed (cf. 6.5.1.2). However, during the interviewing process four withdrew and their journal entries were then discarded. This resulted in 16 participants' reflective journal entries being included in the data set. There was a total of 23 reflective journal entries, ranging between one to three per participant. The entries were analysed using a thematic analysis during phase two of this study, as described below (cf. 6.5.2.1). The findings were grouped with those of the interviews and presented as themes and sub-themes (cf. 7). In terms of trustworthiness, data remained authentic as the participants' handwritten reflective journal entries were analysed in the submitted format. In addition, prolonged engagement with participants was possible as this was one of two data gathering methods. Trustworthiness was therefore further enhanced.

6.5.1.4.2 Interviewing and Mmogo-method™

To supplement the data gathered from the reflective journal entries, and to facilitate the process of gaining deeper insights into undergraduate diagnostic radiography students' experiences and coping with death and dying patients during WPL, individual in-depth semi-structured face-to-face interviews with each participant (n=16) were conducted using an adapted form of the Mmogo-method™. These interviews were a second data gathering method and enhanced the

trustworthiness of the study by means of crystallisation. Interviews are used in qualitative inquiries to gain more insight into the phenomenon of interest from the participants' perspective and how they make sense of their multiple lived realities within a specific socio-cultural milieu surrounding the phenomenon of interest (Brinkmann & Kvale, 2015:3). The use of interviews as a data gathering method aligns with my ontological and epistemological positions. Based on Josselson's (2013:1–2) opinion I accepted that reality is socially co-constructed through conversation and critical questioning to gain insight into a phenomenon of interest beyond my own pre-existing assumptions. Interviewing requires an everyday type of dialogic conversation between a researcher (i.e. interviewer) and a participant. It does have a specific topic of focus to gain a deep, holistic understanding of the participants lived experiences regarding the occurrences of interest (Mason, 2018:110–112).

➤ Interview type

In-depth semi-structured face-to-face interviews were conducted following an amended version of the Mmogo-method™. The Mmogo-method™, developed by Vera Roos, is a South African visual projective technique to elicit narrative (i.e., qualitative) data on different levels from a participant. It facilitates an understanding of a phenomenon under study from a participant's perspective in relation to their specific socio-cultural context. This provides for contextual triangulation of the findings, which enhances the trustworthiness of a study (Roos, 2008:660–662). Interviewing is suitable to gain deeper understandings about social realities where individuals find themselves immersed in daily social realities and find it difficult to distance themselves from these (Roos, 2016:20; Roos, 2012:258). In this case, the reality examined was undergraduate diagnostic radiography students' experiences and coping with death and dying patients during WPL. The philosophy underpinning this data gathering method was congruent with the philosophical assumptions of the researcher in as far as that lived human experiences are socially situated and that their realities are influenced by the socio-cultural context that they find themselves in (Roos, 2012:251). It was therefore an appropriate data gathering method to use.

In its original format, the Mmogo-method™ requires participants to construct and illustrate their individual inter and intrapersonal relationships with their respective communities and socio-cultural settings using potter's clay, beads, grass stalks, and a round cloth (Roos, 2016:21; Roos, 2008:8). These constructions are done in response to an open-ended prompt that is congruent with the aims and objectives of a research study (Roos, 2016:24). Participants become co-creators of knowledge during the process of data gathering by generating the data

from their own perspectives (Roos, 2012:259). Mmogo is a Setswana word that can be translated to interpersonal relatedness, co-ownership, togetherness, co-construction and/or interpersonal threads (Roos, 2012:249). Participants provide verbal narratives regarding their visual construction in relation to questions and follow-up probes, aligned to a research study's aim and objectives (Roos, 2016:28). This technique provides both visual and textual data for analysis. Debriefing is the last stage of the Mmogo-method™ and participants are invited to share how they experienced the debriefing session (Roos, 2016:29). Although this interviewing method is usually done in a focus group interview setting, it is contraindicated if participants are uncomfortable with group participation or, if they had experienced recent trauma, since a group setting can potentially exacerbate emotional distress (Roos, 2016:30). The Mmogo-method™ has further benefits of accessing the lived realities of participants without necessarily having to rely solely on verbal accounts, especially when challenges exist regarding language barriers, cognitive ability, age, culture and ethnicity, since the construction can be utilised as a guide for dialogue between a researcher and participant (Roos, 2016:20; Roos, 2008:661). The interviewing technique requires participants to reflect on the phenomenon of interest and this allows a researcher to access information that would otherwise be inaccessible by simple direct interviewing. This is because participants may have forgotten some aspects that they had not thought about it at the time or were not necessarily aware that an aspect that seemed insignificant actually had a significant influence on their lived experience (Roos, 2012:250).

It was deemed both appropriate and necessary to make amendments to the original version of the Mmogo-method™ (van de Venter, Engel-Hills & Stroud, 2019:362). The reason being was that I was aware of the context in which this study was conducted, the phenomenon of interest, and the participants. The following amendments were made.

- Individual in-depth face-to-face semi-structured interviews were conducted instead of focus group interviews. Research studies involving topics around death and dying are considered sensitive research which may evoke participant specific affective responses. Hence, to protect the participants privacy and dignity and to create an environment conducive of dialogue individual semi-structured interviews were appropriate (Roos, 2016:30).
- Instead of using potter's clay, beads, grass stalks and a round cloth, the following craft materials were used: coloured play dough, beads, sticks, polystyrene balls, feathers and shapes, as well as a rectangular A4 sized white cardboard. These materials were very accessible and apt to the context in which this study was

conducted. The participants were all university students who were familiar with arts-based materials. Some participants were not very tactile learners; hence a pencil was also included to not disadvantage these participants in any way. They were strongly encouraged to use the arts-based materials as much as possible. All were handed a similar pack of materials to maintain consistency. This amendment is in line with the recommendation by Roos (2008:661); the materials used should be representative of the integrity of the context in which the data are gathered and generated in a non-directive manner.

- This study was situated within the social constructivist paradigm (cf. 1.10). The focus was gaining insight into the experiences and coping of the participants with death and dying patients during WPL. The focus was not the researcher's interpretation of what the constructions could possibly mean. The visual constructions were mere transmittal media through which dialogue was facilitated during the interview with each participant. Visual analysis was not done of the constructions from a pure interpretivist perspective based on the researcher's interpretations. This decision was also made to honour the role of the participants as co-creators of knowledge in the process and to align the data analysis processes with the aim and objectives of this study. Another reason for this amendment was to enhance the chances of the participants sharing in-depth narratives regarding their experiences and coping with death and dying patients during WPL in a more contained, comfortable environment (Roos, 2012:259).
- The construction phase was 45 minutes as per the original method. To prevent researcher and participant fatigue, each face-to-face interview did not extend beyond 90 minutes. This was far shorter than focus group interviews that usually last for two to three hours (Roos, 2016:22, 28).

➤ Conducting interviews where participants are known to a researcher (i.e., interviewer)

I conducted the interviews, which were of a qualitative nature. I was mindful of the inherent dichotomous power relationship. To address ethical concerns, the participants were involved in the relevant steps to determine when their interview took place. A semi-structured interview was used to allow them autonomy to determine what information they would disclose. This empowered them as the questions asked by me as the researcher would have had no value if there was no content informing them from their perspective. As reported in the literature when researchers conduct their own interviews this facilitates and eases data analysis; a researcher

can contextualise and report better on the nuances underpinning the data shared by participants. This in turn enhances a researcher's understanding of a phenomenon under study in its natural setting (Råheim, Magnussen, Sekse, Lunde, Jacobsen & Blystad, 2016:10; Edwards & Holland, 2013:78–79, 86). Put differently this enabled me to provide a more rich and vivid description of the findings and in turn this then enhanced the trustworthiness of the study. I recognised that explanations of lived human experiences are nuanced and complex. This was the rationale and logic underpinning the use of interviews as a data gathering method. As a researcher I had to be active and reflexive throughout the data generation process (Mason, 2018:114–115). Bracketing was employed to reduce the probability of personal bias influencing the data gathering and generation processes, as well as data analysis (LoBiondo-Wood & Haber, 2018:106).

Bracketing entails a researcher setting aside their perspectives of a phenomenon being studied when engaging with participants (LoBiondo-Wood & Haber, 2018:106). It requires a researcher to make their perspectives and assumptions about the phenomenon known, and then to employ strategies to set these aside so that they do not influence the data gathering and analysis processes (Polit & Beck, 2018:186–187; Gray, Grove & Sutherland, 2017:66). The following strategies were employed to ensure bracketing.

- The researcher kept a reflective journal (Polit & Beck, 2018:187) detailing methodological decisions taken and justification thereof, where relevant.
- The researcher asked each participant non-leading interview questions and follow-up probes. This was done to ensure that the researcher remained open to the meaning of the phenomenon from each participant's perspective and to pursue issues raised by each one (LoBiondo-Wood & Haber, 2018:106; Polit & Beck, 2018:188). They were asked the same opening questions and probing was dependent on the perspectives that they raised (Gray, 2018:385).
- I have detailed my position in relation to this study, together with my philosophical assumptions in Chapter 1 (cf. 1.10).

To further reduce the probability of bias and power relations influencing the data gathering process, the services of an observer were used. The observer has extensive research experience in both qualitative and quantitative approaches, holds a doctor of philosophy degree in nursing. The observer was employed as a research assistant in the Faculty of Health Sciences at the research site when the study was conducted. The observer was unknown to the participants and did not interact with them during their interviews, except at the start when

introductions were done. To further protect the integrity of the study, and maintain the participants' right to protection of their confidentiality, the observer signed a confidentiality agreement (Addendum I). The observer recorded the following field notes during the interviews.

- The researcher's interactions with the participant with a particular focus on any power relations being displayed.
- Any non-verbal or verbal cues, which the observer felt was of importance to the making sense of the data.
- Any suggestions to improve the interview process.

Using an observer and their field notes further contributed to data richness and acted as an audit trail of interactions between the researcher and participants to enhance the trustworthiness of the findings. The role of the observer was explained to all participants during the recruitment process and at the start of the interview process. The participants were also asked whether they would be comfortable having an observer present as described above (c.f. 6.5.1.3). Fifteen (n=15) of the 16 participants approved the presence of an observer. The observer was not included for the one participant (c.f. 6.5.1.3) who did not agree to the presence of the observer (Kawulich, 2012:150–155). None of the participants opted to be interviewed by an independent interviewer (cf. 6.5.1.3).

➤ Prior to each interview

Two days prior to the scheduled date the researcher confirmed the venue availability and whether the respective participants were willing to participate in their interviews. On the day of the interview the following was done.

- The functionality of the digital audio-recorder was checked.
- The researcher ensured all materials were placed in the bag, inter alia the researcher's interview notebook, and participant pack: participant file and material pack for the construction.

The participant met the researcher (i.e., interviewer) and observer at the arranged venue on the scheduled day and time.

➤ The interview and venue

The interviews took place on the campus where the participants had theory lectures (cf. 6.5.1.3). The venue was an office on the second floor, away from familiar staff members and students, to maximise participant privacy, anonymity and confidentiality (c.f. 6.5.1.3). Figure 6.2 represents the venue layout and seating arrangements during the interviews.

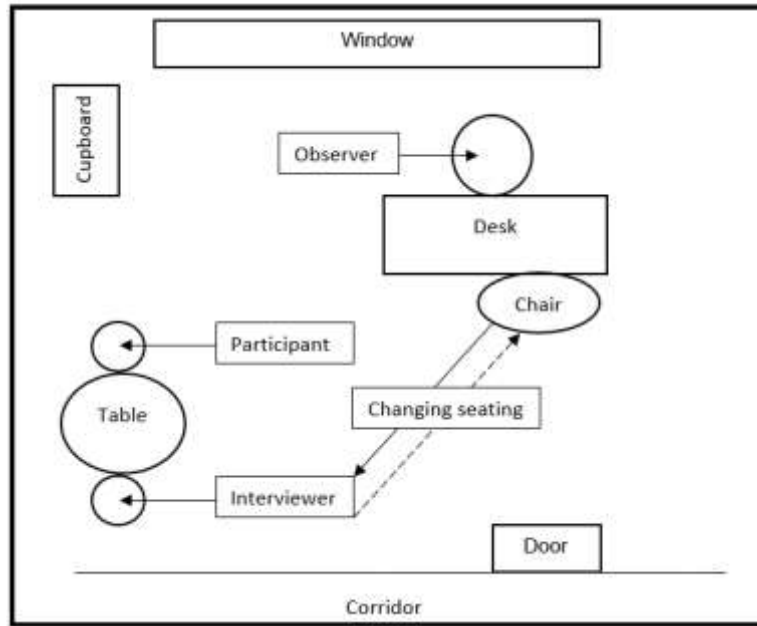


Figure 6.2: Interview venue layout and seating arrangements.

During informed consent and the introductions of interview norms, the researcher (i.e., interviewer) and participant faced each other while seated at a round table. The observer was seated at the desk, out of sight of the participant, but did have full view of all interactions at the table. During the construction stage of the interview, the interviewer moved and sat at the same desk as the observer, facing the observer, thus both were not in the sight of the participant. This seating arrangement allowed each participant to freely engage with their construction process. The interviewer returned and sat opposite the participant when a signal had been given that the construction was finished. The discussion stage of the interview ensued. It was digitally audio-recorded with prior consent. During the discussion phase the observer made active field notes as described above. The interviewer made notes to assist with formulation of probing questions as the discussion unfolded. The debriefing stage of the interview between the interviewer and participant also occurred at the round table. This layout and seating arrangement were adopted, for the interview, to enhance a conducive information sharing environment to ensure maximum comfort for each participant. At the end of the interview, when the participant had left the venue, a debriefing session between the interviewer and observer was held at the latter's desk as described above.

The Mmogo-method™ has a four-stage approach, as previously described. The operationalisation of these four stages in this study is detailed below.

❖ Stage 1: informed consent and introduction of interview norms

Each participant on arrival at the venue was greeted by the interviewer and introduced to the observer. The rationale and purpose of the study were explained by the interviewer in order that each participant was fully informed in order to exercise autonomy when signing an informed consent form (Addendum J). The form was also signed by the interviewer (researcher) and observer. Each participant was then requested to provide their demographic information (Addendum K), which included their contact details. The interviewer explained the need for their contact details as their transcribed interview had to be sent to each participant to check the authenticity thereof and to clarify any segments identified or that they felt required clarification. Each participant was informed that photographs would be taken of their completed construction to supplement their verbal account of their experiences and coping with death and dying patients during WPL. Each participant was asked to share their expectations in terms of participating in the study. Throughout the process each participant had an opportunity to ask clarifying questions, which the interviewer addressed honestly and openly (Roos, 2016:23; Roos, 2012:252). Each participant was made aware that an independent transcriber would transcribe the audio-recorded interviews. All participants were assured that their identity would not be divulged, and that the interviewer would use a unique participant identity number. This was to ensure that during member-checking the correct transcript was provided to the correct participant, as well as to use for reporting purposes in the thesis and publications.

❖ Stage 2: construction

The construction stage followed stage 1. It entailed providing each participant with the identical material pack for consistency (Figure 6.3).



Figure 6.3: Participant material pack.

The interviewer then explained what was required with the pack. The interviewer asked an open-ended prompt question so that each participant could then use their response as a guide for their construction (Roos, 2016:24; Roos, 2012:252). The question was as follows.

- Could you construct/produce/build/depict your experiences and means of coping with death and dying in the workplace?

Each participant was given an opportunity to ask clarifying questions, but none did. All assured the interviewer that they understood the prompt. The prompt was also made available to refer to throughout the construction stage should this have been necessary. Each participant was given 45 minutes to complete their construction (Roos, 2012:252). The seating arrangements, making field notes, and signalling were as described above (c.f. interview venue). The time taken to complete a construction was recorded when a participant signalled as described above (c.f. interview venue). On average 27 minutes was spent on the constructions (range: 15–42 minutes).

❖ Stage 3: post-construction discussion

During this phase the interviewer sat opposite the participant. Photographs were taken of the completed construction. For three dimensional photographs were taken from various angles to capture different perspectives (Roos, 2016:28). Each participant was informed of what was expected during this stage. Throughout this phase the observer made field notes. In order to align with the aim and objectives of the study (Roos, 2016:28) the post-construction discussion was initiated using the following interview question.

- Could you explain your experiences and ways of coping with death and dying in the workplace using your construction in front of you?

During the participant's explanations of their constructions, the interviewer made short notes to assist in formulating probing questions based on what the participant had said. This helped to gain deeper insight and/or clarity on a specific aspect of the construction in terms of how it represented their experiences and coping. Examples of probing questions were as follows.

- Could you explain the reason for structure X being further from structure Y?
- Tell me, does the use of the colour for structures A, B and C, in your construction, have any significant meaning related to your experience(s) and coping?
- Could you elaborate on the reasoning for structure A being bigger/smaller than structure B, and how it relates to your experiences of death and dying in the workplace?
- So, are you saying that...?
- Do I understand you correctly, when you say... that you mean...?

The interview guide had open-ended questions, which allowed the interviewer to commence with a broad question before moving to more specific ones. Follow-up questions emerged throughout each interview based on a participant's narrative. This was also to ensure that the participants right to autonomy was maintained throughout the interview so that they could determine the content they shared and the extent to which they shared their experiences (Roulston & Choi, 2018:237; Råheim, Magnussen, Sekse, Lunde, Jacobsen & Blystad, 2016:10; Edwards & Holland, 2013:78–79, 86).

Two participants (n=2) experienced some emotional distress during this phase. The audio-recording was then paused so that they had time to recover their composure. The interviewer consoled them and allowed them some time alone in silence. They were asked whether they would like to continue, and both affirmed when they were ready (Roos, 2016:27). On the recommendation of the observer follow-up questions were asked during member-checking when the transcripts were sent to them in order for them to indicate what triggered their emotional distress. They provided written explanations. These contributed to gaining more insight into their experiences.

As described above (c.f. interview type) the duration of these stages did not exceed 90 minutes to guard against researcher and participant fatigue. At the end of stage 3 the interviewer thanked each participant for their input. They were allowed to either deconstruct their construction or keep it as is. All were allowed to keep any unused materials in their material pack. Each was reminded that an independent transcriber would transcribe their respective

recorded interview. They were told that they would receive a copy of the transcript to check and verify whether it was correct and final.

❖ Stage 4: debriefing

When the post-construction discussion had ended, and the audio-recorder had been switched off, each participant was asked the following question as a means to initiate the debriefing stage (Roos, 2016:29).

- Was the construction of the Mmogo beneficial, or not, to you to do before the discussion of your experiences and coping with death and dying patients in the workplace, and for which particular reasons?

They provided various answers. This allowed the interviewer to gauge whether any of them were emotionally distressed. Apart from the two participants that experienced emotional distress during the discussion, all appeared to be content. They were all provided with the contact details of individuals if they felt they needed to speak to a professional to debrief after the session.

Each was thanked for their respective contributions at the end of the interview and they then left the venue. Then the observer and interviewer had a debriefing session. The interviewer expressed thoughts on how the interviews went. The observer, during the initial pilot interview, recommended that I keep a neutral facial expression during the interviews. Other than this one recommendation, the observer was of the opinion that the interviews were conducted ethically; the interviewer focussed on each participant's utterances and used probing to follow-up on what had been shared to gain more insight so as to make sense of their experiences and coping with death and dying patients during WPL. The observer was of the opinion that the participants seemed comfortable to share their stories with the interviewer. The recommendation of the observer was incorporated in the interviewer's technique and the observer noted that.

➤ After each interview

Field notes were completed by the interviewer after each interview was completed. These comprised the interviewer's impressions of each participant during and after the interview as well as reflections regarding their utterances during the interview. The audio-recorded interview was downloaded on a password secured laptop in a specific folder and labelled using the unique participant identification number created as discussed above (c.f. stage 1) The recording was shared with the independent transcriber through Google Drive. The transcriber

signed a confidentiality agreement (Addendum L). The transcriber is a professional copyeditor and transcriber with more than 30 years' experience. The transcriber provided a transcript of each recording, which the researcher then listened to pick up any errors in order to make corrections. Each participant was sent their transcript for verification and member-checking. They were informed that the turnaround time for them to verify their transcripts was two working days. All participants were provided an opportunity to rephrase sentences or remove anything that they did not wish to share. Some probes at the end of each transcript were provided, if they were required, to gain deeper insights. All were informed that if they did not meet the turnaround deadline then the version sent to them would be accepted as final and correct.

All reflective journal entries and transcripts were printed and bound in a hardcopy document in preparation for the analysis process. Electronic copies of the documents were saved on a password protected laptop in a specific folder that was only accessible to the researcher.

6.5.1.5 Pilot study

A pilot study is a smaller-sample study or initial exploratory analysis. It is undertaken to determine whether the data gathering methods and participant recruitment process will be effective for gathering information-rich data relevant to answer the research questions, to achieve the aim and objectives of a study (Gray, Grove & Sutherland, 2017:54). A pilot study can also be used to assess the viability and adequacy of the research methods to be used in a larger, main study, as well as to establish whether a researcher has the necessary skill to conduct the study (Botma et al., 2010:275).

One male and one female (n=2) third-years students who met the inclusion criteria were recruited (cf. 6.5.1.3). They agreed to being interviewed to participate in the pilot study. The data were gathered as described above (cf. 6.5.1.4). Following the end of the second interview, a discussion meeting was held with the independent observer to determine whether the pilot study had highlighted any areas that required amendments. The observer indicated that no amendments were required and that it would be appropriate for the data of the pilot study to form part of the main study. The participants were asked their opinion after their respective interviews. Both stated there was no need for any amendments to the interview technique. They both approved the selected venue.

The audio-recorded interviews were transcribed verbatim. The transcripts, together with the reflective journal entries of both participants, were analysed as described below (cf. 6.5.2.1).

The pilot study process was explained to the supervisors of this study. The pilot data were presented as themes and sub-themes. Feedback from the independent observer, and the pilot participants, was provided to the supervisors. The latter were satisfied that the data gathering instruments and methods were adequate to obtain information rich data that would inform the research questions underpinning this study to achieve the objectives and aim set. Modifications were not needed for data gathering instruments and methods, and the participant recruitment process, thus the data and findings from the pilot study were included in the main study (Gray, Grove & Sutherland, 2017:54).

6.5.2 Phase two: data analysis and discussion

Sampling and participant recruitment were completed in phase one. The reflective journals were then accessed, and interviews conducted. The pilot study preceded the main study. Concurrently with data gathering, the initial part of phase two (i.e., data analysis using a thematic analysis method) took place (Brink, van der Walt & van Rensburg, 2018:180). This together with data gathering assisted the researcher to establish when theoretical sufficiency had been reached (cf. 6.5.1.2). This section outlines phase two of the study. It includes the data analysis procedure that was followed as well as the use of a literature control to facilitate the discussion of the findings presented in Chapter 7.

6.5.2.1 Data analysis

The data from the reflective journals and interviews were analysed using an inductive approach through thematic analysis. As indicated in Chapter 2, the literature review started prior to data analysis. A more focussed literature review was done after data analysis to keep the data analysis process as inductive as possible (cf. 2.2). The focus of the data analysis was to establish how the participants experienced and coped during the incidents of death and dying they faced in the workplace in order to address the first three objectives and research questions of this study (cf. 1.5; 1.7). The findings informed the development of the support strategies in phase 3 of the study (cf. 6.5.3), which addressed the fourth objective and research question.

➤ Coding and thematic analysis

Nieuwenhuis (2018:180–181) states that qualitative researchers need to be organised and systematic throughout their work due to the sheer volume of data and documents that they usually have to work with, and to facilitate ease of navigation through the documents during an iterative analysis process. In this study hardcopies of the interview transcripts and reflective journal entries were used for manual coding and analysis of the data. The documents of each

participants were labelled with their unique identification number developed during the informed consent stage of the interview to enable the researcher to link the data to the correct participant. Coding and analysis of the data commenced after the documentation had been prepared. Following the coding and analysis process, hardcopies of all the interview transcripts and reflective journal entries were bound in a single document to keep all the data files together for easier access. The photographs that were taken of each participant's construction during the interview were printed to aid the researcher to make sense of the participants' utterances when reference was made to specific areas on their constructions. These areas were labelled according to what was labelled by the participants. These segments of the constructions then formed codes and aided with data analysis. The researcher had the research questions, aim and objectives at hand throughout the coding and analysis process to ensure that the process was focussed and relevant to these at all times.

Thematic analysis requires a researcher to identify prominent patterns and themes from the data gathered (Brink, van der Walt & van Rensburg, 2018:180; Polit & Beck, 2018:282). To get to this stage, a researcher must categorise data in groups of similar content into meaningful units. This is known as coding. It enables a researcher to gain an overview of the characteristics of a phenomenon being studied from the participants' point of view (Brink, van der Walt & van Rensburg, 2018:180; Gray, 2018:692). This is then followed by establishing the various relationships between the various categories of data and entails an interpretation of the participants' utterances (Gray, 2018:692; Grbich, 2013:259). The themes and patterns can then be related to the theoretical framework underpinning a study, to further describe the nuances of the phenomenon (Gray, Grove & Sutherland, 2017:272). The result then is a descriptive account of the phenomenon after constructing meaning of the data as presented by the participants (Nieuwenhuis, 2016:109–110; Gribch. 2013:260). In this study Tesch's eight steps of coding data were used to make sense of the undergraduate diagnostic radiography students' experiences and coping with death and dying patients during WPL. This enabled the researcher to thematise their perspectives to provide a descriptive account thereof in a scientifically acceptable and rigorous manner.

Tesch's data coding and analysis process involved the following eight steps (Creswell 2014:198).

- All the interview transcripts and reflective journal entries were read to get a general sense of the content of the transcriptions and entries. Some ideas were written down as they came to mind, as possible topics.

- Then a single participant's interview transcript and reflective journal entries were selected. These documents were critically read to deduce deeper meaning of their content. Once again, thoughts and topics were written down to make sense of the different segments of the documents.
- When the previous step had been completed for several interview transcripts and reflective journal entries, the emerging topics and ideas were clustered together, with similar topics in one group.
- Then the researcher abbreviated the topics into codes and put them at specific segments of the interview data. The abbreviated topics were represented by colour coded segments of the data. Each colour represented particular codes. During this step the researcher was mindful to reflect on the process in order to determine whether new topics or themes were beginning to emerge from the data.
- The researcher then clustered the coded topics in an accurate manner that encompassed the meaning of similar segments of data in a descriptive manner, i.e. provided a descriptive label. The researcher then categorised similar and related clusters together.
- The researcher then reached a final decision of descriptive names for the codes in terms of categories. These were then assigned the relevant data segments in the interview transcripts and reflective journal entries.
- Reflecting on the labelling of the emerging categories a preliminary analysis was done to determine whether potential themes had emerged from the coding process, and then these were recorded.
- When deemed necessary, re-coding of data was done until the realities of the participants were thematised as an accurate representation of their experiences and coping with death and dying patients during WPL.

Throughout the coding process I kept and maintained a codebook where inclusion criteria (i.e., analytic memos) were captured and recorded to describe and explain my choices for including a data segment under a specific code/category as well as what each code/category entailed. This enabled me to be consistent and systematic throughout the coding process (Saldaña, 2013:41–42). The data were coded using two cycles of coding using Tesch's eight step method, but three different coding types were applied.

The first cycle entailed open, descriptive coding. The researcher inductively applied codes to segments of data in the interview transcripts and reflective journal entries to describe the topic of the segment using a single word or a descriptive phrase (Saldaña, 2013:88). This allowed clusters and categories to be formed by comparing different segments in terms of similarity and difference and to remain open to all possible theoretical directions (Saldaña, 2013:88). This method is regarded as the foundation of coding cycles to follow; it allows a researcher to determine the appropriate coding types to use in the next cycle(s) (Saldaña, 2013:89). This coding cycle covered most of the underlying sense-making constructs underpinning the participants' experiences and coping with death and dying patients during WPL. Another cycle of coding was however deemed necessary. It was implemented to gain deeper insights into the affective narratives contained in the data as well as to make sense of the phenomenon in totality by assessing any existing relationships between data segments. The second cycle entailed emotion, values, and axial coding.

Emotion coding was deemed appropriate since an experience with death and dying can elicit intrapersonal and interpersonal experiences and actions. This was revealed during the first coding cycle. The focus was on feelings and emotional reactions in relation to the participants' experiences with death and dying patients (Saldaña, 2013:105–106). Values coding was employed to gain more understanding of their beliefs, values and attitudes towards death and dying and to understand why they adopted particular coping strategies/mechanisms (Saldaña, 2013:110–111). Axial coding assisted the researcher to establish the dominant codes and to then cluster them together to form the categories, which were the building blocks to formulate the sub-themes and themes. This type of coding required the researcher to look for relationships between codes whilst being mindful of context, consequences, interactions and conditions to gain insight to why, when and how experiences and coping happen (Nieuwenhuis, 2016:118–119; Saldaña, 2013:218).

Themes and sub-themes were the outcome of the coding process. A theme is regarded as an abstract patterned meaning unit, which consists of an extended phrase or sentence, that captures the gist of what a group of categories mean that constructed from the data that identified the varying manifestations of the experiences and coping of participants (Gray, 2018:692; Polit & Beck, 2018:282; Saldaña, 2013:175–176). The codes, sub-themes and themes that were identified during the analysis process are presented and discussed in Chapter 7.

➤ Independent coder

Literature states that co-coding of data increases the trustworthiness of a research study's findings. This is achieved by two independent researchers coding the same set of data to determine the final themes and sub-themes to represent participants' realities (Nowell, Norris, White & Moules, 2017:4; Barbour, 2001:1116). In this study the services of an independent coder were therefore used. Inter-coder reliability underpinned the independent coding process; both researchers coded the same data set using different sets of self-determined, inductive codes using the same coding method as explained above, i.e. Tesch's eight steps of coding and by applying open, emotion, value and axial coding approaches (Nieuwenhuis, 2016:119).

The independent coder holds a doctor of business leadership degree and has provided professional independent coding services for four years. She has extensive experience in qualitative data coding. She provides overall research support to 1500 doctoral candidates and research teams in South Africa, Africa and Europe. She provides such support in an advisory capacity at South African universities.

To facilitate inter-coder reliability the independent coder was provided with the research questions, aim and objectives as well as the title of the research study. The coding method and approaches to apply were also provided. The researcher coded the data manually. The independent coder used ATLAS.ti version 8 to conduct the coding. The independent coder was only provided with the participants' respective unique identity numbers to link different transcripts and reflective journal entries to the various codes. The data document was shared with the independent coder through Google Drive and was password protected. The independent coder signed a confidentiality agreement to protect the integrity of the study and the process in completing it (Addendum M).

➤ Finalising themes and sub-themes

When both the researcher and the independent coder had completed the coding process, they arranged a consensus meeting. A rigorous debate and discussion ensued to gain insight into their respective coding and thought processes. They agreed on the final themes and sub-themes. During this meeting the independent coder provided the reports containing her codes and associated excerpts from the transcripts and reflective journals. A list with possible themes was also provided. The themes and sub-themes were tabulated and electronically mailed to the participants as a form of member-checking. Each participant had to indicate whether these were a true representation of their realities in terms of experiencing and coping with death and

dying patients during WPL. The turnaround time was three days. In the event that some may not meet this deadline it would then have been taken that the themes and sub-themes were accepted. All did meet the deadline and they all agreed that the themes and sub-themes were representative of their experiences and coping. After this member-checking phase, the themes and sub-themes were emailed to the researcher's academic supervisors. The supervisors recommended minor phrasing amendments and were overall satisfied with the presentation of the findings.

➤ **Contextualisation**

The contextual nature of the study, and inherent philosophical underpinnings of qualitative inquiries required the provision for an in-depth description of the participants' characteristics encompassed in the sample, as well as the context surrounding the phenomenon studied. This was important background information that provided the researcher to gain insight into the milieu underpinning the themes and sub-themes that emerged from the data that represent the social realities of the participants (Nieuwenhuis, 2018:180). According to Nieuwenhuis (2018:180) information that could be captured included sex, race, education, occupation and a comprehensive account of the context that the participants found themselves in surrounding the phenomenon of interest. The inclusion of such information enhanced the transferability and authenticity of the study (Polit & Beck, 2018:297). The characteristics of the participants and context are described in the next chapter as a preface to the findings and discussion (cf. 7).

6.5.2.2 Literature control

According to the higher education qualifications sub-framework (HEQSF) (Council on Higher Education [CHE], 2013:36) a doctoral level research study should demonstrate a novel and substantial contribution to a candidate's discipline. According to Mouton (2001:6) literature control aids in understanding how other researchers have theorised and conceptualised their empirical findings in relation to the phenomenon of interest. A literature control was therefore incorporated to discuss the findings of this study. Its main purpose was a point of departure, to which the findings (themes and sub-themes) of the conducted study were compared, and also it provided a framework to determine the significance and contribution of this study (Creswell, 2014:28–29; Braun & Clarke, 2013:257). The findings of this study, located within the broader framework of the existing body of knowledge, negate or validate findings, and demonstrate how the findings contribute to advances or challenges existing evidence (Braun & Clarke, 2013:257). Where no literature could be found to counter or affirm a finding in this study, means that such a finding constitutes a contribution to the existing knowledge base about the

experiences and coping of undergraduate diagnostic radiography students related to death and dying patients during WPL.

6.5.3 Phase three: development of the EEC support strategies

The final phase entailed the development of the education and empowerment for coping (EEC) support strategies to facilitate coping with death and dying patients in the workplace by undergraduate diagnostic radiography students. This aligned with the fourth objective of this study. These strategies are both educationally (theoretical and practical) and workplace orientated, intended for implementation by radiography educators, clinical supervisors, radiography staff, radiography students and psychologists/registered counsellors. The findings discussed in the next chapter informed the development process of the support strategies. The latter are presented and discussed in Chapter 9.

The conceptual framework was based on the work of Dickoff, James and Wiedenbach (1968) and was used to structure the strategies developed in this study. Dickoff, James and Wiedenbach (1968:415) highlight that theory, research, and practice are interdependent and interrelated. They argue that theory originates in practice and subsequently drives research. Therefore, the findings of research should be put into practice, and if this does not occur then efforts of a study will be fruitless. This aligns with Mouton's three world framework that highlights how philosophy and research can influence everyday social realities, and vice versa (Mouton, 2001:137–139). I developed the support strategies in relation to the findings of this study in order that an implementable output from this study could surface to assist students to cope and manage experiences with death and dying patients in a clinical environment. This in turn should enhance their future radiographic practice and patient care. The theoretical components of the conceptual framework of Dickoff, James and Wiedenbach are presented in Chapter 8.

To enhance the trustworthiness of the support strategies, a peer-review process was employed (Polit & Beck, 2018:301). The review panel consisted of five reviewers. They used the criteria proposed by Chinn and Kramer to evaluate the support strategies. Chinn and Kramer (2018:201) argue that critical reflection plays an integral part in understanding how well theory relates to practice, research or educational activities. For support strategies to be valuable they must be relatable to members of the discipline for whom they were developed. The review panel and criteria used to evaluate the support strategies, as well as the conceptual framework of Dickoff, James and Wiedenbach, are detailed in Chapter 8 and Chapter 9, respectively.

6.6 TRUSTWORTHINESS

Guba and Lincoln's trustworthiness criteria were utilised to ensure that necessary scientific rigour was maintained throughout the study (Polit & Beck, 2018:295–296; Houser, 2012:426). Nieuwenhuis (2016:123) maintains that it is important because a researcher acts as a research instrument in qualitative studies. The trustworthiness criteria, suggested by Guba and Lincoln, are presented below in terms of how they were applied throughout this study.

6.6.1 Credibility

Credibility refers to methods employed to portray the research findings as true to the realities of the participants as is reasonably possible (Polit & Beck, 2018:295; Schurink, Fouché & de Vos, 2011:419-420; Houser, 2012:426). The researcher ensured credibility of this study by using the following strategies.

- Intuiting required the researcher to be open to meanings given to the phenomenon by those who had experienced it (Polit & Beck, 2018:188). Inductive coding that used open, descriptive coding of the reflective journal entries and interview transcripts assisted in achieving this. The format of the interviews, which included the same interview question and probing in line with the issues raised by the participants, as well as asking non-leading questions, contributed to intuiting.
- The services of an independent coder were used to corroborate the findings as well as the input from the supervisors of the study in refining the themes and sub-themes.
- Prolonged engagement with participants assisted me to gain their trust and willingness to voluntarily participate in this study. This positively impacted the quality and quantity of the information they were willing to share.
- Member-checking was used throughout the interviewing processes. Participants were asked to clarify any misunderstandings or unclear concepts and statements to attain a holistic and accurate understanding from their perspective, and to understand how each created meaning of their experience/s. I listened attentively and remained engaged during the interview sessions. The interview transcripts, as well as the tabulated themes and sub-themes, were sent to the participants for review to indicate whether these were a true representation of their experiences and coping with death and dying patients during WPL.
- Data triangulation was achieved using two different data sources and having multiple participants from the same target population: undergraduate diagnostic radiography students at one HEI. The heterogeneous sample of students at different levels of study

in the programme, gave rise to data source triangulation and data richness (i.e., people triangulation). Space triangulation was also possible as different students did their WPL at various institutions (Polit & Beck, 2018:299). Researcher triangulation was possible because both the researcher and an independent coder mutually agreed on the emergent themes and sub-themes after independent coding (Polit & Beck, 2018:300).

- Criterion-based purposive sampling assisted in the elimination of selection bias of participants, and enhanced distributive justice, as described by research ethics. This sampling method was favourable since the pre-determined inclusion and exclusion criteria ensured that the selected participants would best inform the research questions, considering their unique characteristics that made them suitable participants for this study.
- The audio-recording and verbatim transcription of the interviews, and handwritten reflective journal entries, enhanced credibility. The data remained in their authentic form. Theoretical sufficiency was used as a sampling strategy to determine sample size thus also increased credibility of the study (Polit & Beck, 2018:297).
- Literature control was used to discuss the findings of this study and this added to the credibility of the study.
- Polit and Beck (2018:297) maintain that reflective journaling and detailing a researcher's stance in relation to a study are ways to further increase a study's credibility. Both these strategies were implemented in this study. A reflective journal was maintained to record thoughts about methodological choices and the data, and my position statement in relation to the study conducted was outlined in Chapter 1(cf. 1.10).
- The developed strategies were peer-reviewed by a panel, and this enhanced the study's credibility (Polit & Beck, 2018:301).

6.6.2 Confirmability

Houser (2012:426) describes confirmability as attempts made by a researcher to enhance objectivity related to implementation and selection of methods and procedures to reduce researcher or methodology induced biases. The methods employed in this study to ensure confirmability were as follows. Member-checking involved the participants being requested to validate information that was unclear to the researcher. A rich and thick description of the findings was done. Examples were provided of participants' utterances as evidence to substantiate the theme and sub-theme descriptions. The use of an independent coder also enhanced confirmability as the findings could be corroborated. Researcher reflexivity was used.

It related to the personal beliefs and attitudes of the researcher, which could have potentially influenced the study findings. To reduce bias meant that there was continual bracketing by the researcher. Researcher reflexivity also refers to bracketing (Polit & Beck, 2018:298). Reflexivity was attained by detailing my position statement in Chapter 1 (Preissle, 2008:844). Reflexivity was achieved by using the first person in sections of the thesis where I chose to follow certain methods and approaches, or when certain acts were personally done. This is in keeping with taking accountability for my choices during this study and demonstrating the integral part a qualitative researcher plays in such a research inquiry (Holloway & Wheeler, 2017:316). Using the services of an independent coder, and having the developed strategies peer-reviewed, also enhanced confirmability (Polit & Beck, 2018:297). I maintained confirmability by providing detailed records of all methodological procedures and processes followed (Polit & Beck, 2018:297).

6.6.3 Dependability

Dependability corresponds to reliability. It points to the methods utilised to ensure that if this study were to be repeated on similar participants in similar contexts then the findings would be consistent (Polit & Beck, 2018:296; Houser, 2012:426-427). To ensure dependability I have provided comprehensive records of all methodological procedures and processes followed, as well as the context in which the participants found themselves. In addition, data triangulation was used to provide an in-depth account of the participants' experiences and coping with death and dying patients during WPL. The pilot study also enhanced the dependability of this study (Nieuwenhuis, 2016:124).

6.6.4 Transferability

Transferability is the extent to which findings of a research study can be transferred from one context to another. In other words, how 'generalisable' are the findings (Polit & Beck, 2018:296; Botma, Greeff, Mulaudzi & Wright, 2010:292). The details regarding the criterion-based purposive sampling method employed, and the thick contextual description prefacing the findings in Chapter 7, provide methods to satisfy the criterion of transferability. Theoretical sufficiency also aided the transferability of this study (Polit & Beck, 2018:297, Nieuwenhuis, 2016:124).

6.6.5 Authenticity

Authenticity pertains to the efforts that researchers make to present the different realities of participants in their research report in a fair and just manner, as well as using a writing style that invites readers into the lived realities of the participants (Polit & Beck, 2018:296). It is argued that authenticity in this study was linked to the rich, thick description of the findings and the context. The audio-recorded verbatim transcriptions of the interviews, and handwritten reflective journal entries, added to the authenticity of this study (Polit & Beck, 2018:297, 302).

6.7 ETHICAL CONSIDERATIONS

Research ethics is mainly concerned with the protection and promotion of participants' wellbeing whilst participating in research studies (Flick, 2015:32). Ethical research is achieved when researchers take appropriate decisions regarding the procedures and processes as part of their study that will cause the least harm to their participants (Houser, 2012:50). According to Resnik (2015), ethical norms are important in research for the following main reasons: for the promotion of the aims of the study, as well as values like trust, fairness and mutual respect. This is of importance when working in collaboration with others, which usually results in greater cooperation of participants. Research ethics provide a researcher with a moral framework in which research should be conducted. The ethics principles and strategies that were considered and used throughout the research study are presented below.

6.7.1 Beneficence

Beneficence implies that a researcher should promote good and act for the benefit of the participants and be mindful of their welfare when they participate in a study. A balance should be maintained between the risks and benefits of a study. According to Fouka and Mantzorou (2011:5), and Moodley (2011:57), beneficence includes the potential benefits of a research study to the participants and society at large. In terms of this study there were no immediate benefits for the participants. However, a potential benefit may have been that they had a controlled and private environment to express their experiences, which may well have acted as the initial steps towards coping with the experiences they had. As explained in Chapter 1 my motivation was to address the gap in the current curriculum in terms of students' coping mechanism when faced with death and dying in WPL. It is anticipated that the findings of this study will influence future practice regarding support for students to cope with death and dying patients in the clinical setting during WPL and beyond. If this does occur, then it will be an aspiration benefit for me as it was one driver for undertaking this study. For the patient population, there is a potential benefit that quality of care will be enhanced because of the

support strategies for students that were developed as part of this study. Put differently students should potentially be better equipped to thrive in death and dying situations in the workplace if the support strategies are implemented and maintained in practice. The ethical integrity of the research design and data gathering was also scrutinised by the Faculty of Health and Wellness Sciences research ethics committee (HWS-REC) of the Cape Peninsula University of Technology (CPUT), as well as the gatekeepers as identified previously (cf. 6.2). Participants were also made aware that participation was completely voluntary and that no repercussions would ensue if they did not want to participate or if they wanted to withdraw from the study. The researcher conducted the interviews, and the benefits for the participants and scientific community are explained in the data gathering section in this chapter (cf. 6.5.1.4.2).

6.7.2 Non-maleficence

Legal, psycho-social or physical harm to the participants were avoided by the researcher. The use of unique participant identifiers meant that confidentiality and anonymity were ensured to protect the participants' identity and any other information that could be linked to them. Another strategy to ensure non-maleficence was that the interviews were conducted in a private venue. In addition, a locked cupboard, only accessible to the researcher, was used to store raw data. All digital data were stored on a password protected laptop in a specific folder. Only the researcher accessed the participants' reflective journals for sampling and analysis. This further ensured protection of the participants' identity. The participants all agreed that they would be comfortable if the researcher conducted their interviews. They were made aware of and offered assistance if they required debriefing by a professional psychologist or counsellor, by accessing these services at the student counselling, career and development centre (SCCDC) at the research site. There was no foreseen potential risk or offence to the participants (Moodley, 2011:63; Fouka & Mantzourou, 2011:5).

6.7.3 Autonomy

Autonomy refers to a participant's right to self-determination and self-governance. It relates to a participant's freedom of independent decision-making (Burkhardt & Nathaniel, 2008:53). The participants' autonomy was ensured by them voluntarily providing informed consent. According to the Belmont report informed consent entails three main elements: information, comprehension, and voluntariness (Botma, Greeff, Mulaudzi & Wright, 2010:53). This implies it entailed the exchange of information between the researcher and each participant regarding the research methodology and protocol that was to be followed in this study. During this process, the participant could ask questions to clarify any information given, or not understood,

and the researcher honestly answered, when a question was posed. English is the language of instruction for the target population of undergraduate students therefore informed consent was obtained using this language. The interviews were conducted in English to provide an enabling environment for the participants to express themselves when they used technical terms to describe their experiences and coping. As detailed above all participants signed an informed consent form (Addendum J). This also acted as a memorandum of agreement between the researcher and each participant for the duration of the study. The researcher informed them of their right to withdraw from the study at any time, without fear of any consequences. Coercion, bribing, and paternalism, were not used to recruit participants. Strict adherence to the criterion-based purposive sampling strategy was maintained. Consent was obtained from all participants to use sections of the photographs taken of their Mmogo-constructions. This did not present an ethical dilemma because each participant's unique identification number was used for the photographs. The participants were not included in the frame of the photographs; this pictorial communication medium only shows their constructions (Wiles, 2013:83–84).

Confidentiality and veracity are obligations brought about by the principle of respect for persons' autonomy, including effective communication (Moodley, 2011:48–55). According to Burkhardt and Nathaniel (2008:67–68), the ethics principles of privacy and confidentiality are interconnected. Privacy relates to a participant's right to control personal information disclosed to a researcher. Confidentiality demands non-disclosure by a researcher of such personal information of a participant. In other words, confidentiality requires a researcher to maintain the privacy of a participant. This ethics principle was adhered to as the researcher did not share nor disclose any information regarding the participants' identity to a third party. Only demographic information needed for the research study was recorded (Addendum K). Access to raw data and the interview transcriptions was strictly controlled and only accessible to the researcher. Data shared with the transcriber and independent coder contained the unique participant identification numbers. The transcriber, observer, and independent coder, all signed confidentiality agreements. Furthermore, no information disclosed by a participant was used in such manner where it could be traced back to the identity of the participant. The researcher and participant, prior to the interview, discussed and agreed to a suitable venue.

Veracity relates to truthfulness and honesty of researchers towards their participants, the public and academic community, who may have access the results upon completion of a study (Burkhardt & Nathaniel, 2008:65). Veracity is an accepted universal virtue axiological to

research. In this study it was maintained by always being honest and truthful towards participants, and by keeping them informed throughout the research process. If participants had questions, the researcher answered them in an open and transparent manner. The methodological procedures and processes, and the findings, have been presented in a truthful manner without any tampering of the authenticity thereof.

6.7.4 Justice

Justice is the ethical concept relating to unbiased, fair and appropriate treatment of participants during a research study, as well as maintaining their privacy (Polit & Beck, 2018:81; Burkhardt & Nathaniel, 2008:73). The principle of justice was applied in the research process of this study during the recruitment phase of participants by means of a criterion-based purposive sampling strategy. The information supplied in the participant information sheet and informed consent form was adhered to for all participants. The observer, who was present when the interviews were conducted, confirmed the ethical conduct of the researcher throughout the interviews with all participants. This meant that ethical integrity of the data gathering process was upheld. Unique participant identification numbers were used when dealing with the participants' data. None of their actual identification information was divulged to any other person or in this thesis. The insights provided by this study could be beneficial to future undergraduate diagnostic radiography students with regard to preparing them to be able to cope with death and dying experiences during WPL.

6.8 CONCLUSION

A detailed discussion of the research design and methods that were employed to conduct and complete the three phases of this study were presented in this chapter. This is a lengthy chapter because I wanted to ensure that I integrated the theoretical underpinnings to justify my design and methodological choices thoroughly to enhance the rigour of the study and to remain reflexive throughout. Strategies implemented to enhance the trustworthiness of the study were outlined. An explanation of the ethics principles followed throughout the study was presented.

In the next chapter a vivid and thick description of the sample's characteristics is provided. Also provided is the context underpinning their experiences and coping with death and dying patients during WPL learning and the findings that emerged from the interviews and reflective journal entries after thematic analysis. The findings are further discussed by way of a literature control.

CHAPTER 7: FINDINGS AND DISCUSSION

7.1 INTRODUCTION

The research design and methods utilised to conduct this study were discussed and justified in chapter 6. The strategies employed to ensure trustworthiness of the study and ethical integrity were also described. A qualitative inquiry with an exploratory-descriptive and contextual approach were used to gather data through reflective journaling and an amended form of the Mmogo-method™ interviewing technique from undergraduate diagnostic radiography student participants regarding their experiences and coping with death and dying patients during workplace learning (WPL). Data were analysed by the researcher and an independent coder using thematic analysis.

This chapter details the context and participants' characteristics, as well as the sub-themes and themes that were identified and constructed after coding during the data analysis process as described in chapter 6 (cf. 6.5.2.1). In addition to the in-depth discussion of the themes and sub-themes, a literature control is used to position the findings of this study within the broader body of knowledge related to the phenomenon studied.

7.2 THE CONTEXT AND PARTICIPANTS' CHARACTERISTICS

A contextual approach to qualitative inquiries requires a comprehensive exposition of the social context underpinning a phenomenon of interest (Holloway & Wheeler, 2017:4–5; Ritchie & Ormston, 2014:31). It formed part of the research design so as to gain insights into the context underpinning the findings (i.e., themes and sub-themes) and to make better sense of the findings. Furthermore, the provision of an all-inclusive description of the context was important due to the socially situated and constructed nature of knowledge as advanced by social constructivism (cf. 1.10; 6.3; 6.5.2.1).

7.2.1 The context

In 2015 the four-year professional, undergraduate degree in diagnostic radiography commenced at the research site in response to the changes to the new higher education qualifications sub-framework (HEQSF). In this restructuring, the national diploma and bachelor of technology programmes in the health sciences were removed from the HEQSF and replaced with four-year professional bachelor's degree programmes (CHE, 2013:6).

The programme has a theoretical and clinical component, aligned with the purpose and specific exit-level learning outcomes (cf. 2.7) that must be met for award of the degree. The theoretical component is completed at the higher education institution and the clinical experience within a healthcare environment by way of workplace learning (WPL) at public and private sites accredited by the Professional Board of Radiography and Clinical Technology of the Health Professions Council of South Africa (PBRCT-HPCSA). The participants in this study were all registered for the bachelor's degree programme at a single higher education institution (HEI) in the Eastern Cape province, South Africa. The accredited clinical training sites are located across three districts in this province. Two of these centres are in the Nelson Mandela Bay health district (NMBHD), three in the Buffalo City health district (BCHD), and one in the OR Tambo district. At these clinical training centres dedicated clinical tutors/mentors supervise and oversee students and their work during WPL blocks. To increase their exposure to various medical imaging examinations, procedures and modalities, students rotate through more than one site on an ad hoc basis. This occurs when examinations, procedures and modalities, which are compulsory components of the curriculum, are less common or absent at a particular site. Table 7.1 provides an outline of the working areas that students are exposed to at each level of study. Students also spend varied numbers of weeks per level of study in a clinical setting to complete the WPL component of the programme, as presented in Table 7.2.

Table 7.1: Student exposure to the various working areas and modalities in diagnostic radiography

Working area/imaging modality	At which point of study students are exposed to these areas/modalities
General radiography	Levels 1 to 4
Accident and emergency unit	Levels 1 to 4
Night duty in accident and emergency unit	Levels 3 to 4
Mobile/ward radiography	Levels 1 to 4
Operating theatre	Levels 2 to 4
Fluoroscopy	Levels 1 to 4
Computed tomography	Levels 2 and 3
Magnetic resonance imaging	Levels 3 and 4
Interventional radiology	Level 4
Cardiac catheterization	Level 4

Table 7.2: Workplace learning blocks in weeks per level of study for the degree programme

Level of study	Number of weeks of workplace learning
Level 1	12 weeks
Level 2	18 weeks
Level 3	17 weeks
Level 4	17 weeks

In the workplace, students interact with patients of all ages with acute and chronic conditions that need imaging procedures. Patients may be accompanied by family members or may be alone. They are either outpatients or ward patients. Encountering death and dying patients

becomes a likely phenomenon in the course of work of student radiographers. Furthermore, students work and interact with various staff members and HCPs with their own manner of dealing with associated matters, including death and dying. However, as noted previously, developing students' soft or humanistic-orientated skills does not enjoy the same attention as their hard or procedural-orientated skills (cf. 2.8). This leaves a gap in their education to be holistically equipped to cope with the needs, workplace demands and expectations, in particular incidents related to death and dying patients. Such discrepancies exist due to misalignment between what students are taught and what they observe and are expected to practice in the workplace. The characteristics of the sample of participants that formed part of this study are presented in the next section.

7.2.2 Characteristics of the participants

The student populace enrolled for the degree programme at the research site is female dominated. Age range is from 18 to 35 years old. The majority are usually from the Eastern Cape province, and some are from other provinces. The student body also comprises a few international students from African countries. In 2018 there were 106 students enrolled for the programme at the research site when data gathering took place in the second semester.

Thirty-eight (n=38) met the inclusion criteria of the study. Twenty (n=20) agreed to participate during the recruitment (cf. 6.5.1.3). Three potential participants declined the invitation (n=3). Fifteen (n=15) did not respond to the communications after the three-week recruitment period. Four (n=4) who had agreed to an interview withdrew during the appointment scheduling period. The final sample was 16 (n=16). Mason (2010:13) highlighted that in qualitative research studies theoretical sufficiency or data saturation can be achieved at relatively small sample sizes of 25 participants or less. Green and Thorogood (2014:122) maintain that in most qualitative research studies little to no new information emerges after a sample size of 15. The sample (n=16) of this study could thus be justified as being adequate. Data saturation was achieved with twelve participants (n=12). Four participants had indicated their willingness to participate in the study and were included even though data saturation had been reached. Table 7.3 presents the characteristics of the 16 participants.

Table 7.3: Characteristics of the participants (n=16)

Participant ID	Level of study	Age	Gender	Hospital sector	Number of deaths experienced	Number of dying patient experiences
P1-081831	3	20	F	Public	1	10
P2-081832	3	21	M	Public	3	1
P3-081841	4	22	F	Public	0	6
P4-081842	4	26	F	Private	15	5
P5-081833	3	24	M	Public	2	4
P6-081843	4	27	F	Private	1	4
P7-081834	3	23	F	Public	2	1
P8-081835	3	23	F	Public	10	25
P9-091811	1	22	M	Public	3	9
P10-091836	3	20	F	Public	1	0
P11-091821	2	20	F	Public	2	0
P12-091822	2	20	F	Private	1	2
P13-091823	2	20	F	Private	2	3
P14-091812	1	19	F	Public	3	5
P15-091824	2	21	F	Public	4	4
P16-091825	2	19	F	Public	2	2

As shown in Table 7.3 most participants were in their third level of study (n=6), and five (n=5) in their second level of study. The least number were from the first level of study (n=2), which was expected due to their limited time in WPL. The majority were female (n=13). The age range was between 19 and 27 years. The participants therefore fall within what Levinson (1986:5) considers early adulthood in their theory of life structures. Hence, the participants' experiences discussed in the next section of this chapter may have been influenced by their desire to meet their internal aspirations regarding their life goals whilst concurrently having to face and handle external stressors during their work and personal lives. This may result in traumatic and/or emotionally taxing encounters being experienced more intensely (cf. 3.4.8). The participants' experiences were also similar across the four years of study and thus may be further explained by Levinson's theoretical tenets, because although they are in different level of study, they are all in the same phase of adulthood. Most participants (n=12) were placed in public sector hospitals for WPL. Hence, the findings could be skewed toward second and third level students' experiences from a public-sector point of view, without discounting the insights provided by other participants towards understanding the phenomenon studied more holistically. The number of death and dying patient incidents that the participants experienced varied. Participant 8 had the most encounters (n=35); participant 10 only had one encounter. The participants experienced more dying patients than deaths as shown in Table 7.3. Readers are urged to be mindful of the variations in the sample when reading the findings.

7.3 DATA ANALYSIS: FROM CODES TO THEMES

An inductive thematic analysis was used to analyse the data through two cycles of coding (cf. 6.5.2.1) by the researcher and an independent coder. This data analysis method was congruent

with the research design and objectives of the study to provide a summative, descriptive account of the undergraduate diagnostic radiography students' experiences and coping with death and dying patients during WPL (cf. 1.7; cf. 6.3; Nowell, Norris, White & Moules, 2017:2; Alhojailan, 2012:40). The researcher and the independent coder used lumping coding during the first, open cycle of coding, and a more nuanced analysis during the second cycle of coding using emotion, value and axial coding, which enabled greater insight into the phenomenon studied from the participants' perspective (Saldaña, 2013:22–23).

The researcher identified 98 codes and the independent coder 118 codes (Addenda N – O). The codes were further reduced to categories and 19 categories emerged (Addendum P). Thereafter, the researcher compiled the themes and sub-themes. These were shared with the independent coder. Further refinement was done until consensus was reached on the themes and sub-themes that most appropriately represented the data (Nowell et al., 2017:4; Barbour, 2001:1116). Thereafter, the themes and sub-themes were shared with the participants as a means of member-checking to enhance the trustworthiness of the study findings (cf. 6.6.1). After they had agreed that the themes and sub-themes were a true representation of their experiences during WPL, these were presented to the supervisors. The supervisors assisted in further fine-tuning the themes and sub-themes in terms of phrasing and organisation thereof. At the end of this review and refining process five themes and 13 sub-themes were identified (cf. 7.4). The number of codes, categories and themes are in line with the debates in literature as described by Saldaña (2013:24). The sections that follow provide a description and discussion of the themes and sub-themes that were identified from the data analysis process.

7.4 DISCUSSION OF THE FINDINGS

The findings are presented in a narrative format and organised in themes and sub-themes to represent the insights gained through data analysis on how undergraduate diagnostic radiography students experience and cope with death and dying patients during WPL. The final descriptions used to represent the themes and sub-themes (Table 7.4) are based on labels used by the participants during the interviews and reflective journaling and a comparison with the existing body of literature on the phenomenon of focus. Literature control was used to integrate the findings with existing literature (cf. 6.5.2.2). Due to the limited available literature directly related to a diagnostics radiography context on how students experience and cope with death and dying patients during WPL in South Africa, international and national literature of related health professions and other associated literature were used to discuss and critique the findings. Themes and their sub-themes are discussed separately where verbatim quotations

and visual excerpts are used to present the socially situated lived realities of the participants. Flowcharts representing the inter-relationships of themes and sub-themes are also provided.

During the data analysis similarities and differences between the four levels of study were sought. The findings were that the experiences and coping were similar across the four levels, and represent the summative nature of the phenomenon studied and any associated variations among the participants.

The verbatim quotations are presented in bold italics. Where contextual information was inserted by the researcher during the write up, this information is presented in normal font in square brackets.

I also acknowledge that different researchers will interpret the same data set differently based on their frames of reference and background. This can be ascribed to the act of meaning-making that qualitative researchers engage with to make gain understanding of and give voice to participants' narratives. In my opinion, the analysis may well even change over time as new knowledge is acquired. Hence, I believe the analysis contained in this chapter is representative of my current knowledge base that I gained through my lived experiences, previous educational background and throughout my doctoral journey.

Table 7.4: Summary of the themes and sub-themes

THEMES	SUB-THEMES
1. Experiences with death and dying patients initiate a meaning construction process with accompanying affective responses	1.1 Appraising the experiences to construct meaning 1.2 Meaning construction through the quest hero narrative metaphor 1.3 Positive affective responses 1.4 Negative affective responses
2. Student and workplace-related factors influencing experiences with death and dying patients	2.1 Factors with no consequence on how the experiences are perceived 2.2 Factors facilitating the process of perceiving the experiences as less negative 2.3 Factors aggravating the negative undertones attached to the experiences
3. Coping with experiences of death and dying patients	3.1 Emotion-focused coping mechanisms 3.2 Problem-focused coping mechanisms 3.3 Appraisal-focused coping mechanisms
4. The cyclical nature of experiencing and coping with death and dying patients	4.1 Cyclical phase 1: Sense-making and emotional tsunami 4.2 Cyclical phase 2: Acceptance 4.3 Cyclical phase 3: Finding mechanisms to cope
5. Suggestions for effective coping with experiences of death and dying patients	

7.4.1 Theme one: Experiences with death and dying patients initiate a meaning construction process with accompanying affective responses

The participants identified and explained that when they encounter death and/or dying patients during WPL they needed to make sense of the experience. According to them this enabled them to then find and use coping mechanisms to deal with the experience. These coping mechanisms are what they perceived to be appropriate at the time of encountering the experience. In addition to their cognitive process of creating meaning of their experience, they relayed that they experienced a plethora of different emotions and feelings. Depending on the meaning attached to the experience, they had a particular affective response, which could be positive or negative or both. Figure 7.1 represents the relationship between theme 1 and its four sub-themes, where the cognitive appraisal process elicited concurrent affective responses.

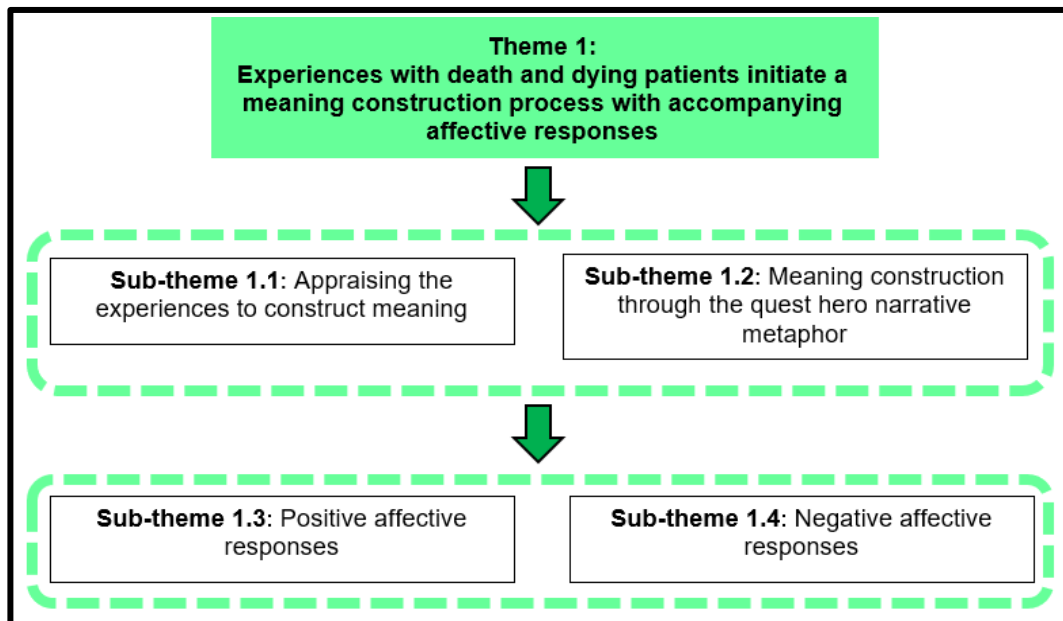


Figure 7.1: The relationship of the four sub-themes to theme 1.

7.4.1.1 Sub-theme 1.1: Appraising the experiences to construct meaning

The Cambridge Dictionary (2020) defines appraising as a cognitive, analytical and evaluative act to establish the qualities, value and needs of a situation through scrutiny. According to Hornby (2015:60) to appraise a situation enables a person to form an opinion of a situation's nature and significance. Appraisals are typically related to encounters that are considered to affect an individual's emotional experience of an encounter (Kuppens, Champagne & Tuerlinckx, 2012:1). The data representing sub-theme 1.1 were coded as appraisal of death and dying experiences.

The narratives of the participants regarding their experiences with death and dying patients demonstrated that they did appraise their experiences, as indicated by the three reflective journal entries.

I don't think I was shaken by the death of the patient but rather the fact that I saw him lying there, lifeless – P10-091836RJ2:lines 47–49

It was good that the patient did not pass on in front of me but it was still bad that she passed on anyways [sic.] – P1-081831RJ:lines 11–14

These reflections demonstrate that not all of the participants appraised their experiences in the same manner. There were however similarities. Their appraisals of the experience informed an affective response.

...a sense of hopelessness especially as being a radiographer because there's only so much that we can do, you know – P3-081841:lines 45–46

They alluded to their feeling of hopelessness since they could only be of assistance to a certain point. This shows that the above participant had undergone a particular appraisal process to come to this conclusion, which gave rise to a feeling of hopelessness. The appraisal processes of the participants focussed on themselves and also encompassed thoughts and evaluations about patients and their significant others as shown in the below comment.

I often wonder if they [family] wonder why. Why now? And I often wonder why, why now for the patient. Why does this person have to be taken away? – P4-081842:lines 101–102

Appraisal of the experience beyond themselves demonstrates that their experience with death and dying patients affected them in complex ways, as they considered themselves and others related to the patient. The sense-making process of the experience is complicated. Hutchinson (1984:88–89) found that logical reasoning, emotions and technical skills were used by nurses as sense-making processes and tools to deal with death and dying in a neonatal intensive care context. Similarly, in a radiography and radiotherapy context, experiences with death and dying patients are situated in the cognitive, affective and technical domains of professional practice (Trad, 2014:92, 95–97; Ballinger, Comello & Vealé, 2008:11–12). The participants displayed logical reasoning through their appraisal of the experiences and emotions through uttering specific feelings (hopelessness, confusing, overwhelming). Due to the various domains of experiences with death and dying patients during WPL by undergraduate diagnostic radiography students, one can argue that these incidents can be quite daunting (overwhelming) for students to make sense of.

The findings converge with the seminal work of Freud on mourning and melancholia to the extent that the participants' narratives showed that they had varying appraisals of their

experiences with death and dying patient incidents during WPL. Freud maintained that there is no one-size-fits-all approach as to how individuals attach significance to an experience and subsequently make sense thereof (Freud, 1949:152–170). His work is supported by Scott (2018:para 1), and Billet (2009:210–212); they maintain that a person's activities within a social context, like a workplace, contribute to the assimilations and personal epistemologies that a person would hold true about a specific incident. This would differ for each person due to variations in physiology, access to resources as well as the meaning that different people attach to similar incidents. Billet (2009:212) points out that this significantly contributes to students' learning during WPL. Aubrey and Riley (2016:170) highlight that the context and relationships among different role-players together form the learning milieu when describing what situated learning entails.

The tenets of Lazarus and Folkman's transactional model on stress, appraisal and coping, were used as a theoretical framework to make sense of the findings (cf. 5); individuals undergo cognitive appraisal processes when encountering stress experiences, to find ways to cope with the experience. Both primary and secondary appraisals pertain to the participants' appraisal process. Primary appraisals relate to the significance that a person attaches to an encounter based on personal beliefs, values and worldviews. Secondary appraisals refer to an evaluative act of establishing a means to cope with an encounter in relation to a desired outcome (Park & Folkman, 1997:122–123; Lazarus & Folkman, 1984:31–36). Park and Folkman (1997:116, 121) further explain that an individual's respective global (i.e., beliefs and goals), and situational (i.e., person-environment transaction to seek meaning of the experience) meanings attached to experiences encountered, influence individuals' appraisals thereof. However, if an encounter is perceived as irrelevant and not posing a threat to a person's wellbeing then the coping process is halted and no secondary appraisal in search of a coping mechanism ensues (Lazarus & Folkman, 1984:32). These primary and secondary appraisals could further provide theoretical vantage points to provide possible explanations for the variety of affective responses that the participants experienced (cf. 7.4.1.3 & 7.4.1.4), together with the factors that influenced the appraisal processes (cf. 7.4.2.1 – 7.4.2.3). Authors maintain that when a person experiences a discrepancy or misalignment between the global and situational meanings attached to the encountered experience, then this incongruence elicits an affective response (Kuppens, Champagne & Tuerlinckx, 2012:1–2; Park & Folkman 1997:123–124). Roseman, Spindel and Jose (1990:899) emphasise that different individuals have different affective responses to the same or similar events.

In terms of this study the participants constructed meaning of experiences to minimise these incongruencies to avoid long-term distress and an inability to cope with the stress experience (Park, 2010:259). An affective response is influenced by the organisational culture that students finds themselves in. This notion is upheld because alignment between what is observed in the workplace, and a person's own beliefs, attitudes, values and worldviews, results in reinforcement of responses with a sense of validation. However, if incongruence persists, disenfranchised grief (cf. 3.3) emerges since a person's affective response is not normative in a specific workplace environment. Such a person thus hides their true emotions and feelings which may result in long term distress and other conditions, as they are unable to cope (Papadatou, 2000:69–72; Doka, 1987:455–469).

In this study it is argued that different students would experience these encounters, which are the same or similar in a multitude of ways, because their meaning of experiences would be personally and situationally constructed. This sub-theme addressed how students appraised the experiences to construct meaning. The next sub-theme demonstrates something of the nature of the meaning that was constructed. It is inclusive of literature to provide an analytical contrast to the feelings of hopelessness and grief in terms of a more empowering rendition of stress appraisal and coping. The participants assumed agency and they did cast themselves and others as heroes or anti-heroes.

7.4.1.2 Sub-theme 1.2: Meaning construction through the quest hero narrative metaphor

The participants demonstrated a strong desire to fulfil a hero narrative whilst storying their experiences and coping with their encounters with death and dying patients during WPL. They storied themselves and others as heroes or rescuers, and in some cases as anti-heroes. Bystanders and family members of the patient also formed part of the plot.

- **Participants storying themselves as heroes or rescuers**

They portrayed themselves as heroes or rescuers during their experiences with death and dying patients. They made sense of these experiences, through appraisal (cf. 7.4.1.1). They expressed feelings of responsibility and used positive self-talk to mitigate the associated negativity, as evidenced in the first sub-theme. Feelings of responsibility appeared to be premised on their conflict with the 'what if' question. This would hold true since a hero or rescuer would want to determine what the best possible action or reaction would be when faced with death and dying patients during WPL.

...(sigh) it's more the 'what if' question that's coming into my mind. What if we were there earlier or what if somebody could've – what if we were there when it happened, what if we could've prevented it what if we could just prolonged his life, just a little bit or anything like that, that was what was going on in my mind – P11-091821:lines 72–75

The quotation shows how they pondered about the impact that the delay in examining patients in the ward had in terms of the death of a patient. This is because they cast themselves, in some instances, as a bridge between life and death; an enduring theme in hero narratives. They perceived that they were in the healthcare profession to facilitate the healing process of a patient. Sometimes patients die, and this in turn leads to one questioning whether their services are in vain and potentially harming patients more than being beneficial to them. In this setting a person then feels that, as the hero, they could not address the plight of patients. These conflicted feelings are further complicated because one is usually acutely aware of their limitations in practice and appreciates that they cannot always do anything about the situation, even if they would have liked too. This is illustrated in the below comment of a participant.

...I wonder whether our help is actually beneficial for the child or will their case be worse if they get better and they go home – P3-081841:lines 20–21

This participant also represented this conflicted feeling visually in Figure 7.2. The stick-figure represents the student and the question marks their thoughts about a dying patient in relation to efforts to care for and heal the patient.

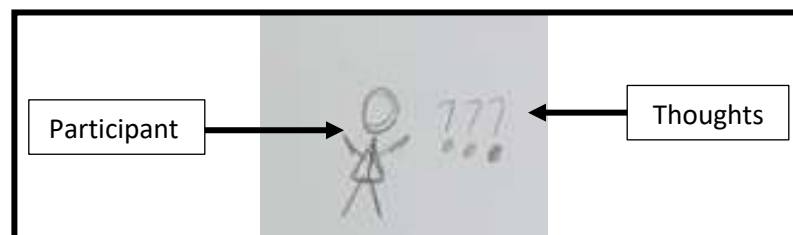


Figure 7.2: An excerpt from a Mmogo-construction demonstrating a participant's conflicted thoughts.

Of note is the contributing influence that both personal and institutionalised shared meanings of the experiences with death and dying patients have, and how these contributed to participants' meaning construction process in representing themselves as heroes or rescuers. From their conflicted feelings, it seems that they did seek to find a means to cope and hence create their heroic response.

...others made me feel better about how I work with patients, they gave me confidence...The next day it was as if nothing happened so, that helped me, cause if you move on and is not stuck at the same situation all the time, you won't actually learn how to cope with it if you keep on wondering about it the whole time – P16-091825:lines 184–192

Positive self-talk was another method used by them to represent themselves as heroes or rescuers to make sense of their experiences and subsequently cope. Positive self-talk entailed the retelling of their experiences in more positive terms, either to themselves or others, to portray themselves as more heroic and stoic during these incidents.

...in the afternoon I walked out of casualty and then I saw those same people, the same family crying. So, I just, uhm, assumed that the patient died or whatever. So, I just, from, like from that day onward I just, uhm, accepted that death is part of life and there's nothing we or the healthcare practitioners can do about it. So, I just started accepting death as part of life – P10-091836:lines 57–61

As shown in Figure 7.3 a participant represented themselves as a 'cool person' with sunglasses, during their Mmogo-construction, upon reflecting on their work day whilst driving home, as a means of positive self-talk to distract themselves from what really occurred (P11-091821).

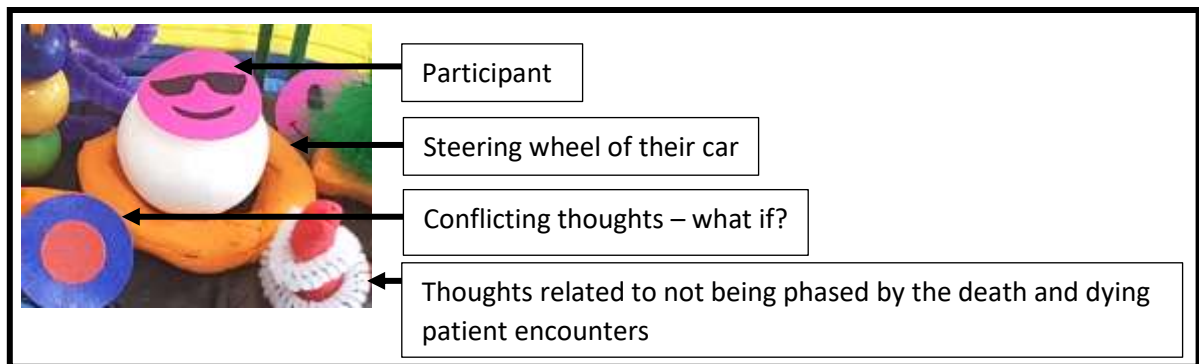


Figure 7.3: A clipping from a Mmogo-construction demonstrating a participant's representation of positive self-talk after work.

- **Storying of others as heroes or anti-heroes**

The participants alluded to the importance of social support. When others were perceived to be of assistance they were heroes, and unhelpful when the opposite was applicable.

...it was a death experience, and somebody died in front of me. You can always talk to your, your elders, your family members, besides professionals because ... they do not really – they do not help, but sometimes you just need somebody who's been there to tell you how they cope with it and then you can try to see if it will work for you [sic.] – P9-091811:lines 34–38

But for me, I don't like speaking to strangers, so, uhm, I feel like if you don't know me, you can't really understand what I'm going through. So, the support that I got was from people that I knew, from people that would understand that the way I was processing was me. So, I think, like, a lot of people don't mind speaking to counsellors. Psychologists are good for them – for a lot. Uhm, so I think speaking about it helped – P6-081843:lines 490–495

Money, in the private healthcare sector context, was considered another factor forming part of an anti-hero complex representation. Participants felt that it was more about the money and less about patients, since time is money in the private sector.

I feel like a lot of the times it's more about money than anything else. You have to get the next patient on the bed, you have to carry on, there has, there's people that need to be done – P4-081842:lines 29–30

They found it difficult to process their encounters with death and dying patients since they had to simply be okay after their respective encounters and to get on with the day's work. They thus felt like they were on their own and had to find their own way to handle these encounters.

...I felt like they threw me in the deep end, no one was willing to help me, I had to just help myself the whole way through and I felt completely and utterly alone. And I wasn't good at anything and I was messing up and I would get into trouble and I hated that as no one was helping me – P12-091822:lines 127–130

They perceived social support as being important as it helped them to process their emotions and the experience on a whole. They felt that workplace support systems are important in terms of there being capable staff and peers to act as facilitators, to guide them through their experiences with death and dying patients during WPL. Lack of this support left them in a state of long-term distress and the inability to process and cope with the incident; staff, peers and other related stakeholders then became anti-heroes rather than heroes.

- **The family and/or bystanders in the 'plot'**

During their encounters with death and dying patients, the participants recalled themselves as being mindful and even concerned about what a patient means or meant to their respective significant others (i.e., family, friends and colleagues).

Everyone else in the room knew he was dying except for his wife standing at his bed because she didn't know what the monitors meant – P14-091812:lines 22–23

...you feel sorry for the family, because he may be their only breadwinner. In most cases, the breadwinner that gets to be – that gets to die and that's really tragic – P9-091811:lines 63–65

They explained that thinking about how the death or terminality of patients impacted on their significant others, then led to other thoughts regarding the personal impact that such an encounter would have if such an event were to happen with one of their significant others.

...a house to resemble my home and how happy we are right now. So...uhm, and peace and everything, love, everything is there right now. But my biggest fear is being alone. That's why I made this, uhm small person right here, in black with all the dark thoughts, uhm, loneliness, and everything. So, I – the one thing I'm scared of is ever losing my mother – P8-081835:lines 6–10

Figure 7.4 visually depicts the comment of the above participant.

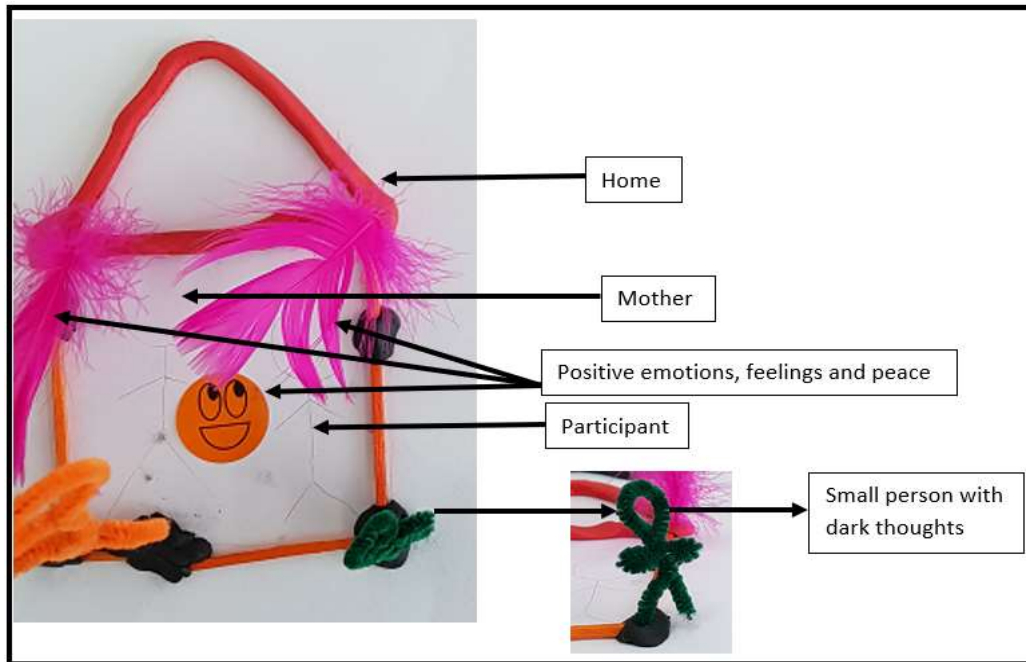


Figure 7.4: An excerpt from a participant's (P8-081835) Mmogo-construction to visually demonstrate the verbatim quotation used above.

The participants also referred to their concern for the staff that worked with the patients and the impact that the death of their patient may have had on them and how they were experiencing and coping with the encounter.

...death is a huge loss...to the staff members that were working on...trying by all means to get this patient uhm to make the patient survive, it's a loss to them
– P5-081833:lines 188–190

They alluded to the connections among people, due to a higher deity, that is common among all human beings, as indicated by the following reflective journal entry of a participant.

I observed that there is a connection between people because of one common creator – P5-081833RJ:lines 20–22

Experiencing death and dying patients during WPL elicits thoughts involving every aspect and facet surrounding a patient's life and healthcare. By implication the patient, HCPs, and significant others all became part of the plot of the narrative when the participants made sense and constructed meaning from their experience. This also shows the participants' empathy in these situations. They could empathetically relate and reflect on their own circumstances if they were to find themselves in the position of a patient's significant others.

The hero narrative is a metaphor used by individuals to construct meaning of experiences they encountered. In this construction of meaning, a student, for example, would think or speak about one idea in relation to another, where the one idea resembles the other due to the similarities that can be perceived between the two different ideas (Demjén, Marszalek, Semino & Varese, 2019:17; Moss, Moss, Rubenstein & Black, 2003:s290). The hero narrative metaphor is typically used to provide a description of an intrapersonal, transformative journey, bound to time and place, in a storytelling format, pertaining to a subjective and sensitive incident. The storyline (i.e., plot) typically consists of a journey, which requires the performance of a specific task, in a specific setting to bring about certain opportunities, challenges and learning. The plot is used to share the lessons learnt and to empower others to fulfil everyday life tasks (Demjén et al., 2019:17; Lee & Foo, 2007:3; Bosticco & Thompson, 2005:3, 11–13; Boje, 2000:6–7; Vogler, n.d.:1–6). As Leeming (1998:6) asserts, the hero's journey is an expression of one's own journey through physical and psychic life. Individuals use metaphors to make sense of their emotions about an incident they faced (Froggatt, 1998:333). Considering the manner in which data were gathered, using an amended form of the Mmogo-method™ of interviewing, one could also argue that metaphors were used by the participants to enable them, through visual constructions and symbols, to contextualise their experiences and this allowed them to make connections between current and past experiences that they had with death and dying patients during WPL (Roos, 2009:17–18). It can further be contended that by using a hero narrative in which the hero is on a quest, depicts the participants' endeavours to satisfy an ideal diagnostic radiographer in terms of providing effective patient care and demonstrating appropriate professional characteristics expected of them, to uphold the core ethical values as outlined by the regulatory body (Health Professions Council of South Africa [HPCSA], 2016a:2–3). This notion can be upheld since heroes usually depict universal ideals that assist people to frame their realities to meet a standard to transform and grow (Goldstein, 2005:8). Richardson (2013:194) justifies this notion by stating that students demonstrate a commitment to further their knowledge; commitment to using previous life experiences to find meaning; and being committed to the wider, more social and cultural values regarding their learning. Therefore, striving to be an ideal radiographer aligns with Richardson's insights. The participants were striving to further their knowledge to best cope with death and dying patient encounters whilst upholding the required and expected ethical conduct and care when interacting with their patients.

During this journey the participants, like a hero, realised that the ideals are not always feasible and linear; many challenges need to be overcome, and opportunities are needed to

successfully perform a task at hand. Smith-Han et al. (2016:4–5) found that undergraduate medical students shared similar views. In their study the students explained that their view of only being a curer changed when they realised that a medical doctor has to have a more caring role in death and dying incidents to assist patients to have the most dignified death they possibly can (Smith-Han et al., 2016:4–5). However, Goldstein (2005:8–9) maintains that death and dying incidents can give rise to conflicting dilemmas and reactions, especially in complex situations. Considering the experiences of the participants in this study, in terms of others forming part of the plot in any way, could be regarded as challenges and opportunities en route to the successful completion of the task. Based on Campbell (1949:245–246), and Vogler's (n.d.:1–6) hero journey structure, in order to grow the participants had to leave their physical social reality (i.e., being an undergraduate diagnostic radiography student) and enter a new experiential realm (i.e., healthcare working environment as an aspiring radiographer). This new realm is filled with barriers and opportunities, villains and aides (e.g., other healthcare professionals, a patient's significant others, as well as practice protocols and resources available) in the journey to fulfil a specific task (i.e., providing diagnostic radiographic services to patients and meeting their learning outcomes for their WPL modules). Once they could successfully do this they returned to their social reality, transformed as role models to teach and empower others and to transfer their newly gained knowledge to other similar encounters. This aligns with the participants' positive self-talk utterances, where they portrayed their strength to cope and help others cope with death and dying incidents during WPL. The experiences of the participants in this study are in keeping with the findings of a study conducted on preservice teachers in the United States; the education students also felt like heroes on a journey specifically to remain resilient and confident to successfully complete the tasks at hand (Goldstein, 2005:15–18). Another way to interpret the participants' need to fulfil the hero narrative is to see it as a form of protection against their true feelings, inter alia mitigating their guilt, towards death and dying in the workplace as they fear to be seen as weak (cf. 7.4.1.4; 7.4.2.3). This is congruent with Campbell's (2004:201) crossing the return threshold in his structure of the hero's journey. During this phase, the hero needs to return to the reality of the matter (i.e., dead/dying patients experience and the effect it had on a participant) and to leave the idealised version of events in the created mystical realm. This is difficult for the hero figure because they no longer have a sense of protection against the sorrows and obscenities associated with their experience (Campbell, 2004:202–204).

One can therefore claim that organisational factors contributed to how the participants created meaning of their encounters with death and dying patients during WPL. They saw other role-

players as being of assistance or a hindrance to perform radiographic examinations and to provide the best possible patient care they could. Lee and Foo (2007:2), as well as Allison and Goethals (2019:2), highlight that hero narratives convey norms, values, attitudes and behaviours of specific social groups in a given context. Cunliffe and Coupland (2012:83) concluded in their study pertaining to embodied narrative sense-making that one cannot separate the living body and context because cognitive appraisals, as well as sensory stimuli, contribute to individuals' lived experiences, and use is made of narratives to make these experiences more sensible. By implication, this highlights the variation in the different narratives that the participants relayed in this study. In other words, different workplace environments have distinct cultures and protocols and procedures. Literature highlights that we draw on everyday experiences (past and present) and future anticipations to perform particular tasks and make sense thereof (Cunliffe & Coupland, 2012:83). Allison and Setterberg (2018:4) maintain that hero narratives stimulate the development of compassion among those that encounter traumatic experiences. This aspect was evident in the participants' narratives when they expressed their concern for the patients' significant others' and their colleagues that interacted with the patients.

One can also reason that the hero narrative, as expressed and framed by the participants, converges with the sixth stage of grief based on the work of Kessler's of finding meaning, which is an extension of Kübler-Ross's five stage theory (cf. 3.3). Kessler (2019:2–3) explains that although the intensity of grief diminishes over time, it never ends. Embarking on ways to find meaning helps sufferers to reframe their experiences and loss in more positive terms to allow for transformation and growth in order to move forward and cope with the experience. Bosticco and Thompson (2005:11) have a similar view; finding meaning through metaphors assists in the facilitation of an individual's coping process of the incident faced. Finding meaning in the narratives of the participants was evident through their expressions and explanations of how they used positive self-talk.

During the sense-making and meaning construction process, they experienced specific affective responses. During cognitive appraisal, people do form an opinion or evaluation of their significance of the experience (Kuppens, Champagne & Tuerlinckx, 2012:1). A hero narrative identifies role-players' contributions to the affective responses of the hero (i.e., participant/student) in the narrative. An affective response can be defined as an individual's emotional response, mood and feelings pertaining to a specific experience. The response is subjective, thus unique for different individuals. It can be positive, negative and/or both.

Affective responses also impact on an individual's attitudes, behaviours and decision-making regarding the encounter experienced, as well as the coping strategy they adopt (Fox, 2018:2; Haile, Gallagher & Robertson, 2015:29; Zhang, 2013:247; Goh, Sawang & Oei, 2010:18). From a sociological point of view, Thompson et al. (2016:172–173) maintain that the social context, processes and structures, also influence how individuals are triggered by a specific stimulus to form and express their emotions (cf. 3.4.4). Hence, it can be argued that emotions are intrapersonally, interpersonally and environmentally situated within a workplace context. Fox (2018:2) maintains that different individuals may have different affective responses (emotions and feelings) to similar incidents due to external and internal bodily stimuli that are involved during any experience or encounter. Although there is no consensus regarding the exact number of emotions that human beings have, I draw on the influential work of Ekman, as explained by Gu, Wang, Patel, Bourgeois and Huang (2019:2), who maintained that we all have six basic emotions: fear, anger, joy, sadness, disgust and surprise. These emotions manifest as organised recurring patterns of behavioural components that assist human beings to adapt and evolve in order to handle life tasks (Gu et al., 2019:2; Kowalska & Wróbel, 2017:2–5).

In the next two sub-themes the affective responses of the participants are identified and discussed. These positive and negative affective responses show the contrasting emotions and feelings that they experienced during encounters with death and dying patients, as well as circumstances surrounding the incidents. They experienced more negative affective responses. The dissimilar emotions and feelings that gave rise to the respective sub-themes also point to the debates in the literature and provide a richer analytical depth to the overall theme.

7.4.1.3 Sub-theme 1.3: Positive affective responses

Humans have six primary emotions, which occur in recurring, organised patterns (Gu et al., 2019:2; Kowalska & Wróbel, 2017:2–5). One can therefore argue that people experience a variety of feelings rooted in these basic six emotions. We can draw on Willcox's earlier work, on the feeling wheel tool, to further justify this point, since the feeling wheel contains 72 adjectives, a non-exhaustive list, that we could use to express our emotions and feelings (Willcox, 1982:274–276). Participants relayed a variety of positive affective responses during the interviews and reflective journaling (Table 7.5). When participants perceived their experiences with death and dying patients during WPL as less negative and non-threatening to their wellbeing, their affective responses were positive. The reasons for positive affective

responses were explained during the discussion of sub-theme 1.1 (cf. 7.4.1.1). The category of data that represents sub-theme 1.3 was that of positive feelings/ emotions/reactions.

Table 7.5: Positive affective responses elicited during death and dying patient experiences

❖ Increased confidence and comfortability
❖ Contentment
❖ Sympathy
❖ Opportunities to learn

- **Increased confidence and comfortability**

Participants stated and explained their feelings as presented below.

I think I've gotten used to the idea of death in the workplace. Because at first, I used to run...I used to jump and go, because a person dying right in front of my eyes was tragic, was – it was just not good for me – P8-081835:lines 52–54

When the patient was in the room I felt normal because I didn't really know what was wrong with him. After I found out that he was going to die soon I wasn't sad – P14-091812RJ:lines 20–23

They're [emotions] positive in the sense that...death is like unavoidable, and it's sad and you have to feel for...the patient and the family, but at the end of the day you still need to move on with your life because you can't carry everybody's weight and all the sadness with you through life – P13-091823:lines 59–62

These views show that the participants had more positive affective responses to their encountered experiences. The reasons advanced included having had previous encounters and they therefore knew what to expect in such situations, as well as expecting that a patient is going to die and knowing the cause of death. They recalled that when they did see and feel that death was inevitable, unavoidable and in the best interest of a patient to be freed from suffering, the experience was less negative and elicited a more positive affective response. There was an increase in their confidence and comfortability with encounters of death and dying patient during WPL.

So, I feel much uhm like I have much more experience I am not...I can, I can deal with the patient even if when their look like they are dying. Yah, I can...I have much more confidence now – P1-081831:lines 320–321

Uhm, I realised how much I had grown, like, intellectually, emotionally, confidently, I wasn't crying after work – P12-091822:lines 138–139

In their second year, student radiographers are exposed to a 70-minute lecture on aspects pertaining to death and dying in a diagnostic radiography setting. The focus is mainly communication and procedures to follow. Other ad hoc informal discussions, when a need arises, are held based on their clinical experiences. One can appreciate that this is very limited. The inclusion of education related to end-of-life-care (EOLC) in the curriculum was found to

increase resident medical students' confidence and comfort to engage in EOLC conversation in a clinical setting as they felt more prepared for this role after qualifying (Schmit, Meyer, Duff, Dai, Zou & Close, 2016:1&5). Studies found that it is important for EOLC topics to be included in the curriculum, to adequately prepare students for their respective roles in radiotherapy and medicine, but that very limited time was spent on this (White, 2017:S39–S40; Schmit et al., 2016:4–5). These findings are consistent with the literature on best practices for successful WPL implementation and optimal student development. Complete integration of WPL into the formal curriculum is advocated to ensure theory-practice-integration so that students can develop the required skills, knowledge, attitudes, values and behaviours (SKAVBs) in their discipline (in this case diagnostic radiography) (Billet, 2016:125–126; Adams, 2012:2; Winberg et al., 2011:15). By implication, a formal curriculum needs to be flexible to accommodate workplace changes so that graduates are holistically workplace ready (Billet, 2016:126). This is especially important since statistics show that almost half of all deaths occur in healthcare establishments in South Africa (cf. 1.2). These statistics are comparable to the 55% of deaths that occur in UK-based hospitals (de Witt, 2015).

- **Contentment**

The participants felt content with their role in contributing to the management of patients' health concerns. They felt that they had helped by doing something good by performing a radiographic examination or procedure to provide some answers regarding the condition of patients.

...we don't directly...help the patient but we do definitely help the patient in terms of helping the doctor and so knowing that what we do is actually doing something good. I think it helps us cope and helps us deal with working in this environment and also personally helps us know that like, hey there are ways that we can help – P3-081841:lines 128–132

This finding compares favourably with the literature. Jain et al. (2008:1&5), and Jovic-Vranes, Vesna, Boris and Natasa (2008:223), in their respective studies reported that job satisfaction was influenced by HCPs' perceptions of providing good services and care to their patients, and was associated with motivation and productivity in the workplace. The nature of work was also found to contribute to overall job satisfaction for Lithuanian radiographers (Vanckavičienė, Navickienė, Viliušienė, Sakalauskienė, 2017:32), of which patient engagement forms part. Similar findings were reported in a systematic review on factors impacting on physicians' occupational wellbeing (Scheepers, Boerebach, Arah, Heineman & Lombarts, 2015:683). The participants in this study may have had this response as a means to demonstrate the importance they place on patient-centred, compassionate care to contribute to the

enhancement of patient outcomes, as expected of medical radiation sciences professionals (Hendry, 2019:272; Taylor, Hodgson, Gee & Collins, 2017:350–351; Bolderston, 2016:359). Literature highlights that the inverse is also true. A study among radiographers, physicists, physicians and nurses working in radiotherapy centres in Germany found that when these HCPs perceived their treatment yielded little to no significant patient improvement, and when their patients' condition deteriorated, they experienced statistically significant ($p < 0.001$) increased occupational stress, called "...stress by compassion..." (Sehlen et al., 2009:4–6).

- **Sympathy**

Participants felt that it was better to show sympathy instead of empathy to patients and their significant others during the terminal phase of a patient's condition or during times of grief, because empathy increased their burden of distress. Being sympathetic facilitated their process of de-stressing from the experience in order to have a more positive affective response towards the death or dying patient encounter, as narrated during the interviews.

Because if I show empathy I am going to be distressed for the rest of the year. Because now I'm going to think about that patient over and over and over again and it is something that I can't... reverse... whereas if I show sympathy, yes, I'm going to show...that I feel for that patient who... lost someone [sic.] – P2-081832:lines 200–203

Sympathy was constructed by participants in a study by Sinclair et al. (2017:440, 442–443) as an instinctive reaction leading to acknowledgment of a patient's, and by implication, others' suffering without demonstrating understanding or a desire to lessen the patient's distress. The patients felt that HCPs react this way, as a means of self-protection or out of obligation to assume the required radiographer professional disposition, but they (the patients) do not necessarily find it useful. This is opposed to empathy as it demonstrates sympathy, together with understanding and emotionally, resonating to a patient's suffering (Sinclair et al., 2017:442–443). The views of the participants in this align with those of the patients in Sinclair et al.'s (2017) study; the participants expressed that sympathy mitigates intense involvement with a patient's suffering that is characteristic to empathy. However, it could not be established from the data whether the participants reacted this way out of obligation to 'act professional' and as a result demonstrating that they were indeed emotionally attuned.

- **Opportunities to learn**

Participants also felt that having interactions with others (radiographers, other students and other HCPs) involved in an experience, helped them to find a way forward in processing and coping with their experience.

When I interact with other persons, including clinical tutors, it gives me a positive feeling now, as compared to my earlier stage. Because now the staff, actually some, for example the clinical tutor is someone who is actually looking after you, looking after me, making sure that I am okay. So, if I tell, I tell them about what happens they are sure to provide a way for me to make sure that when the death of a patient occurs again, I know...how to deal with it and deal with it effectively – P2-081832:lines 97–102

Some felt that the encounters that they had with death and dying patients were learning opportunities, since the experiences of others may provide valuable lessons and tips for them to deal with such encounters in future.

...for me, the reason why I like to hear other people's experiences is because maybe it's something I can learn from it, you know – P6-081843:lines 417–473

The findings of this study may be favourably compared to studies involving first year nursing students in the UK, and registered nurses in New Zealand. These studies found that encountering death in the workplace offered opportunities to learn to attain the necessary skills and knowledge on how to handle death incidents (Kent, Anderson & Owens, 2012:1261; Terry & Carroll, 2008:760). Experiencing death in the workplace was also regarded as opportunities for personal and professional growth (Kent, Anderson & Owens, 2012:1261). The findings of a South African study, involving mental health workers exposed to continuous secondary trauma, are similar to those of the latter cited study. The participants in the South African study also experienced these incidents positively as impacting their personal and professional growth, but they added that these experiences further assisted them to provide better service to their clients and gain new knowledge on how to support their colleagues (Keyter & Roos, 2015:372–373). Literature highlights that a learning opportunity exists, but there is an emphasis on emotionally arduous and distressing aspects too, which may give rise to negative affective responses (Ali, 2017:7; Terry & Carroll, 2008:760). The negative affective responses of participants in this study, in terms of their death and dying patient experiences, are discussed in the next sub-theme (cf. 1.4). These experiences of different HCPs further highlight the need for alignment between the formal and WPL curriculum, since radiography students identified that clinical placements give them opportunities to put theory into practice. Non-alignment between the formal and WPL curriculum will lead to a theory-practice-gap and optimal learning will not take place (Bwanga & Lidster, 2019:371; White, 2017:S40; Terry & Carroll, 2008:760; cf. 2.4.3.5). This goes hand-in-hand with the need for collegial support networks and role modelling in a work setting to foster and reinforce appropriate practises and learning (Keyter & Roos, 2015:376); radiography students learn a great deal from their clinical observations and engagements (Bwanga & Lidster, 2019:371). The utterances of the

participants in this study further substantiate this since they show how the actions of others did provide them with methods to cope with death and dying patient experiences during WPL.

The participants also recalled several negative affective responses and these are presented next.

7.4.1.4 Sub-theme 1.4: Negative affective responses

They recollected a number of negative affective responses that were coded as negative feelings/emotions/reactions. They had a variety of combinations of the negative affective responses which are discussed below. Table 7.6 presents a summary of the negative affective responses recalled by them.

Table 7.6: Negative affective responses elicited during death and dying patient experiences

- | |
|--|
| <ul style="list-style-type: none">❖ Overwhelmed, confused and uncertain❖ Emotional numbness and dissociation❖ Shocked and surprised❖ Anxious and scared❖ Guilt, blame and disappointment❖ Sadness❖ Hopelessness and helplessness❖ Traumatic, difficult and complicated❖ Depressing and concern❖ Anger and upset❖ Physical signs and symptoms |
|--|

- **Overwhelmed, confused and uncertain**

Participants alluded to feeling overwhelmed and confused during their appraisal process of the death or dying patient experience. They found these feelings to be negative. It was debilitating, intense and gave rise to many clarity-seeking questions.

...your thoughts and feelings are overwhelming when you dealing with such situations [death and dying patients]... they take up your concentration... everything – P1-081831:lines 39–40

I asked the radiographer to explain everything to me. I was so confused about [it]. I had so many questions and extremely shocked and traumatised – P16-091825RJ:lines 73–78

The sense of uncertainty surrounding encounters with death and dying patients further complicated their feelings of being overwhelmed and confused, which also raised more questions needing clarification.

...because you feel like you shouldn't be feeling these feelings, because you don't know the person. So, but you are still feeling them. So, you don't really know what's gonna happen next, what's gonna happen to that family, that patient – P4-081842:lines 128–130

Nia et al. (2016:3) indicate that nurses feel overwhelmed and anxious when encountering stressors related to death and dying. Some studies reported that participants described this overwhelming feeling as an emotional rollercoaster or 'emotional turmoil' (French-O'Carroll et al., 2019:78; Meller et al., 2019:306; Scott, 2011:1–3). An integrative literature review found that heightened levels of anxiety may be ascribed to an acute hospital setting where it is sometimes difficult to differentiate between acutely ill and dying patients (Atienza et al., 2016:13–14). This, together with the conflicting emotions experienced, could describe the participants' uncertainty and confusion in this study which gave rise to trying to understand what was happening. These feelings result in high levels of distress, which leads to HCPs developing negative attitudes towards these incidents (Atienza et al., 2016:14; Kent, Anderson & Owens, 2012:1260). However, positive attitudes were also adopted which were linked with positive experiences (Atienza et al., 2016:14). This is also true in this study in terms of the discussion in the previous sub-theme (cf. 7.4.1.3).

- **Emotional numbness and dissonance**

Participants further described how they became numb during their encounters with death and dying patients. This numbness was due to the feeling of being overwhelmed and confused with what they were experiencing in the moment. They alluded to how they felt paralysed; they were unable to move, unaware of what they were thinking or feeling when faced with death and dying patients. Hence, emotional numbness was perceived negative for the same reasons as was their feelings of being overwhelmed and confused described above.

...I wouldn't say I had no emotions, but I was just numb – P7-081834:lines 21–22

I was the first person to notice that there was something wrong because she wasn't breathing properly, and her eyes rolled to the back of her head. And immediately I was just like, what do I do, I can't move – P6-081843:lines 33–35

Coupled with emotional numbness was emotional dissonance. They narrated that when they experience death and dying patients they either see how others dissociate themselves from showing any emotions/ feelings or they themselves practise emotional dissociation to get through the experience and cope. They realised that emotional dissonance made an experience more negative. It only helped them cope with the experience to a certain extent.

They also expressed that it did not make them feel good about their care provision towards the patient.

...it's kind of like you numb yourself from the situations, so if you see a child in that situation, I can't see them as a child. I have to see them as just... not even like a patient...Just so that, it helps me to cope so that I know that okay look this is not a child that I'm dealing with, this is a patient (laughing). Just a number... so those are ways of kind of shielding myself, so distance myself from the situation – P3-081841:lines 177–183

I felt like an actress, playing a role, pretending everything was okay, when it wasn't...It was just easier to pretend everything was okay and focus on the other patient. I wouldn't change/ do it differently if it happened again – P4-081842RJ3:lines 46–48; 53–57

...I tried to block it [feelings] out, and I tried to depict this, the heart of stone. I tried to like harden my heart basically towards everything and all my feelings but it didn't help – P10-091836:lines 21–23

Figure 7.5 visually presents the feeling as expressed in the last verbatim quote.



Figure 7.5: Clipping from a participant's (P10-091836) Mmogo-construction that depicts their stone heart as explained in the preceding verbatim quotation.

Emotional dissonance occurs when a HCP does not express their true feelings as it is in conflict with organisational norms (Abraham, 1999:442). Emotional numbness, on the other hand, is defined as a generalised lack of emotional involvement and inability to feel and express emotions when experiencing traumatic experiences (Litz & Gray, 2002:198–199). French-O'Carroll et al. (2019:78) maintain that emotional repression is a protective mechanism among paediatric ICU doctors. Akroyd, Caison and Adams (2002:215) found that radiographers in the United States (US) experienced emotional detachment and depersonalised care when they were exposed to high levels of occupation-related stressors. Menezes (2006:8–9) found that medical doctors when dealing with dying patients remain emotionally expressionless and focussed on seamlessly completing the task at hand in ICU settings. Meier, Back and Morrison (2001:307) highlight that these dispositions by HCPs result in disengagement from patients, which may result in poor judgement, long-term distress, impact patient care and the HCPs' overall wellbeing. Abraham (1999:451) asserts that emotional dissonance can have wider

implications and result in unproductivity and job dissatisfaction among individuals experiencing person-role conflict (i.e., unable to express true views due to role expectations). Feeling overwhelmed with the experience with death and dying patients did result in emotional numbness among the participants in this study. Emotional dissonance was adopted by observing others and also to cope with these incidents. However, they found it a coping mechanism of limited effectiveness and alluded to their perceived poorer care for patients. Therefore, their experiences are congruent with those of reported studies in the literature.

- **Shocked and surprised**

A sense of shock and surprise were the first pinpointed feelings that the participants expressed once they felt slightly less overwhelmed and could then make some sort of sense of their encounter with death and dying patients during WPL. These feelings were particularly associated when their encounter with death and dying patients was quite novel experiences and unexpected to them.

*...shocked and surprised because it was the first time I experienced it –
P11-091821:lines 248–249*

*...then I saw the patient, they're closing the patient and then I knew that the patient was gone. And then they took the patient out. And then I was in shock, I was looking at everyone and the doctors start leaving, the doctor showed no emoti...they were so calm and all and I couldn't understand why do they take it so calmly because everyone is just like, okay no, it's okay and they left and the radiographer said they have to write a report now –
P16-091825:lines 32–37*

Litz and Gray (2002:198) report that shock is frequently experienced when facing traumatic incidents and this leads to emotional numbness. However, Parkes and Prigerson's (2010:7) view of the grieving process holds that illusoriness and denial frequently occur almost concurrently with emotional numbness. This was the case for the participants in this study. Being surprised and shocked is an example of many emotions that were experienced by them. The findings of an Irish study of paediatric ICU physicians were that they experienced shock when they encountered a patient's death (Ffrench-O'Carroll et al., 2019:78). These emotions are not uncommon when HCPs are faced with death and dying patient encounters.

- **Anxious and scared**

Participants also expressed that they felt anxious and scared when encountering death and dying patients. This was coupled with feelings of worry and nervousness. A reason advanced for these feelings was whether the actions of HCPs, and the student participants had anything

to do with the death or initiating it. The participants indicated that they were scared because they were not used to these experiences in the workplace.

...I was just thinking what else could we have done. Uhm, could the patient, could something have been done like, with the patient, was the patient taken to hospital on time? I was just thinking, did we do something wrong [sic.] – P15-091824:lines 11–14

...we are not used to death – for us it is terrifying – P2-081832:line 232

The anxiety and panic elicited by encounters with death and dying patients resulted in them doubting their ability to perform and manage radiographic examinations and radiological procedures. This in turn exacerbated their anxiety and reduced their confidence to do their daily work tasks.

Like before that [death experience], we were used to doing screening [fluoroscopic examinations] by ourselves, we were – like we hated staff being in the room with us, because we knew what we were doing, and it was like confidence. And then this [death of patient] happened and I felt like just to be back to first year again and I was like okay, I don't know if I should do this by myself. Like, something as simple as someone coming in for a swallow [contrast medium swallow]. Like if the, if they're a hospital patient [in-patient], I'm like nope, I'm not doing this, I can't, you have to stand with me and the staff... at least they understood that I've gone through something traumatic – P6-081843:lines 200–206

According to Steimer (2002:233) individuals experience feelings of fear and anxiety because these emotions act as triggers to prompt the need for a suitable adaptive response to cope with the stimulus which poses a threat or danger to the person's wellbeing. In the context of death and dying experiences, the term death anxiety is used to refer to the anxiety and fear that individuals' experience (Atienza et al., 2016:12; Çevik & Kav, 2013:E63). A study among first year nursing students found that they became more aware of their own feelings when faced with death and dying. This gave rise to feelings of anxiety since they could not establish what their patients may think or experience during this time, yet they were expected to ensure optimal patient wellbeing during these encounters (Ek et al., 2014:513). They expressed that lack of time did not allow them to be emotionally and physically present with patients, due to other tasks that had to be performed, and this heightened their feelings of anxiety (Ek et al., 2014:511–512). A reason advanced in the literature for death anxiety is when HCPs have not been adequately prepared to deal with end-of-life scenarios (Atienza et al., 2016:12; Çevik & Kav, 2013:e63). This gives rise to lower retention rates of HCPs and poor communication skills in these cases. The HCPs' quality of life may also be impacted (Nia et al., 2016:2–3). At an organisational level, the quality of patient care can be negatively impacted due to compassion fatigue and professional negligence since the death anxiety may demotivate employees which

then leads to an underperforming working environment (Thibeau, 2019:365; Figley, 2002:1440).

- **Guilt, blame and disappointment**

Anxiousness and nervousness gave rise to feelings of guilt and blame among the participants. They had feelings of being responsible for patients' death, particularly when there was a delay in attending to requests for mobile radiographic examinations to be done in the wards. This led to them being disappointed in themselves and the radiographers who were supposed to supervise them. They felt that they had failed to fulfil their duty of caring effectively for their patients.

...the patient had passed away. I was in shock, scared and felt guilty. I thought to myself if we went there earlier they could have saved the patient's life – P1-081831RJ:lines 6–11

In our hospital we are not allowed to go do a mobile x-ray alone, which is a right thing. But sometimes, staff want us to wait until there is a long list of mobile x-ray requests. This becomes stressing when doctors call for emergency mobile CXRs [chest x-rays]. I have been in a situation where we arrived in ICU [intensive care unit] and... in a ward where the patient whom the doctor called for an urgent x-ray was demised just before we arrived for the x-ray. I then questioned said to myself, "maybe if we arrived early, immediately after the call, we could have added to rescue of the patient". This affects me because I am part of the radiographers who were rostered on mobiles, but I could not go alone if the staff said we must wait [sic.] – P5-081833:lines 217–224

Scott (2011:3), and Meller et al. (2019:306), maintain it is common for HCPs to experience feelings of guilt and incompetence if they are traumatised by patient outcomes like death and dying, among others. Similar findings were reported by Ffrench-O'Carroll et al. (2019:78) for Irish medical doctors working in paediatric ICUs. Morake, Phiri and Van der Wath (2016:965) found that guilt was experienced by South African nursing students caring for women with stillbirths. They experienced these feelings because they felt that they could not afford the women the care they deserved (Morake et al., 2016:970). They blamed themselves as they felt that there may have been something that they could have done to prevent the death of the unborn babies if they had prior knowledge of the women's situations (Morake et al., 2016:970). This gave rise to a sense of disappointment. Bull (2016) in her blog indicated this feeling led to her blaming herself and questioning her competence. This is characteristic of the second victim phenomenon where HCPs hold themselves responsible for adverse patient outcomes and medical errors (Meller et al., 2019:306; Scott, 2011:3). The findings of this radiography-focused study align with those in the literature of other healthcare-related fields.

- **Sadness**

Experiences with death and dying patients were described as heart breaking and hurting. The participants' showed profound sadness towards these experiences during WPL. Their sadness was not limited to their own feelings because they also considered the patients' significant others. A physical response to release this sadness was by way of crying.

We later found out that the patient had passed away soon after they arrived in casualty. My initial feelings were profound sadness for the mother that was so distraught and now her worst nightmare has been realised – P4-081842RJ2:lines 51–57

For me, I feel very sad for them and I also feel some understanding because if you've lost someone you kind of know what it feels like for the family, what they experience afterwards – P13-091823:lines 37–38
So, if I want to feel like crying I will cry and do as uhm all sort of things to ensure that I am...I am not going there at the hospital the following day feeling the same way I felt yesterday and the same day when I experienced the death of the patient – P2-081832:lines 148–150

These feelings were also experienced by South African nursing students in a study by Morake et al. (2016:969). They felt emotionally traumatised, which gave rise to intense levels of sadness, when they were reminded of bereaved mothers during the delivery of their stillborns. This also influenced their quality of care towards these women (Morake et al., 2016:973). Minnie, Goodman and Wallis (2015:14–15) found South African emergency medical personnel (EMS) to experience sadness if a patient died in their care, which in turn gave rise to feelings of doubt and inadequacy. The sadness of the participants in this study demonstrates their internal conflict in terms of the extent to which empathy and compassion should be applied and demonstrated in death and dying scenarios. This is similar to the findings South African and Irish nursing studies (Morake et al., 2016:970; McCreight, 2005:441). Moores et al. (2007:943) found that UK medical doctors in West Yorkshire mainly experienced a moderate intensity of sadness (41%) when experiencing a patient death.

The participants' crying episodes to express their sadness is not uncommon. Simons, Bruder, van der Löwe and Parkinson (2013:1) highlight that crying is a normal response to pain and is associated with sadness, anger, frustration and anxiety, among others. Many individuals attempt to inhibit crying so as to reduce or eliminate negative emotions and to avoid the attention and social reactions that crying may draw to them. It is also reported that people try not to cry as they fear their competence being called into question to deal with certain incidents (Simons et al., 2013:1, 5–6). This is further demonstrated in the findings of a UK study among medical doctors where 76.6% of the respondents indicated that they do not cry when patients die, but 6.4% indicated that they experience intense episodes of crying when their patients die

(Moore et al., 2007:943). Zambrano, Chur-Hansen and Crawford (2014:312) found that palliative medicine specialists in Australia did not experience crying as a negative emotion since they felt that one should recognise one's emotions and not hide them.

- **Hopelessness and helplessness**

Experiences with death and dying patients also elicited negative affective responses when the participants perceived that the care and interventions, which a patient received, was not helpful in view of a decline in the patient's condition.

...so, in the case of me dealing with the patient, if I see the patient one day being better, that gives me hope to know like, oh my word, like, this patient could actually survive. And then if I see the patient the next day, seeing that they're worse, you know, that brings me back to square one, as to like... I don't know how to cope with this, I don't know like why this is happening to this person. So I think it's almost like an up down situation of feeling hopeful and hopeless – P3-08181:lines 109–114

Feelings of hopelessness and those of helplessness were in tandem. The participants felt that they could not help the patient any further, even though they would like to. They expressed that they felt useless in situations where they were faced with death and dying patients since they could not do much in these situations in view of the limitations brought about by staff and their own knowledge base. Other factors that may have contributed can be ascribed to emotional numbness, being overwhelmed, confused and shocked.

I felt helpless because I tried to help the staff with the patient, but I couldn't – I could only do as much as they allowed me to and what I could do – P16-091825:lines 102–104

And for me, I felt like, I was useless from that point on, because there was nothing I, like, I phoned the nurse but there's nothing else I could do. Everybody else basically took over the room. The radiographer sorted the emergency trolley, we had one of our nurses on top of the woman giving her CPR [cardiopulmonary resuscitation] and the whole time I was just standing there. Just watching this whole thing happen, I couldn't say anything, I literally just put myself in the corner and I just watched it – P6-081843:lines 40–45

An integrative literature review found helplessness to be an emotional reaction experienced by nurses when traumatised by a patient's death (Meller et al., 2019:306). South African nursing students, in a study by Morake et al. (2016:969), explained how they felt helpless and powerless in navigating the emotionally taxing tensions that existed when providing care to women that had stillbirths. They did not know how to cope with these situations (Morake et al., 2016:969–970). Çevik and Kav (2013:E62) had a similar finding in their study involving Turkish nurses in adult in-patient clinics; 34% indicated that they experienced a sense of helplessness. Some also experienced a sense of hopelessness (0.5%) when caring for dying patients. These

experiences could be ascribed to lack of preparation and willingness for the role of caring for the dying and dead, and a sense of responsibility of providing the best care possible to patients but not being able to do so due to the absence or low levels of personal capacity (Meller et al., 2019:306; Çevik and Kav, 2013:E62). The participants' utterances in this study show that their helplessness and hopelessness were more to do with being excluded from actively participating and their traumatised state as opposed to their lack of preparation (cf. 7.4.5) and willingness to assist.

- **Traumatic, difficult and complicated**

During the interviews the participants labelled their experiences with death and dying patients as traumatic, bad, difficult and complicated. Their experience was traumatic due to the visual stimuli associated with situations where patients die or are dying.

Her skin and blood came with the detector on the pillowcase. So, it was gruesome in a way – P12-091822:lines 28–29

They explained that this then impacted on their productivity at work as well as them maintaining a balance between fulfilling their duty to care for patients and what was ultimately the best for the patient. In other words it was a complicated and difficult situation to navigate as student radiographers.

It was difficult to concentrate on my work – P4-081842RJ:lines 10–11

...it's very difficult for because we are called to bring health and to bring life and so, in a sense to allow someone just to die makes it seem like we're cruel, or it makes it seem like we're not doing anything. So, that's why I think it's a very complicated balance for me working in the healthcare world that I don't know what is best for the patient – P3-081841:lines 73–76

Their experiences were associated with negative affective responses. They described these experiences as frustrating due to the traumatic nature of them. These experiences acted as triggers to remind them of their loved ones that they had lost. The experience then was a difficult one for them to navigate through during WPL.

Uhm...the problem is death. Death (sighs)...death is not...it's a very frustrating thing...it is what I have been through. Ah, uhm, I have lost... a lot of people close to me including a parent – P1-081831:lines 227,235,237,239

Diagnostic radiography students in a workshop identified that they expected to see visual stimuli associated with traumatic incidents during WPL. They also recognised that they had difficulty in expressing how they would react to these experiences without experiencing them first-hand (de Witt, 2015). Sharpley, Poulsen, Baumann and Poulsen (2015:25) found that radiation therapists and radiation oncology nurses perceived patient deaths as causing

relatively high levels of workplace-related stress. Minnie et al. (2015:14) reported similar findings among EMS personnel in South Africa. Ashong, Rogers, Botwe and Anim-Sampong (2016:116) concluded in their study among Ghanaian radiographers that workplace stressors impacted their productivity at work and their quality of service delivery to clients. Studies among nursing students and EMS personnel also reported that participants found death and dying experiences difficult and traumatic in the workplace because it reminded them of patients and significant others that they had lost (Morake et al., 2016:970; Minnie et al., 2015:15; Terry & Carrol, 2008:763). The findings of this study are therefore congruent with the existing body of healthcare literature. On the other hand Zambrano et al. (2014:313) reported that palliative medicine specialists in their study did not find the demise of a patient traumatic since they appraised the current experience more positively when an incident they faced reminded them of past patients and how they handled those encounters.

- **Depressing and concern**

Coupled with the traumatising and difficult nature of the experiences with death and dying patients during WPL the participants explained that the entire experience was also depressing. This emotion stemmed from them demonstrating compassion and empathy towards the loss of the loved ones of a patient, as well as them feeling helpless and powerless during these situations.

I was feeling it was depressing but I could not do anything about it. Uhm...it was depressing because I was putting it – I was putting myself in this father's shoes and if it was my child – P15-091824:lines 57–61

They expressed intense concern for the significant others of patients, as well as those HCPs who had provided a far more longer healthcare service than they had. This in turn aggravated their feelings of being overwhelmed and sad as they found the incident difficult. Their feelings of uncertainty surrounding the death or dying patient experience became intensified. They shared emotionally moving examples in their interviews and reflective journals, as represented by the quotations below.

I was concerned about the student because she was really terrified and staff members were also terrified – P2-081832RJ:lines 16–18

For me it's always yes, the patient is there, and the patient is going through things and you know sort of how it's going to end for the patient. But then I often feel what about the rest? What about the family? What about the people that that person is influencing in their lives? Whether it's distant family or friends or whether it's the inner circle which is usually the people that you see at the hospital. The parents, if it's a young person, or if it's an older patient the wife, the children, all of those people. And ... they sitting outside and then they like don't really know what's going on inside the room...you basically see that moment in between where you know their whole life is just gonna like fall apart in like a second. So, that's difficult to deal with (participant started crying) [sic.] – P4-081842:lines 41–49

Glaysher, Vallis and Reeves (2016:e231) maintain that exposure to traumatic events may lead to the development of other conditions, like depression, anxiety, post-traumatic stress disorder (PTSD) and phobias, among others. They further maintain that radiographers will experience various levels of psychological disturbances when encountering traumatic events, with most recovering over time. It was thus not out of the ordinary that the participants in this study described their encounters with death and dying patients as depressing. Literature also reports that medical doctors and nurses expressed concern for the significant others of demised patients (Ffrench-O'Carroll et al., 2019:78; Prado, Leite, Castro, Silva & Silva, 2018:4; Shorter & Stayt, 2010:163). This concern intensifies when a HCP developed a relationship with the patients' family and close friends (Shorter & Stayt, 2010:163). On the other hand, literature could not be found to validate or negate the participants' concern for the HCPs that worked with dead and dying patients. One explanation for this may be extrapolated from the complexity theory which holds that the interactions among the constituent parts of an organised system allows for the system to be more than each part individually. Hence, our experiences then with death and dying patient experiences cannot be fully understood if we do not make sense of the experience without considering all people and environmental factors that constitute the environment (Sammut-Bonnici, 2014:1–2). This is because individuals' experiences do not occur in a vacuum free from the influences of all relevant social and interpersonal factors (Glaysher et al., 2016:e234).

- **Anger and upset**

Participants further recalled that their encounters with death and dying patients during WPL aroused feelings of being upset and angry. They attributed these feelings to the manner in which other HCPs handled demised patients; as if they were nothing.

I think I was just upset because, uhm, of the way the doctors treated the patient...they left the patient there, like, without taking the patient – the tube out because the patient was intubated him and stuff. I think I was just angry about that [sic.] – P10-091836:lines 11–13

...they just said, put him outside in the passage we must do the other patients...he was nothing, just put him outside and we'll just do the next patient – P7-081834:lines 47–49

UK-based radiography students expressed that they thought that they may feel angry when they are faced with incidents of death or dying patients (de Witt, 2015). A study among Turkish nurses found very few nurses expressed anger (2.1%) as an affective responses in caring for dying patients (Çevik and Kav, 2013:E62). Similarly, Moores et al. (2007:943–944) found that only 9% of UK-based medical doctors in their study expressed anger as an affective response to encounters with memorable deaths. In contrast, a South African study among EMS personnel found that when they encountered innocent victims of violence and trauma that almost a third (31%) frequently experienced anger and irritability. These studies did not provide or explore the reasons for these emotions to further validate the findings of the present study. A South African study among nursing students did find that they felt angry if they perceived that their colleagues treated the dying in a disrespectful manner and without the appropriate sensitivity (van Rooyen, Laing & Kotzé, 2005:35). Rueth and Hall (1999:743) also provide a plausible explanation as they maintain that individuals experience anger in situations when they experience loss because their wellbeing is threatened and they feel that they have lost control over a particular situation. This is congruent with the views in the stress appraisal and coping body of literature in so far that individuals experience a situation as being stressful if their wellbeing is threatened and then express this through various emotional responses (cf. 7.4.1.1).

- **Physical signs and symptoms**

Besides cognitively situated, emotion-laden feelings and attitudes, the participants also vividly remembered and described physical signs and symptoms that they experienced. These signs and symptoms made the experience more anxiety-stricken, scary, overwhelming and traumatic. These physical symptoms contributed greatly to their emotional numbness and helplessness during experiences with death and dying patients. They identified the following physical signs and symptoms that they experienced: perspiration, tachycardia, malaise and insomnia.

I was sweating and my heart was racing. I felt confused and useless as I didn't fully know what happened and I couldn't really help – P6-081841RJ:lines 15–19

The thing that kind of made me really feel sick, uhm, and realise that basically in public hospitals you really are just like a number there. So, we're done with you now so you can go outside – P7-081834:lines 122–124

Like, for me, I didn't sleep well a night most of the time because I would think about the patients and stuff – P10-091836:lines 77–78

Stress experiences can have physiological effects for an individual (Weiten, Dunn & Hammer, 2018:70–78). The physical signs and symptoms (perspiration, tachycardia and malaise) experienced by the participants in this study are typical of a fight-or-flight response to stress experience (Augustyn, 2019:para 2; Schneiderman, Ironson & Siegel, 2005:612–613). These occur due to the endocrine and nervous system related changes that happen in the human body during stress experiences, which could lead to some people feeling mildly ill (Augustyn, 2019: para 1–2). In a South African study among EMS 18% of participants indicated that they experienced physical signs and symptoms, like perspiration and nausea, when encountering death and dying incidents (Minnie et al., 2015:15). Insomnia was not unique to the participants in this study because it and their other signs and symptoms were reported in a study by Brady (2015:35) in terms of emergency healthcare workers' death related anxiety. However, Minnie et al. (2015:15) found in their South African study among emergency medical personnel that 69% of the participants did not experience insomnia. Moores et al. (2007:943) also found that the majority of UK-based medical doctors (76.1%) in their study did not experience insomnia. Other systemic pathologies and psychopathologies have also been reported in the literature that may arise due to chronic exposure to traumatic scenarios like death and dying patients (cf. 4.3.2). These were not recalled by the participants during their interview narratives and reflective journaling.

Moores et al. (2007:945) found that one in 10 medical doctors experienced strong affective responses in their encounters with death and dying patients, which demonstrates that doctors, and by implication other HCPs, are compassionate beings. Literature reports that failure to attend to HCPs' emotions and feelings may result in disengaged HCPs, impaired judgement and decision-making and emotional distress. In turn, this negatively impact their overall workplace wellbeing and therefore productivity and leads to compassion fatigue that may result in poor patient care practises, professional negligence, medical malpractice, as well as adopting poor coping strategies (Meller et al., 2019:302; Lai, Wong & Ching, 2018:7; Lemaire & Wallace, 2017:1; Houpy et al., 2017:1; Davies, 2016:i5597; Meier et al., 2001:3007).

7.4.1.5 Summary of theme one

The participants used an appraisal process and the hero narrative metaphor to make sense and create meaning of their experiences with death and dying patients during WPL. Positive and negative affective responses were elicited, and the latter were the predominate response.

Various reasons for their affective responses were discussed. The participants, patients, their significant others, and other HCPs involved in the experience and different clinical settings influenced the participants' unique sense-making and affective responses to their encounters with death or dying patients during WPL. The findings of this study are well situated within the existing body of literature through either empirical findings or theoretical perspectives.

7.4.2 Theme two: Participant- and workplace-related factors influencing experiences with death and dying patients

During the data analysis process the participants storied their experiences and continuously alluded to specific factors that influenced how they perceived the experiences with death and/or dying patients during WPL. These factors related to the participants' themselves and those associated with workplace circumstances surrounding the experience. These factors were categorised into three distinct groups: factors that were inconsequential to how the participants perceived the experience; factors that mitigated negative perceptions about the experience; and factors that intensified the negative perceptions surrounding the experience. These factors were closely associated with the meaning attached and affective responses elicited during the death and dying patient encounters. These factors influenced the appraisal process of making sense and creating meaning about these experiences. One can also then argue that these factors play a role in the coping mechanisms the participants adopted, as discussed in theme three. This is because the meaning attached to an experience is influenced by these factors, and the meaning then attached to the experience leads to the coping mechanisms they (the participants) ultimately use to deal with the experience, drawing on Lazarus and Folkman's transactional model (cf. 5). Figure 7.6 represents the relationship of the three sub-themes to theme two.

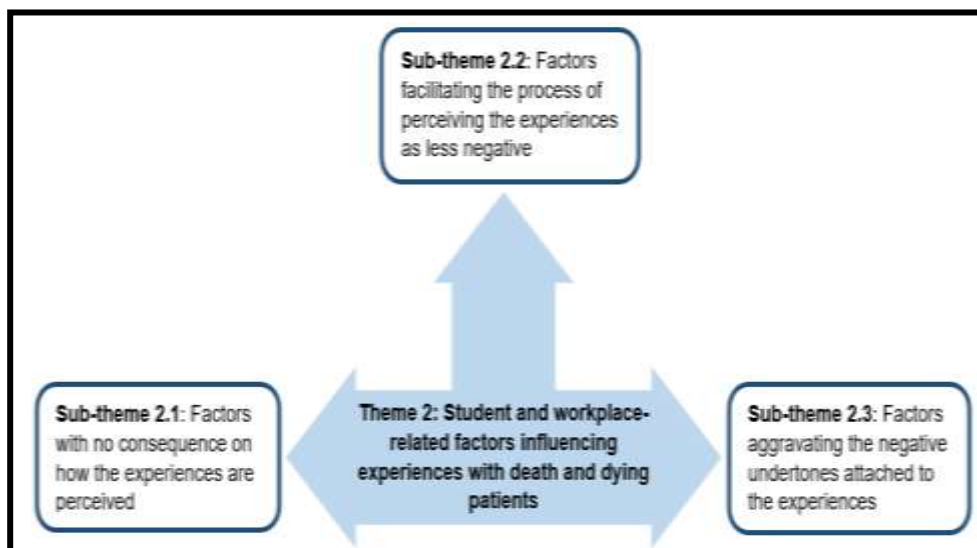


Figure 7.6: Theme two and the relationship of the sub-themes with the main theme.

7.4.2.1 Sub-theme 2.1: Factors with no consequence on how the experiences are perceived

Inconsequential factors refer to influences that posed no hazard to the participants' wellbeing. The subsequent appraisal process outcome is thus signified as being irrelevant. The coping process is halted since the experience does not threaten the person's wellbeing, as explained by the transactional model of Lazarus and Folkman (1984:32). This sub-theme is made up of the codes categorised under the category inapt factors. There were only two factors that had no consequence on how the participants perceived the experience, and both could be categorised as work-related factors and are discussed below.

- **Where death and dying patients were encountered**

Participants referred to four areas where death and dying patients were frequently encountered: mobile (ward) radiography, operating theatre, fluoroscopy (colloquially known as screening in radiography speak), and the computed tomography (CT) suite. Mobile radiography and CT were the two areas of work where most of the experiences with death and dying patients were faced. Noteworthy is that regardless of the area where they encountered the experience, their narratives showed that this had no influence on how their respective experience was perceived.

...radiologists came in and told us that they [A&E department] are going to receive a patient at the emergency unit with a gunshot. A staff member went up and us students went up to the emergency unit about 5 minutes later. We saw the nurses and paramedics trying to resuscitate the patient and get fluids in...It felt weird, everyone was rushing and they all looked like they were trying to keep themselves together...I felt so bad for the patient and their family – P13-091823RJ:lines 3–18

There was this one guy on the CT [computed tomography] bed and he code blue'd in front of me...It was weird and his face just like solidified and he stared at me, like, it was really hectic – P12-091822:lines 43, 49–50

These experiences could not be corroborated with available and accessible literature. Hence, this study is potentially the first to have found that the place where radiography students encounter a patient death or dying patients does not have any impact on how they experience and cope with the experience. On the other hand, a New Zealand nursing study found that most death and dying encounters are experienced in surgical and medical wards (Kent, Anderson & Owens, 2012:1259). The same findings were reported in a Chinese study among medical doctors and nurses (Lai, Wong & Ching, 2018:5–6). Therefore, it is not surprising that students recalled most of their experiences being faced when performing mobile radiographic examinations. Violence and non-communicable disease (NCD) are prevalent in the South African context (cf. 3.2.1). Many patients are referred for CT examinations to evaluate the extent of their injuries sustained or the extent of their disease. Patients may well be in unstable or critical conditions when arriving at the CT suite or even chronic, terminal progression of their NCD. Some have anaphylactic reactions to the iodinated contrast agents used for some CT examinations. These factors may therefore account for patient deaths in CT units, inter alia (International Atomic Energy Agency [IAEA], 2018:1–4; Ordoñez et al., 2016:600; Andreucci, Solomon & Tasanarong, 2014:1–2). These perspectives therefore explain why the participants may have encountered most deaths in a CT suite.

- **Passive involvement with the patient**

Another factor regarded as having no consequence on how the participants perceived and then appraised an experience was whether they had actively engaged with a patient or saw a patient die. They were not affected in any manner, according to their utterances, when they had not seen a patient die or had to physically engage with a patient.

I don't really take it to my mind. I don't – I just ignore it. I take it, the person died, I wasn't there – P8-081835:lines 174–175

...uhm, I've never experienced dying to say, so only death I can speak of and in both cases I rocked up there and they were already gone...if I like maybe have a relationship with the patient...if I kept doing the x-rays like throughout the week or the next two weeks then it would have hit me more. But they're just a name to me – P11-091821:lines175–176, 184–186

A study among South African EMS personnel reported similar findings as they found arriving at a scene with dead bodies the least traumatic (Minnie et al., 2015:14). Meller et al. (2019:307) found in their nursing focused integrative literature review that nurses who form meaningful relationships during their care for patients find the death of a patient more traumatic and stressful. Nurses spend the longest time with terminally ill patients in comparison to other HCPs (de Casterlé, Verpoort, De Bal & Gastmans, 2006:187). Radiographers have a very short interaction with patients thus establishing rapport and trust with patients can be challenging. Further complicating this situation is patients' conditions and the need to get their examination done without hindering departmental workflow (Pollard, Lincoln, Nisbet & Penman, 2019:333–334). It is therefore not unreasonable to argue, that if there is no established relationship between a practitioner and patient then this would not induce a stress experience since the practitioner would not reasonably perceive the situation as threatening to their own wellbeing (Lazarus & Folkman, 1984:32–33). We should appreciate that the participants of this study felt that not being involved with a patient or seeing a patient die was an inconsequential factor since there was neither a meaningful relationship nor a threat to their wellbeing.

In addition to the inconsequential factors, they detailed factors that either positively or negatively influenced their perceptions and subsequent appraisals of the experiences with death and dying patients during WPL. These factors are discussed in sub-themes 2.2 and 2.3. These factors, according to the transactional model of Lazarus and Folkman, lead to an individual encountering a stress experience and subsequently leads to an individual finding ways to cope with it (Lazarus & Folkman, 1984:35–36). These factors can be person-specific or environment-related (cf. 5.2.2.1). According to Walter (1996:7), and Papadatou (2000:69–72) individuals continually reconstruct their views of a stress experience to adapt to the dynamic contexts that they find themselves in as an attempt to make sense of the experience.

7.4.2.2 Sub-theme 2.2: Factors facilitating the process of perceiving the experiences as less negative

Participants recounted several factors that led to more positive perceptions about their experiences with death and dying patients during WPL. These factors lead to a more positive appraisal of the experiences, elicit more positive affective responses, and influence the type of

coping mechanisms that a person would use to adjust or counterbalance the stressor (i.e., death or dying patients) into a more positive experience for enhanced wellbeing for the individual facing the stressor (Lazarus & Folkman, 1984:35–36). Seven factors, which facilitated the process of perceiving the experience as less negative, emerged from the data and were captured in the mitigating factors' category. The factors are summarised in Table 7.7, and sub-divided into person (i.e., participant) and workplace related factors.

Table 7.7: Factors leading to less negative perceptions about death and dying patient experiences

Participant-related factors	Workplace-related factors
❖ Emotional intelligence	❖ Age of the patient
❖ Religion and culture	❖ Having previous experiences
❖ Appreciating that one is still learning and developing	❖ Knowing the cause of death
	❖ Staff remaining calm

- **Age of the patient**

Participants perceived the death of an elderly patient as less negative. They were of the opinion that elderly patients who die had lived a good life and fulfilled their time on earth and made the contributions that they should have. Some participants viewed the death or terminality of paediatric patients to be less negative as they thought that these patients had not made major contributions to their communities and therefore having them be freed from their suffering at an early stage in their lives may be better for them. They explained that these experiences were bad and sad regardless of these views and that they felt sympathetic towards the patients' significant others.

...since it was babies...it was less intense as it would have been for somebody that was older but I did feel sorry...for the mother that had to carry the babies like for nine months only for them to die within a week...if a baby dies, okay...you are never sure of what they've grown out to be but for an adult, say now, he or she is a breadwinner and then she just dies, what about the other babies, other children, they'll have no financial support, they basically have nothing. They don't – some will have to drop out and go looking for jobs, which are usually not very paying jobs but helping jobs – P9-091811:lines 93–95, 98–102

I feel sometimes when a patient is older they are more prone to diseases and, uhm, they have seen life...this patient...she was very old, more than 70 years I think, if I still remember, so it is – it was better compared to the child who is very young – P15-091824:lines 84–88

The finding of a study by Lekalakala-Mokgele (2018:151) was that elderly people who were grieving the loss of family members experienced their deaths in similar ways regardless of their age. The participants' view in this study of not being affected by the death of paediatric patients is not aligned to findings of a literature review study, where it was reported that nurses found that the death of paediatrics, or patients close to or of their own age and gender, were the most

difficult to deal with (Wilson & Krisbaum, 2011:561–562). These findings demonstrate that there are wider socio-cultural influences that contribute to how we make sense and attach meaning to death and dying, from a sociological perspective (Faunce & Fulton, 1958:205). This could be used as a premise to explain this point of view among the participants in this study by reflecting on the reasons that they provided for their points of view.

- **Having previous experiences**

According to the participants, having previous experiences with death and dying patients, improved their confidence and comfortability in dealing with these encounters during WPL, as discussed in sub-theme 1.3 (cf. 7.4.1.3). Therefore, previous experience was identified by them as a factor that mitigates the negative connotations attached to an experience but does not make the grief associated with the experience any different. The previous experiences that they referred to extended beyond just the working environment, and therefore personal life experiences were also buffered against the negative meanings associated with death and dying patient encounters during WPL.

I do think having prior experience [being a 4th year] with similar situations helps with not feeling guilty, but it doesn't mean you become desensitised to the grief and sadness – P4-081842RJ2:lines 57–62

Between first year and now it is because of the experience. Like when we've gone to the hospital for quite a long time, we have seen death and dying experiences...so, the more it happens is the more you get to accept it and to understand that that's where, unlike when I was in first year, when it was my first experience I – sometimes I would think of it all the time, even when I get back home, but now it's better, and also what I've learnt in professional practice – P15-091824:lines 128–133

There were about 4 babies that were deemed dead just before we could perform the requested examinations. My mother gave birth to a lithopaedion, so I wasn't as shocked. I just sympathised with the parents – P9-091811RJ:lines 7–11

Having previous personal life experiences with death and experiencing death during WPL acted as a trigger to how participants perceived the incident. Although overall less negative, such an experience still acted as a reminder of any previous loss that they suffered.

I don't think I was shaken by the death of the patient but rather the fact that I saw him lying there, lifeless. It brought back the memory of seeing my grandmother lying lifeless on her bed. I think I would have handled it differently or thought about it differently if my grandmother hadn't died just two weeks prior to this incident – P10-091836RJ2:lines 47–55

The transactional model of Lazarus and Folkman was used as a theoretical framework for a premise to make sense of the findings of the participants. It posits that if individuals associate

a stimulus with harm or threat to their wellbeing, they will appraise the stress experience in a more negative light due to previous meaning attached to such an experience (Lazarus & Folkman, 1984:84). This tenet of the theoretical framework captures what the participants in this study recalled as a factor mitigating the negative connotations because they already had a sense of meaning of the situation. Hence, there is reduced ambiguity attached to the experience compared to the initial encounter with a similar experience (Lazarus & Folkman, 1984:103, 116). This implies that the participants were better able to cope with the situation since they had pre-existing knowledge reservoirs to draw from and which did not exist when they encountered their very first death or dying encounter. Their views are aligned with some empirical studies in nursing, education and radiotherapy. The participants, as reported in the literature, maintained that having more than one experience reduced death anxiety and intense negative affective responses to the encounter, as well as improving professional and personal self-efficacy and knowledge to manage dying patients and patient deaths in future (Zheng, Lee & Bloomer, 2016:325; Kent, Anderson & Owens, 2012:1261; Dungey & Jasperse, 2011:16). Radiation therapy and education students indicated that when they had to deal with terminal patients of a similar age as their friends or reminded them of personal encounters with death that these situations placed them in a particularly vulnerable position, made them feel more helpless but heightened their levels of empathy toward patients and their family members (Dungey & Jasperse, 2011:16). This can explain the participants' experiences in this study since they could relate more with the patients and their significant others due to their personal experiences with loss.

- **Emotional intelligence**

Emotional intelligence was another factor that participants felt impacted more positively on their appraisal of their experiences with death and dying patients. This was displayed through their conscious awareness of their emotions and how they regulated these emotions as they recalled their workplace experiences.

...you accept the kind of person you are afterwards and the feelings that you have like you own them. They are your feelings, it's fine to feel them that way. It's fine if you want to be angry, it's fine if you wanna be sad [sic.] – P4-081842:lines 95–97

So it's really – for me it involves putting it in the back of my mind and acknowledging that that what just happened was not nothing, and that it's okay to – it's okay to feel something about what just happened and not become like a zombie like most of the nurses in the hospital. And then, ja, just putting it in the back and being able to move to the next patient. And be prepared to be happy with the patient and not – be prepared to not feel like you're dragging everyone down two minutes later – P14-091812:lines 86–92

Emotional intelligence (EI) refers to an individual's ability to identify, assess, control and manage one's emotions, as well as understand the emotions of others they engage with in order to guide their behaviour, thinking and thus decision-making (Green, 2020; Charles, 2020; Mayer, Caruso & Salovey, 2016: 296; David, 2014). In terms of this definition of EI we can appreciate that the participants narrated it as a mitigating factor; they were able to take control of their emotions and use emotional stimuli to guide their behaviour in situations where they were faced with death and dying patients to then adopt self-perceived appropriate coping strategies (Green, 2020; David, 2014). Emotions are involved in the thought process hence it can be argued that they influence our appraisal of stress experiences. This is another explanation for the participants varied recollections of affective responses and appraisal of death and dying patient experiences during WPL as discussed in theme 1 (cf. 7.4.1 – 7.4.1.4). The experiences of the participants are in keeping with that of Hoelterhoff and Chung (2017:642–644). They found that students, enrolled at a Lithuanian university who had experienced traumatic events were perceived to possess the ability to appropriately and adequately manage and control (i.e., cope) emotionally with the stress experience and its associated effects (Doménech-Betoret, Abellán-Roselló & Gómez-Artiga, 2017:1–2; Hoelterhoff & Chung, 2017:642–644). This finding is further grounded in the transactional model of Lazarus and Folkman (1984:32–33) where individuals' appraisal is more positive if there is little to no threat to their wellbeing. This can further explain the participants' experiences in the current study. Drawing on Mayer, Caruso and Salovey's (2016:296) recent work on EI, organisational culture also plays a role in how we perform and express emotions in the workplace since social norms and rules can dictate how these are, and should be, dealt with in the workplace. The participants in this study may have perceived that expressions of their emotions and management thereof were appropriate as this was acceptable within their particular clinical settings and demonstrated higher levels of EI by implication. This may not necessarily be the case since a culture of suppressing true emotions in stressful situations in healthcare is seen as unprofessional and inappropriate behaviour by HCPs in the workplace (Papadatou, 2000:69–72; Doka, 1987:455–469) resulting in long-term distress. So, one may, by implication, argue that the participants may end up adopting ineffective coping mechanisms or more emotion-focused coping mechanisms to neutralise the stressor to make them feel more in control of their emotions (cf. 7.4.3.2). Pau, Croucher, Sohanpal, Muirhead and Seymour (2004:208), and McQueen (2003:101), found in their respective work that EI has many benefits for both patients and HCPs in being able to cope with stress experiences. They therefore advocate for the development of EI in undergraduate education programmes of HCPs.

- **Religion and culture**

Some participants referred to their use of religio-cultural values and teachings as leading to a less negative perception of their experiences with death and dying patients during WPL. The religio-cultural knowledge of the participants enabled them to make sense of the experiences they encountered and how to cope.

And in my reaction to the encounter of death and dying in the hospital, my religious knowledge [Christianity] about the concept of death, and cultural background [traditional Xhosa] are the final stages of my understanding – P5-081833:lines 305–307

I would just tell Him [God] like how I feel and, uhm, or tell myself how I, I'm actually feeling so that I can actually cope and identify what I'm actually feeling and why I'm feeling that way. So I just tell myself or to God whatever, what happened, analyse what happened and why it happened – P10-091836:lines 195–198

Globally individuals and communities make sense and cope with death and dying differently. These variations were outlined and discussed in chapter 3 (cf. 3.4.2; Table 3.1; 3.4.7). It was evident that there are many social processes, symbols, rituals and rites of passages associated with grieving and coping with death and dying. These religio-cultural practices therefore provide a plausible explanation for the participants to draw on religion, culture and spirituality to appraise and create meaning of these encounters in order to cope with them during WPL. Literature underscores this phenomenon among HCPs and maintains that religion helps individuals in healthcare professions to reflect on a deceased patient's life in an attempt to construct meaning of a patient's death. This assists them to accept a patient's death as a means of consolation. Religion also informed HCPs' future practises related to end-of-life-care so as to have greater self-perceived control and stability during these encounters in the workplace and to remain open to learning (Keyter & Roos, 2015:372; Klass, 2014:15; Sinclair, 2011:186; Garibay, n.d.:86). A South African study among nursing students found that religion and culture influence how students interact with patients during death and dying incidents and what is regarded as appropriate from a religio-cultural perspective (Morake, Phiri & van der Wath, 2016:973). This again emphasises that different students will appraise and create meaning of a death or dying incident differently (Atienza et al., 2016:14; Loisel & Sterling, 2011:255–256).

- **Knowing the cause of death**

Participants recalled that knowing the cause of a patient's death contributed positively to their perception about the experiences. It brought about a sense of closure, finality and peace for them.

...with the staff members that were working with that patient, I ask them the cause of death. That, what happened, what caused the patient to die uhm like what was the patient admitted for? And then, after understanding the cause of death...I then get understanding and peace again [sic.] – P5-081833:lines 30–33

This finding can be explained by drawing on the transactional model of Lazarus and Folkman. The participants may have felt this way because, as the transactional model maintains, if individuals have enough information about a stress experience or, if they are able to draw on their personal epistemologies and ontologies, and act on these beliefs then an encounter is appraised more positively (Lazarus & Folkman, 1984:63; 103). This is in contrast to the findings of a forensic radiography review study which found that no matter how well a forensic radiographer knows a patient's clinical history there is still a high prevalence of emotional and psychological distress (Glaysher, Vallis & Reeves, 2016:e214). The transactional model posits that people can also draw on personal beliefs, especially in scenarios where there is a lack of information that hinders proper evaluation of the stress experience. Therefore, a person will draw on their beliefs for reassurance and more positive re-interpretations of their experiences (Lazarus & Folkman, 1984:104, 108) and not necessarily only depend on the information or lack thereof at their disposal.

- **Appreciating that one is still learning and developing**

Participants reassured themselves that they were students and during their time in WPL they were there to learn whilst performing diagnostic radiography tasks. They acknowledged that they were still developing and did not know everything. This was used as a means of comfort to perceive the experience with death and dying patients as less negative. One participant represented this developing and learning process using a 'magical forest' as her Mmogo-construction in Figure 7.7 and explained it in the accompanying quotation during her interview.



Figure 7.7: A clipping from a participant's Mmogo-construction (P12-091822) representing her development and learning journey.

Only a few trees and then there's kind of a winding road, there's some compassion along the way and this not really fluffy forest because I'm confused, and not happy and then...Now this year, I feel a lot more comfortable and confident with everything, so it's like a magical forest, it's fluffy and colourful. So I think I'm developing – P12-091822:lines 12–16

Another participant said the following.

...I'm a student, and students can only do as much and they can only learn as much in certain situations– P16-091825:lines 126–127

Being able to perceive a sense of achievement through developing and learning to confidently and comfortably handling encounters with death and dying patients during WPL led to a more positive appraisal of an experience and elicited a positive affective response (cf. 7.4.1.3). A systematic review of experiences of new graduate nurses (Zheng, Lee & Bloomer, 2016:327), and a study among registered nurses in New Zealand (Kent, Anderson & Owens, 2012:1261), reported similar experiences in their work. Nurses opined that encounters with death and dying experiences gave them opportunities to gain professional skills and knowledge to handle these incidents effectively in the future. Hence, they did not feel defeated by the experiences if they did not know how to act when faced with these situations.

- **Staff remaining calm**

Participants felt that when their peers and other staff were involved with an incident that they should appear to be calm and not worried and this negated the negative perceptions associated with death and dying patient experiences. It made them feel that the situation was under control. Figure 7.8 visually presents a face with sunglasses in a Mmogo-construction. The use of this pictorial communication is explained in the quotation below.



Figure 7.8: An excerpt from a participant's Mmogo-construction (P1-081831) representing a calm staff member during death and dying patient incidents.

it means...they are not worried. They look like people who actually know what they're doing and that. In any circumstance...whatever may happen...they wouldn't panic...they would just keep calm. They are calm, let me put it like that – P1-081831:lines 152, 154 & 156

...me walking into theatre...And I walk in there, the doctors and all were like, okay I think he's crashing, but we can deal. And they were all so calm and in that specific situation, like, I was shocked, I felt like removing myself from the situation, but I didn't feel fearful. I wasn't – I didn't feel trapped. I was just like all of these people look like what they're doing – like they know what they're doing...so all I did was just like move my equipment to the corner and stood there, just waiting to see what was happening...I didn't feel upset afterwards – P6-081843:lines 319–328

Calmness, as a means to reduce fear, reinforces the central point that students learn through observation and active participation in the workplace. This is congruent with the strategies discussed for optimal student development during WPL (cf. 2.4.3.2). Participants felt that if others maintained a sense of calmness and organisation, then they found the experience to be less negative and it also reduced their innate fear of dealing with the experiences at present and in the future. The findings of an Iranian nursing study (Akbar, Elahi, Mohammadi & Khoshknab, 2017) is used to discuss this category in the data. The researchers found that nurses, in their grounded theory study, used various situational control strategies in an attempt to calm and eliminate the stress related to the situation they face, which included self-control, self-reliance and seeking social support from colleagues (Akbar et al., 2017:205). The participants in this current study may have perceived the other HCPs self-control actions as a measure of having control over the situation and thus they felt less fearful. In other words the actions of the others were some sort of reassurance that everything would be fine. This further aligns with the transactional model of Lazarus and Folkman (1984), and revised transactional model by Goh, Sawang and Oei (2010) indicating that both person and environmental factors influence how individuals appraise and cope with stressful situations (cf. 5.2.2.1; Goh, Sawang & Oei, 2010:14; Lazarus & Folkman, 1984:157, 165–167). In the broader context of WPL, this finding reiterates that radiography students learn through observing the actions of others, which then leads to them adopting these practises (Bwanga & Lidster, 2019:371). This is further explained by Kolb's experiential learning theory, which posits that students use observed

experiences, evaluate these in terms of learning needs and desires, and then experiment and reflect on these experiences to create and recreate new knowledge and, by implication, skills, attitudes, values and behaviours (Trumble, 2018:140; Aubrey & Riley, 2016:156; Kolb, 1984:38). All activities and artefacts, which students are exposed to, influence their development and learning (Aubrey & Riley, 2016:170). Thus, considering the above views, it is not surprising that the participants in this study perceived the calmness of others to be mitigate the negative connotations and fear they had during death and dying patient encounters in their clinical setting.

7.4.2.3 Sub-theme 2.3: Factors aggravating the negative undertones attached to the experiences

In contrast to the factors that lessened the negative perceptions of participants towards their experiences with death and dying patients during WPL, as discussed in sub-theme 2.2, there were also factors that aggravated the negative undertones attached to these experiences. This sub-theme represents the category labelled aggravating factors. During the appraisal process participants perceived a threat to their wellbeing when they encountered death and dying patients. These factors contributed to this perceived threat. They then pursued finding coping mechanisms to neutralise or change the stressor to restore their wellbeing until more positive affective responses were elicited (Folkman, 2008:6–7; Lazarus & Folkman, 1984:35–36). Table 7.8 presents a summary of the 13 aggravating factors that emerged from the data following analysis.

Table 7.8: Factors aggravating negative perceptions attached to death and dying patient experiences

Participant-related factors	Workplace-related factors
<ul style="list-style-type: none"> ❖ Practice limitations ❖ Fear to be seen as weak ❖ Facing one’s own mortality ❖ Not being prepared physically and emotionally 	<ul style="list-style-type: none"> ❖ Unexpectedness and suddenness ❖ Novelty of the experience ❖ Patient’s age ❖ Active involvement with the patient ❖ No time to process the experiences ❖ Lack of urgency to attend to patients ❖ Having a lack of or no support ❖ Putting on a mask ❖ Second victim syndrome

• **Unexpectedness and suddenness**

The unexpectedness and suddenness associated with patients’ death in the workplace aggravated negative perceptions of the participants’ experiences. This also led to them having affective responses of feeling overwhelmed and confused in trying to find meaning and to make sense during the appraisal of the experiences.

The amount of time that it took for everything to happen and finish and just...how fast this woman died. Like it was really a big shock for me – P6-081843:lines 28–29

Zambrano and Barton (2011:842) reported a similar finding among general practitioners when a sudden and unexpected death of a patient was very distressing. Kluge (2006:1) holds that an unexpected death of a patient can be significantly more stressful due to the conflating questions raised around such an incident in an attempt to understand it. Mumbrue (2010:31) found in a study among nurses that they too experienced a sense of instability due to confusion and being overwhelmed with the rapid change in the condition of a patient and associated activities that they had to cope with, in a matter of seconds, whilst at the same time trying to make sense of the experience. This is similar to the radiography student participants' experiences in the present study. They tried to make sense of their situation and were confronted with many mentally-situated questions around the incident, which also elicited an array of emotions and feelings, notwithstanding self-blame, anxiety and guilt among others (Mumbrue, 2010:31–32; Kluge, 2006:1) as discussed in sub-theme 1.4 above (cf. 7.4.1.4). In turn this is grounded in the transactional model of Lazarus and Folkman that was used as the theoretical framework as a premise to make sense of the study's findings. The participants' perception of the experience is correlated with how they appraised the situation as well as the associated person and environmental factors that influenced this evaluation of the experience, which ultimately translated into which coping mechanisms that individuals adopt to counter the appraised impact that the death and dying experience has on the person (cf. 5.2.2 & 5.2.3).

- **Novelty of the experience**

The participants explained that when an experience with death and dying patients was new to them, it became quite difficult for them to deal with this. The place where death or dying patients was encountered emerged as an inconsequential factor. The fact that death or dying patients are encountered in work areas was not expected, also played a negative role in how they perceived the experience. Therefore, as discussed in theme 1 (cf. 7.4.1) the subsequent appraisal and elicited affective responses were also more negative.

...I feel too scared...it was my...the first few times I hadn't seen a patient like that before. I have never seen someone close to death like that (giggle) so that's why I was... going through the most – P1-081831:lines 46, 56–58

...it's because we haven't experienced much of it, and, for me, like these were in the wards, like mobile x-rays, but for this, this was a patient in the CT room where we were supposed to be doing a CT-scan – P7-081834:lines 253–257

Lazarus and Folkman (1984:83) maintain that novelty is one environmental factor that influences our appraisal of stress experiences insofar that it is more positive if we have never experienced a similar incident and associate a threat to our wellbeing with it. However, if we can make a connection of threat to our wellbeing either through a direct previous experience or vicariously then the resultant appraisal of another encounter with a similar experience will inevitably be more negative (Lazarus & Folkman, 1984:83–84). Thus, it is not uncommon for the participants to view the novelty of the experience as an aggravating factor because all of them had invariably experienced either death or dying patients during WPL (cf. 7.2.2). Another possible reason for their utterances may be due to their limited clinical experiences in caring and engaging with terminally-ill and dead patients (Akuroma, Curran & Eye, 2016:18). These experiences can be further understood when read together with the category discussed in sub-theme 2.2 of having previous experience (cf. 7.4.2.2), where the participants opined how previous experience with death and dying patient during WPL mitigated the negative perceptions attached to the experiences. Meller et al. (2019:306) found in their literature review study that earlier experiences with death and dying did have a formative function on HCPs' future practices and coping.

- **Patient's age**

A patient's age was seen as a factor than could mitigate the negative perceptions of the experience with death and dying patients. However, a patient's age was also a factor that could result in the experience being more negative for the participants. The majority felt that paediatric patients and patients of similar age to them or their parents made their experience more negative. The main reasons for this was that they were concerned with the loss experienced by the patients' loved ones and what they could have been experiencing and what the way forward would be for them. Additionally, patients of similar age of the participants or their parents made them aware of their own mortality and gave rise to existential anxiety, which is a factor discussed in later in this sub-theme.

With this patient it was a bit more traumatic for me... 'cause he was the same age as my parents, both my parents...so it could happen to them as well – P7-081834:lines 160–163

...children and adults are fine but people that are born the exact same year as I am, they're the ones that impact me more – P11-091821:lines 153–154

This finding is in keeping with the literature of other healthcare disciplines. Negative experiences were reported in studies in terms of dealing with deaths of paediatric and neonates (Plante & Cyr's, 2011:215; Minnie et al., 2015:14). Wilson and Krisbaum (2011:561–562) in

their review of nursing literature found that nurses reported that the death of patients of similar age and sex to them as being more traumatic. Meller et al. (2019:307) also found that the proximity of a patient's age to HCPs interacting with them influenced how they appraised their experience with death and dying in the workplace. However, it should be noted that a study found that HCPs' grief diminished over time (Plante & Cyr, 2011:215). On the other hand a study concluded that the age of a patient may have no effect on how individuals experience death and dying incidents (Lekalakala-Mokgele, 2018:151).

- **Active involvement with the patient**

When participants saw patients dying in their presence, this was regarded as active involvement with the patients. They found this to be a factor that made their experience with death and dying patients more negative. They ascribed the negative connotation to the experience as being linked to the sensory stimuli associated with a patient dying which therefore made this experience traumatic.

...but I think this specific instance for me was traumatic just because of how she died. It wasn't just like, you know, someone just closing their eyes, their heart stops beating. You know, she was vomiting, her eyes were rolling to the back of her head, she was breathing really hard, and it was just – you could see there was something very wrong with this woman. Whereas with the guy that was, uhm, dying, he just went purple. There wasn't any movement from him, he was just lying there, his colour just changed, and it was just...you know he's dying. So, I also think that...kind of like influences the situation – it was a traumatic situation – P6-081843:lines 373–380

This finding may be favourably compared with findings of studies in nursing and emergency medicine, where the participants in these earlier studies expressed that if a patient died in their care or, if there was an established relationship between a HCP and patient then such a patient's death was perceived as more traumatic (Meller et al., 2019:307; Zheng et al., 2016:323, 325–326; Minnie et al., 2015:14). Almost counterintuitively, some research in nursing found that having an active relationship with patients when they were terminally-ill and their death imminent was a privilege as they were able to experience sharing a patient's death (Zheng et al., 2016:326). This is in contrast to the operations within radiography as interactions with patients are usually short hence it is not possible to establish long relations with terminally ill or dying patients. So, when a patient dies in the care of a radiographer it is more often than not unexpected and this becomes a more stressful experience as discussed earlier in this sub-theme.

- **No time to process the experiences**

The manner in which staff and other students reacted during and after incidents of death in the department was off putting for some participants. They felt that some colleagues were inconsiderate to bombard them with questions and that they did not help the participants to make sense of the experience in any way. Instead, they made the experience worse. Other colleagues had a 'get on with it' and 'time is money' attitude, which further intensified the negative appraisal of experience because the participants had to move from one patient to another without some time to process a patient's death. They found this to be licentious and uncaring and bad examples of how to handle death and dying patient experiences. In addition, they found this to be very difficult. It could be emotionally taxing for them which resulted in fatigue.

Pretending that it didn't happen. Put the next patient on the bed. That's...to me it's callousness, it's crude, it's like you're putting an object on the bed, not a patient, a person, someone that has just lived two minutes ago and that's not living now – P4-081842:lines 270–272

...then after the incident, uhm, you've got all of the staff members wanting to know what's happening, like, I felt like they were inconsiderate to the fact that, like, I just witnessed someone died...the last thing you want to do is repeat the story over and over to people, so, all I wanted to do was just remove myself from the situation – P6-081843:lines 49–54

I find it very taxing, it makes me very tired – P14-091812:lines 54

I felt that they...they weren't really as concerned as I thought like they should be in my opinion...they didn't act as they were really feeling something...it make me feel like it's just another person dying, no one really cares and there the patient goes – P16-091825:lines 50–51, 54–55, 61–62

The constant need to move on to the next patient to get through the workload leaves little space for HCPs to reflect and process death and dying experiences in a clinical environment (Shute, 2019). Failure to process these experiences can increase the risk of compassion fatigue, burnout and chronic stress that may manifest in poorer patient-practitioner relationships and quality of patient care (Shute, 2019; Robins, 2019). Davies (2016:i5597) highlights that HCPs would continue with their work tasks because of the professional taboo associated with grieving patient losses in the healthcare space since it is seen as unprofessional. Grief among HCPs is rather ubiquitous (Sansone & Sansone, 2012:25). Davies (2016:i5597) emphasises that this continued taboo culture around HCPs' grief being normal within a professional healthcare context has negative consequences for both the HCPs and patients. Considering the theoretical framework underpinning this study (cf. 5), one can appreciate the influence that environmentally situated culture (i.e., workplace-related in the

healthcare setting) has on how HCPs experience and cope with death and dying incidents. The findings of this study is in synch with the current, accessible body of literature in this regard. A culture in the workplace of not having appropriate time and support to process patient losses threaten optimal WPL for the diagnostic radiography student participants. Reflection has been identified as an imperative for optimal WPL. This is because reflection facilitates sense-making of clinical experiences among students in order for adequate and appropriate theory-practice-integration so that their development is optimised in relation to the requirements of the learning programme and SKAVBs required in the workplace after obtaining a qualification (Shaw et al., 2018:107–108; Winberg et al., 2011:15).

- **Lack of urgency to attend to patients**

Participants explained that the staff's lack of urgency to attend to patients, especially for mobile radiographic examinations to be done in the wards at patients' bedsides, was another factor that made their experiences with death and dying patients more negative. They detailed how this contributed to their feelings of guilt and blame, confusion and uncertainty during these experiences, which were detailed in sub-theme 1.4 (cf. 7.4.1.4). In addition, this factor forced them (i.e. students) to act outside of their practice delineations by doing the mobile radiographic examinations unsupervised.

I wish radiographers can respond quickly when doctors ask for mobiles because those patients are critically ill, and they can die at any time. Delay of chest x-ray to be done affects treatment and management of the patients thus patients can die because there is something lacking which is the chest x-ray. Some diseases can be managed if radiographers arrive on time for the chest x-ray – P2-081832RJ:lines 34–43

On the 2nd patient the doctor was saying that they requested mobile x-rays over the weekend and that was 2days ago. She said the x-ray is not going to help because the patient is not going to make it. So, she said just do the x-ray. For a while I just asked myself, what would have happened if the x-ray was done earlier – P15-091824RJ:lines 8–15

...the case we had was, uhm, they called for our mobile x-ray and then the staff just didn't want to go and she just disappeared and eventually said you just go and I'll meet you up there. And then we went, I took another person with me just so I can have somebody to help me cause we're not actually supposed to be going alone...from the time they called to when the staff actually came, might have been like two, two-and-a-half hours difference – P11-091821:lines 35–39, 44–45

A nursing study found that the participants indicated that making time to adequately engage with patients and demonstrate empathy, among others, are fundamental to nursing practice (Kieft, de Brouwer, Francke & Delnoij, 2014:4). Nurses, like radiographers and other HCPs, are autonomous professionals that have self-directed control over the practises within ethico-legal

frameworks. Hence, HCPs can decide which cases enjoy priority over others (Kieft et al., 2014:5). However, considering the context of the participants' utterances in this study, means one could argue that lack of urgency of radiographers to accompany students to examine patients in the ward cannot be justified. There is not an effective collaborative working relationship between students and radiographers. Radiography students, in accordance to regulations set by the Health Professions Council of South Africa's Professional Board of Radiography and Clinical Technology (HPCSA-PBRCT), are not permitted to perform examinations without the supervision of a registered radiographer (HPCSA, 2016c:50). So students are not out of place for not doing unsupervised examinations. However, some do undertake ward radiographic examinations unsupervised since the radiographers do not necessarily want to accompany them, as identified in the quotes above. Students may be hesitant to speak out about their feelings and experiences in a work setting since they may feel that they do not have a voice (Morgan, 2015:1). This factor may then explain some of the negative affective responses discussed in sub-theme 1.4 (cf. 7.4.1.4). Kieft et al. (2014:5) found that cooperative working relationships positively influence interprofessional working relationships and enhance patient care due to the collective knowledge, expertise and skills being used to complete tasks.

- **Having a lack of or no support**

The experiences with death and dying patients during WPL were perceived as more negative when the participants felt that they were left to their own devices and that there was little or no support from staff to help them deal with their experiences. This made them feel excluded and alone. This in turn made their experiences more terrifying for them and this led to an array of negative affective responses as discussed previously (cf. 7.4.1.4).

But the hospital I'm in, I felt like they just threw me in the deep end, no one was willing to help me, I had to just help myself the whole way through and I felt completely and utterly alone – P12-091822:lines 127–129

...the staff didn't really help me to cope with it [death and dying patient experiences] ...they didn't show that they can assist me with how to deal with this – P16-091825:lines 138–140

These experiences are similar to a South African study among emergency medical care personnel: 31% stated that they rely on their colleagues for emotional support when faced with traumatic incidents; 78% felt that organisational support structures and interventions were inadequate (Minnie et al., 2015:15–16). A systematic review by Zheng et al. (2016:327) reported similar findings insofar that support by colleagues, when encountering death and dying experiences, is infrequent in the work setting and when it is available it is occasionally of no

use. This trend in the literature also appears in international studies in radiotherapy and other healthcare fields where the respective participants highlighted that collegiality and a strong support culture in the workplace contributed in a positive manner for stressful experiences, like death and dying, so as to assist HCPs to cope with these scenarios (Ullström et al., 2014:325; Ek et al., 2014:509; Terry & Carroll, 2008:760; French, 2004:13). Gallagher et al. (2014:4) found the inverse to be true in their study where UK-based nursing students felt that they had adequate and appropriate support to care and deal with death and dying incidents. The contestations in the literature demonstrate the influences that the workplace can have on how HCPs appraise and experience encounters with death and dying, as well as the importance of support within a clinical environment to process these experiences.

- **Practice limitations**

Another factor, which aggravated the participants' negative perceptions related to death and dying patient experiences during WPL, was their practice limitations. This left them somewhat frustrated, disappointed and helpless at times.

***So, I think in terms, especially like in radiography, as I said before, there's only so much we can do that we limited to our scope, we limited to our practice and, you know, even though I love my job and I love being a radiographer, sometimes I definitely do wish that I could do more, but yeah –
P3-081841:lines 134–137***

In terms of ethico-legal healthcare practice HCPs have certain duties as prescribed by regulatory bodies and legislation. These duties include what HCPs should do or refrain from doing. The underlying core ethical values are linked to the obligations brought about by beneficence, non-maleficence, respect for persons, and justice, as well as relevant legalisation like the Bill of Rights in the South African Constitution (HPCSA, 2016a:2–4). However, many a time there are conflicts that arise in determining the best ethical decision to take with regard to, inter alia, patient care and management. These decisions are reached through ethical reasoning (HPCSA, 2016a:2–3). The preceding holds true for situations where HCPs, including student radiographers, are confronted with dying patients and the death of patients. The participants in this study found it particularly difficult to reconcile the most appropriate decisions in the moment in relation to their required scope of practice as student radiographers. In other words, did they fail to meet their duty to their patient and profession morally or professionally? This question results in internal conflict for students and other HCPs (Kluge, 2006:4). Literature posits that there is passive indoctrination of perfectionism and idealism in undergraduate health professions education and training programmes that implicitly advocates a notion that there is no place for error, uncertainty and infirmity in the health professions (Rowe, Frantz & Bozalek,

2012:e216; Scott et al., 2009:325; Goldberg et al., 2002:287–288). Hence, Kluge (2006:4) advances the need for more ethical training for HCPs so that they do not find themselves in these moral crises in order to cope more effectively with death and dying experiences in the workplace. Therefore, the patient-practitioner-care relationship should focus on the two stakeholders as persons, who are moral beings with fallibilities, operating within a setting that has unique resources and limitations in which care should be provided. Hence, the criterion of reasonableness should be used as a standard to measure care and decision-making considering the entire context and stakeholders involved. Then moral crises may be potentially mitigated for HCPs (Kluge, 2006:4) if they are supported and educated that optimal care is a delicate balance between what is morally and practically appropriate for each individual they engage with.

- **Fear to be seen as weak**

Participants related that they did not always feel comfortable talking about their experiences and expressing their true emotions and feelings. They explained that this to be the case as they were not comfortable showing their peers and colleagues their vulnerability as they feared being seen as weak. They explained that they thought if they did that then they would be seen as not being able to do their work. Therefore, they retreated to emotional dissonance (i.e., putting on a mask); however, they acknowledged that this only worsened the experiences for them.

Uhm, maybe we are just scared to be vulnerable amongst each other. We just – we don't want to get used to each other [i.e. over familiar] in that manner. It's a difficult thing to open up and talk about certain things – P8-081835:lines 102–105

And I also don't want the, like the people that I work with to also think that I'm just gonna break down for everything, you know. Uhm, you don't want people to see you as weak [sic.] – P6-081843:lines 282–284

Literature posits similar views. Grieving about a patient's death is seen as a taboo, a sign of weakness and disgraceful in professional contexts. This has negative consequences as it impacts on the care that HCPs provide to their patients and also influences both their personal lives and relationships with colleagues (Davies, 2016:para 5; Granek, Tozer, Mazzotta, Ramjaun & Krzyzanowska, 2012:964–966). Therefore, one can understand the rationale of the participants in this study for not expressing their true feelings to their workplace superiors (i.e., radiographers). Hence they dissociated from their feelings and went about fulfilling their professional duties behind a proverbial mask. Zambrano et al. (2014:314) found a contradicting view among palliative specialists, where their participants viewed being vulnerable and

expressing their emotions elicited by their work created stronger bonds among colleagues and brought a sense of stability in their work environment.

- **Putting on a mask**

Having to hide their true emotions, in the name of being professional, when they faced death and dying patient experiences was also a factor that led the participants to have a negative perception about the experiences. They recalled that they had to do this as to not show other patients what they really felt and to focus their full attention on the next patient they encountered. It is argued that such a scenario results in patient care becoming a performance instead of a professional behavioural habit.

And you try by all means to hide your face from the patient in order for them not to see you are heartbroken – P2-081832:lines 10–12

...it taught me how to block my emotions and proceed working like nothing happened – P9-091811RJ2:lines 23–25

...patients are just their work, you know, they're not enjoying it. It's literally we have to show empathy. It's like part of the thing, you're not naturally doing it. You have to show compassion to make the patient feel better. You do that enough times, you're sick of it – P12-091822:lines 193–196

This category of data refers to emotional dissonance which is practiced by students and HCPs in order to suppress their true feelings to conform with what is acceptable within their workplace setting; they therefore display contrary feelings when faced with a stress experience (Abraham, 1999:442). This is an attempt to not be ridiculed of being unprofessional and seen as weak, as discussed above. Abraham (1999:452) found that social support to handle stress experiences in the work environment directly reduced the level of emotional dissonance among colleagues to handle an incident that acted as a stimulus of stress. Canadian oncologists referred to this as compartmentalisation, to explain their separation of their affective responses to grief to the death of a patient in relation to their practices and personal lives (Granek et al., 2012:964). Davies (2016:para 5) maintains that leaving a HCP's grief unattended may result in irritability, exhaustion, emotional fatigue, and inattention which can have negative implications for a HCP's productivity, and patient care, by implication. Hence, patient care becomes a performance of professionalism instead of sincerity due to HCPs' compassion fatigue and this has a negative impact on patients, healthcare establishments and HCPs alike.

- **Second victim syndrome**

The second victim syndrome arose among the participants during experiences with death and dying patients. This made their experience more negative and gave rise to physical signs and

symptoms of guilt, blame and anxiety as affective responses, among others as discussed in sub-theme 1.4 above (cf. 7.4.1.4).

it's more the uncertainty of everything surrounding the patient's death that's causing this indirect guilt – P4-081842:lines 147–148

I remember feeling very anxious when that patient was busy dying. I felt like I was supposed to be doing something and not just stand there. It literally felt as if I was about to faint – P10-091836:lines 240–242

In discussions in this chapter of the findings, guilt and blame are almost synonymous with the loss of a patient for HCPs. They feel responsible in a moral sense and question their competence. This can result in what is known as the second victim syndrome where a HCP becomes traumatised by the loss of their patient or unanticipated patient outcomes and errors. If left unrecognised and treated by way of processing the incident, a HCP can suffer from other mental illness, among which post-traumatic stress disorder, compassion fatigue, anxiety and burnout are included. This can have devastating implications for a HCP in terms of their performance and wellbeing as well as influencing the level of care received by patients. The second victim syndrome is linked with the notion of healthcare practice being an error free enterprise. Literature strongly motivates for HCPs to be supported to mitigate this phenomenon and its consequences. It was not out of place therefore for the participants in this study to have experienced themselves to be second victims in cases where patients died or were busy dying. They felt morally responsible to some extent in so far as they failed to satisfy their duty to their patients especially since they felt that in most cases they did not have a support mechanism at their workplace to help them process and make sense of these experiences (Lam, 2018:16; Scott, 2011:1; Wu, 2000:726–727).

- **Facing of one's own mortality**

Another factor that aggravated the negative perceptions about death and dying patient experiences during WPL was that participants were faced with their own mortality. References to questions such as what if this was me, my family, or someone close to me, form part of this category. The experiences made them realise that death is inevitable and in turn led to existential distress when they encountered these experiences during WPL.

...I think death affects me more now that I've lost someone and that obviously I've lost a patient. It's, ja, it just affects me more...I believe that you don't really understand a situation/ event until you have been through it yourself. Before when someone died I felt for the family and I had the mentality of: they died but I am moving on, because I never quite understood what it felt like to lose someone. Now I feel sad/emotional for the family because I know what it feels like to lose a loved one and how much pain it causes you. And that was like someone's life that is no longer here. And even though everybody dies in the end, nobody lives forever, it's just still sad, because some people I feel they go before it's their time to go – P13-091823:lines 44–52

It felt like I have lost a sibling because that lady (patient) was very young – P5-081833RJ:lines 17–19

Death comes any time to anyone. So, I do fear dying myself, I do fear losing, uhm, people, so it's never a clear thing – P8-081835:lines 188–189

Existential distress is quite an established construct in the literature. Studies demonstrate that dying patients and the death of patients can give rise to existential crises and death anxiety among HCPs in various healthcare professions. This translates to negative impacts on service delivery, attitudes towards death and dying, as well as care of patients and HCP wellbeing (Nia et al., 2016:4; Brady, 2015:32; Pessin, Fenn, Hendriksen, DeRosa & Appelbaum, 2015:3–4). Literature maintains that HCPs experience death anxiety because they are confronted with and reminded of their own mortality and the inevitability of death (Ek et al., 2014:513; Zambrano et al., 2014:313; Kasket, 2006:137). This may be due to secularisation, rationalisation and medicalisation of death in contemporary society, as enunciated in chapter 3 (cf. 3.5.1) and because HCPs can relate to a patient in some way (Kasket, 2006:144). Therefore, considering these views in the body of literature one can appreciate why the participants in this study considered being faced with their mortality as a factor that made the appraisal of death and dying experiences during WPL more negative for them. However, literature also provides a more positive stance to this phenomenon in that participants in various works indicated that being faced with their own mortality gave them opportunities to reflect on the incidents to further optimise the manner in which they dealt with these experiences and this resulted in more positive attitudes towards caring for the dead and dying. Furthermore, studies found the HCPs find these experiences as opportunities for personal growth to have renewed appreciation towards life (Hoelterhoff & Chung, 2018:645; Nia et al., 2016:4–5; Brady, 2015:33; Pessin et al., 2015:5; Zambrano et al., 2014:313; Sinclair, 2011:187; Anderson, Williams, Bost & Barnard, 2008:1227). No data in this present study among undergraduate diagnostic radiography students confirmed these positive attributes in the current body of knowledge.

- **Not being prepared physically and emotionally**

Lastly, the participants felt that they were not physically and emotionally prepared to deal with these encounters during WPL. This was another factor which aggravated their negative perceptions attached to workplace experiences with death and dying patients. Physical preparation refers to procedural activities related to an incident. Emotional preparation relates to the effect it will have on participants cognitively and psychologically. The participants saw what healthcare workers were doing, but they had no insight into this in order to understand the exact protocols associated with these incidents. They were also not prepared for how fast and chaotic these encounters can be.

Uhm, and ja, from obviously my death experience was in first year, and I was not really prepared for what life, you know, had in store for me – P12-091822:lines 10–11

So, like, one thing that I explained to other students, uhm, was that I was not prepared for how fast everything happened – P6-081843:lines 473–474

Corker (2010:138) maintains that HCPs' perceived preparedness to handle death and dying experiences in the clinical setting is directly related to their training and mentoring received. Dunn, Otten and Stephens (2005:103) postulate that the skills required for appropriate patient care and engagement can be learned in during WPL and that formal theoretical learning and teaching are not needed. However, Flynn and Philip (2017:para 2) caution that specific skills that HCPs may require to care for the dying, and dead, may not be achieved or encountered through the clinical-oriented, apprenticeship mode of teaching and learning. This contextual backdrop therefore provides a premise to understand the plethora of evidence, internationally and in South Africa, where HCPs in various healthcare professions vividly recollect their perceived emotional and physical unpreparedness for the task of coping and managing death and dying experiences in the workplace because their qualification programmes did not have sufficient amounts of teaching and learning opportunities about death and dying (Nelson et al., 2018:851; Vicensi, 2016:69; Minnie et al., 2015:12; Hanzeliková Pogrányivá et al., 2014:145; Kent et al., 2012:1263). White (2017:S39) found that a UK radiotherapy curriculum only focussed on end-of-life-care on an ad hoc basis without any deliberate outcomes. These experiences are dealt with as class discussions rather than formal learning and teaching moments. Boerner, Burack, Jopp and Mock (2015:214) found in their work that self-perceived lack of emotional preparation among death care staff in nursing homes and homecare led to more intense grief symptoms among their participants. Corker (2010:140–141) argues that the lack or absence of learning and teaching of appropriate care for the dying and dead in a clinical setting sends an implicit message (through the hidden curriculum) that patient deaths are

unimportant, should be avoided and once a patient dies a HCP has no duty towards that patient anymore. One can therefore appreciate the negative implication this lack of emotional and physical preparation has for HCPs from a moral duty point of view and patient care and management. This links to the above categories of: practice limitations, and lack of urgency to attend to patients. This may be how radiographers, and other HCPs, have been acculturated to handle and operate during these incidents. This holds true for the bachelor of radiography in diagnostics degree programme at the research site. There is greater focus on procedural and technical knowledge and skills; focus on interpersonal skills related to death and dying patient care is lacking greatly (cf. 2.8). This leaves a gap in the holistic development of students enrolled for this programme and, by implication, some of the exit level outcomes and associated assessment criteria of the programme are not met (cf. 2.7.2 & 2.7.3) because not all patient categories that diagnostic radiographers encounter in practice are adequately covered in terms of safe and effective care to maintain their welfare.

7.4.2.4 Summary of theme two

Theme 2 distinguished between and discussed three categories of factors that influenced how the participants appraised their experiences with death and dying patients during WPL. The three categories of factors were: those that were inconsequential and not needing the adoption of any coping mechanism since wellbeing remains intact; factors that reduce the negative undertones attached to the experiences and therefore provoke more positive affective responses; and factors aggravating the negative connotations attached to the experiences that the participants encountered and which posed a threat to their wellbeing, which subsequently resulted in more negative affective responses. Both the latter two categories elicited a coping process among the participants; they used specific coping mechanisms to deal with their encounters with death and dying patients. The factors were participant-specific and workplace-related. The participants encountered a variety of combinations of these factors, depending on where they were placed to complete their WPL.

7.4.3 Theme three: Coping with experiences of death and dying patients

During the secondary cognitive appraisal process, bearing the factors influencing the stress experience and result of the primary cognitive appraisal in mind, individuals evaluate the resources available to them to deal with their encounter. This then leads to adopting a particular coping mechanism or strategy (Lazarus & Folkman, 1984:35–36). Theme 3 provides an in-depth discussion of the coping mechanisms that the participants used when they experienced death and dying patients during WPL. Of note was the influence which their work setting, and

organisational culture, had on the coping mechanisms that they adopted. The cues that influenced their conditioning to cope in a particular manner were: what others told them, what they observed, and the workflow in the department.

...so you consult them [staff and clinical tutor] then and then ask about how do you go about and with death – P2-081832:lines 21–22

So, you get those people that are just like it's going to happen, you need to just deal with it, deal with it however you want...but you just need to deal with it – P6-081843:lines 162–163

...I just have to get used to it because I'm training at a very busy hospital and that is also a factor that influence how, at the end of the day, once I'm qualified, how I will deal with all this death and dying patients – 16-091825:lines 143–146

These experiences are theoretically upheld because there is a reciprocal relationship between an individual and environment which influences how a person appraises and copes with a stress experience (Biggs, Brough & Drummond, 2017:351). This is also the premise of departure for Lazarus and Folkman's transactional model that was used as the theoretical framework for this study (Lazarus & Folkman, 1984:293). The notion that workplace culture influenced participants' coping can also be appreciated when considered in relation to the workplace-related factors that influenced their appraisal of death and dying experiences (cf. 7.4.2.2; 7.4.2.3). This is in keeping with the finding of Keyter and Roos (2015:376) in their study among South African mental health workers. Although some authors argue that caring for the dying should be learned in a clinical setting only, some authors indicate the associated limitations of skill acquisition and development (Flynn & Philip, 2017:para 2; Dunn, Otten & Stephens, 2005:103). Billet (1995:24–26) also indicated in an earlier work that the culture and embodied values of a workplace can have a limiting effect on student development, since students adopt practises, and these may not necessarily be best practice. The theory of situated learning and communities of practice confirms this insofar that learning is often unintentional among people instead of deliberate; it has a role in shaping students' professional knowledge construction, their skills, knowledge, attitudes, values and behaviours (SKAVBs) (Aubrey & Riley, 2016:170; Northern Illinois University, n.d.:para 3–4). Deliberate constructive alignment between a formal curriculum, assessment, and WPL is required so that students can master all SKAVBs required (Billet, 2016:125–126; Adams, 2012:2; Winberg et al., 2011:15–16; Biggs, 1999:63–70). This further underscores the importance of providing students with adequate emotional and physical preparation to assist them to learn holistically (Winberg et al., 2011:21; Billet, 1995:25). Participants in this study indicated that a lack and presence of support influenced their experiences and that they had to suppress their true grief feelings since they

did not want to be seen as weak. Without appropriate support optimal student development and learning is then threatened (Bwanga & Lidster, 2019:371; Winberg et al., 2011:15; Billet, 2001b:213; Billet, 1995:23). Given the influence of the workplace culture on the participants' coping it can be seen that they adopted a variety of coping mechanisms and were grouped in one of three categories: emotion-focused, problem-focused, and appraisal (meaning)-focused coping mechanisms (cf. 4.2.2). More than one category of coping mechanism can be invoked to deal with an incident of death and dying depending on a person's perception and appraisal of the experience. This phenomenon is what Cheng (2003:425; 2001:814) describes as coping flexibility, where an individual adopts the most effective mechanism for them in the moment when they are faced with a stress experience. Figure 7.9 gives a visual, relational representation of theme 3 and its related four sub-themes.

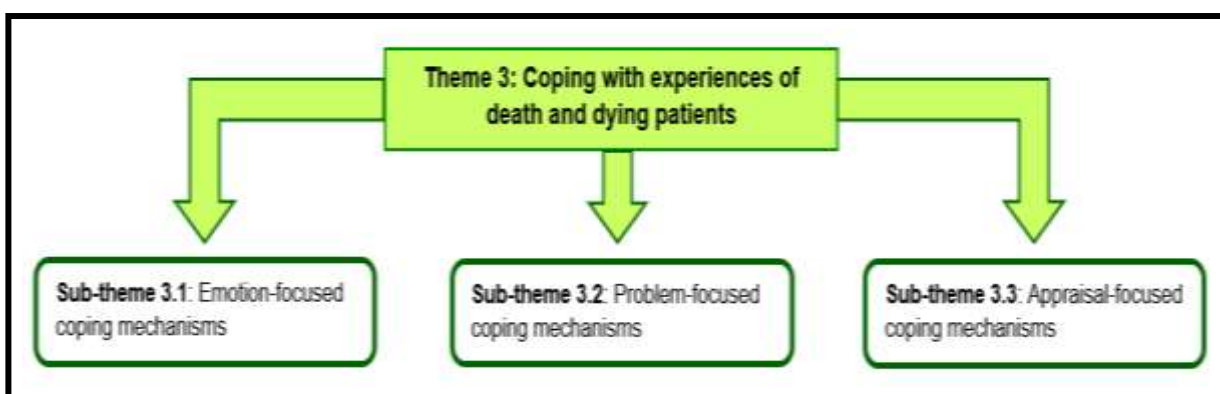


Figure 7.9: The relationship of theme 3's encompassing sub-themes to the overall theme.

7.4.3.1 Sub-theme 3.1: Emotion-focused coping mechanisms

Participants used emotion-focused coping mechanisms to neutralise or make the affective responses evoked by the experience with death and dying patients more manageable (Lazarus & Folkman, 1984:150–151). Literature maintains that individuals adopt these coping mechanisms in situations which are out of our control (cf. Table 4.1). The category representing this sub-theme was emotion-focused coping. The participants used these mechanisms in varying degrees and in combinations with other categories of coping mechanisms.

- **Seek emotional reassurance from others**

Participants explained that when staff or their clinical tutors or preceptors provided them with some sort of emotional reassurance they felt less responsible and guilty about the death of a patient.

I asked her [staff member] whether they would have saved the patient's life if we came earlier and she said no it was not up to us, even if we went there right at the time they called it was not up to the x-rays to change the patient's condition. So, this is her making me feel better – P1-081831:lines 24–26

Studies support that HCPs and students alike, in nursing and medicine, globally prefer informal or formal reflective discussions, debriefing and open dialogue between inexperienced and experienced colleagues as a means to de-stress and process the emotionally charged experiences with death and dying patients in the working environment (Weurlander et al., 2018:79; Ek et al., 2014:509; Loisselle & Sterling, 2011:250; Zambrano & Barton, 2011:837; Shorter & Stayt, 2009:163–165). HCPs preferred this since it facilitated the process of creating a meaningful learning experience from a traumatic incident (Smith-Han et al., 2016:1; Ek et al., 2014:509). According to a study by Zambrano et al. (2014:314) among palliative specialists, having these support structures in place at work are imperative for work stability. Meller et al. (2019:307) found that seeking emotional reassurance from other nursing colleagues creates a trusting work environment where individuals feel more liberated to talk about emotionally taxing situations they are faced with and need help to manage and process. De Witt (2015) found in her workshop with diagnostic radiography students that they also preferred processing and making sense of these experiences by talking to others. On the other hand, Zheng et al. (2016:327) found in their systematic review and meta-synthesis that guidance and support from senior nursing colleagues was seldom useful. HCPs may therefore feel the need to find other coping mechanisms when debriefing and collegial support is insufficient for their needs to process traumatic incidents, as Minnie et al. (2015:16–17) found in their study among South African EMC personnel.

- **Advocacy/mentoring**

Interestingly, participants also alluded to transformation in their roles once they had experienced death and dying patients during WPL. This role was that of being an advocate for other students or to mentor them as a means of emotional support to enable them to deal with their encounters of death and dying. The participants further explained that assuming this role enabled them to further process their experiences.

I could understand the student's feelings because I know they haven't learnt a lot about coping and it was during their first two weeks in the hospital. So, I tried to talk to her and I tried – I don't know – I'm not really sure now. But I think the student changed from then, became better – P15-091824:lines 106–109

...students now, uhm, most especially those who have not experienced it, they get to know that this is what you encounter in the workplace...the more I tell them, the more they also get uhm prepared – P5-081833:lines 268–275

Dungey and Jasperse (2011:16) found that radiotherapy and education students at the University of Otago in New Zealand opined that having previous experiences of death motivated and gave them the confidence to take up an advocating or mentoring role to assist and support others that may experience loss. Meller et al. (2019:307) echo this sentiment in their integrative literature review study where nurses found informal mentoring by colleagues very useful to make decisions and care for terminal patients.

- **Distancing**

Participants felt that due to the previously discussed negative affective responses and aggravating factors, an urge arose to avoid death and dying patient encounters by either isolating themselves or avoidance. Distancing is associated with emotional dissonance and the urge not to showing any feeling in a stressful situation. Therefore, the participants opted to rather be more distant to an incident.

I don't even want to come into the screening room. I don't want to deal with, like, old patients. Ja. So that whole environment especially the hospital I work in, most, 90% of the patients are these old, terminally ill people. So, just being there it's just a constant reminder of that [previous dying patient experience in the screening room] – P6-081843:lines 212–215

I didn't want it to affect, like, my experience at work, so I tried to not to think about it as much, and I don't like crying and I don't like showing emotion. So, I just tried to suppress all of it by hardening my heart [sic.] – P10-091836:lines 68–70

...time passed and then it makes me forget about what happened and I just escape that feeling – P16-091825:lines 199–200

One participant reminisced resorting to claiming to be sick, simply to avoid facing another encounter with death or dying at work. This provided the participant with time to process the previous incident.

I remember this other time, first year, I lied and said I'm sick, because I didn't feel like going to work after, like, the day after [the incident]. I just wanted to be alone – P8-081835:lines 55–56

Reeves and Decker (2012:79–80, 82) found distancing to be used as an emotion management tool among UK diagnostic radiographers. South African EMS personnel, and UK critical care nurses, respectively used distancing to mitigate the emotional distress that death and dying incidents elicited (Minnie et al., 2015:16–17; Shorter & Stayt, 2010:159). The three studies found that taking a more task-orientated focus instead of patient-focused disposition, objectiveness through emotional dissociation and suppressing true feelings, as well as the use of reductionist language by objectifying patients, were all means that the participants used to emotionally shield themselves from the stressful experiences they encountered (Minnie et al.,

2015:16–17; Reeves & Decker, 2012:82; Shorter & Stayt, 2010:164). The views of the participants in this study were similar; they adopted an escape-avoidance disposition to death and dying patient incidents as a means to neutralise the emotional distress elicited.

- **Distraction**

Another emotion-focused coping mechanism, used by the participants, was distraction. They used a variety of methods to distract them from thinking about the encounter, and it usually happened outside of the workplace. They engaged in listening to music, watching television, going for jogs or imagining idealistic worlds.

...I just first just lie down, listen to music – P2-081832:lines 161

...when I see something that hurts me, I'll rather just create a fantasy land, you know, in a sense – P12-091822:lines 7–8

Participant *P7-081834* visually represented distraction in Figure 7.10 as an unorganised event in their Mmogo-construction to demonstrate keeping busy to distract themselves from thinking about their experience with death and dying.



Figure 7.10: Representation of distraction and keeping busy. A clipping from a participant's Mmogo-construction.

This finding aligns with studies of diagnostic, forensic and therapeutic radiography (Ghana and UK), general practitioners (Australia), and nursing (US). Distractions used in these studies were similar to those alluded to by the participants in the present study and included alcohol use, comfort eating, exercise, meditation, home life and work, television, academic study, as well as relaxing activities and holidays (Chiaravalloti, 2018:3; Ashong et al., 2016:2016; Glaysher et al., 2016:e214; De Witt, 2015; Zambrano & Barton, 2011:833; French, 2004:19–20). These distractions facilitate the revocation of emotions that remind HCPs about a stressful incident they encountered (Glaysher, 2016:e214).

- **Crying**

Participants alluded to crying as an emotional response and coping mechanism to deal with death and dying patients during WPL. They maintained that crying made them feel better as it brought about a sense of relief, distracted them from thinking about the incident they faced and allowed them to move forward from the experience.

I will feel better after that [death experience]. And after that, usually...I've noticed that you don't uhm...think much uhm about it [death experience] – P5-081833:lines 247–248

Figure 7.11 is a visual representation of a crying participant seated on a toilet after experiencing a patient die in a CT suite.



Figure 7.11: Mmogo excerpt representing a participant crying (P16-091825) in the bathroom at work after their experience with a dying patient.

Van Rooyen, Laing and Kotzé (2005:36) found that crying was a method used among second year South African nursing students because they felt it brought a sense of relief. This finding is further congruent with the work of Simons, Bruder, van der Löwe and Parkison (2013:3) on inter and intrapersonal motivations for crying regulation. The effects of crying are very much innate to the beliefs that people hold about crying and its effect on themselves and others, as well as the context in which crying happens. In the context of the current study the intrapersonal effects of crying are relevant. It is believed that crying assists individuals to recover from emotionally-laden incidents since it has a cathartic effect. The inverse is also true, where suppressing the need to cry, in an attempt to not show emotions, can negatively impact HCPs' mood, wellbeing and mental health and this could result in burnout (Simons et al., 2013:3).

7.4.3.2 Sub-theme 3.2: Problem-focused coping mechanisms

Participants also used problem-focused coping mechanisms to cope with death and dying patients during WPL. This is consistent with Lazarus and Folkman's transactional model in the sense that individuals use different coping mechanisms depending on how they appraise their stress experience and how they would like to handle it (Lazarus & Folkman, 1984:141–142). It

was found that participants used these coping mechanisms to find solutions to handle their experience and to influence coping in the future. However, adopting this category of coping mechanisms was also in attempt to gather information to facilitate understanding, find solutions through reflection, and take control over their emotions and feelings (Lazarus & Folkman, 1984:152–153).

- **Reflection and finding solutions**

Participants explained that they did reflect after work on their encounters with death and dying patients on a particular day. They did this to find solutions on how to handle a current experience as well as similar incidents that may arise in the future. They pointed out that they reflected alone in their intimate personal spaces.

I switch off my phone, just uhm...think about what has happened...which is the problem...and come up with possible solutions. And the solutions is that I can use personally in order to prevent that and also to advise other students – P2-081832:lines 166–168

...one of the most important things for me was writing everything down. So, I literally wrote everything that happened, everything the doctor told me afterwards... I actually went and looked at her files, and I looked at what was wrong with her, trying to figure out if maybe something we did influenced her dying. If there was something that I could have done to help – P6-081843:lines 80–84

Trainee medical doctors, working in a paediatric intensive care context, used reflection as a means to find solutions (Ffrench-O’Carroll et al., 2019:78). In a more guided fashion, de Swardt, du Toit and Botha (2012:1) found that reflection assisted South African nursing students to see the link between formally taught content in their programme and their practical clinical experiences, since their reflections facilitated a critical assessment of their experience, their knowledge and feelings, and how to make sense thereof (de Swardt, du Toit & Botha, 2012:4). Shaw et al. (2011:21) add that reflection opportunities are necessary for HCPs to assist them to make sense of their clinical experiences and associated complexities, since this helps them to form their professional identity. Considering the degree programme at the research site, reflective journaling is an active component of the learning and teaching modes (cf. 2.8). So, although reflection was found to be a coping mechanism used by HCPs when facing death and dying or stressful incidents, reflection may also have been an innate habit for the participants in this study. It becomes a coping mechanism for them to construct meaning and make sense of their diverse clinical experiences to find solutions for similar future experiences.

- **Take control of feelings and emotions attached to the experience**

Some participants alluded to their efforts to take control of their feelings and emotions attached to their experiences. This was an effort to reduce and even eliminate the effect that the experience had on them.

Later on, in the day, when I, when I'm internalising it all, I make a willing choice to not be put down by it. That's a conscious decision on my part to be there and also just – obviously you can think about happy things that makes you happy. And then just seeing, seeing good in a situation that seems negative [sic.] – P14-091812:lines 161–164

This coping mechanism was used by UK-based radiotherapists as a means to reassure themselves (French, 2004:20). This is closely linked to reflection and seeking information from others so as to facilitate understanding and find solutions to inform patient care decisions in future as can be seen from the preceding, and following categories discussed in this sub-theme (French, 2004:20). This could be because HCPs use reassurance as a method to calm their patients and this becomes a norm to reduce anxiety in stressful and difficult situations (Togher, O'Cathain, Phung, Turner & Siriwardena, 2015:2951). This may also be linked to the disenfranchised grief culture where grieving is seen to be unprofessional and a taboo within a healthcare context; not showing emotions by remaining objective and in control of them is more acceptable, as discussed in sub-theme 3.2 (cf. 7.4.3.2). This was a finding among South African emergency care personnel, and UK diagnostic radiography students, respectively (De Witt, 2015; Minnie et al., 2015:15).

- **Seek information from others to gain understanding**

The last problem-focused coping mechanism which the participants used was a type of social support in the form of seeking information from others to gain more insight and understanding about patients' deaths.

...the information I get from the staff member that are working with the patient concerning the cause of death of the patient and also the understanding that...my gender understanding of like uhm...when someone dies...you can't change that...you understand that everyone has his own day you know...like on death you say okay, she's gone or he's gone, then I understand I must just uhm make peace about it – P5-081833:lines 83–90

The narratives of the participants in this study echo the literature debates. French (2004:22) found that seeking information to gain understanding about a stress experience was a common coping mechanism. Australian radiation therapists indicated that they seek information from colleagues to solve problems they encounter when facing a stressful work incident and rated this a 7.5 out of 10 mean success score, indicating that it is quite a useful coping mechanism to adopt (Sharpley, Poulsen, Baumann & Poulsen, 2015:27). A study among Iranian nurses

found that seeking information reduced job-related stress and facilitated better handling of the situation they faced (Akbar et al., 2017:205). Information gained through formal learning and teaching was found to assist undergraduate South African nursing students to cope with end-of-life-care experiences they encountered (Van der Wath & du Toit, 2015:5). This implies and underpins the notion that support should be situated within the workplace and in the formal curriculum.

7.4.3.3 Sub-theme 3.3: Appraisal-focused coping mechanisms

The third and last group of coping mechanisms, which the participants used to cope with death and dying patients during WPL, was appraisal-focused coping mechanisms, also known as meaning-focused coping mechanisms. The category associated with this sub-theme was labelled appraisal-focused coping during data analysis. From the data, five specific appraisal-focused coping mechanisms were identified.

- **Rationalisation and logical analysis**

Participants described how they sometimes resorted to logical reasoning to cope with their encounters with death and dying patients. They compared the pros and cons attached to their perceptions about their experiences and then tried to reach the most rational way of coping best suited for them personally.

I sort of gather the situation that that patient with their family might be in...not entirely because obviously I don't spend a lot of time with them. But then I can really think about where they've been to get to where – to get me, and where they're probably gonna go afterwards. And I think of as many pros to the situation as possible. And then also just kind of realising that it is something I need to deal with if I'm going to continue in this and that it is something that I will see more frequently, most likely. So, it's – I just spend time thinking about it, different things that it could be. I don't – I don't go into it thinking I'm now depressed now about – because this sad thing just happened. I've – just making sure that you look at it all from a logical point of view, from a realistic point of view. Instead of in the moment thinking about it with all your emotions, take it back to a time where you can look at it without your feelings getting in the way of being realistic about the situation [sic.] – P14-091812:lines 96–108

I suppose it would definitely, the whole logical-emotional thing – if you've like gone through a lot of emotional crap throughout your life, you – it's easier to just see things from a logical point of view –P12-091822:lines 286–287

Knoll, Starrs and Perry (2016:1–2) describe rationalisation as a defence mechanism that people use to devise self-serving and reassuring explanations, thoughts, actions or feelings, which are incorrect but plausible, to cope with emotional turmoil due to stress experiences. It assists a person to distance themselves from difficult to acknowledge feelings, actions and thoughts and to substitute them with more socially acceptable one's. In other words, a person

covers up their true feelings and thoughts related to their stress experience. The coping mechanism equivalent is known as logical analysis where an individual carefully and systematically reasons the causes for a particular situation (Diehl, Chui, Hay, Lumley, Grünh & Labouvie-Vief, 2014:636). The participants in this study may have adopted this due to the workplace culture that they were socialised into and the influence of their observations and practises at the hospital where they were placed for WPL (cf. 7.4.3.1). It may also be another coping mechanism, in addition to distancing and reflection, to find solutions, which they adopted as to not get too emotionally attached to the experience that they faced with a dying or dead patient (cf. 7.4.3.2).

- **Reinterpreting the experience in more positive terms**

Participants many a time reinterpreted their experiences with death and dying in more positive terms. They would either only focus on the positive memories attached to the experience or make comparisons between experiences in terms of which one was more negative or more positive. This helped them to relieve the threat to their wellbeing that the experience posed in order to cope with it.

It was difficult to concentrate on my work, but I chose to remember the good memories and celebrate her life, rather than mourn her death – P4-081942RJ1:lines 10–13

They just tell you it – it gets better and probably tell you about their experiences, which in most cases are more severe and when you compare it. For minor cases, okay, that's nothing too much but for the bigger ones, [it] really help to talk [sic.] – P9-091811:lines 40–43

Positive reappraisal of stress experiences, like death and dying incidents by HCPs, occurs as a means to restore wellbeing and sustain coping with the experiences (Folkman, 2008:6, 11; Folkman & Moskowitz, 2004:766; Folkman, 1997:1217). Reinterpreting stress experiences in more positive terms involves efforts that individuals use to construct more positive meaning of the experience by focusing on personal growth (French, 2004:20). This then leads to evoking positive emotions and the experience then becomes assimilated in a person's belief and value system (Folkman, 2008:6–7; Folkman & Moskowitz, 2004:766). Hence, an individual feels more in control and is better able to cope since they appraise the experience as benign and meaningful (Garland, Gaylord & Fredrickson, 2011:60; Folkman, 2008:6, 11; Folkman & Moskowitz, 2004:766; Folkman, 1997:1217). This coping mechanism was used by UK radiotherapists, and Australian generalist medical doctors, when they encountered patient deaths and other occupational stresses (Zambrano & Barton, 2011:837; French, 2004:20).

They did this in a similar fashion to the participants' experiences in this present study pertaining to death and dying experiences during WPL in a diagnostic radiography context.

- **Positive self-talk**

Participants also used positive self-talk. This involved telling themselves that their experiences with death and dying patients during WPL would get better and that they would feel more positive about it.

I try to tell myself that it's gonna be fine because everyone's gonna die at the end of the day...Making myself stronger, telling myself that it's going to be okay and you have to deal with this because, uhm, you will be faced with worse situations than that in this profession, who knows [sic.] – P16-091825:lines77–78, 80–82

This strategy is documented in other healthcare-related research studies. South African undergraduate student nurses used positive self-talk to encourage themselves to remain calm whilst managing dead and dying patients and to take their mind off the task at hand (van Rooyen, Laing & Kotzé, 2005:37). Hamilton, Miedema, MacIntyre and Easley (2011:e47) indicated that positive self-talk has been used extensively as a motivating strategy in competitive sports, as well as among cancer survivors to cope with the sequelae of cancer. Similar to the findings of these studies, the participants in this current study used positive self-talk as motivation to encourage them to keep on going by constantly comparing different experiences with one another.

- **Dark humour**

Dark humour was another appraisal-focused coping mechanism used by participants to cope with death and dying patients whilst in a clinical setting. They explained using dark humour helped them not to become too attached to their experiences.

...I just sort of start laughing about these things, uhm, even if other people tell me something... I just make light of it – P11-091821:lines 90–92

The participants' use of dark humour is not odd in a diagnostic radiography context. Strudwick (2011:137–146), and de Witt (2015), found that UK diagnostic radiographers used dark humour as a coping mechanism when talking about taboo topics like death and suffering. It is also prevalent in other healthcare professions like nursing, for example (Nunes, José & Capelas, 2018:104). Literature does however caution that some may see this as an inappropriate form of coping. Authors argue that this need not be the case if it is done in a respectful manner, away from patients and their families. Hence, the context in which dark humour is used should be taken into consideration when assessing the appropriateness, since this may well be the

only positive way for some HCPs to cope with traumatic and stressful clinical experiences, but it can also become easily unprofessional, dehumanising and derogatory. Hence, it requires a delicate balance to remain empathetic towards others' losses (Hardy, 2020:179; Cain, 2012:689–690; Strudwick, 2011:137–138). Nunes, José and Capelas (2018:105) maintain that dark humour should not be used as the only coping mechanism, and that a combination of others may be beneficial to facilitate optimal patient care so that HCPs (nurses in their study) do not become too detached from their patients. The participants in the current study used dark humour in combination with other emotion problem and appraisal-focused coping mechanisms. None relied on only one coping mechanism to deal with death and dying patient experiences during WPL.

- **Drawing on religion**

Lastly, participants drew on their religious teachings and principles to cope with death and dying patients during WPL. As discussed in sub-theme 2.2 their religion and culture contributed to the mitigation of negative connotations attached to death and dying (cf. 7.4.2.2). They used prayer to gain courage to cope with dying and dead patients. They also prayed that patients should enter a good afterlife so that they were then relieved from their pain and suffering.

***I believe in God of the Christians, and I believe that God wants everyone to come live in heaven with Him if they choose Him or if they choose to believe in Him. So, for me, when I pray to Him, I pray knowing that He's helping me and He's guiding me through the emotions and I also pray for the patients that died that they have the opportunity to go live in paradise with Him. Because I personally don't want anyone to suffer in the afterlife –
P3-081841:lines 222–227***

A similar finding is reported in the literature. Participants in a Lithuanian study expressed that having a strong grounding in their faith helped them cope with their experiences with a life-threatening event and to reduce their death anxiety since they could use their religious beliefs as a frame of reference to be open to the possibility of death that follows their traumatic experience (Hoelterhoff & Chung, 2018:644–645). Van Rooyen, Laing and Kotzé (2005:37) too reported a similar finding in their study among undergraduate South African nurses, where they used their religion and prayer as a means to cope with caring for dying patients. The participants' views in the present study are aligned with Vincensi (2016:67) in that Brazilian nurses believed that patients move to a next phase in their journey as a human being. This is similar to the African perspectives on death and dying where the dead is believed to transition to a different state of existence (cf. 3.4.8). However, one should be cognisant that different individuals have different religious beliefs and that culture greatly influences how people conceive and cope with death; one group's beliefs and practises should not be considered

superior to another group's norms (cf. 3.4.2; 3.4.7). According to literature religion-orientated coping mechanisms also assist in constructing meaning of stress experiences (Gall et al., 2005:90). This highlights why the participants in this current study may have identified religio-cultural practices as factors that reduced the negative perceptions about death and dying patient experiences during WPL.

7.4.3.4 Summary of theme three

Coping with death and dying patients during WPL was perceived to be a conditioning process embedded in the respective organisational culture where the participants found themselves. Participants used three categories of coping mechanisms, in varying degrees and combinations, to cope with their encounters with death and dying patients. These coping mechanisms were categorised as emotion-focused, problem-focused, and appraisal-focused. The coping mechanisms that they adopted are summarised in Table 7.9.

Table 7.9: A summary of the coping mechanisms participants used

Emotion-focused coping mechanisms	Problem-focused coping mechanisms	Appraisal-focused coping mechanisms
<ul style="list-style-type: none"> • Seek emotional reassurance from others • Advocacy/mentoring • Distancing • Distraction • Crying 	<ul style="list-style-type: none"> • Reflection and finding solutions • Take control of feelings and emotions attached to the experience • Seek information from others to gain understanding 	<ul style="list-style-type: none"> • Rationalisation and logical analysis • Reinterpreting the experience in more positive terms • Positive self-talk • Dark humour • Drawing on religion

Participants predominantly used emotion-focused and appraisal-focused coping mechanisms, and very seldom adopted problem-focused coping mechanisms. The coping mechanisms are closely related to the secondary appraisal processes of their experiences and the factors that influenced their perceptions about the experiences they faced. The findings of this study demonstrate that the factors discussed in theme 2 influenced the participants' appraisals of their experiences as well as the subsequent coping strategies they adopted. This is what Lazarus and Folkman (1984:57, 165–167) argue to be misalignment between the demands elicited by a stress experience and the resources available to adequately cope with it. Only once there is equilibrium or near-equilibrium between resources available and demands elicited will an individual cope with a stress experience. This is an inference that is also evident from the experiences of the participants in this study. The coping mechanisms that they used were both of constructive and ineffective types. Constructive coping mechanisms assisted them to

appraise their experience more positively and therefore they perceived themselves in a better position to cope. Ineffective coping mechanisms were related to lack of resources to adequately cope. The factors that influenced the participants' experiences, appraisals and affective responses were discussed in earlier themes. The danger of ineffective coping mechanisms are increased work stress, error, poorer task performance, burnout and mental health illness, as well as a decline in the quality of patient care provided (Weiten, Dunn & Hammer, 2018:78–82; Walinga, 2014:693). Conversely, constructive coping mechanisms facilitate, among others, resilience, courage, persistence and an ability to thrive (Weiten, Dunn & Hammer, 2018:82; Walinga, 2014:693). Therefore, concerted efforts are required to assist HCPs to adopt constructive coping mechanisms so as to mitigate and eliminate the negative impact ineffective coping mechanisms can have for a HCP, a patient, and workplace (Walinga, 2014:701).

Considering the above themes as interrelated parts of a process, the next theme was constructed when patterns indicating a relationship between the experiences and coping of participants were noticed in the data.

7.4.4 Theme four: The cyclical nature of experiencing and coping with death and dying patients

During the analysis of the data a relationship between the participants' experiences with death and dying patients during WPL and how they coped with these experiences were noticed. Upon deeper analysis the relationship presented itself as a continuous, cycle encompassing three distinct phases. The phases were cyclical because participants found themselves fluidly transitioning through each phase and into the other. Participants expressed that this cycle never ends because of the multiple encounters they experienced. Each time they face a new encounter they go through this cycle in a comparable manner. The continuous, cyclical relationship starts with sense-making and an emotional tsunami, followed by acceptance and, finally, finding mechanisms to cope. Some also expressed that the cycle sometimes moved through multiple times during a single experience to fully make sense and create meaning of it, to fully accept that it occurred and to find the most appropriate coping mechanisms. This further reinforces the cyclical nature of the relationship between their experiences and coping. Although cycle phases 1 and 3 appeared generic for all the participants, the content of each phase with respect to how they made sense of the experience, the affective responses elicited, and the coping mechanisms they used varied. This variation is depicted in themes 1 and 3, respectively (cf. 7.4.1; 7.4.3). The stimulus that triggered this process was death and dying patient experiences during WPL. The associated participant-specific and workplace factors

surrounding the incident could account for the variations between participants in this study. These factors are discussed in theme 2 (cf. 7.4.2). Phase 2 was the only standard and unvaried phase for the participants, i.e. acceptance. Figure 7.13 presents the visual representation of this theme and its related sub-themes.

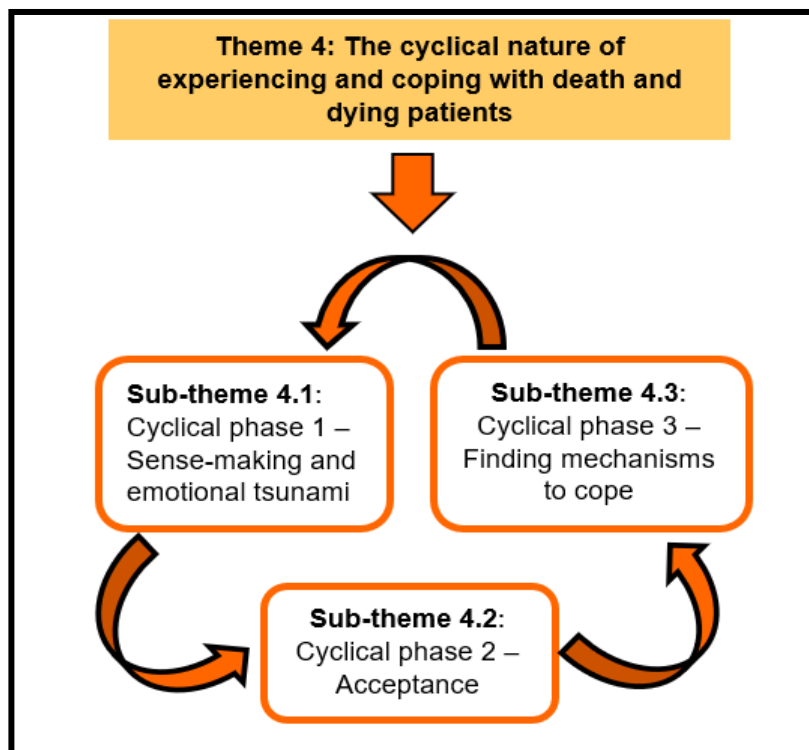


Figure 7.12: Visual representation of theme four and the associated relationship with the sub-themes.

Participants maintained that with each experience, albeit similar or different to earlier experiences, led to personal transformation and therefore their perception about the experience and coping mechanisms that they adopted was ever changing. However, they conceded that there were a variety of factors associated with the experience at the particular moment in time that further impacted on how they perceived the experience and the coping mechanisms they adopted. However, the three transitioning, cyclical phases characteristic of this journey essentially remains the same. The only change is personal transformation when they compared how they perceived themselves and future encounters before and after such encounters with death and dying patients. Participants recalled this as follows.

But that it's a circle means that it, it doesn't ever end. So, it'll, it keeps on happening and every time it sort of stays the same, except for the last part, where it's a purple little bit because every time it happens, you aren't the same person you were before it happened [sic.] – P4-081842:lines 6–9

...the pathways are kind of just – it doesn't happen overnight, you have to kind of like work through it – P13-091823:lines 10–11

One participant (*P14-091812*) represented this continuous journey in Figure 7.14 using an analogy of a see-saw construction, with a feather as the fulcrum because it is light and easily tiltable. Its flexibility showed a process of experiencing something negative (i.e., negative aspects) and then having to find ways to become happier and move on and carry on with their work (i.e., positive aspects).



Figure 7.13: Clipping from a participant's (*P14-091812*) Mmogo-construction representing coping as continuous journey.

Another participant (*P1-081831*) demonstrated the transformation of the coping journey with the construction extract (Figure 7.15) where a red heart represents the participant and a yellow rectangular block resembles the transformation or change in them after their experience with death and dying patients during WPL.

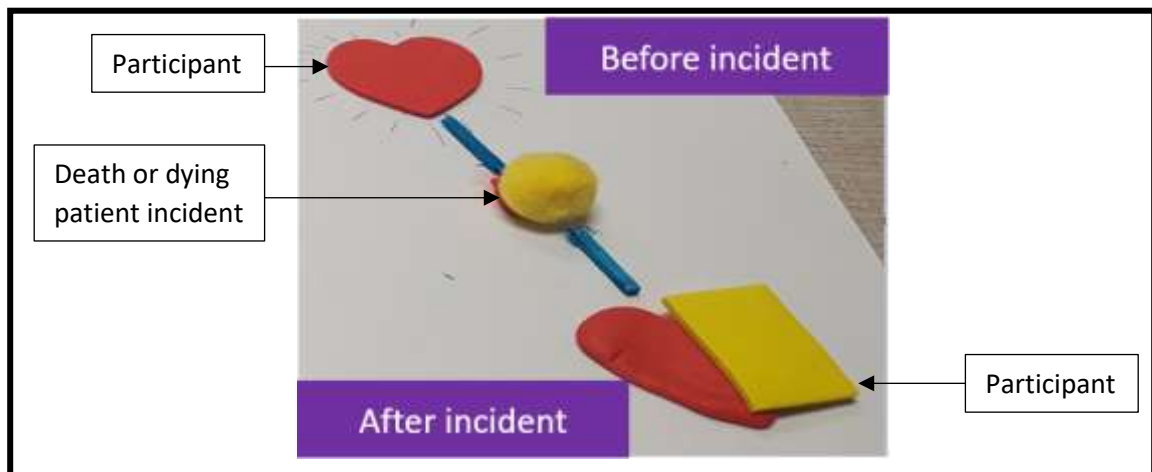


Figure 7.14: An extract from a Mmogo-construction demonstrating the participant's (*P1-081831*) coping journey with death and dying patient experiences during workplace learning.

The participants' notion of coping being a continuous journey is reported in the literature of contemporary views on stress and coping. Literature maintains that individuals and the environment they find themselves in are dynamically and reciprocally intertwined because a trigger initiates a particular response when an individual's wellbeing is threatened or feelings of harm are evoked by a stimulus. This response is further, continuously, influenced by person-specific and contextual factors (Biggs, Brough & Drummond, 2017:351; Maddrell, 2016:183; Walinga, 2014:687–689; Lazarus & Folkman, 1984:293). This is because individuals will keep on reappraising a stress experience, like death and dying patients, until such time that positive emotions are elicited and they feel that their wellbeing has been restored in some way or another and they are able to cope with the experience (Folkman, 2008:6–7; Folkman & Moskowitz, 2004:766; Folkman, 1997:1217). Walter (1996:7) validates the notion of coping being a continuous journey because he holds that grief of the dead requires constant reconstruction of the dead to assimilate memories of them in our continued lives by reflecting and talking about the dead person. The work by Furnes and Dysvik (2010:136–139) also holds this perspective. The non-linearity of the coping journey described by the participants are reported in the literature. Corr (2018:4–6; 1992:85–88), and Doka (2013a:6–10, 26), in their models of the phases that dying people go through emphasise an individualised process for each person due to the subjectivity inherent to stress and coping and the influencing factors for each individual experience not always being the same, and therefore a person vacillates between different phases continuously in order to reconstruct their lived reality to cope with the death and dying experience they faced. Therefore, personal transformation, as described by the participants in this study, can be appreciated since their realities were constantly reconstructed over time as they encountered these experiences, which could influence how they perceive future experiences and subsequently cope with them.

7.4.4.1 Sub-theme 4.1: Sense-making and emotional tsunami

The first cyclical phase of this continuous coping journey described by the participants is a phase where they engaged in a process of making sense of the experience, which was accompanied with many different emotions and feelings. This sub-theme was represented by the following categories of data: emotional chaos, and making sense of experiences. The variety of affective responses that they experienced, and the appraisal process that they underwent, were detailed and presented as theme 1 and entailed four sub-themes (cf. 7.4.1). This sub-theme is the starting point of the emerging relationship between the participants' experiences and coping with death and dying patients during WPL.

...like when I was dealing with this patient there was a lot going through my mind... – P1-081831:lines 12–14

Uhm I think as soon as the dying experience or the negative experience happens, uhm, it starts off with uhm confusion, and then probably to sadness or even anger, depending on like am I sad because like I know that this patient's case is hopeless or am I sad for the mother, or am I angry in the sense that I don't know what to do about this? – P3-081841:lines 144–147
Starting that, uhm, I'm shocked cause usually I don't have any word straight away, but then a few seconds go, and I have words about it – P11-091821:lines 284–286

This first cycle is reported in the literature. Parkes and Prigerson (2010:7) posit that the usual initial response to a stress stimulus is a plethora of conflating emotions and feelings. However, one needs to appreciate that this happens due to a cognitive appraisal of the stress experience as initiated by a stimulus as a means to make sense and construct meaning of such a stress experience at a particular point in time and place (Lazarus & Folkman, 1984:19, 31). Sense-making is person-specific, context dependant and can change over time. There is no one-size-fits all definition to how people experience and make sense of the loss of a person (Dozois, 2000:167–168, 193; Freud, 1949:152–170). Current perspectives in literature do account more and more for individual complexities inherent to constructing meaning, making sense and responses to death and dying. The focus however remains that an individual's experiences cannot be understood in isolation; the context in which an experience was encountered is imperative (Corr & Corr, 2019:para 19–20; Corr, 2018:1–13; Parkes & Prigerson, 2010:7). This also holds true for HCPs (Papadatou, 2000:69–72). Hence, one can appreciate the argument advanced in this thesis, based on the participants' narratives, that both person-specific and workplace-related factors influenced this first phase of the cyclical relationship between their experiences and coping when encountering death and dying patient incidents during WPL.

7.4.4.2 Sub-theme 4.2: Acceptance

Normalise and internalise experiences is the category of data in this sub-theme. The second cyclical phase that the participants entered was that of acceptance. During this phase they internalised the experience and accepted it was a normal occurrence in the diagnostic radiography work setting or that the death of a patient is imminent or final. This was the only cyclical phase of the three that was exactly the same for all participants.

You have to internalise that, struggle with it, accept it, and then deal with the next patient – P14-091812:lines 79–80

I just reminded myself that death is part of life – P15-091824RJ:lines 26–27

I realised that I will have a lot of people dying on the table probably throughout my whole life as a professional so it is better to be prepared for an opportunity and not get one than to be given an opportunity but not [be] prepared for it – P9-091811RJ:lines 17–22

Working at a hospital you are bound to come across a death/ dying patient. Patients don't come to hospital if they are healthy – P11-091821RJ:lines1–2

Acceptance of loss grows as negative affective responses that were evoked decline (Parkes & Prigerson, 2010:7). Acceptance of death is also the final stage in the work of Kübler-Ross's work after a person dying has gone through stages of denial, anger, bargaining and depression. This is not a happy stage and is rather an indication that the struggle is over (Kübler-Ross, 2009:91–92). This is further explained by Park (2010:258, 260) that individuals have come to terms with their stress experience and that meaning has been constructed about it. From an empirical stance in a medical context, Zambrano and Barton (2011:837), and Trivate, Dennis, Sholl and Wilkinson (2019:11), validate the above theoretical viewpoints in that acceptance is a way for generalist and student medical doctors to come to terms with their own feelings evoked by dying and dead patient experiences they encountered at work. This includes normalising the experiences in relation to the existing social norms, values and behaviours in the workplace (Trivate et al., 2019:11). These points of view succinctly describe the recollections of the participants in this study. This phase of acceptance was imperative for them. It was almost a mediating phase to adopt self-perceived appropriate coping mechanisms to deal with their experiences during WPL.

7.4.4.3 Sub-theme 4.3: Finding mechanisms to cope

The participants identified that when they had accepted the experience was one of a standard nature within healthcare culture and diagnostic radiography, and that there was some sort of finality or imminence to a patient's terminality, they were in a better position to move forward and cope with the experience. The categories of data that represented this sub-theme were: ways to cope with experiences, and stages of experience of death/dying leading to coping. They identified that adopting coping mechanisms were influenced by person-specific and workplace-situated factors (cf. 7.4.2; 7.4.3.1). Of note is that due to the cyclical nature of the relationship between the participants' experiences and coping, they may well go through the full cycle several times to be able to cope with the experience to maintain their wellbeing in more positive terms.

Because everything that happens in the previous steps basically affected how I felt and how I dealt with it afterwards – P7-081834:lines 223–224

So then, accepting the situation and then from there kind of almost...finding ways to kind of remind myself that look we are blessed with a life and sometime some people's lives are shorter than others – P3-081841:lines 150–152

Literature emphasises the influence that culture and norms of a workplace have on the adoption of particular coping mechanisms. A person can use a combination of multiple coping mechanisms to adequately cope with a stress experience. This can be traced back to the premise of Lazarus and Folkman's transactional model on stress, appraisal and coping in that a person and the environment reciprocally influence how one perceives and copes with a stress experience (Cheng, 2003:425; Cheng, 2001:814, 828–829; Stroebe & Schut, 1999:219–220; Lazarus & Folkman, 1984:293). Hutchinson (1984:88–89) found that coping was situated in emotion, logical reasoning and technical skills among neonatal intensive care unit nurses. This may be due to workplace culture, norms, attitudes and beliefs towards grief and subsequent coping since there is a taboo and unprofessional connotation linked to grief by HCPs (Doka, 2002; Papadatou, 2000:69–72; Doka, 1987:455–469). Stroebe and Schut (1999:212–216) maintain that a person can move through a grieving cycle multiple times, over time, until the physical and mental wellbeing of the person is restored. Furthermore, Folkman (2008:6–7) posits that individuals will reappraise a stress experience until positive emotions are elicited and that they have assimilated the experience with their beliefs and values as part of their global meaning attached to the experience. This was indeed what the participants in this study narrated. The use of coping flexibility (i.e., using multiple coping mechanisms concurrently to cope with a stress experience) (Cheng, 2003:425) by the participants are similar to the findings of Trivate et al. (2019:1) among medical students. Finding coping mechanisms as the third cyclical phase in this three phase cycle is congruent with the tenets of the transactional model, the theoretical framework used as a premise to make sense of this study's findings, in that the participants' ability to cope with death and dying patient experiences during WPL only happened in relation to the appraisal of their stress stimulus after which they did use cognitive and/or behavioural strategies in an attempt to restore their own wellbeing (Lazarus & Folkman, 1984:141–142).

7.4.4.4 Summary of theme four

The participants' experience and coping with death and dying patients during WPL appeared, from their narrations, to be a continuous, cyclical, three phase relationship. This process is well-situated and documented within literature and therefore this study provides further validation of previous works. They were influenced by their own and workplace-related factors outlined in theme 2 (cf. 7.4.2). This evoked an appraisal process and a variety of affective responses

during the first cycle. Thereafter, as meaning of the experience was constructed, acceptance of the experience occurred. They then searched for and adopted one or more coping mechanisms to deal with the incidents. They alluded that they had to possibly go through the cycle a few times before sense could be made of an experience to then lead to adequate coping. Lastly, they identified that some personal transformation happened over time as they encountered more and more death and dying patient experiences which contributed to their future experiences and coping.

7.4.5 Theme five: Suggestions for effective coping with experiences of death and dying patients

An aggravating factor, which influenced the participants respective perception about death and dying patient experiences, and ultimately influenced the coping mechanisms they adopted as an attempt to restore their wellbeing in more positive terms, was that they felt emotionally and physically unprepared. To this end they put forth proposals during the interviews as to what they believe could help and support them, and other undergraduate diagnostic radiography students, to effectively cope with death and dying patient experiences. They did this by way of highlighting the gaps in their knowledge and skills, and their inputs were categorised in the data as: suggestions for effective coping: education; and suggestions for effective coping: practice. They identified several needs that should be addressed to facilitate their emotional and physical preparation to enable them to cope effectively with death and dying patient experiences during WPL.

They indicated that they were not always aware of all clinical signs and symptoms that may indicate that a patient was dying. They also stated that they were not able to interpret the information provided by medical monitors or equipment attached to patients. They did point out that theoretical education must be coupled with practicing of these skills in real-life contexts to enable them to practically identify and act on the signs and symptoms of dying patients.

...I had somebody explain it to me, but I've never seen it really for myself. So, like, how am I prepared? You know. I don't know what a very sick person looks like. I don't know what signs to look at. Like, there's all of these – there might be all of these monitors hooked up to this person that might be showing me what's wrong with them, but I don't know how to read it. So, I just feel like in that sense, you're not prepared. Like I might be able to call someone, get an emergency trolley, but like, that's all I can do – P6-081843:lines 409–415

They indicated that the physical protocols associated with death and dying incidents need to be highlighted to them in terms of their specific working environment's expectations, policies

and procedures. Examples of areas to focus on were handling of a corpse, people to phone, and how to complete an incident report.

...you are not prepared of and you have never handled a dead patient before, so you don't have...you don't know how to go about uhm...transporting a patient. For example, if the patient now is dead, how do you go about transporting the patient from the radiography department to the mortuary, you know and filling the documentation that need to be filled – P2-081832:lines183–187

...I'm assuming they [staff] are told once the patient goes into cardia arrest or there's no response from the patient...then they must call a doctor...they immediately rang the alarm and told me they're phoning high care, they didn't pick up. They sent me to go call, uhm, a doctor for better help – P16-091825:lines 107–114

They highlighted that one should recognise that people deal differently with death and dying patient incidents. This was linked to them voicing that they did find it difficult to regulate their emotions and feelings when faced with these incidents during WPL, which affected them in a negative manner. They explained that they needed to remain professional and not let their feelings interfere with patient care that they would give to the next patient, almost immediately after experiencing something as traumatic as a dying patient. This left them at a cross-road of not knowing how to handle the conflicting emotions and feelings that they experience.

So, everyone deals with it in their own way, and I think, the fact that you can accept that that it is okay for you to do it that way, makes it better already. Uhm like you don't have to deal with it in a specific way, like everyone, if someone tells you have to deal with it in this way it's okay if you don't want to, you do it in your own way [sic.] – P4-081842:lines 91–94

I don't think I know how to separate my emotions from certain situations and it affects me in a negative way – P3-081841RJ:lines15–18

Something I personally struggle with, which I didn't think I would struggle with, was that the way that you have to jump from one patient will come in and they'll be, they'll be dying, and it will make you feel sad. And then two seconds, two minutes another patient will come in and they, some of them got great news and you just immediately have to be happy and excited. And you are for them, but it's almost you have to completely disregard the – two minutes ago how you were feeling before – P14-091812:lines 11–16

They argued that there is a need to establish a support culture in the workplace to support students to cope with the death and dying patient encounters that they faced. They emphasised that this should be established from management down to the staff interacting with the students. The role of a clinical tutor was recognised by them. They felt that all staff members must be included since students spend most of their time with staff members working on the floor with them and not their clinical tutors necessarily. However, some participants cautioned that they were only comfortable speaking to particular people that they trust, and therefore it would seem

that a support culture needs to accommodate this. Some do not like speaking about these experiences, and this too needs to be considered.

...management should, on the experience of death in our hospital – then the manager will organise us a counselling if needs be and also ah offer counselling to other staff members and also encourage other staff members to show support to us as students, because we do... don't know anything about death and we...we are the ones that will spend the most time working with and unlike our clinical tutors – P2-081832:lines 235–239

I have never spoken to my colleagues about it, so I will just talk to my family member or somebody I trust – P9-091811:lines 122–123

I don't like to talk to people about issues – P12-091822:lines 17–18

I'm not comfortable speaking to other people and I– no one else understands me except my mother or my sister, but my sister's young so I don't like speaking to her all the time – P10-091836:lines 175–176

Lastly, it appeared from the data that theoretical education should be followed up in a working environment on a continuous basis through in-service training or continuing professional development activities. The participants pointed out that they may have been taught certain skills during the qualification in first year but by their third or fourth year they had already forgotten those skills.

Like, we went for a first-aid course in first year, but I don't remember any of that stuff – P6-081843:lines 407–408

Their views could be due to the lack of attention that the curriculum at the research site gives to death and dying (cf. 2.8). Literature does address this. Allie et al. (2018:6–7) found that South African medical students indicated a need for education and training on bereavement so as to effectively cope with death and dying patient incidents. To this end, they recommend exposing students to death and dying incidents prior to entering a clinical platform, through simulation or videos, for example, so that students know what to expect when they encounter these scenarios. Moores et al. (2007:942) identified the formal undergraduate curriculum as one of the best suited places to teach students about death and dying and to provide them with opportunities to learn. This is argued to be more optimal due to the negative influences that workplace acculturation has on student learning and because WPL alone does not fulfil this important function alone (White, 2017:S41; Anderson et al., 2008:1230).

Reeves and Decker (2012:80–82) found that diagnostic radiographers focus on their technical skills more than patient care as a means to emotionally dissociate from patients, thus it may be worthwhile to develop strategies that integrate technology and patient care to further develop a person-centred care approach. This seems to be true for the participants of this study. They

were unsure of how to identify signs and symptoms of dying from both patient presentation and using information on the monitors and devices connected to a patient. The notion of having opportunities to practice these skills is covered in the literature. Kemp et al. (2019:1), and Costello (2001:59), argue that it will give students the necessary time to develop their skills, attitudes, behaviours and values related to death and dying patient incidents so as to appropriately integrate their theory into practice to eliminate or reduce the theory-practice-gap and to foster a patient-centred care approach. The same would be true for mastering workplace protocols in documenting and handling dying and dead patients. The discourses on the success of WPL and optimal student development also validate these points of view since active student engagement, support and deliberate curriculum design are essential factors to achieve diagnostic radiographers that will be able to cope with death and dying patients in the workplace using formally taught SKAVBs in the context of workplace protocols (cf. 2.4.3).

Literature attests to the importance of having workplace programmes to facilitate and support HCPs in coping with death and dying patient experiences. There should also be continuous, in-service training on this so that HCPs and students are regularly assisted and supported to adopt positive coping mechanisms and to debrief about their experiences. These efforts should be at top management level and within specific departments. This therefore can assist in transformation of the current workplace culture that disenfranchises grief by HCPs at all organisational levels (Allie et al., 2018:7; Weurlander et al., 2018:74; Loiselle & Sterling, 2011:254; Moores et al., 2007:942; Dunn & Otten, 2005:103; van Rooyen, Laing & Kotzé, 2005:37–38). Since, as McCreight (2005:446) and Ali (2017:13–21) point out, active policies and protocols in the workplace assist and support staff to process their grief.

7.4.5.1 Summary of theme five

The recommendations by the participants support the strategies and recommendations in the body of literature. The participants underscored that formal learning and teaching and workplace-related areas do need attention to support their process of coping with death and dying patient experiences during WPL. Furthermore, they highlighted individual variations about their own proclivities and dispositions. Therefore, support initiatives should accommodate these variations, to have an inclusive support structure for all types of undergraduate diagnostic radiography students.

7.5 CONCLUSION

This chapter comprehensively described the context, participant characteristics and theme and sub-theme construction. Five themes and 13 sub-themes were constructed after the data from interviews and reflective journals were thematically analysed based on the patterns in the data.

The findings showed that the undergraduate diagnostic radiography student participants' experiences and coping have a continuous, three-phase, cyclical relationship. Sense-making and meaning-construction were influenced by a number of participant-specific and workplace-related factors. This resulted in both positive and negative affective responses, depending on how each participant appraised their experience with death and dying patients during WPL. In order for them to find coping mechanisms they first had to accept that the incident occurred and that it was normal. Linked to the variation in appraisal of their experiences they adopted multiple and varied coping mechanisms to deal with the death and dying experiences during WPL. These were categorised as emotion-focused, problem-focused, and appraisal-focused coping mechanisms. Based on their experience and ways of coping, they provided recommendations of how they could be educated, trained and supported to effectively cope during WPL with patients' deaths and terminally-ill patients. The findings of this study to a large extent are in synch with the existing, accessible body of literature. The findings are well grounded within the tenets of the theoretical framework used for this study, namely, the transactional model of Lazarus and Folkman, 1984, detailing the underlying process to stress, appraisal and coping.

This chapter marks the achievement of the first three objectives of this study (cf. 1.7). The conceptual framework used to develop the support strategies based on the findings is described in the next chapter.

CHAPTER 8: CONCEPTUAL FRAMEWORK FOR DEVELOPING THE SUPPORT STRATEGIES

“health care is first about human relationships between those who suffer and those who have committed to care” – Sue Robins, Bird’s eye view.

8.1 INTRODUCTION

The findings were discussed in the previous chapter and were located within the broader accessible and available scholarship on and related to the phenomenon studied, i.e. undergraduate diagnostic radiography students’ experiences and coping with death and dying patient experiences during workplace learning (WPL). The participants’ experiences and coping are underpinned by a continuous, three-phase cycle. It covers sense-making and emotional turmoil followed by the participants’ acceptance of their experience and then they found the most appropriate or accessible coping mechanisms. Several participant and workplace-related factors influenced their experiences in terms of being insignificant, mitigating or aggravating to the appraisal of these experiences.

The context underpinning the development of the support strategies, as well as the conceptual framework of Dickoff, James and Wiedenbach (1968) that was used, are discussed in this chapter.

8.2 CONTEXT FOR THE SUPPORT STRATEGIES

The fourth objective of this study was to develop and describe support strategies that would facilitate the coping of undergraduate diagnostic radiography students’ coping with death and dying patient experiences during WPL (cf. 1.5). These support strategies are informed by the findings of this study discussed in chapter 7. The participants identified that they felt emotionally and physically ill-prepared to effectively cope with death and dying patient experiences during WPL. The reasons advanced were informed by their views of feeling that they did not receive adequate education and training to handle these encounters nor was there adequate support in the workplace setting to process these incidents (cf. 7.4.2.3 & 7.4.5). The findings also identified various factors relating to both the participants and their workplace environments that contributed to their points of view.

Five key strategies are posited in literature to contribute to optimal student development during WPL (cf. 2.4.3). This entails providing opportunities for students to reflect on clinical experiences so that they can make sense of these. Students should be encouraged to actively

participate in learning activities using all their senses to gain first-hand experience of the tasks to be completed. It is further advocated that learning experiences should be scaffolded: starting with the fundamental and moving toward more complex learning experiences in order to enable student independence in becoming professional diagnostic radiographers. To achieve this support should be provided to students through guided learning, mentoring and deliberate, goal-driven curricula to ensure that students develop the intended skills, knowledge, values, attitudes and behaviours (SKAVBs).

Death and dying experiences are common encounters for HCPs in the South African healthcare sector, and globally, with approximately half of all deaths occurring within healthcare establishments (cf. 1.2), which could be ascribed to the medicalisation of death and dying (cf. 3.5.1.4). Death and dying do not receive adequate attention within the curriculum at the research site (cf. 2.8). This inadequacy was also pointed out by the participants. In other words, the exit-level outcomes, and associated assessment criteria, of the four-year degree programme are not adequately met in terms of ensuring effective and safe patient management in relation to patients' needs and welfare (Table 2.2 & Table 2.3). This phenomenon is not unique to the research site. It was also highlighted in a UK radiotherapy study (White, 2017:S39). Literature underscores the need for students to be introduced to death and dying experiences, during undergraduate education and training, with a focus on what they can expect in a clinical setting during these incidents, as well as on-going workplace support from peers and mentors (Allie et al., 2018:6–7; Moores et al., 2007:942). Thus, physical and emotional preparedness to effectively cope with death and dying patient experiences during WPL should be initiated at the HEI and the knowledge and skills should then be continuously reinforced and facilitated at clinical placement sites (Cunningham, Wright & Baird, 2015:263; Lee, 2015:17).

It is against this contextual background that it was deemed necessary that support strategies should be developed to fill this gap within the education and training of students to facilitate undergraduate diagnostic radiography students' effective coping with death and dying patient experiences during WPL.

8.3 THE CONCEPTUAL FRAMEWORK

A conceptual framework provides a researcher with a theoretical premise to guide their work and typically indicates the interrelationships between concepts underpinning a specific phenomenon (Polit & Beck, 2018:123–124). No radiography specific conceptual framework,

that was fit-for-purpose, could be found in the literature thus a nursing-oriented framework was used. For the purposes of this study, I chose to adopt and use the conceptual framework of Dickoff, James and Wiedenbach (1968:415), which describes the interdependence and interrelatedness of theory, practice and research. They maintain that theory starts in practice, which subsequently informs and advances research agendas. They argue that any findings and outputs emanating from research should be fed back into practice in order for research to be meaningful (Dickoff et al., 1968:415). They further posit that these research findings should yield some or other theoretical position or intervention that can prescribe actions for practice, which can be performed and understood by the intended agents, and who should implement these actions in good faith for the benefit of the intended recipients (Dickoff et al., 1968:418–419). They proposed a conceptual framework for the development of prescriptive or situation-producing theories (Dickoff et al., 1968:420). According to them these theories describe any connections that exist between concepts underpinning a phenomenon of interest in a grandiose and multifaceted way. Furthermore, these theories allow for the materialisation of desired situations to address a specific problem that prompted the research to be done in the first place. Situation-producing/prescriptive theories have three fundamental, characteristic components (Dickoff et al., 1968:421), namely:

- “goal-content specified as an aim for activity”,
- “prescriptions for activity to realise the goal-content”, and
- “a survey list to serve as a supplement to present prescription and as preparation for future prescription for activity toward the goal-content”.

Goal-content refers to the objective of a research study, prescriptions are the actions necessary to realise the goal-content, and survey list includes aspects required to implement the actions and factors that can possibly influence the implementation of the set goal-content and prescriptions (Dickoff et al., 1968:421–422).

My intention was not to develop a radiography theory. My objective was to develop support strategies to facilitate effective coping when undergraduate diagnostic radiography students encounter death and dying patient experiences during WPL. The support strategies were thus developed to align with the recommendations from literature regarding optimal student development in WPL, as well as the existing gap in the students’ education and training at the research site (cf. 8.2). Therefore, the conceptual framework of Dickoff, James and Wiedenbach was merely a theoretical foundation to inform the development of the support strategies. The

application of the three cardinal components of Dickoff, James and Wiedenbach's framework (1968) are outlined in Table 8.1.

Table 8.1: Application of the conceptual framework in the context of this study

CONCEPTUAL FRAMEWORK COMPONENT	APPLICATION IN THE STUDY
Goal-content	To develop and describe support strategies to facilitate coping with death and dying in the workplace, by undergraduate diagnostic radiography students.
Prescriptions	These refer to the actions that educators, clinical supervisors, radiography students and other workplace staff and mental health professionals can implement to materialise the goal-content.
Survey list	The six aspects of an activity, that are contained in a survey list, were used as the building blocks for the strategies that were developed.

Dickoff et al. (1968:422) further identify six aspects of an activity that can form the foundation of the survey list, in the form of six closely, interlinked questions pertaining to an activity. Responding to these six questions assists users to demonstrate the connections between the different concepts that underpin the framework (Dickoff et al., 1968:422). These questions are as follows.

- Who or what is performing the activity? (Agent)
- Who or what is the recipient of the activity? (Recipient)
- In what context is the activity performed? (Context/framework)
- What is the end point of the activity? (Terminus)
- What is the guiding procedure, technique, or protocol of the activity? (Procedure)
- What is the energy source for the activity? (Dynamics)

The connections between the six aspects of an activity, which are encompassed in the survey list, can thus be visually represented with a cogitation map (Figure 8.1), where the recipient is influenced by the actions of the agent, and in some instances the response of the recipient to the agent's actions may prompt the agent to act in another manner. The agent's actions are guided by a particular procedure. The procedure is underpinned by a particular set of dynamics. The procedure and dynamics in turn are aligned to the desired and intended goal or outcome of the activity. All this happens within a specific context.

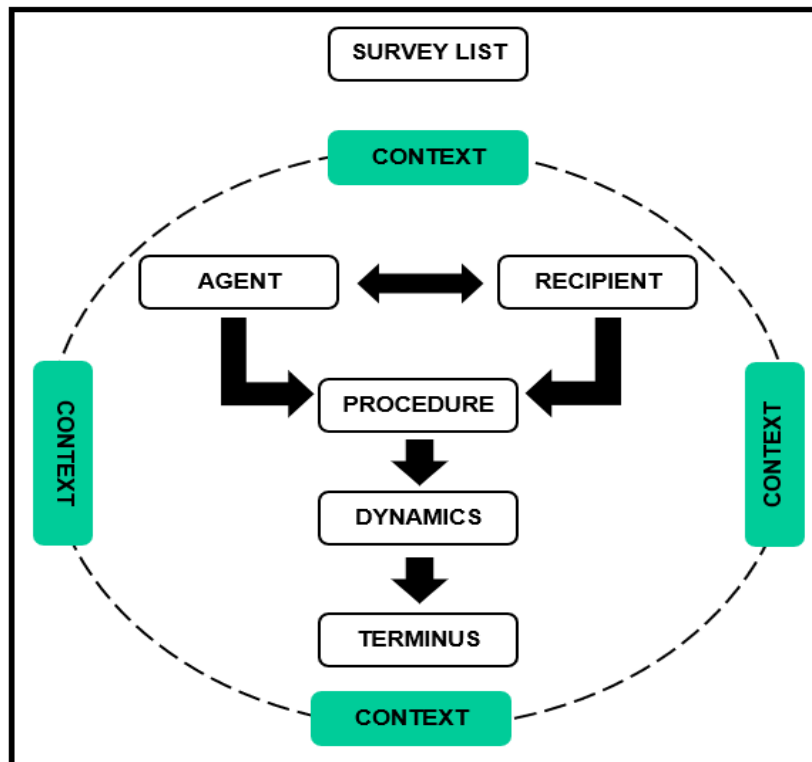


Figure 8.1: Cogitation map of the connections between the aspects forming part of an activity (Adapted from Smith, 2017:166).

The application of each of these six aspects of the survey list is described and discussed below in relation to the context of this study.

8.3.1 Agents

Dickoff et al. (1968:425) define an agent as a person responsible for executing activities so as to achieve a predetermined goal. In this study the agents are categorised as main-agents and sub-agents, where the main-agents are directly responsible for conceptualising and implementing an activity to educate and empower undergraduate students to effectively cope with death and dying patient experiences during WPL. The sub-agents are those who assist in realising the goal of an activity that main-agents have initiated and implemented to provide support undergraduate students to effectively cope with death and dying patient experiences during WPL through education and empowerment.

During the course of WPL students interact and engage with radiography educators at the HEI and during clinical accompaniment by these educators at the clinical placement sites. The clinical placement sites are in both public and private sector hospitals in the Eastern Cape province of South Africa (cf. 7.2.1). Students also work closely with clinical supervisors,

radiographers, other HCPs and students at these sites. When students experience adverse and difficult incidents at their workplace or HEI they are likely to be referred to student counselling services at the HEI or a psychologist at the clinical placement site, should the need arise, or in line with policies. However, in the majority of cases interactions focus on procedural aspects of radiographic examinations, since this is the primary focus of the degree programme at the research site (cf. 2.8).

Considering this synoptic background, the following main and sub-agents would be appropriate to assist in the fruition of the support strategies to facilitate effective coping of undergraduate diagnostic radiography students when they encounter death and dying patients during WPL.

8.3.1.1 *Main-agent: radiography educators*

Radiography educators are considered the main-agent for educating and empowering undergraduate diagnostic radiography students to effectively cope with death and dying patient incidents during WPL. Radiography educators are diagnostic radiographers registered in the category of independent practice with the Health Professions Council of South Africa (HPCSA) (HPCSA, 2018:57). Their professional educational background, both undergraduate and postgraduate, is related to diagnostic radiography. Some radiography educators have completed postgraduate programmes in related fields of study: higher education, healthcare management and bioethics and health law, for example. They also commit to lifelong learning through their engagement with continuing professional development activities as mandated by the HPCSA (HPCSA, 2019:7; HPCSA, 2017:7). Therefore, they have extensive theoretical knowledge and practical experience to fulfil this task. According to the HPCSA and UK Society of Radiographers radiography educators must fulfil the core functions of learning, teaching, research and engagement that are underpinned by relevant university policies to which radiography educators must align in presenting, coordinating and managing academic programmes at HEIs (The Society of Radiographers [SoR], 2020; HPCSA, 2019:7). This is inclusive of holistic development and support of undergraduate diagnostic radiography students so that they are appropriately prepared for optimal performance during WPL, in relation to the exit-level outcomes of the four year professional degree programme (cf. 2.7.1) and regulations defining the scope of the profession of radiography and the scope of practice of diagnostic radiographers developed by the HPCSA (HPCSA, 2020; SoR, 2020; Delany & Molloy, 2018:3–5, 25; National Department of Health [NDoH], 1974:1–2). Additionally, radiography educators are also deemed researchers that used evidence-based informed methods to guide their teaching and learning activities as well as development, implementation and evaluation of

educational programmes that they are responsible for (SoR, 2020). In many cases, radiography educators also refer students to the student counselling centre at the HEI should they require the professional services of a registered counsellor or psychologist to process personal challenges that they may have in relation to their academic programme or any other psychosocial matter that they are struggling to cope with.

8.3.1.2 Sub-agents

Dickoff et al. (1968:426) indicate that one group of professionals should take the lead in ensuring that the goal of an activity materialises. However, they forewarn that when one considers agents that may be applicable to implement an activity to achieve the goal of such activity, they should not be limited to only the discipline in which the activity/theory is developed. Sharing responsibility among different professionals is valuable since some responsibilities are beyond the ambit of one group of professionals (Dickoff et al., 1968:426). One can appreciate that although radiography educators can drive the task of facilitating effective coping among undergraduate diagnostic radiography students in lieu of their encounters with death and dying patients during WPL, radiography educators cannot fulfil this multifaceted task alone. This is because they are not always present at the clinical placement sites and are not mental health practitioners. Therefore, individuals (i.e., sub-agents) are required to assist the main-agent. Sub-agents fulfil the role of realising the education and empowerment required to assist students to effectively cope with death and dying patient experiences during WPL. The following sub-agents are identified as relevant.

➤ *Clinical supervisors*

Clinical supervisors (a.k.a. clinical tutors/mentors/preceptors/instructors) are diagnostic radiographers employed at the clinical placement sites and are responsible to oversee and implement the clinical component, inter alia WPL, of the degree programme. They are appointed due to their knowledge and clinical experience regarding diagnostic radiography. They are responsible to monitor student progress, ensure that they achieve the required skills, as prescribed by the curriculum, as well as doing certain clinical assessments on the students and providing them with constructive feedback so that they can improve their skills. They also provide feedback on the students' progress and development to the HEI where students are enrolled. The feedback should include raising any challenges students have in lieu of coping with death and dying patient experiences, for example. These clinical supervisors are also important liaison persons between the HEI and clinical placement site (Cunningham, Wright & Baird, 2015:258, 266–267; Lee, 2015:18–19). They thus act as educators, mentors, role

models, coaches and carers when engaging with undergraduate diagnostic radiography students in a clinical environment.

➤ *Radiography staff*

Radiography staff are diagnostic radiographers whom undergraduate students work with in the clinical environment. They act as informal extenders of clinical supervisors to facilitate student learning and to oversee their work to ensure it is of optimal quality. They also assist students to overcome workplace challenges with regard to patient care and performing radiographic examinations. Students arguably spend less time with their clinical supervisors and more time with other radiographers. From these interactions students observe and learn skills that are not necessarily aligned with what is taught at the HEI. These skills, and those taught at the HEI and by clinical supervisors, are internalised by the students. This all forms part of their development and identity as aspiring diagnostic radiographers. This in turn impacts how they would practice and cope with work incidents in the future.

➤ *Radiography students*

Peer-to-peer learning and teaching is an established practice in clinical education. In the context of this study radiography students informally adopt a peer educating role so as to assist their peers perform required tasks that they are either unfamiliar with or uncomfortable with. This happens in incidents when a self-proclaimed peer educator has had a prior similar experience related to the task or incident at hand and can therefore assist peers to fulfil the task or handle the incident with more surety (Secomb, 2008:711–713). Literature maintains that peer learning often occurs if students feel overwhelmed and unsupported in a clinical setting (Tai, Canny, Haines & Molloy, 2017:162), such as was identified by the participants in this study. The informal nature of peer learning, in the context of this study, makes it possible for students, at different levels of study, to interact with one another to learn from and teach others about clinical experiences so as to assist other students to handle those situations. However, the accuracy of such information and skill sharing cannot be ensured.

➤ *Psychologists and registered counsellors*

Occasionally, students may require professional support services from registered counsellors or psychologists to process and cope with academic and psycho-social matters affecting their ability to learn and perform optimally in the radiography degree programme. Students engage with these professionals at their clinical placement site through the employee assistance programme (EAP), subject to accessibility to students, and at the HEI through the student counselling centre. Referrals are usually made by radiography educators or clinical supervisors, but students can also do self-referrals to the student counselling centre at the HEI.

These professionals are important since the other agents identified are not necessarily professionally equipped to assist the students.

Although sub-agents are identified that would assist in implementing the support strategies to facilitate the process of coping by undergraduate diagnostic radiography students with death and dying patient experiences during WPL by way of support, mentoring and educating, it remains the radiography educators responsibility to prepare students academically, physically and emotionally to cope with death and dying in the workplace setting through adequate and appropriate education and training at the HEI, i.e., work-directed theoretical learning (Winberg et al., 2011:32). This argument is upheld because there is a reciprocal relationship between classroom-based and workplace-based learning and teaching since the one informs the other, continuously as the profession and practice needs, desires and requirements advance (Cunningham, Wright & Baird, 2015:264).

8.3.2 Recipients

According to Dickoff et al. (1968:426–427) a recipient is the entity that receives the actions implemented by the agents to achieved a desired goal. The recipient in this study would be all undergraduate diagnostic radiography students enrolled for the four-year professional degree in diagnostic radiography; those that experienced death and dying patient incidents during WPL and those with no such experience. This is the case since the support strategies intend to educate and empower undergraduate diagnostic radiography students with regard to effectively coping with death and dying patient incidents that they may or have encountered in a clinical setting. This is apt since the participants in this study indicated that they felt emotionally and physically ill-prepared to cope with these experiences. Moreover, they perceived that they had little to no support to facilitate their coping with these experiences. It is thus argued that having these support strategies in place for students should enable them to provide more personalised care, in line with the specific needs of patients, by being better equipped to manage and cope with death and dying patient encounters during WPL.

8.3.3 Context

The context is described by the conceptual framework as the milieu in which the activity has to be implemented, inclusive of any physical or non-physical factors that may influence the implementation of the activity (Dickoff et al., 1968:428). The context in which the support strategies developed from the findings of this study should be implemented comprises the HEI where the four-year professional degree is offered and the accredited clinical placement sites

where students are placed for their WPL. This is to ensure that there is continuity of implementation and attainment of the intended goal of the support strategies across the span of a student's development to becoming a diagnostic radiographer who can effectively and appropriately handle and address specific patient needs in their professional practices (Cunningham, Wright & Baird, 2015:263).

8.3.4 Procedure

Dickoff et al. (1968:430–431) indicate that procedure refers to all actions/rules/principles required to achieve the predetermined goal/terminus of an activity. A procedure provides sequential, general steps that can be taken to achieve a goal of an activity over time, and therefore offer a guide rather than prescribing what should be done during a specific time at a specific place (Dickoff et al., 1968:430–431). In a procedure, reference can also be made to the equipment, setting and conditions required to accomplish the goal/terminus of an activity. Additionally, the procedure can also point out any barriers or enabling situations that may arise due to the procedure and then suggest alternative actions to implement to enhance or counter these (Dickoff et al., 1968:430). Having a procedure in place contributes to the overall consistency and quality of an activity since the necessary tools and conditions are identified beforehand (Dickoff et al., 1968:430).

A strategy is defined as a detailed procedure that entails specific actions towards achieving an intended goal (Cambridge Dictionary, 2020). Ordinarily, a strategy encompasses both grand and functional strategies. Grand strategies provide a comprehensive, broad tactic to steer the intended function of an activity (Ehlers & Lazenby, 2010:214). Functional strategies, on the other hand, provide details about the resources required to implement grand strategies as well as an outline of the stakeholders involved and what is expected of them (Ehlers & Lazenby, 2010:216). In this study, only functional strategies were developed for key role-players to facilitate undergraduate diagnostic radiography students' effective coping with death and dying patients during WPL. This is appropriate since this was a qualitative study at one HEI in South Africa, and therefore grand strategies at national level cannot be developed since the findings of this study cannot necessarily be generalised to other diagnostic radiography degree programmes though there could be some degree of transferability to many environments. The support strategies that were developed were informed by the findings of this study, literature reviewed, the theoretical framework underpinning this study, and input from the panel of reviewers that reviewed the draft strategies. These strategies are further aligned with the exit-level outcomes of the four-year degree programme, to facilitate holistically educated and

trained graduates that can effectively and appropriately function in practice and employ radiographic practices that are ethico-legally and clinically safe. The support strategies therefore provide key stakeholders with information as to what is required to support undergraduate diagnostic radiography students so as to facilitate their effective coping with death and dying patients during WPL.

To this end, two main support strategies were developed to contribute to undergraduate diagnostic radiography students' emotional and physical preparedness to effectively cope with death and dying patients during WPL.

- Facilitate undergraduate diagnostic radiography students' understanding of death, dying, grief and effective coping as well as patient care and management through **education**
- Develop a support culture, for undergraduate diagnostic radiography students, through **empowerment** to facilitate coping with death and dying patients.

Together these two strategies are called the EEC support strategies (i.e., education and empowerment for coping support strategies). These two main strategies are interlinked and operate in tandem since the education strategy informs the empowerment strategy and vice versa, because changes in practice can inform the manner in which the education strategy is operationalised. A comprehensive description of these support strategies is provided in Chapter 9.

8.3.5 Dynamics

Dynamics, as an aspect of the survey list, is defined as the power sources (biological, chemical, physical, or psychological) driving the activity to achieve the intended goal (Dickoff et al., 1968:431). In this study, compassion, as a psychological source is used as the driver for the implementation of the support strategies to attain the intended goal/terminus. Compassion is appropriate since it speaks to the motivation of radiography educators, clinical supervisors, radiography staff, radiography students and psychologists/registered counsellors to facilitate undergraduate diagnostic radiography students' effective coping with death and dying patients during WPL through appropriate action. The appropriateness of compassion, as a psychological power source, is elucidated by mainly drawing on the work of Taylor et al. (2017), which was a concept analysis of compassion in healthcare.

According to the Merriam-Webster Dictionary (2020) compassion refers to being empathetically mindful of another's suffering whilst having an intention to mitigate their suffering. Sinclair et al. (2017:442) add that compassion is a proactive, virtuous approach to ameliorate another's suffering through relational understanding and action prompted by the individual's needs. This requires the person helping (i.e. responder) to be emotionally engaged and resilient. Using these descriptions of compassion as background, one can appreciate the work of Taylor et al. (2017) on compassion in healthcare. According to Taylor et al. (2017:353) compassion consists of five fundamental attributes. They maintain that although these attributes occur sequentially, individuals may need to move between attributes in a non-sequential fashion to address their needs at a given time. The five attributes are as follows (Taylor et al., 2017:355).

- Recognising another's suffering or distress, for example (Recognition).
- A personal connection with another individual based on genuine, authentic thought (Connection).
- A selflessly wanting to assist another person (Altruistic desire).
- Relational, human-to-human comprehension of what it is to be human (Humanistic response).
- Adopt sensitive, receptive behaviour or action (Action).

Within the context of this study, these five attributes are situated in the verbal and non-verbal communication modes that individuals use to display compassion and interest for students' experiences or feelings regarding a death and dying encounter, in the classroom or clinical setting. This should give students a sense of support since they may perceive the responder as caring about their general wellbeing without casting a judgment on the manner in which they responded, physically or emotionally, to the encounter. Students may then perceive this as comprehension and cognisance, on the part of educators, clinical supervisors, staff, peers and mental health professionals, of the impact that such an experience had or may have on a student emotionally, physically and socially. Hence, a shared connection can be fostered through shared understanding and experiences, within appropriate boundaries, to drive the implementation of the support strategies to facilitate effective coping with death and dying patient experiences during WPL by undergraduate diagnostic radiography students (Sinclair et al., 2017:442; Taylor et al., 2017:355–356). Compassion, as explicated by Taylor et al. (2017), is an appropriate driver for the implementation of the support strategies developed in this study because the strategies are based on the vantage point of shared understanding and action to mitigate the negative impact that death and dying experiences had on the participants in this study.

8.3.6 Terminus

The terminus is considered to be the endpoint of an activity. In other words, what should be or have been achieved to indicate that the goal of the activity was met (Dickoff et al., 1968:428). In this study the terminus, which should be achieved by the support strategies that were developed, is the appropriate and effective emotional and physical preparation and support of undergraduate diagnostic radiography students so that they can effectively cope with death and dying patient experiences during WPL. Figure 8.2 provides a summative cognitive map of how the conceptual framework of Dickoff, James and Wiedenbach was applied in this study.

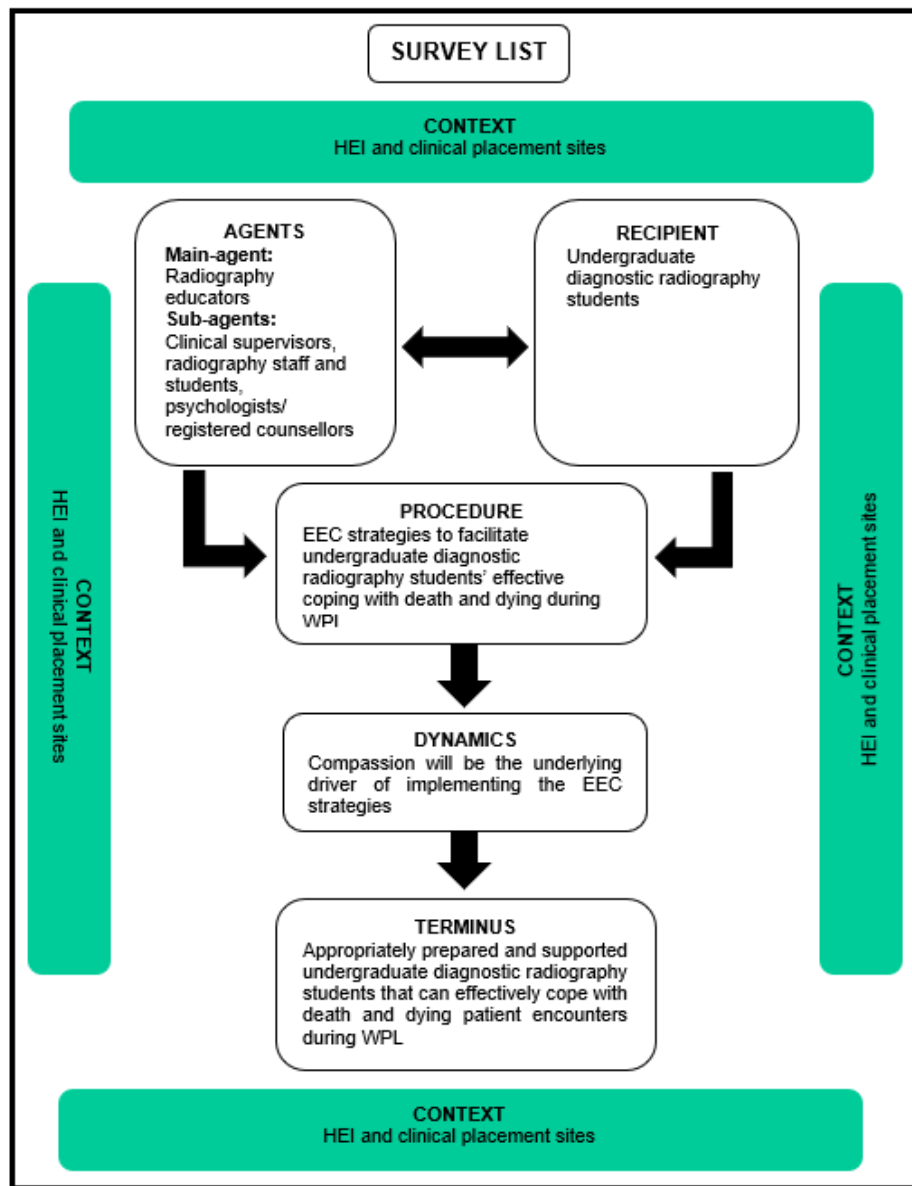


Figure 8.2: A summative cognitive map of how the conceptual framework of Dickoff, James and Wiedenbach was applied in this study.

8.4 CONCLUSION

The context underpinning the development of the support strategies to facilitate undergraduate diagnostic radiography students' coping with death and dying patients during WPL was provided. Thereafter, the conceptual framework of Dickoff, James and Wiedenbach was described. Together with this description was the justification for using this framework and how it was applied as a vantage point for the development of the education and empowerment for coping (EEC) support strategies. Multiple stakeholders, at the HEI and clinical placement sites, are required to fulfil this end goal of the support strategies and that they would be guided by a specific procedure.

A comprehensive description of the support strategies, which were developed, and the associated review process, are presented in the next chapter.

CHAPTER 9: SUPPORT STRATEGIES TO FACILITATE EFFECTIVE COPING WITH DEATH AND DYING PATIENT EXPERIENCES DURING WORKPLACE LEARNING BY UNDERGRADUATE DIAGNOSTIC RADIOGRAPHY STUDENTS

“staff well-being affects patient well-being” – Sue Robins.

9.1 INTRODUCTION

In Chapter 8 the conceptual framework of Dickoff, James and Wiedenbach (1968) was discussed and applied as a theoretical premise for the development of the support strategies as part of this study. A context to motivate the need for these strategies, based on the findings of the study, was also provided. As indicated in Chapter 8, the survey list of the conceptual framework was used to develop the EEC support strategies (cf. 8.3). In this chapter, I present the EEC support strategies that were developed. The review process that was incorporated to enhance the credibility of these strategies are also discussed.

9.2 DESCRIPTION OF THE SUPPORT STRATEGIES

The strategies are collectively known as the education and empowerment for coping (EEC) support strategies. The British phonetic pronunciation of the acronym is ee-ee-see [‘i:-i:-si]. Phonetically it is a play on *easy*. The Cambridge Dictionary (2020) defines *easy* (adjective or adverb) as a state of calmness, comfortability, free from worry or pain/suffering.

I chose this abbreviation to allude to the end goal of the support strategies to facilitate effective coping with death and dying experiences that undergraduate diagnostic radiography students encounter during WPL through education and empowerment to assist in their physical and emotional preparedness. The acronym was also driven by the dynamic underpinning the support strategies, i.e., compassion which is the empathetic act of shared understanding of someone’s distress and acting thereon to mitigate a situation to be more positive and manageable (cf. 8.3.5). The support strategies were also developed in such a manner as to (i) incorporate the experiences of and suggestions proposed by the participants, and (ii) the principle premise of the theoretical framework underpinning the study, the transactional model of Lazarus and Folkman (1984) (cf. 5), which posits that the interplay between person and environment contributes to how an individual appraises a stress experience and subsequently copes with it. The EEC support strategies are therefore directed at both the HEI and clinical placement sites, which formed the context for the support strategy development (cf. 8.3.3). Various options to achieve each of the two main support strategies are provided to address the multidimensional impact that death and dying has on student diagnostic radiographers, and to

ensure that there are different ways to assist a diverse populace of students to effectively cope with these encounters during WPL that are congruent with their needs at the specific time. The EEC support strategies comprise two main support strategies. These are further sub-divided to encompass five and four functional strategies, respectively (cf. 9.4). The aim of the strategies is for implementation by the following agents: radiography educators at HEIs and clinical supervisors, radiography staff, radiography students at the clinical placement sites, as well as psychologists/registered counsellors at the HEI and clinical placement sites (cf. 8.3.1). The recipients of the agents' actions would be undergraduate diagnostic radiography students (cf. 8.3.2).

9.3 EVALUATION OF THE SUPPORT STRATEGIES BY A REVIEW PANEL

The developed support strategies were appraised by a panel of five individuals with extensive background in diagnostic radiography, health professions education, patient engagement and methodology, respectively. Chinn and Kramer (2018:201) opine that critical reflection plays an integral part in understanding how well theory relates to practice, research or educational activities. For the support strategies to be valuable they must be relatable to members of a discipline for whom they were developed. According to Chinn and Kramer (2018:199–200) the use of critical appraisal can assist in uncovering unconscious assumptions and ambiguities that obfuscate the intention of the support strategies. Therefore, having external input may reduce the probability of this occurring; thus enhancing the rigour and practicability of these support strategies.

To determine how suitable the EEC support strategies were for their intended purpose (i.e. end-goal/terminus), namely, to facilitate effective coping of undergraduate diagnostic radiography students in relation to their encounters with death and dying patients during WPL, the review panel used the following five guiding questions that Chinn and Kramer (2018:203) propose for the evaluation of theory.

- How clear is the strategy?
- How simple is the strategy?
- How general is the strategy?
- How accessible is the strategy?
- How important is the strategy?

The use of these questions, according to Chinn and Kramer (2018:203–211), allows for identification of evaluation criteria that should be considered, to develop an evaluation rubric

(Addendum Q). I chose local, national and international reviewers in order to have a great range of inputs to enhance the credibility of the EEC support strategies in terms of being relatable for the diagnostic radiography discipline (Brouwers et al., 2013:10). The reviewers were asked to complete a demographics form which contained a confidentiality clause that they had to agree not to share, store or divulge any information pertaining to this study (Addendum R) before the draft EEC support strategies were sent to them. Upon return of the completed demographics form, the researcher sent each reviewer the evaluation rubric. They were provided with instructions on their role as a reviewer as well as the draft strategies that were developed. They had a deadline of one week to complete their review from the day that the EEC support strategies were emailed to them. Table 9.1 provides the demographics of the five reviewers in terms of their suitability as reviewers. All were deemed appropriate and suitable since they had first-hand experience and knowledge of working with radiography students who experienced death and dying patient encounters, radiography education, research methodology as well as patient engagement and advocacy related to health professions' education.

Table 9.1: Overview of the reviewers' characteristics

Demographics	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5
Occupation	<ul style="list-style-type: none"> Lecturer: Diagnostic radiography Teaching and learning development practitioner 	Clinical supervisor	Senior lecturer: Diagnostic radiography	<ul style="list-style-type: none"> Research coordinator Lecturer: Research methodology 	Author and partner in health communications company
Sector of work	University	Clinical placement training site (public sector tertiary hospital)	University	University	Health communications
Educational background	MTech: Radiography	<ul style="list-style-type: none"> BTech: Radiography ProfCert: mammography 	<ul style="list-style-type: none"> BSc (Hons) PGCert: medical imaging PGCert: higher education 	DPhil: Sociology	<ul style="list-style-type: none"> BA: English PGCert: health care admin PGCert: professional communication management
Years of experience in current role	<ul style="list-style-type: none"> Diagnostic radiography lecturer – 18.5 years Teaching and learning specialist – 1.5 years 	10 years	7 years	10 years	15 years
Current country of work	South Africa	South Africa	United Kingdom	South Africa	Canada

The review panel provided comments to consider for further refinement of the EEC support strategies. Only a single round of review was implemented since this was deemed sufficient so as to highlight any aspects that were unclear or incongruent in lieu of the intended purpose of the support strategies. Their comments and recommendations are provided below using each of the five guiding questions of the evaluation rubric as sub-headings. Their recommendations were considered and incorporated into the final version of the EEC support strategies presented in this chapter (cf. 9.4).

9.3.1 Clarity of the strategies

Considering the clarity of the EEC support strategies, all reviewers indicated that they were presented with clarity, consistency and that the strategies were easily understandable. The functional strategies for each of the two main strategies were also deemed congruent with the purpose of the main strategies. Reviewers 1 and 3 highlighted some areas that could benefit from rephrasing and reorganisation of concepts.

9.3.2 Simplicity of the strategies

All reviewers regarded the EEC support strategies to be simple, focused, and practical. The strategies are a general guide for practice. The implementation activities are provided in a manner which allows for them to be implemented in a practical manner. Reviewer 3 and 4 made suggestions to further simplify functional strategies 9.4.1.2, 9.4.2.2 and 9.4.2.3 in terms of organising the implementation activities in a logical manner and to eliminate overlap between functional strategies 9.4.1.2 and 9.4.2.2.

9.3.3 Generality of the strategies

The reviewers indicated that the scope of the EEC support strategies as a whole were sufficiently broad and could be applied to the specific situations they are designed for; they also have potential to be transferred and applied in other similar scenarios. Reviewers 1, 2 and 3 underscored that these strategies were applicable for undergraduate diagnostic radiography students as well as radiographers and other healthcare professionals. However, reviewer 1 queried the reason for the strategies focussing on diagnostic radiography instead of all of the disciplines in radiography (i.e., diagnostic, radiotherapy, nuclear medicine and ultrasound). This comment was not considered during the refinement of the EEC support strategies as this study was conducted from a diagnostic radiography perspective, and not from that of all radiography disciplines. The comment was however partially addressed since through taking cognisance of the query by reviewer 4 and I do recommend that future research should cover all radiography

disciplines (cf. 11.5). Reviewer 5 opined that the strategies have the potential to enhance the mental wellbeing of healthcare professionals and that of the experience of patients and their family in the long-term. Reviewer 4 recommended that more explicit mention be made to indicate which level of study each strategy is aimed at, as well as who the specific agent(s) are that will implement the functional strategy.

9.3.4 Accessibility of the strategies

The reviewers considered the EEC support strategies to be accessible since the relationship between the theoretical underpinnings of the strategies and their application to practice are clearly indicated. Reviewer 2 highlighted that the strategies are practically attainable. Reviewer 1 recommended limiting strategy 9.4.2.4 to students due to the power relations that would need negotiating before the strategy could be achieved in its entirety; but also appreciated the interdisciplinary approach proposed as this would give students an appreciation of their role in the workplace beyond the boundaries of radiography. The interdisciplinary approach was kept since strategies are long-term goals. Keeping this approach would make this strategy more comprehensive in terms of its proposed outcome.

9.3.5 Significance of the strategies

The reviewers were of the opinion that the EEC support strategies are significant for education, practice and research. They identified that these strategies are invaluable for undergraduate student education and training as they highlight the importance of an often neglected area in students' education and clinical training. Reviewer 3 highlighted how the strategies were interlinked to develop cognitive, psychomotor and affective domain skills that could contribute to holistic development of students in relation to managing and coping with death and dying patient incidents during WPL. Reviewers 2, 3 and 5 highlighted the important gap that these strategies could fill in terms of (i) providing educational opportunities for an area that does not necessarily get much attention in student training, (ii) facilitating optimal mental wellbeing of students in practice, and (iii) the establishment of a support culture in the clinical setting. Reviewers 1, 3 and 4 underscored the potential opportunities that the strategies bring about in terms of further research.

9.4 EEC SUPPORT STRATEGIES

This section describes the education and empowerment for coping (EEC) support strategies that were developed and refined after the incorporation of the feedback from the panel of reviewers. Table 9.2 provides a summary of the EEC support strategies. As indicated in

Chapter 8, only functional strategies were developed in this study (cf. 8.3.4). There are two main strategies and each have sub-strategies (i.e. functional strategies) to achieve the main goal of each of the two main strategies.

Table 9.2: Summary of the EEC support strategies

Main strategies (EEC strategies)	Functional strategies		Proposed outcomes
Facilitate undergraduate diagnostic radiography students' understanding of death, dying, grief and effective coping as well as patient care and management through education	9.4.1.1	Provide didactic opportunities on the theoretical and empirical perspectives underpinning death, dying, grief and effective coping to students	Knowledgeable undergraduate diagnostic radiography students that have theoretical insights about death, dying, grief and effective coping so that they will be able to draw on this knowledge base to handle these encounters effectively during WPL.
	9.4.1.2	Prepare students regarding a general protocol to follow when a patient dies or is dying in the workplace	Undergraduate diagnostic radiography students who are prepared for the possible roles that they will be expected to fulfil in the workplace during death and dying patient experiences.
	9.4.1.3	Develop simulation learning experiences to emotionally and physically prepare students to manage and cope with death and dying patient experiences	It is envisaged that undergraduate diagnostic radiography students will have the knowledge, skills and emotional capacity to effectively cope with death and dying patient experiences in a clinical environment.
	9.4.1.4	Cultivate and develop students' reflective and reflexive practice	It is envisioned that undergraduate diagnostic radiography students would have the capacity to manage death and dying incidents they encounter during WPL in relation to their specific needs at the particular time and that the knowledge and skills gained, related to reflective and reflexive practice, will be transferred to future action taken in similar incidents.
	9.4.1.5	Develop opportunities to reinforce learning to ensure students are up to date with the most recent developments and skills to manage death and dying patient incidents during WPL	It is envisaged that students will be able to use the most recent evidence and practices available to effectively cope with death and dying patient encounters during WPL.
Develop a support culture, for undergraduate diagnostic radiography students, through empowerment to facilitate coping with death and dying patients	9.4.2.1	Identify the support services available to undergraduate diagnostic radiography students at the HEI	Undergraduate diagnostic radiography students will be aware of the support services available to them and be referred for appropriate support related to their specific needs.
	9.4.2.2	Orientate undergraduate diagnostic radiography students regarding the workplace specific protocols and procedures related to	It is envisaged that undergraduate diagnostic radiography students will have the capacity to effectively manage death and dying patient encounters in accordance with clinical training site

		death and dying patient incidents	protocols and procedures following the orientation process.
	9.4.2.3	Provide opportunities for taking time-out to process death and dying patient experiences immediately after the incident	Undergraduate diagnostic radiography students are given time and space to process and reflect on the incident to inform future practice and moving forward from the incident whilst maintaining optimal wellbeing.
	9.4.2.4	Create regular debriefing sessions in the radiography department for staff and students to share their work experiences and how to manage these experiences	The envisioned proposed outcome for this strategy is to establish a supportive workplace culture built on mutual sharing and learning to facilitate effective coping with death and dying patient experiences by undergraduate diagnostic radiography students during WPL.

The EEC support strategies are presented in full using the following organising sub-headings, in line with the conceptual framework of Dickoff, James and Wiedenbach (1968) discussed in Chapter 8 (cf. 8.3).

- Background information
- Rationale
- Proposed outcome
- Implementation activities

The strategy development, in the main, was informed by the participants' narratives provided in Chapter 7. Literature were used to further support the participants' voices and to justify the propositions entailed in the EEC support strategies.

9.4.1 Facilitate undergraduate diagnostic radiography students' understanding of death, dying, grief and effective coping as well as patient care and management through education

According to the Oxford Advanced Learner's Dictionary (Hornby, 2015:477), education is a process of teaching, training and learning to improve knowledge or develop skills in a specific field or discipline usually offered by a university or college. In this study, education pertains to the strategies that radiography educators can use to assist students to acquire the knowledge and skills to understand death, dying, grief and effective coping in relation to patient care and management of dead and dying patients during WPL. Five functional strategies that form part of this main strategy to achieve its goal are presented below.

- Provide didactic opportunities on the theoretical and empirical perspectives underpinning death, dying, grief and effective coping for students.

- Prepare students regarding a general protocol to follow when a patient dies or is dying in the workplace.
- Develop simulation learning experiences to emotionally and physically prepare students to manage and cope with death and dying patient experiences.
- Cultivate and develop students' reflective and reflexive practice.
- Develop opportunities to reinforce learning to ensure students are up to date with the most recent developments and skills to manage death and dying patient incidents during WPL.

Each of these functional strategies are discussed in the five sub-sections presented below.

9.4.1.1 Provide didactic opportunities on the theoretical and empirical perspectives underpinning death, dying, grief and effective coping for students

➤ Background information

Participants indicated that they felt ill-prepared to cope with death and dying patient encounters during WPL. They further indicated that they were not well-informed on using the information that medical devices provide to detect whether a patient is in distress and having a cardiac arrest (cf. 7.4.5). They also indicated that each experience was seen as a learning opportunity since they appreciated that they were still learning and developing (cf. 7.4.1.3 & 7.4.2.2). They recommended that efforts to enhance their understanding of death and dying, including associated facets like effective coping, should be addressed in the current curriculum. Literature highlights the lack of attention of this topic in the current health sciences curricula (Sikstrom, Saikaly, Ferguson, Mosher, Bonato & Soklardis, 2019:6; White, 2017:S39). Moores et al. (2007:942) underscore that an undergraduate curriculum is one of the most appropriate places to teach students about death and dying and to provide them with learning opportunities, and to this end many strategies are proposed by literature (cf. 4.5; Sikstrom et al., 2019:8–9). This gives students the chance to process the theoretical underpinnings related to this area of work (Kemp et al., 2019:1; Costello, 2001:59). The need to have constructive alignment between the theoretical and WPL curricula is imperative since all learning experiences that students may encounter in the workplace should be catered and planned for in an integrated fashion to ensure that students can function, cope and adapt to a dynamic work environment (cf. 2.4.3.5; Watts, 2007:267). The implementation activities for this functional strategy should span across the four-years of study in the degree programme to continuously reinforce teaching and learning of previous years.

➤ Rationale

Provide undergraduate diagnostic radiography students opportunities to gain a comprehensive grasp of the theoretical underpinnings pertaining to death, dying, grief and effective coping.

➤ Proposed outcome

Knowledgeable undergraduate diagnostic radiography students that have theoretical insights about death, dying, grief and effective coping so that they will be able to draw on this knowledge base to handle these encounters effectively during WPL.

➤ Implementation activities

The following procedures need to be followed by radiography educators to achieve the proposed outcome.

- Present lectures on the theories underpinning death, dying and grief, as well as effective coping. Topics can include:
 - Definitions of death and dying
 - Causes of death and terminal-illness
 - Areas where one would expect to encounter these incidents
 - The processes posited by theories on how individuals grieve
 - The religio-cultural stances regarding death and dying
 - An explanation of coping, differentiating between different groups of coping mechanisms, and what is considered healthy ways to cope with traumatic and stressful experiences like death and dying
 - Emotion regulation and emotional intelligence
 - Identify signs and symptoms indicating that a person is traumatised and/or grieving
 - Family centred care and delivery bad news
- Educate students on the use of the multiparameter patient monitor that displays information about a patient's vital parameters, namely: heart rate, respiration rate, blood oxygen saturation levels, and blood pressure (Vaijeyanthi et al., 2014:19) to identify when patients are in distress or are having a cardiac arrest episode.
 - Students should also be educated on the normal and abnormal limits of these patient monitoring parameters so that they can take appropriate and timely action.
- Develop opportunities for students to engage with a predetermined list of published research so that they can synthesise how radiographers experience and cope with death and dying in a clinical setting. This can be done as a preparation activity for a facilitated discussion.

- Facilitate classroom discussions focussing on students' lived experiences during WPL. Then support the students to integrate their experiences with the theory provided so as to assist them to understand their experiences from a theoretical perspective and integrate these theoretical perspectives with their lived experiences as a means to process and make sense of their experiences.
- Have a guest speaker or more than one address students about their experiences and coping with death and dying patients in the workplace or clinical setting (Johnson & Jackson, 2005:442).
 - A guest speaker could be radiographers, other healthcare professionals or even a patient's adult significant other who are willing to take up this opportunity
 - Students are to be reminded that the experiences shared are personal and that their own experiences and coping may differ
 - Give students the opportunity to engage with the guest speaker by having a question and answer session included to gain deeper insight into the individual's experiences and coping
- Refer any students that may become distressed during these didactic opportunities to the student counselling services at the higher education institution for debriefing, if the need arises.
- Compile a list of useful resources that students can use, for future reference, to further enhance their understanding of death, dying, grief and effective coping.

9.4.1.2 Prepare students regarding a general protocol to follow when a patient dies or is dying in the workplace

➤ Background information

Protocols outline the rules and behaviours that individuals are required to follow during certain situations in the workplace so as to manage the incident optimally (Cambridge Dictionary, 2020). In Chapter 1, death was conceptualised as the instance of loss of life; dying was considered to indicate a patient that is terminally ill or near death (cf. 1.9). Considering this study's context, students should be sensitised to the protocols used in the local hospitals to manage death and dying incidents so as to enable them to have a broad idea of what their possible roles would be during these incidents in a clinical environment. This proposed strategy was informed by the participants' views insofar that they felt that they were not well-informed about physical protocols that need to be followed when encountering these incidents. The only way they can participate in managing these incidents is when they are told to do one specific

action, under stressful conditions. Literature underscores that workplace acculturation can have a negative influence on student learning and therefore the taught curriculum should make allowance to ensure that this set of skills, knowledge, attitudes, values and behaviours are covered so that student are prepared for the demands and expectations of a working environment (White, 2017:S41; Billet, 2016:126; Anderson et al., 2008:1230). This can be potentially covered by radiography educators during the second year level of study in the degree programme since students spend more time at the clinical placement sites.

➤ Rationale

This strategy aims to provide students with a broad overview of the possible procedures involved in managing death and dying incidents in the workplace.

➤ Proposed outcome

Undergraduate diagnostic radiography students who are prepared for the possible roles that they will be expected to fulfil in the workplace during death and dying patient experiences.

➤ Implementation activities

The following procedure is proposed.

- Discuss the main purpose of managing death and dying patient incidents.
- Indicate who should be informed of the incident and the procedure of how this should be done.
 - Identify the individuals that must be informed
 - Identify the modes of communication that should be used and provide the relevant speed dials and email addresses where appropriate
- Identify the specific expected roles of different role-players during these incidents and how the role-players should go about fulfilling these roles.
- Identify where emergency equipment, which may be necessary during these incidents can be retrieved from.
- Outline the documentation to be completed.
- Create opportunities for students to compile an incident report.
 - Provide examples of the prescribed forms to be used
 - Identify the required information that must be included on the forms
 - Provide examples of incident reports of an mock scenarios
 - Provide mock scenarios and allow students to write a complete incident report

9.4.1.3 Develop simulation learning experiences to emotionally and physically prepare students to manage and cope with death and dying patient experiences

➤ Background information

The participants alluded to being emotionally and physical ill-prepared and that there was a lack of support to effectively manage and cope with death and dying patient experiences during WPL. They did however acknowledge that being exposed to these experiences whilst in the clinical environment increased their confidence and comfortability of dealing with these incidents whilst learning from them (cf. 7.4.1.3). They indicated that they are however not given any opportunity to process and learn from these experiences and this then evoked negative emotions and feelings (cf. 7.4.1.4 & 7.4.2.3). This gap in the current curriculum at the research site is acknowledged (cf. 2.8). Billet (2001b:213) maintains that students should be given opportunities to motivate active participation during learning experiences by providing them occasions where they can integrate theoretical knowledge within a workplace setting. These learning activities should be authentic and representative of requirements and expectations of a workplace (Billet, 1995:23). To this end, simulation, which imitates real-life incidents, is advocated as an useful educational strategy to create safe and authentic learning environments to facilitate students learning and teaching of adverse events, like death and dying (Nestel & Gough, 2018:176; Shiner, 2018:262). This will assist students to gain insights as to what to expect during death and dying incidents (Allie et al., 2018:6–7). Øgård-Repål, De Presno and Fossum (2018:156–157) found in their integrative literature review that simulation-based learning experiences facilitated improved preparation of students for practice by increasing their confidence and awareness and reducing their fear and anxiety levels. Shiner (2019:299) found that simulation among first year radiography students facilitated sense-making of the learning experience and subsequently reduced students cognitive load, burnout and emotional labour associated with traumatic incidents, such as open wounds. Noteworthy is that simulation-based education can be costly to implement (Nestel & Gough, 2018:181). For simulation to be effective, the learning activity must be pre-planned and structured according to a set of learning outcomes so as to be able to objectively assess whether these learning outcomes have been met through debriefing and follow-up assessments (Nestel & Gough, 2018:177). Radiography educators should therefore implement various scenarios across the four years of the degree programme starting with basic scenarios during first year and more complex scenarios from the second year onwards.

➤ Rationale

The underpinning rationale for this strategy is to create conducive learning environments to prepare and support undergraduate diagnostic radiography students physically and emotionally to manage death and dying experiences during WPL.

➤ Proposed outcome

It is envisaged that undergraduate diagnostic radiography students will have the knowledge, skills and emotional capacity to effectively cope with death and dying patient experiences in a clinical environment.

➤ Implementation activities

To achieve the proposed outcome of this strategy, the following procedures are put forth (Nestel & Gough, 2018:183–184; Shiner, 2018:262):

- Secure adequate funding to acquire the required infrastructure, equipment, accessories and consumables to facilitate simulation-based education.
- Motivate for the employment of appropriately trained personnel, in conjunction with management and human resources structures, to assist in implementing simulation-based activities that were developed and managing the simulation laboratory.
- Develop a standardised protocol for planning and optimised implementation of simulation-based learning activities by using theoretically grounded didactic approaches and frameworks. These protocols could include information about the following.
 - Outline the learning outcomes to address learning needs and clinical skills to be developed
 - Brief all role-players involved in the activity of the logistics, purpose and learning outcomes related with the activity
 - Implement the activity
 - Provide an opportunity for constructive feedback
 - Provide an opportunity for debriefing and reflection
 - Identify procedures to be followed in the event that students become distressed or overwhelmed during the simulation activity
 - Provide topics appropriate for low- and high-fidelity simulation learning activities
- Integrate simulation-based education in the theoretical curriculum.
 - Implement simulation scenarios to achieved pre-determined learning outcomes
 - Implement simulation-based activities that constructively aligns theory and practice
- Devise a plan to ensure sustainability of simulation-based education learning activities.

- Measure the impact of simulation-based education activities employed over time for quality improvement purposes.
 - Use of student evaluations of the simulation-based activities
 - Radiography educators and other personnel observations
 - Regular review of prepared scenarios by appropriately trained and knowledgeable personnel

9.4.1.4 Cultivate and develop students' reflective and reflexive practice

➤ Background information

Schön (1984:50) explains that the basis of being reflective practitioners is that professionals think about what they are doing whilst doing it. It is during this process that they would reflect on their embodied knowledge and understandings due to critiques they received or from observations made of their actions, which in turn guides future action. Williams, Woolliams and Spiro (2012:3) maintain that reflection is a purposeful activity that drives learning and change. Le May and Holmes (2012:141) maintain that reflection requires one to critically review what one has done so as to identify ways to do it differently or improve on in future. According to Aubrey and Riley (2016:142) reflection helps professionals to learn from and address complex incidents in the workplace. Therefore, Schön's work brings to the fore the need for contextualised and reflective teaching and learning within health professions education (Lawrence-Wilkes & Ashmore, 2014:12). Hence, students must be given the opportunity to critically question and evaluate their own professional practices so as to continuously develop their practices and professional identity (Shaw et al., 2018:107–108) to adapt and perform optimally within a professional diagnostic radiography context. Hence, this calls for both reflective and reflexive practice cultivation. Reflective practice entails student reflection on what they have learnt and what this means to them; reflexive practice refers to the students considerations of the implications of their learning on the wider professional context they find themselves in (Mathers, 2019). Cultivating these practices may assist to mitigate the aggravating factors and negative affective responses that the participants highlighted in this study (cf. 7.4.1.4 & 7.4.2.3) insofar that they will be able to identify the stimulus for the negative experience and then come up with ways to manage the encounters differently in future. This strategy is to be implemented by radiography educators across the four years of study of the degree programme in the classroom setting and incorporated in the clinical practice (i.e., workplace learning) modules.

➤ Rationale

The rationale for this strategy is to cultivate reflection among undergraduate diagnostic radiography students so that they can develop personalised problem-solving skills aligned with their unique needs related to a specific death and dying incident they encountered during WPL so as to guide future action they take.

➤ Proposed outcome

It is envisioned that undergraduate diagnostic radiography students would have the capacity to manage death and dying incidents they encounter during WPL in relation to their specific needs at the particular time and that the knowledge and skills gained, related to reflective and reflexive practice, will be transferred to future action taken in similar incidents.

➤ Implementation activities

The following procedures are suggested to develop reflective practice and reflexivity in the classroom setting.

- Discuss the importance of reflective and reflexive practice in everyday life and radiography, with a focus on death and dying incidents.
- Identify possible practical methods that can be used to implement reflection with reference to its advantages, disadvantages and how to adopt the method.
- Provide guided, critical self-reflection opportunities for students to evaluate their competencies, experiences they had and how to optimally handle similar situations (Bleiker et al., 2016:260; Fragkos, 2016:11; Smith et al., 2016:1; Adamson & Dewar, 2015:155).
 - This can be done in the classroom setting or can be activities to be completed as part of students' workplace learning modules.
 - Clarify the expectations from students at the start of the learning activity prior to and on the day that the activity takes place.
 - Use a variety of teaching strategies to cater for a diverse student population.
 - Use a structured reflective writing framework through reflective journaling or autobiographical essays
 - Present a critical incident to their peers
 - Use role-plays to depict a specific death and dying related incident, and have peers observe one another and critique each other and suggest improvements or changes to actions

- Use videos and have guided discussions where students share their views on the incident portrayed and identify what they would have done in a similar scenario
- Debriefing with students should be considered after the learning activity to provide any support that may be required.

9.4.1.5 *Develop opportunities to reinforce learning to ensure students are up to date with the most recent developments and skills to manage death and dying patient incidents during WPL*

➤ Background information

The participants in this study suggested that theoretical education should be reinforced over time since they may have forgotten the theoretical underpinnings of a particular clinical skill or procedure (cf. 7.4.5). Adopting a lifelong learning philosophy is expected from healthcare professionals (HPCSA, 2017:2). This enables healthcare professionals to remain up to date with the latest developments, techniques and evidence-based practices in their respective disciplines, especially because healthcare is an ever-changing environment in terms of models of care, equipment and treatment options, for example (HealthStream, 2018:para 2). Therefore, learning opportunities for undergraduate students that will reinforce and support their learning should be considered on a continuous basis across the four levels of study of the degree programme. This strategy is directed for implementation by radiography educators and clinical supervisors.

➤ Rationale

The rationale for this functional strategy is to provide an enabling environment to ensure students have the most recent knowledge about methods of handling death and dying patient incidents.

➤ Proposed outcome

It is envisaged that students will be able to use the most recent evidence and practices available to effectively cope with death and dying patient encounters during WPL.

➤ Implementation activities

The following procedures are proposed to achieve the outcome of this strategy.

- Radiography educators and clinical supervisors direct or provide students with new evidence on methods to cope with death and dying patient encounters
 - Clinical supervisors inform students of updates to the protocols and procedures in managing these incidents at the clinical training site

- Radiography educators arrange seminars and/or workshops, provided by industry, families, terminally ill patients or academic stakeholders, for students to gain knowledge on developments in coping and managing death and dying incidents in the workplace

9.4.2 Develop a support culture, for undergraduate diagnostic radiography students, through empowerment to facilitate coping with death and dying patients

Page and Czuba (1999) define empowerment as a multidimensional social process that enables individuals to take control of situations and their lives in lieu of things they regard as important to them and their communities. Therefore, there is a relationship among different individuals to achieve control over a phenomenon of interest to better and more confidently deal with it. To achieve this, a supportive environment and culture is required in the specific context of relevance. For the purpose of this study, the supportive environment is the clinical placement site where students conduct their WPL as well as the HEI where students are enrolled for the diagnostic radiography programme, and where lectures and clinical tutorials and other work-integrated learning take place. Empowerment in the context of the EEC support strategies refers to the enabling processes that can be put in place to assist undergraduate diagnostic radiography students to cope effectively with death and dying patient experiences during WPL. To this end, the following four functional strategies are put forth as part of this main strategy to develop a support culture.

- Identify the support services available to undergraduate diagnostic radiography students at the HEI.
- Orientate undergraduate diagnostic radiography students regarding the workplace specific protocols and procedures related to death and dying patient incidents.
- Provide opportunities for taking time-out to process death and dying patient experiences immediately after the incident.
- Create regular debriefing sessions in the radiography department for staff and students to share their work experiences and how to manage these experiences.

9.4.2.1 Identify the support services available to undergraduate diagnostic radiography students at the HEI

➤ Background information

Support services refer to ancillary services and resources aimed at providing assistance to individuals to manage a particular situation (Oxford English Dictionary, 2020). For the purposes of the EEC support strategies these support services encompass services offered by the student counselling or advisory unit at a HEI where students are enrolled so as to assist students to process difficult situations they may face during the course of their academic programme. This strategy was informed by the participants' suggestion regarding the establishment of a support culture within the context in which WPL is conducted. As explained in Chapter 8 (cf. 8.3.3) both the HEI and clinical placement site becomes the context due to the interrelationship between the two functional areas in the education and training of students. It can therefore be argued that there is a responsibility to ensure optimal student development from both the HEI and clinical placement site. This functional strategy is to be implemented by radiography educators at the HEI where students are enrolled.

➤ Rationale

The rationale for this strategy is to inform students about the support services available to them whilst a registered student at the HEI, as well as to refer students for the most appropriate support service to address their needs.

➤ Proposed outcome

Undergraduate diagnostic radiography students will be aware of the support services available to them and be referred for appropriate support related to their specific needs.

➤ Implementation activities

To achieve the outcome of this strategy, the following procedure could be implemented.

- Indicate to students where information about the support services on offer by the HEI can be found, for example by providing a web address for the online page or a physical brochure.
- Highlight the procedures to follow to access these support services at the HEI.
- Inform students about the level of support that can be provided by the radiography educators themselves before referral is made to the student counselling or advisory unit, or if a student feels uncomfortable being referred to such unit.
- Refer a student for support at the student counselling or advisory unit, if they agree to such referral being made.
 - Actively listen to a student's challenges and/or concerns without judgement.

- Discuss possible support services that are appropriate for a student's needs.
- Allow a student to choose the discussed support services that they are most comfortable with pursuing.
- Make the necessary referral agreed upon through the appropriate referral protocol.

9.4.2.2 Orientate undergraduate diagnostic radiography students regarding the workplace specific protocols and procedures related to death and dying patient incidents

➤ Background information

The participants indicated that they were not familiar with the specific protocols and procedures that are in place at the clinical placement sites and that should be followed when they encounter a death or dying patient incident during WPL. Orientation entails the provision of information and/or training that new employees are given when they start a new role at an organisation (Hornby, 2015:1055). Orientation is beneficial for new employees since they are provided with succinct and accurate information to boost their comfortability and confidence within the new working environment, and it leads to faster adaptation by an employee and optimal work performance, and promotes communication between employers/supervisors and employees (Oregon State University: Office of Human Resources, 2020). Undergraduate diagnostic radiography students are not employees at the clinical placements sites in the general sense of the term because they are not paid by an employer for their experiential learning services rendered at the clinical placement site (Hornby, 2015:489). Nonetheless, undergraduate diagnostic radiography students must still be orientated to effectively integrate within the radiography department's workflow, policies, procedures and protocols so as to optimally learn whilst performing clinical tasks. Therefore, clinical supervisors, with input from heads of department at the clinical training sites, should orientate students to the protocols and procedures of the specific clinical training site so that they know what to do in cases of death and dying in a clinical setting. This will empower the students to effectively handle these encounters and allow for implementation of the theory taught, as proposed in the previous functional strategy (cf. 9.4.1.2). Students may also feel supported in their learning with the implementation of an orientation programme. This strategy should be implemented by clinical supervisors at the clinical placement site.

➤ Rationale

The intent of this functional strategy is to provide an empowerment opportunity for students to be informed about the clinical training site specific protocols and procedures to follow when they encounter death and dying incidents.

➤ Proposed outcome

It is envisaged that undergraduate diagnostic radiography students will have the capacity to effectively manage death and dying patient encounters in accordance with clinical training site protocols and procedures following the orientation process.

➤ Implementation activities

In line with the rationale and outcome of the strategy the following procedures are proposed.

- The development of a structured orientation session(s) for students regarding death and dying protocols at the respective clinical training sites where they are placed for WPL.
- Orientation should be done in the first week of clinical placement and reinforced regularly (e.g., annually or bi-annually) during each year of study.
- Demonstrate the physical location of all equipment, consumables and accessories that may be required during these incidents.
- Encourage students to ask clarifying questions and ensure all understand the protocols and procedures.
 - Understanding can also be ascertained by asking students questions related to the protocols and procedures if there are not questions forthcoming from them.
- Provide a hard copy of the protocols and procedure to students.
- Orientation session(s) must be mandatory for all students.
- Identify the support services available to process these incidents, and the procedures to follow to access these support services.
 - Indicate the type of support service available.
 - Identify the individual providing the support service (e.g., whether it is a psychologist or registered counsellor).
 - Provide the referral or appointment scheduling procedure.
 - Discuss the students' expectations when accessing these services.
- Encourage students to report these incidents to the clinical supervisor so that appropriate actions of support can be taken in a timeous manner.

9.4.2.3 Provide opportunities for taking time-out to process death and dying patient experiences immediately after the incident

➤ Background information

Participants indicated that experiencing death and dying patients during WPL was more negative because they had no time to process these encounters (cf. 7.4.2.3). Literature ascribes this to the taboo-ist attitudes towards adverse events in the workplace where it is perceived as being disgraceful and a sign of weakness if a professional grieves about patients. This, for example, can lead to poorer patient-practitioner relationships, compassion fatigue, burnout, post-traumatic stress and professional negligence (cf. 4.3.2; Shute, 2019; Robins, 2019; Davies, 2016:i5597). Hence, having time-out occasions could facilitate student learning and processing of these experiences that may influence their future professionals practice (cf. 2.4.3.1). The strategy should be implemented by radiography educators, clinical supervisors, and radiography staff that work with a student that was involved in such an incident, as well as the employee wellness mental health practitioner.

➤ Rationale

The purpose of this functional strategy is to provide students time and space to reflect and process the death and dying patient encounter in an individualised manner until such time that referral to a mental health professional is appropriate according to the clinical training site's protocol.

➤ Proposed outcome

Undergraduate diagnostic radiography students are given the time and space to process and reflect on the incident to inform future practice and moving forward from the incident whilst maintaining optimal wellbeing.

➤ Implementation activities

To achieve the outcome the following procedures are recommended.

- Develop a procedure that radiography staff and students can use to report a student that have encountered a death or dying patient experience to the clinical supervisor.
 - Educate staff and students on the signs and symptoms to look out for to identify this in students.
- The clinical supervisor should arrange a meeting with the grieving student.
 - The clinical supervisor informs the student about the purpose of the meeting and allows he student to respond and share their views.
 - The clinical supervisor discusses the need for the student to be assessed by the employee wellness mental health practitioner.

- Following the initial meeting between the student and clinical supervisor, the student should be referred to the employee wellness mental health practitioner for formal counselling as they may be in a position to benefit from such service at this time (Hamilton & Dinat, 2006:119).
 - Usually done 48 hours after the incident.
 - The student is then responsible to take heed of recommendations of the employee wellness mental health practitioner for the way forward.
- The recommendations, if any, from the employee wellness mental health practitioner should be conveyed to the clinical supervisor by the student and efforts made to implement the recommendations.
- The clinical supervisor should also inform the radiography educators in charge of clinical placement at the HEI for record purposes, and possible further support when the students are off the clinical platform attending theory lectures.
 - The radiography educator in-charge of clinical placements liaises with the student to establish their support needs and then discusses how these could possibly be addressed.

9.4.2.4 Create regular debriefing sessions in the radiography department for staff and students to share their work experiences and how to manage these experiences

➤ Background information

Keene, Hutton, Hall and Rushton (2010:189) highlight in their research that debriefing is an effective way of workplace support for healthcare professionals to enable them to process their grief experiences following the loss of a patient. Debriefing is defined as a critical, systematic review of an event after it has occurred or a task has been completed, through questioning and reflection (Merriam-Webster Dictionary, 2020; Keene et al., 2010:189). Literature maintains that debriefing provides students an opportunity to translate distressing experiences into meaningful learning experiences where they can learn from one another and other staff in a clinical setting (Smith-Han et al., 2016:1; Ek et al., 2014:509). In this study the participants identified that they had little to no support to process and learn from death and dying experiences that they encounter during WPL and alluded to their learning taking place through observations of staff's actions and behaviours (cf. 7.4.2.2 & 7.4.2.3). The participants further highlighted that they were not always comfortable sharing their experiences and seeking assistance because they feared being seen as weak (cf. 7.4.2.3 & 7.4.5). Thus, having debriefing sessions where students and staff share their experiences with death and dying in the working environment

can contribute to establishing camaraderie and connected relationships representative of collegial support and empathy for each other's experiences. This strategy would be implemented by clinical supervisors, radiography staff that students work with as well as other radiography students at the clinical training site.

➤ Rationale

The purpose of the strategy is to develop a support culture in the workplace where there is mutual sharing of and learning from others' experiences as a means to inform practice and develop an understanding for varied ways in coping with death and dying incidents in the clinical environment.

➤ Proposed outcome

The envisioned proposed outcome for this strategy is to establish a supportive workplace culture built on mutual sharing and learning to facilitate effective coping with death and dying patient experiences by undergraduate diagnostic radiography students during WPL.

➤ Implementation activities

To achieve the proposed outcome of this functional strategy the following procedures become important for consideration.

- Clinical supervisors to motivate for the establishment of structured debriefing sessions through the head of the department.
 - Get staff buy-in.
 - Clinical supervisors can explain the purpose to qualified and student radiographers in a staff meeting.
- Develop a policy statement on the purpose of the student debriefing sessions.
 - Inform all staff and students of the policy statement.
 - Indicate how the debriefing sessions will be conducted and structured.
 - Indicate when these debriefing sessions will take place and where.
- All staff and students that were involved with the particular patient's care should be invited to attend these debriefing sessions.
 - Other staff and students who are interested in the case should be allowed to join the discussion as they may be able to provide outsider perspectives as they have not have interacted with the specific patient.
 - If students are not comfortable with a group debriefing session approach then individual, one-on-one debriefing sessions should be considered possibly between the student and clinical supervisor.
- The debriefing session can be structured around the following discussion points (Keene et al., 2010:186).

- Welcome, and possibly, introductions in terms of each individual's role during the incident being discussed.
 - Provision of information surrounding the circumstances of the patient's death.
 - Participants share how they experienced managing the patient and incident.
 - Grief and affective responses are shared.
 - Establish how the individuals are taking care of themselves in order to cope with the incident.
 - Discuss lessons learnt from the experience and their implications for future practice.
 - Conclude the session and provide a summary of take away points.
- The debriefing sessions could potentially be expanded to become interprofessionally orientated so that different professionals can learn from one another to establish a support culture throughout the hospital since students also interact with other staff during ward and theatre radiography.
 - Radiography staff and students should be encouraged to set up self-directed more informal debriefing initiatives for their own purposes and learning on an ad hoc basis when they feel the need arises.

9.5 CONCLUSION

The education and empowerment for coping (EEC) support strategies were developed using the conceptual framework of Dickoff, James and Wiedenbach. The overarching aim of the support strategies is to facilitate effective coping with death and dying patient experiences during workplace learning by undergraduate diagnostic radiography students. To this end two main support strategies were developed, comprising five and four functional strategies, respectively. A panel of five reviewers used criteria proposed by Chinn and Kramer to evaluate the clarity, simplicity, accessibility, generality and significance of the EEC support strategies. The reviewers were experienced in radiography education, research, clinical education and patient engagement. Their recommendations were taken on board, where applicable, to refine the EEC support strategies which resulted in the version presented in this chapter.

The next chapter provides my personal reflections to demonstrate and extension of my learning along this doctoral journey.

CHAPTER 10: REFLECTIONS ON THE DOCTORAL JOURNEY

“vulnerability...the emotion we experience during times of uncertainty, risk and emotional exposure” – Brené Brown, Dare to lead.

10.1 INTRODUCTION

In Chapter 9 the proposed strategies to support undergraduate diagnostic radiography students to effectively cope with death and dying patient experiences during WPL, based on the conceptual framework were described (cf. Chapter 8) of Dickoff, Wiedenbach and James. Collectively these are known as the education and empowerment for coping (EEC) support strategies. They comprise nine functional strategies that can be implemented by various, identified stakeholders, to facilitate effective coping among undergraduate diagnostic radiography students when they encounter death and dying patient incidents in the clinical setting.

Some personal reflections about my learning along the doctoral journey are presented in this chapter. Where appropriate I link my discussion with my philosophical assumptions and position statement outlined in chapter 1 (cf. 1.10). My position statement in chapter 1 focussed more on the study itself. The purpose of this chapter is to demonstrate that there was personal learning beyond the study. I reflect on six lessons learnt.

10.2 LIFELONG LEARNING

During the completion of this doctoral study I had to read widely and often beyond the limits of diagnostic radiography. Psychological and educational discourse greatly intersected with the work of this thesis. Therefore, I had to learn these new discourses and gain understanding thereof so that I was able to make sense of the data and the findings of this study. For me this aligned with my lifelong learning philosophy in that one should never stop exploring new knowledge, even if it is beyond the direct boundaries of one's own discipline. The new knowledge gained has opened new avenues to further explore the phenomenon studied in this thesis from different perspectives, which I had not thought of when I embarked on this doctoral journey. I consider myself privileged to have had the assistance and support of an interdisciplinary supervisory team and to have connected with other researchers globally through social media or networking at conferences and workshops.

The process of completing this doctoral degree was not smooth sailing. It came with its fair number of peaks and troughs. There were many points in time where I lost all will, motivation

and confidence to carry on. However, once an idea crystallised in my head, I was able to move forward. This reminded me of what Kiley (2009:295) describes as a liminal state – the period when you feel stuck before you cross the particular threshold concept. For me, it may also have been about the expectations I had placed on myself and those implicitly imposed on me by being in academia, which can lead to fear failure and disappointment. However, I realised after completing a short course on supervision for supervisors that the liminal state is necessary as part of the learning journey since it facilitates the process in one becoming a researcher and doctor and learning about yourself in relation to your abilities. Support from peers, social media acquaintances, and my supervisors were crucial to help me out of these troughs.

Lastly, this study also clarified a great deal of my own experiences as a diagnostic radiographer with incidents of patient death and terminally ill patients. I neither had the vocabulary nor cognitive resources to express how I coped or experienced these incidents in the workplace nor did I have knowledge of the underlying factors that influence this. In this sense, I did learn about my own grieving processes whilst I was in practice before entering academia.

10.3 INTERDISCIPLINARY SUPERVISORY TEAM

The value of appropriate assistance and support to complete a research study of this nature and magnitude cannot be denied. It was difficult to navigate the different disciplinary content that I was not familiar with at the start of the doctoral journey. But part of the success of this work is due to having an interdisciplinary supervisory team, where one supervisor had radiography and professional education expertise and the other expertise in psychology. I was comfortable with most of the radiography and education content, due to my education, but psychological discourse was a new realm for me. I am therefore of the view that when one embarks on a doctoral study one should at the start be aware of possible disciplinary intersections and attempt to get supervisors with the necessary expertise. You then have the resources at your disposal to be supported in making sense of and being able to navigate the literature as well as being guided to access particular resources. What further assisted me was that my supervisors were from two different universities which gave me access to different, yet complementary, research perspectives and styles. This helped me to learn how the same result and goal can be achieved using different points of view, since each supervisor brought to the journey their own unique contributions.

10.4 TALK WHILE YOU WALK: THE POWER OF SOCIAL MEDIA AND NETWORKING

It is important to talk to people along your doctoral journey and to ask for help when you need it. We are not expected to know everything when we engage with doctoral work, even if it sometimes feels like we have to. My supervisors were my port of call when I had some idea about sections of my thesis and research and needed guidance. However, I learned early in the journey that speaking to people external to the study could help clarify a lot of gaps in your thought process to which you and your supervisors may have a blind spot due to immersion in the work. Twitter, conferences, informal conversations with colleagues at my university and other universities, helped to make the doctoral journey less lonely. You get a sense of belonging and comfort to know that you are not the only one struggling with a certain concept or section in the thesis. People external to the study can also guide you to pertinent resources that you may not be aware of, which further enriches your experience and quality of your work. In addition, especially on Twitter, you can get access to resources directly from authors which you would otherwise not have been able to do. Hence, I advise any person to join Twitter for professional reasons and connect with prominent individuals in your field. The power of social media to remain focused and motivated throughout the doctoral journey is understated. These views may work for me since I believe knowledge is socially situated and collaboratively constructed, and I recognise that it may not be ideal for others that do not hold these worldviews about learning. Equally, talking to people continuously gives you unsolicited peer review opportunities to give you a sense of how others in your discipline receive this new knowledge and how they can relate to it. This further assists in enhancing the quality of your work.

Furthermore, knowing senior individuals in your discipline can assist you to gain historical information that is not documented anywhere. The only way to get this is through personal lived accounts. I found this enlightening as it enabled me to understand the current practises in and structures of my profession and discipline. I believe without this information, I would have made inferences in this study that would have been inaccurate, and perhaps even inappropriate.

10.5 VICARIOUS LIVING

A fourth lesson that I take from this doctoral journey is that of living alongside my participants whilst penning their voices, authentically, on paper. I found this process so emotionally taxing and had to take constant breaks to process their thoughts and narratives which I presented in chapter 7. It felt like they lived through me and I lived through them. This may be because I could relate so much to their narratives due to my own experiences in practice. But, it may also

be due to the constant iterative process I was immersed in to unpack and assemble the participants' narratives so as to make sense thereof in order to form a cohesive description, analysis and interpretation that readers would be able to understand. Hence, both affect and intellect are potentially at play here which is true to the nature of qualitative work where the researcher is immersed in the experiences of the participants. First I felt that I was doing something terribly wrong to be so touched by the participants' stories, but I was then reminded about the principles of qualitative work which helped me through the process of writing these recollections in their truest form in relation to the context in which the participants narrated their stories and views.

10.6 THE IRONY

Then, something I joke about now but that was not fun to deal with and navigate at the time was developing anxiety whilst I was busy with the most intense part of this thesis. I was ready to throw in the towel. I had the desire to run and never return to this. I felt that I was not capable of doing this and that I had no support. I felt that all the odds were against me. However, once I could recognise the signs and symptoms, I learnt how to navigate through my anxiety and doctoral thesis alongside each other, albeit not the easiest of tasks. The irony, and joke, is that here I am investigating coping with stressful and traumatic experiences that could lead to anxiety and burnout; yet I struggled to cope with the 'trauma' that this doctoral journey exerted on me intellectually, and sometimes emotionally. It was important for me to coach myself to take guilt-free breaks when the going-got-tough in order to have a meaningful journey. The breakthrough point was that I had come to realise that my anxiety developed due to confounding variables, similar to the experiences of my participants in this study, and that self-care was of greater priority than being defeated by something that was always a life goal – a doctoral degree. Today, I live to tell the tale and I will actively advocate for attention to make students and colleagues mental wellbeing a priority during research, undergraduate education and training, and in general.

10.7 MENTAL HEALTH AND WELLBEING IS IMPORTANT

Following on from the irony, the doctoral journey taught me that taking care of oneself and one's mental health is important. If you are not in a good frame of mind or do not feel well, then you cannot engage in cognitively demanding tasks required when engaged in doctoral work. Similarly, one cannot perform optimally or provide quality care to patients in practice if you are not physically and mentally healthy. Hence, there is a need for more advocacy and strategies to take care of the carers and researchers alike. This notion is further supported by the fact that

the South African government has declared October 2020 as a mental health awareness month in order to decrease and eliminate the stigmas, myths and discrimination attached to mental illness. They highlight how workload and poor interpersonal relationships, among other key factors, contribute to the rise in poor mental health and overall wellbeing (South African Government, 2020). Furthermore, the World Patient Safety Day for 2020 revolves around the theme of “health worker safety: a priority for patient safety” with the slogan “safe health workers, safe patients” (WHO, 2020). The pertinence of HCPs wellbeing and mental health may have been heightened due to the unprecedented disruptions of the novel coronavirus pandemic. I find this so apt in the context of this study as the findings demonstrate how healthcare culture has a taboo-ism around grief and how this impacts HCP wellbeing and patient safety. I faced many criticisms about my doctoral topic choice and its importance. This caused much self-doubt and worry that I am wasting a good part of my life on an area that my discipline thinks so little of. However, the themes of these campaigns, and the findings of this study, demonstrate why it was important for me to follow my heart and passion. This will be part-and-parcel of my future practise, even to a greater extent compared to what it already is. In fact, I believe focusing on mental health and wellbeing will be embedded within many HCPs and researchers’ repertoire of practices henceforth due to their lived experiences during the novel coronavirus pandemic.

10.8 CONCLUSION

Six pertinent lessons that I learnt through my doctoral journey, and beyond the confines of the actual study are captured in this chapter. These lessons will be incorporated into my own future practises as an educator responsible for professional practice modules, researcher and supervisor of postgraduate students, so as to optimise learning experiences to ensure pleasant, meaningful learning can take place and that one does not end up battered and bruised at the end of the journey and process. As much as a doctoral degree is your intellectual effort under guidance of supervisors, the communities of practice that you establish along the way should offer equally important assistance to you in order to shape your own researcher identity.

In the next, and final, chapter a summary of the study is provided as well the findings in relation to the objectives and research questions. The limitations, contributions, implications for practice and recommendations for future research are also provided.

CHAPTER 11: SUMMARY, CONTRIBUTIONS, LIMITATIONS, RECOMMENDATIONS, IMPLICATIONS FOR PRACTICE AND CONCLUSION

11.1 INTRODUCTION

Six germane lessons that I have learnt along my doctoral journey were identified and briefly discussed in Chapter 10. They were provided to demonstrate an extension of my learning as well as reflexive practice as a scholar.

In this chapter, I provide a summary of the study's findings in relation to each research question and objective. The contributions, limitations, recommendations for future research, and implications for practice are also described.

11.2 SUMMARY OF THE FINDINGS AND SUPPORT STRATEGIES IN RELATION TO THE OBJECTIVES

My interest in studying how undergraduate diagnostic radiography students experience and cope with death and dying patients during WPL was triggered by classroom discussions with my students over a few years as a lecturer. Upon reviewing the literature I identified a dearth of evidence on this topic in the South African diagnostic radiography context. The aim of this study therefore was to investigate the experiences and coping mechanisms, and the nature of this relationship, of undergraduate diagnostic radiography students pertaining to death and dying patients in the workplace; and to identify support strategies to assist students to cope better with death and dying patients in the workplace. This then encouraged me to ask the following research questions.

- What are the experiences of undergraduate diagnostic radiography students, regarding death and dying patients in the workplace?
- How do undergraduate diagnostic radiography students cope with death and dying patients in the workplace?
- What is the nature of the relationship between undergraduate diagnostic radiography students' experiences and coping mechanisms, related to death and dying patients in the workplace?
- Which support strategies need to be in place to assist undergraduate diagnostic radiography students to cope with their experiences regarding death and dying patients in the workplace?

To search for possible answers to the four research questions, I embarked on a qualitative, exploratory-descriptive, contextual inquiry using reflective journaling and in-depth, face-to-face, semi-structured interviews using an amended format of the Mmogo-technique™ to gather data from 16 purposively sampled undergraduate diagnostic radiography students at a single HEI in South Africa. The data were analysed using an inductive thematic analysis. During data analysis five themes and 13 sub-themes were identified. The findings and literature informed the development of support strategies to facilitate effective coping among undergraduate diagnostic radiography students during WPL when they encounter death and dying patient incidents. The findings and support strategies that emanated from this doctoral investigation are summarised below in relation to each objective that underpinned the study.

- **To explore and describe the experiences of undergraduate diagnostic radiography students regarding death and dying situations in the workplace.**

Themes one and two addressed this objective of this study. The participants described how they had to make sense and constructed meaning of their encounters with death and dying patients during WPL. It was further found that they used the quest hero narrative metaphor as a means to construct meaning of their experiences in which they, other healthcare professionals they work or interact with, patients and their significant others were role-players. The sense-making and meaning construction process then elicited either positive or negative affective responses based on how participants appraised their experiences. They alluded to more negative affective responses opposed to positive ones (cf. 7.4.1). The appraisal and subsequent affective responses by them were influenced by various factors. From their narratives these factors were categorised as having no impact, mitigating the negative perceptions attached to the experience, and aggravating the negative connotations associated with the experience. These factors were workplace-related as well as participant-related (cf. 7.4.2).

- **To explore and describe the coping mechanisms adopted and employed by undergraduate diagnostic radiography students to deal with death and dying situations in the workplace.**

This objective was addressed by theme three (cf. 7.4.3). Depending on how the participants perceived their experiences with death and dying patients in the work environment they adopted a variety of coping mechanisms to restore their wellbeing. The coping mechanisms, which they used to cope with death and dying patient encounters, were categorised as

emotion-focused, problem-focused and appraisal-focused. More emotion-focused and appraisal-focused coping mechanisms were used opposed to problem-focused coping mechanisms. Participants used one coping mechanism or a combination of coping mechanisms across the three categories as they saw fit. Their choice of coping mechanisms were strongly influenced by the organisational culture at the clinical placement site where they were working. The participants alluded to how the culture at the clinical placement site conditioned them to cope with death and dying patient experiences in a particular manner.

- **To describe the nature of the relationship between undergraduate diagnostic radiography students' experiences and coping mechanisms pertaining to death and dying patients in the workplace.**

Theme four addressed this objective (cf. 7.4.4). Upon deeper analysis of the data, a relationship between the participants' experiences and coping with death and dying patients during WPL workplace learning were identified. A three-phase, cyclical relationship was identified. Cyclical phase one encompassed sense-making and an emotional tsunami during which the participants made sense of the experience that which elicited an array of positive and/or negative affective responses. During cyclical phase two participants accepted that they encountered the incident. This then led to the third cyclical phase that involved finding appropriate coping mechanisms to cope with the experience they had.

- **To develop and describe support strategies to facilitate coping with death and dying in the workplace, by undergraduate diagnostic radiography students.**

During the interviews the participants provided suggestions of strategies they believed could be put in place to support them to effectively cope with death and dying patient experiences that they may encounter during WPL. This was captured in theme five (cf. 7.4.5). These suggestions were directed to education and workplace initiatives that should be implemented. Using these suggestions, in conjunction with the other findings, I used the conceptual framework of Dickoff, James and Wiedenbach (cf. Chapter 8) to develop the education and empowerment for coping (EEC) support strategies (cf. Chapter 9) as a proposed way forward to facilitate effective coping with death and dying patients during WPL undergraduate diagnostic radiography students. The EEC support strategies consists of two main strategies that are further underpinned by five and four functional support strategies, respectively.

In view of the findings, and the proposed support strategies, the four objectives and the aim of the study were achieved to provide possible answers to the underpinning research questions of this study. Figure 11.1 below provides a visual representation of the findings of the study. The aim is to demonstrate how the different themes are related to each other which ultimately informed the development of the EEC support strategies as part of the fourth objective of this study.

Therefore all four objectives and the aim of the study was achieved to provide possible answers to the underpinning research questions of this study. Figure 11.1 below provides a visual representation of the findings of the study. The aim is to demonstrate how the different themes are related to each other which ultimately informed the development of the EEC support strategies as part of the fourth objective of this study.

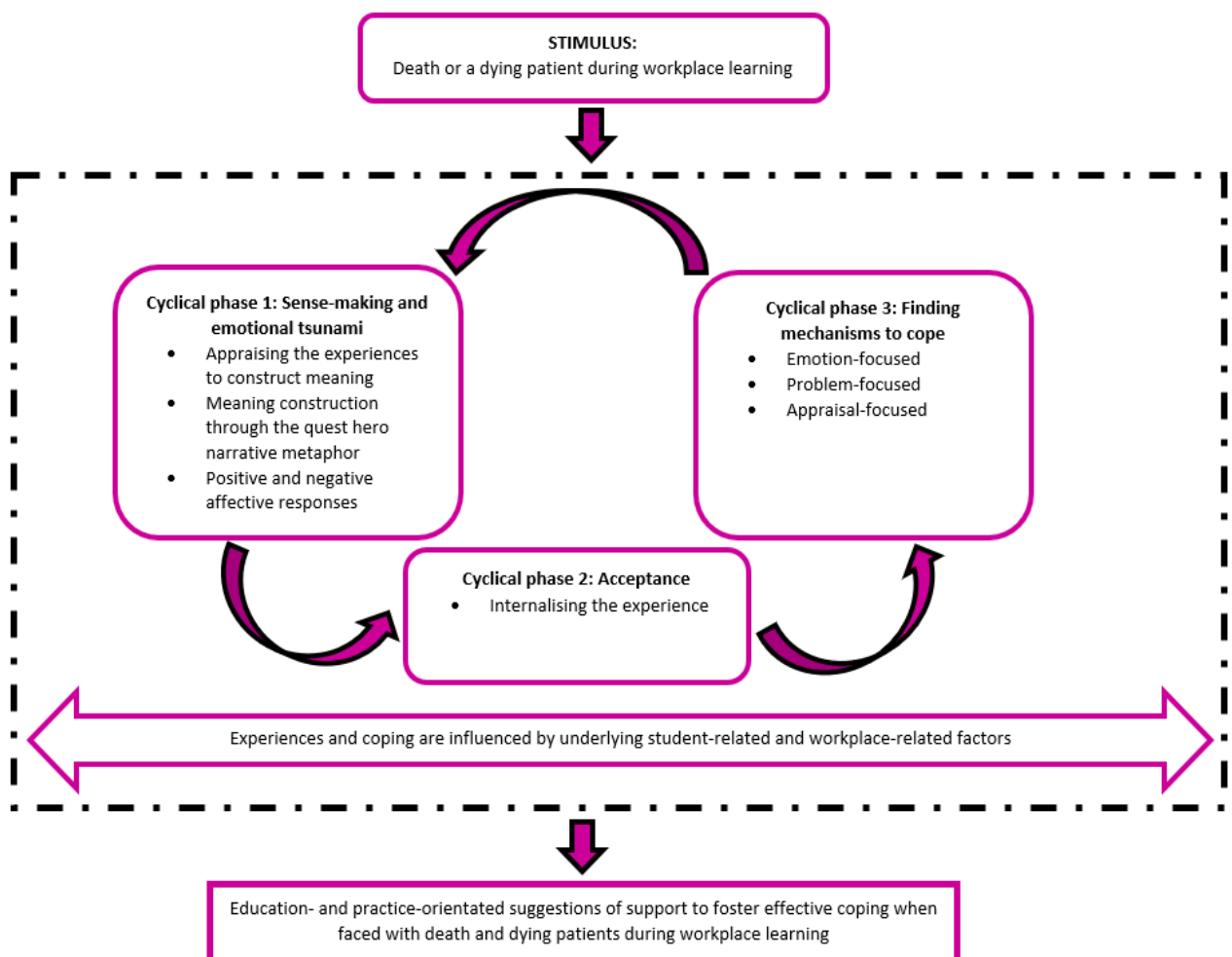


Figure 11.1: Summary of the research findings.

11.3 CONTRIBUTIONS

Novel findings were presented in this thesis. These findings provide the first insights, from a South African perspective, about undergraduate diagnostic radiography students' experiences and coping with death and dying patients whilst they are in the clinical setting for WPL. Furthermore, the relationship between their experiences and coping identified, can potentially inform the creation of a diagnostic radiography specific theory in this regard. The proposed education and empowerment for coping (EEC) support strategies can form the basis of implementing changes at higher education institutions and clinical training sites to facilitate effective coping of undergraduate diagnostic radiography students in respect of death and dying patient incidents that they may face during WPL.

11.4 LIMITATIONS

The following limitations of this study are recognised.

- There are curricula and context-dependent factors that influence how undergraduate diagnostic radiography students experience and cope with death and dying patients. Therefore, the findings of this study are not generalisable to all diagnostic radiography students in South Africa, since the study was conducted at one higher education institution. There are, however, elements of the study that can be transferred to other contexts for diagnostic radiography students and even to other students in the health sciences.
- One of the data gathering methods was a visual projective method, namely the Mmogo-method™. Some of the participants were not very tactile oriented. Therefore, I tried overcoming this by providing them with a pencil as an additional tool to express their narratives so as not to put them at a disadvantage of not being fully integrated in the research process as co-creators of knowledge. This may have influenced the data-richness since a pencil is not a tool ordinarily used as part of this method.
- Death and dying is a sensitive topic to express one's views on, due to the personal intimacy attached to it. Therefore, the insights that the participants shared are only representative of what they were comfortable sharing. There may be more facets underpinning their experiences and coping that they did not necessarily share during the time that data were gathered.

11.5 RECOMMENDATIONS FOR FUTURE RESEARCH

Considering the limitations of this study and how the study was designed, and conducted and the findings that emanated from this doctoral inquiry, the following suggestions are put forth for future research.

- A multi-centre study involving all the higher education institutions that offer undergraduate diagnostic radiography programmes should be considered. A quantitative orientated study and/or document analysis can be used to find commonalities and differences in relation to the findings and context of this study.
- A similar study could be done at the same research site as this study, using a quantitative approach to gain more generalisable findings and further enhance the understandings gained from the current study.
- The relationship between the participants' experiences and coping in this study can be further explored so as to develop a broader, more formal model or theory.
- A comparative study could be considered between diagnostic radiographers and undergraduate diagnostic student radiographers to establish any variances and possible reasons for these variations.
- Impact or intervention studies could be conducted to establish the influence the proposed support strategies have on students' coping with death and dying during WPL.

11.6 IMPLICATIONS FOR PRACTICE

The findings of this study contribute by raising awareness about the different ways in which undergraduate diagnostic radiography students experience and cope with death and dying patients in a clinical setting. The study substantiates the importance of including sufficient content and dedicated time to sufficiently and appropriately educate and support students to effectively cope with death and dying patient experiences during WPL. The EEC support strategies provide a foundational roadmap for HEIs and clinical placement training sites to adopt and amend to their unique requirements to facilitate the effective coping of undergraduate diagnostic radiography students when they encounter death and dying patient experiences during WPL. If the EEC support strategies were to be implemented at the clinical placement training site a new organisational culture may be necessary. Furthermore, the EEC support strategies have the potential to be used in other radiography disciplines and healthcare professions to support undergraduate students to effectively cope with death and dying patient experiences.

11.7 CONCLUSION

The study provides initial evidence about how undergraduate diagnostic radiography students experience and cope with death and dying patients during WPL in South Africa from a single higher education institution. The participants' experiences and coping with death and dying patients during WPL are multifaceted and are a continuous cycle that they undergo each time they face these incidents. It is also evident from the study that the workplace environment, and its inherent culture, as well as patient and participant related factors influence how they experience and cope with these incidents. Therefore, different participants experienced similar incidents differently depending on their appraisal of an incident. This then elicited a variety of positive and/or negative affective responses which influenced the coping mechanisms adopted by the participants in this study. To this end, the participants highlighted their lack of preparation and support to effectively cope with death and dying patient incidents during WPL and subsequently provided possible suggestions to fill this current perceived gap. These suggestions were directed at education and workplace initiatives. This prompted the development of the education and empowerment for coping (EEC) support strategies as a possible means to fill this gap.

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ADDENDA

Addendum A: Ethical clearance letter from HWS-REC at CPUT



HEALTH AND WELLNESS SCIENCES RESEARCH ETHICS COMMITTEE (HW-REC)
Registration Number NHREC: REC- 230408-014

P.O. Box 1906 • Bellville 7535 South Africa
Symphony Road Bellville 7535
Tel: +27 21 959 6917
Email: sethn@cput.ac.za

18 July 2018
REC Approval Reference No:
CPUT/HW-REC 2018/H12

Dear Mr Riaan van de Venter - 217302661

Re: APPLICATION TO THE HW-REC FOR ETHICS CLEARANCE

Approval was granted by the Health and Wellness Sciences-REC to Mr van de Venter for ethical clearance on 31 May 2018. This approval is for research activities related to student research in the Department of Medical Imaging and Therapeutic Sciences.

TITLE: Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning

Supervisor: Prof Engel - Hills

Comment:

Approval will not extend beyond 19 July 2019. An extension should be applied for 6 weeks before this expiry date should data collection and use/analysis of data, information and/or samples for this study continue beyond this date.

The investigator(s) should understand the ethical conditions under which they are authorized to carry out this study and they should be compliant to these conditions. It is required that the investigator(s) complete an **annual progress report** that should be submitted to the HWS-REC in December of that particular year, for the HWS-REC to be kept informed of the progress and of any problems you may have encountered.

Kind Regards

A handwritten signature in black ink, appearing to read "Dr. Naidoo", with a horizontal line underneath.

Dr. Navindhra Naidoo
Chairperson – Research Ethics Committee
Faculty of Health and Wellness Sciences

Addendum B: Request for ethical clearance from the research site

Subject: Permission to conduct research at [REDACTED] - PhD student at CPUT

Importance: High

Dear Imtiaz,

Thank you for your telephonic assistance and guidance. It is much appreciated.

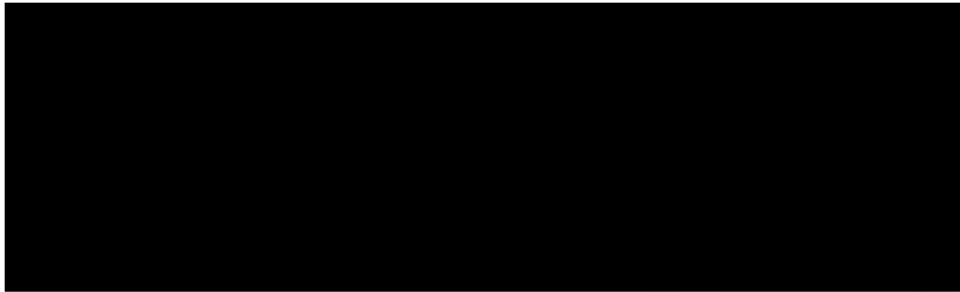
Kindly find attached:

1. A letter for the attention of Prof [REDACTED]
2. My ethics approval letter from CPUT
3. Final, approved research proposal by CPUT with all the accompanying appendices

I hope to hear from you very soon.

Should you have any other queries do not hesitate to contact me.

Addendum C: Ethical clearance from the research site's institutional REC-H committee



Ref: [H18-HEA-BTR-EAP-001

Contact person: [REDACTED]

23 July 2018

Dear Prof Engel-Hills

TITLE: DEATH AND DYING PATIENTS: EXPERIENCES AND COPING MECHANISMS OF UNDERGRADUATE DIAGNOSTIC RADIOGRAPHY STUDENTS DURING WORKPLACE LEARNING
REF NR: CPUT/HW-REC 2018/H12

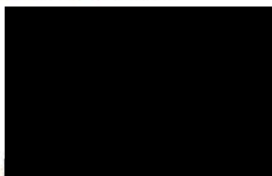
Your application for ethics approval to conduct research at [REDACTED] has been considered by the REC-H on the basis that the study has been duly vetted and approved by the Cape Peninsula University of Technology's Ethics Committee.

Kindly use the following ethics reference number H18-HEA-BTR-EAP-001 together with your University's ethics clearance number in any correspondence with gatekeepers and participants at the University. Please inform the REC-H, of any changes that may arise during the execution of the study, particularly to the methodology.

It must be noted that the [REDACTED] assumes that the Research Ethics Committee responsible for providing the original ethics approval/clearance has undertaken both ethics and scientific review of the protocol according to the National Health Research Ethics Committee (2014) Guidelines, and assumes primary responsibility for oversight with regard to any ethical issues that may arise in the course of the study. The [REDACTED] would also wish to be provided with an executive summary of the findings from the research.

We wish you well with the project.

Yours sincerely



Chairperson: Research Ethics Committee (Human)

cc: Department of Research Capacity Development

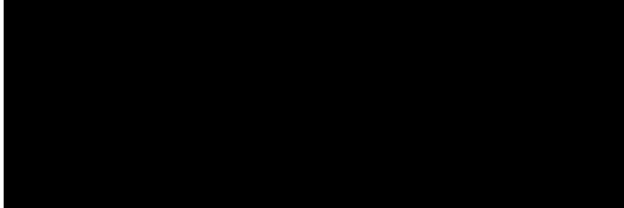
Addendum D: Letter to the Deputy Vice Chancellor: research and engagement

R. van de Venter

082 517 5131

riaan330@gmail.com

25 July 2018



Dear Prof [REDACTED]

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH [REDACTED]

My name is Riaan van de Venter, and I am a doctoral student at the Cape Peninsula University of Technology (CPUT) in Cape Town and an academic staff member at the [REDACTED] in [REDACTED]. The research I wish to conduct for my doctoral thesis for the degree doctor of radiography is entitled: *Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning*. The project is being conducted under the supervision of Prof P. Engel-Hills at CPUT and Prof L. Stroud at the [REDACTED] University. I have been granted ethics approval for my study by the Faculty Health and Wellness Sciences Research Ethics Committee (HWS-REC) and my reference number is **CPUT/HW-REC 2018/H12**. My ethics reference number at [REDACTED] is **H18-HEA-BTR-EAP-001**.

The aim of this study is to investigate the experiences and coping mechanisms of undergraduate diagnostic radiography students pertaining to death and dying situations in the workplace to develop support strategies to assist these students to cope better with death and dying situations in the workplace.

I wish to interview undergraduate radiography students at [REDACTED], across the four-years of the programme, and to analyse reflective journals that form part of their professional practice and clinical practice modules. The data will be collected by conducting a semi-structured interview with each participant, using the Mmogo-method™, a visual narrative method of inquiry. Each interview will last approximately 90 minutes. The question or probe that will be put to the participants, for them to construct their experiences related to death and dying in the workplace is: *Could you construct/produce/build/depict your experiences of and means of coping with death and dying in the workplace?*

The main question that will be asked to start the narration part of the interview is: *Could you explain your experience of death and dying in the workplace using your construction in front of you?* Examples of follow-up probing questions could be:

- *Could you explain the reason for structure x being further from structure y?*
- *Tell me, does the use of the colours in your construction have any significant meaning related to your experience(s)?*
- *Could you elaborate on the reasoning for structure A being bigger/smaller than structure B, and how it relates to your experiences of death and dying in the workplace?*

Ethical considerations

Participants will not be coerced, and they may withdraw from participating in the study at any time. The information gathered will be managed confidentially. Quotes from interviews may be used in the research report or in an academic article but the institution where the participants study or do practicals as part of their workplace learning requirements, and the name of the participant will not be mentioned. The actual names of the participants will be replaced with unique identification numbers. There are no direct benefits to the participants, but support strategies to enable students to cope effectively with death and dying in the workplace is envisaged to be developed.

Seeking consent

I am hereby seeking your consent to conduct research in the Department of Radiography at the [REDACTED]. I have attached a copy of my proposal which includes copies of the consent forms to be used in the research process, as well as a copy of the approval letter which I received from the CPUT HWS-REC and [REDACTED] REC-H.

If you require any further information, please do not hesitate to contact me:

Researcher: R. van de Venter

Study promoter: Prof P. Engel-Hills

Contact details: 082 517 5131

Contact details: (021) 959 6218

riaan330@gmail.com

Study co-supervisor: Prof L. Stroud

riaan.vandeventer@mandela.ac.za

Contact details: (041) 504 2682

Research Ethics Committee at CPUT contact details: Ms N. Seth (021) 959 6917

Thank you for your time and consideration in this matter.

Yours sincerely,

R. van de Venter

Addendum E: Permission to conduct research from the Deputy Vice Chancellor



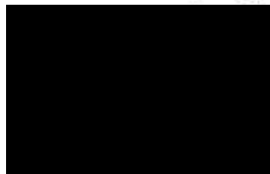
**(Institutional permission for conducting research)
H18-HEA-BTR-EAP-001**

Dear Mr Riaan van de Venter

TITLE: Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning.

I Professor [REDACTED] DVC: Research and Engagement grant permission for the above mentioned study and will act in the capacity as gatekeeper for this institutional study.

SIGNATURE:



DATE:

30 July 2018

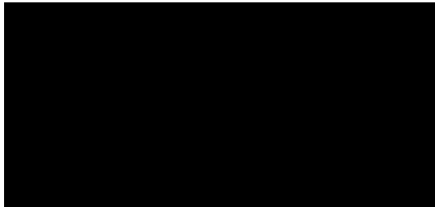
Addendum F: Letter to the Head of Department of Radiography: Research site

R. van de Venter

082 517 5131

riaan330@gmail.com

30 July 2018



Dear [REDACTED]

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH [REDACTED]

My name is Riaan van de Venter, and I am a doctoral student at the Cape Peninsula University of Technology (CPUT) in Cape Town and an academic staff member at the [REDACTED] in Port Elizabeth. The research I wish to conduct for my doctoral thesis for the degree doctor of radiography is entitled: *Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning*. The project is being conducted under the supervision of Prof P. Engel-Hills at CPUT and Prof L. Stroud at the [REDACTED] University. I have been granted ethics approval for my study by the Faculty Health and Wellness Sciences Research Ethics Committee (HWS-REC) and my reference number is **CPUT/HW-REC 2018/H12**. My ethics reference number at [REDACTED] is **H18-HEA-BTR-EAP-001**. In addition, Prof. [REDACTED] has also granted permission to conduct the study.

The aim of this study is to investigate the experiences and coping mechanisms of undergraduate diagnostic radiography students pertaining to death and dying situations in the workplace to develop support strategies to assist these students to cope better with death and dying situations in the workplace.

I wish to interview undergraduate radiography students at [REDACTED], across the four-years of the programme, and to analyse reflective journals that form part of their professional practice and clinical practice modules. The data will be collected by conducting a semi-structured interview with each participant, using the Mmogo-method™, a visual narrative method of inquiry. Each interview will last approximately 90 minutes. The question or probe that will be put to the participants, for them to construct their experiences related to death and dying in the workplace is: *Could you construct/produce/build/depict your experiences of and means of coping with death and dying in the workplace?* The main question that will be asked to start the narration part of the interview is: *Could*

you explain your experience of death and dying in the workplace using your construction in front of you?

Examples of follow-up probing questions could be:

- *Could you explain the reason for structure x being further from structure y?*
- *Tell me, does the use of the colours in your construction have any significant meaning related to your experience(s)?*
- *Could you elaborate on the reasoning for structure A being bigger/smaller than structure B, and how it relates to your experiences of death and dying in the workplace?*

Ethical considerations

Participants will not be coerced, and they may withdraw from participating in the study at any time. The information gathered will be managed confidentially. Quotes from interviews may be used in the research report or in an academic article but the institution where the participants study or do practica as part of their workplace learning requirements, and the name of the participant will not be mentioned. The actual names of the participants will be replaced with unique identification numbers. There are no direct benefits to the participants, but support strategies to enable students to cope effectively with death and dying in the workplace is envisaged to be developed.

Seeking consent

I am hereby seeking your consent to conduct research in the Department of Radiography at the [REDACTED] University. I have attached a copy of my proposal which includes copies of the consent forms to be used in the research process, as well as a copy of the approval letter which I received from the CPUT HWS-REC, [REDACTED] REC-H and Prof [REDACTED] the DVC for Research and Engagement at [REDACTED].

If you need any further information, please do not hesitate to contact me:

Researcher: R. van de Venter

Study promoter: Prof P. Engel-Hills

Contact details: 082 517 5131

Contact details: (021) 959 6218

riaan.vandeventer@mandela.ac.za

Study co-supervisor: Prof L. Stroud

Contact details: (041) 504 2682

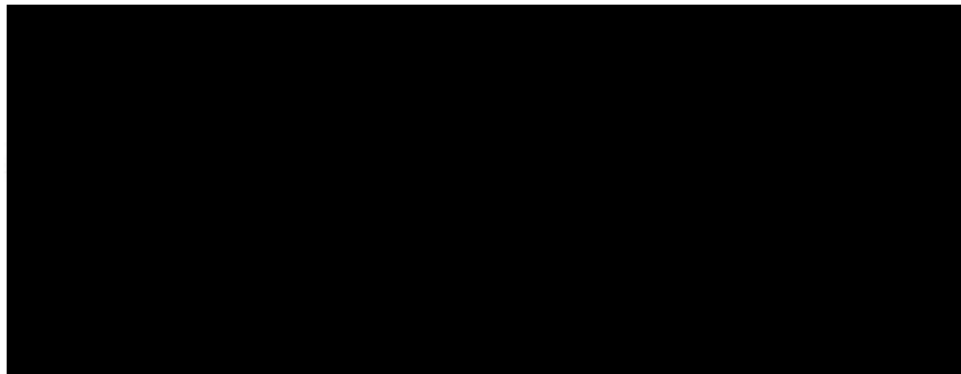
Research Ethics Committee at CPUT contact details: Ms N. Seth (021) 959 6917

Thank you for your time and consideration in this matter.

Yours sincerely,

R. van de Venter

Addendum G: Permission to conduct research from Head of Department



Dear Mr Riaan van de Venter

TITLE: Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning.

I, [REDACTED], Head of Department: Radiography hereby grant permission for the above mentioned research study (H18-HEA-BTR-EAP-001) and I will act as gatekeeper for this study at departmental level.

Kind regards,



Head: Department of Radiography

Addendum H: Participant information letter

PARTICIPANT INFORMATION LETTER

I, Riaan van de Venter (the researcher) am a student at CPUT doing my Doctor of Radiography degree. My study is entitled:

Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning

Death¹ refers to “an instance of dying” but could also indicate the end of life or an instance of the loss of life. Whereas dying refers to a patient being terminally ill and near death². In the context of this study, the concept is operationalised as death or dying experiences that a student experienced in the workplace. The death and dying experiences may either involve the student’s direct and/or indirect participation in examining the patient (i.e. the student either examined the patient themselves or assisted a staff member to complete the examination). The cause of death may be acute or chronic, traumatic or non-traumatic. An experience on the other hand is defined as events one has personally lived through, encountered, observed or actively participated in³. Experience is interpreted in this study as the event a student has encountered whereby a patient has died or is terminally-ill and the patient is probably going to come to their demise soon, and how the student subsequently perceived and coped with the death of, or dying, the patient. This encounter acts as the stressor in the context of this study.

The aim of this study is to investigate the experiences and coping mechanisms of undergraduate diagnostic radiography students pertaining to death and dying situations in the workplace to develop support strategies to assist these students to cope better with death and dying situations in the workplace.

I would be very grateful if you would be willing to take part in my study. Participation involves an interview between you and the researcher or independent interviewer and the analysis of your reflective journal. If you agree to participate, a date and venue will be arranged where the interview will take place during office hours. The time and venue must be where you feel most comfortable. The interview will be recorded (with your permission) using a digital recorder and will be approximately 90 minutes long. Your role would be to give an honest account of how you experience and cope with death and dying situations of patients in the workplace, and the reasons why you think it is like that. The interview will involve you in

¹ Merriam-Webster Dictionary 2017

² Merriam-Webster Dictionary 2018

³ Merriam-Webster Dictionary 2017

building/constructing your experiences and coping with playdough and craft accessories. This method is known as the Mmogo-method™. All the supplies will be provided to you that you will need.

Participation in this study is voluntary, and your identity will only be known to the researcher and no other party. All personal demographic and other information will be confidential and available to the researcher only. You may withdraw from participation at any time, without any fear of prejudice or repercussion. No participant will receive any form of remuneration or compensation for participating in this study. There is no direct benefit for any participant in participating in this study.

Should you perceive that I am not conducting myself in an ethical manner or to confirm the ethical clearance of this study, please contact my supervisors or the research ethics committee at CPUT.

If you require debriefing please contact the student counselling, career and development centre at [REDACTED] to make an appointment with a registered counsellor between 08:00 and 16:00. The contact numbers are: (041) 504 1149 (North Campus) or (041) 504 2174 (South Campus).

Please refer and forward any further queries to:

Researcher: R. van de Venter

Contact details: 082 517 5131

riaan330@gmail.com

Study supervisor: Prof P. Engel-Hills

Contact details: (021) 959 6218

Study co-supervisor: Prof L. Stroud

Contact details: (041) 504 2682

Research Ethics Committee at CPUT contact details:

Ms N. Seth

(021) 959 6917

Addendum J: Participant informed consent form

CONSENT FORM

INFORMATION AND INFORMED CONSENT FORM

<u>RESEARCHER'S DETAILS</u>		
Title of the research project	Death and dying patients: Experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning	
Reference number		
Principal investigator	Riaan van de Venter	
Address	1 Kirkwood Street, Port Elizabeth	
Postal Code	6001	
Contact no./ Email address	Contact no. 0825175131 Email address: riaan330@gmail.com	
Contact details of supervisors	Prof Penelope Engel-Hills 021 959 6218 engelhillsp@cput.ac.za	Prof Louise Stroud 041 504 2682 louise.stroud@mandela.ac.za

A.1 HEREBY CONFIRM AS FOLLOWS:		Initial
I, _____ (full name and surname), was invited to participate in the above-mentioned research project		
that is being undertaken by	Riaan van de Venter	
From the	Cape Peninsula University of Technology	

THE FOLLOWING ASPECTS HAVE BEEN EXPLAINED TO ME, THE PARTICIPANT:		Initial
2.1	Aim: The aim of this study is to investigate the experiences and coping mechanisms of undergraduate diagnostic radiography students pertaining to death and dying situations in the workplace to develop support strategies to assist these students to cope better with death and dying situations in the workplace.	
2.2	Procedures: I understand that the interview will be recorded on a recording device and that I will have to construct/build my experiences through the Mmogo-method™ (as explained to me) and then provide a narrative (i.e. a verbal explanation of my construction about my experiences and coping with death and dying patients in the workplace). AND	

		<p>Photographs will be taken of my Mmogo construction and included in the thesis for supplementary information to my narrative.</p> <p style="text-align: center;">AND</p> <p>That my reflective journal will be selected to be analysed regarding my experiences and coping related to death and dying in the workplace.</p> <p style="text-align: center;">AND</p> <p>The role of the observer was explained to me and I do not object to this.</p>			
2.3	Risks:	Potentially there are no risks involved, however should you feel distressed because of the experiences you shared during the interview process, an appointment can be scheduled for you at the student counselling, career and development centre at Nelson Mandela University for debriefing.			
2.4	Possible benefits:	There are no direct benefits to me in participating in this research study.			
2.5	Confidentiality:	My identity will not be revealed in any discussion, description or scientific publications by the investigators. Furthermore, the observer present will not reveal any information discussed during the interviews to anyone.			
2.6	Access to findings:	Any new information or benefit that develops during the course of the study will be shared as follows: By means of access to a soft copy of the final research report and/or summary report of the findings.			
2.6	Voluntary participation / refusal / discontinuation:	My participation is voluntary	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> </table>	YES	NO
YES	NO				

3. THE INFORMATION ABOVE WAS EXPLAINED TO ME/THE PARTICIPANT BY:		<u>Initial</u>
<p>_____ (name of relevant person)</p>		
in	English	
I was given the opportunity to ask questions and all these questions were answered satisfactorily.		
4.	No pressure was exerted on me to consent to participation, and I understand that I may withdraw at any stage without being penalised.	
5.	Participation in this study will not result in any additional cost to myself.	
STATEMENT BY OR ON BEHALF OF INVESTIGATOR(S)		

I,		declare that
1.	I have explained the information given in this document to the participant	
2.	He / she was encouraged and given ample time to ask me any questions;	
3.	This conversation was conducted in	English
	and no translator was used.	
Signed/confirmed at		On 20
Signature of interviewer	Signature of participant:	
	Signature of witness:	
	Date:	

Addendum K: Participant demographic information form

DEMOGRAPHIC INFORMATION

Date of interview:		
Surname:		
Name:		
Age:		
Gender:		
Level of study:		
Place of work:		
Identification number (researcher use only):		
Received and read (tick where applicable):	Participant information sheet	Consent form copy
Contact details (for follow-up purposes):		

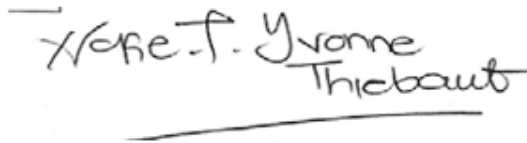
Approximate number of deaths experienced in your time in the clinical environment?

Approximate number of dying patients experienced in your time in the clinical environment?

Addendum L: Independent transcriber's signed confidentiality agreement

CONFIDENTIALITY AGREEMENT OF NON-DISCLOSURE

I, Yvonne Thiebaut (full name and surname), engaged with data of participants generated as part of a doctoral study being conducted by Riaan van de Venter in my capacity as transcriber (the role in which I engaged with the data). I agree not to divulge any information regarding this study, intentionally or unintentionally, digitally, verbally or in writing, to any other party except Riaan van de Venter, the researcher. All data I have engaged with will be handled with strict caution by using strict protective security measures.

A handwritten signature in black ink that reads "Yvonne Thiebaut". The signature is written in a cursive style and is underlined with a single horizontal line.

Signature

12 November 2018

Date

Addendum M: Independent coder's signed confidentiality agreement

CONFIDENTIALITY AGREEMENT OF NON-DISCLOSURE

I, [REDACTED] (full name and surname), engaged with data of participants generated as part of a doctoral study being conducted by Riaan van de Venter in my capacity as Second/Independent Coder (the role in which I engaged with the data). I agree not to divulge any information regarding this study, intentionally or unintentionally, digitally, verbally or in writing, to any other party except Riaan van de Venter, the researcher. All data I have engaged with will be handled with strict caution by using strict protective security measures.



Signature

2018-11-15

Date

Addendum N: Code list of the researcher

These codes were generated after the first cycle of open coding.

- A need to search assistance from others to cope
- Active versus passive involvement with patients
- Anger/upset
- Anxious
- Appraisal of death and dying experiences
- Become aware of practice limitations
- Become mentor/advocate
- Blame
- But what about those staying behind?
- Characteristics of emotional intelligence
- Clinical tutor as a caring figure
- Comfortability
- Complicated
- Confidence
- Contentment
- Control emotions
- Coping as a conditioning process
- Coping mechanisms
- Crying
- Dark humour
- Death and dying a journey
- Death and dying affects mood
- Death and dying is a continuous process – never ends
- Death has a cognitive effect
- Depressing
- Difficult
- Disappointment
- Distraction
- Don't attach to the patient
- Effects of staff and student assistance
- Emotional dissonance
- Emotional numbness
- Empathy towards others around patient
- Examples of support mechanisms
- Facing mortality – self (own) or people close to the student
- Fear to be seen as weak
- Feelings towards death and dying situations are not the same
- Feelings towards death and dying situations are the same
- Going forward
- Guilt
- Help from a distance/indirectly
- Helping is more than just focussing on the medical condition
- Hopelessness and helplessness
- Impact on student of practice limitations
- Influence of personal life experiences when faced with death and dying in the workplace
- Influence of still developing/learning
- Internalising the experience
- Jumping between different patients
- Knowing the cause of death assists with coping and brings closure
- Lack of urgency to attend to patients
- Let the patient move on – die
- Management to encourage a support culture for students experiencing death and dying situations
- Need for staff education re: support to students encouraged
- Negative experiences when dealing with death
- Negative experiences when dealing with dying patients
- No support from staff
- No time given to process death and dying situation after it occurred
- Normalising death and dying as uncontrollable natural processes
- Not prepared emotionally and physically
- Novelty of the experience with death and dying in the workplace
- Overwhelmed
- Patient interactions elicit questions of concern leading to confusion
- Patient type encountered
- Peer-to-peer interaction
- People students talk to and reasons
- Personality characteristics

- Physical signs and symptoms
- Positive experiences when dealing with death
- Positive experiences when dealing with dying patients
- Positive peer pressure
- Positive self-talk
- Rationalising
- Reactions of senior students towards death /dying situation
- Reactions of staff towards death/dying situation
- Reasoning
- Refer to death as a thing
- Reflecting after work
- Reinterpret
- Religion and culture affects death and dying experience
- Remain devoted to patient care
- Sadness
- Scared
- Second victim syndrome
- Seek emotional reassurance
- Sense of exclusion
- Shocked
- Staff and students assist to cope – negative
- Staff and students assist to cope – positive
- Stages of experience of death/dying leading to coping
- Students that experienced death and dying before
- Surprised
- Sympathy and not empathy
- Take into account patient/family worldview around death and dying
- The notion of still developing/learning
- Ticking the boxes
- Traumatic
- Uncertain
- Unexpectedness/suddenness of death and dying situation
- Where deaths/dying patients are interacted with

Total codes: 98

Addendum O: Code list of the independent coder

- CP_"time out" to process- recharge/re-orient
- CP_analyses and sense-making
- CP_bitter-sweetness of experiences
- CP_colleagues & peers as guides for emotional processing
- CP_common bonds of humanity
- CP_comparative areas around dying/dead person
- CP_comparative experiences of coping & capability
- CP_crying as release of tension
- CP_developmental pathway towards coping & capabilities
- CP_different means to find peace with death
- CP_emotional buffers & masks
- CP_emotional connectedness gives perspective
- CP_emotional honesty
- CP_empowered through mentoring others
- CP_EXP as contextualised and contingent
- CP_EXP_grieving cycle
- CP_experience buffers guilty feelings
- CP_experience of death-proximity/healing role
- CP_experiences as process
- CP_expressions around psychosocial support needed
- CP_family/peers/friends support structures
- CP_FOMO and curiosity
- CP_helped through being in "safe place"
- CP_how to cope?
- CP_importance of capable colleagues & staff
- CP_insights towards acceptance of death
- CP_listening to music is central
- CP_making conscious choices
- CP_meditation and reflection
- CP_need a vocabulary to name emotions
- CP_needs to be alone
- CP_objectify the patient
- CP_people's "listening" responses
- CP_positive orienting and self-talk
- CP_professional roles/distance
- CP_questioning the meaning of death
- CP_questioning the meaning of healthcare
- CP_railing against existence of death
- CP_rationalises the experiences
- CP_relating back of the stories
- CP_relationship with God/Religion
- CP_role of culture
- CP_sees RDG as potential to save-restore patient
- CP_sense of & comfort of shared experiences
- CP_setting yourself free from grieving
- CP_specific coping techniques are helpful
- CP_supportive responses of other patients
- CP_suppression of emotions
- CP_talking through the experience
- CP_uncertainty/avoidance & denial
- CP_uniqueness of experience means coping is unique
- CP_use of humour
- CP-exercise
- CP-recording the event in writing
- EM_nervous filler or buffer sounds
- EM_participant becomes emotional
- EXP_of compassion and connectedness
- EXP_absence of support from colleagues
- EXP_anger and unfairness
- EXP_anger_doctors indifference
- EXP_being "stuck" in the EXP
- EXP_concern over "inappropriate" feelings around loss
- EXP_conflation of cognitive and emotional responses
- EXP_confronting the notion of death
- EXP_continuum and accumulation of emotions
- EXP_contrasting and conflicting emotions
- EXP_curiosity and profundity of EXP
- EXP_death and dying changes the person, you are
- EXP_difficult with child
- EXP_discourses of desensitisation
- EXP_discourses of negativity

- EXP_distinct observer role_distant
- EXP_distinguishes between death and dying
- EXP_dying sharper for young person
- EXP_embraces role so as to experience deep feelings
- EXP_emotionally taxing and tiredness
- EXP_empathy_personalised experiences
- EXP_every experience is unique
- EXP_fear and worry
- EXP_feeling sorry for the dying
- EXP_feelings of responsibility
- EXP_hospital and staff not conducive to healing
- EXP_humanity of the dying
- EXP_hypothetical situation and analysis
- EXP_impact/change on family through death
- EXP_isolation and aloneness
- EXP_loss of productivity
- EXP_multiple deaths close together are tough
- EXP_no visible trauma on body makes it worse
- EXP_on-going cycles around death & dying
- EXP_over-identification with death of patient
- EXP_panic and confusion
- EXP_people outside the ecosystem don't understand
- EXP_post-traumatic flashbacks
- EXP_powerlessness in face of death
- EXP_pressures of carrying on-as face death & dying
- EXP_profit-more important than death & dying
- EXP_psychosomatic illnesses
- EXP_relentless schedules-no time to process death & dying
- EXP_rooted in who you are as a person
- EXP_sadness/distress and/or overwhelmed
- EXP_sensationalising trauma and/or death
- EXP_sense of crisis
- EXP_sense of hopelessness & helplessness
- EXP_senselessness of death
- EXP_sensitive to people's different views - death & dying
- EXP_setting an example about how to cope
- EXP_shock and rawness of experiences (first and other)
- EXP_stigma to take "time out" to process death
- EXP_stigma_forced to mask your real feelings
- EXP_strong emotions controlling responses
- EXP_student to practitioner transition-challenging
- EXP_sympathy over death of babies
- EXP_trauma_closing of head as dead-but was not
- EXP_triggers memories
- EXP_unexpectedness of death
- EXP_vivid description of the disease
- EXP-experiences of family grief

Total codes: 118

Addendum P: List of categories

The categories took into account the codes that emerged from the two cycles of coding conducted by the researcher and the coding done by the independent coder.

- Appraisal of death and dying experiences
- Quest hero narrative/metaphor
- Positive feelings/emotions/reactions
- Negative feelings/emotions/reactions
- Inapt factors
- Mitigating factors
- Aggravating factors
- Emotion-focused coping
- Problem-focused coping
- Appraisal-focused coping
- Coping as a conditioning process
- Coping is a continuous journey
- Stages of experience of death/dying leading to coping
- Suggestions for effective coping: education
- Suggestions for effective coping: practice
- Emotional chaos
- Making sense of experiences
- Normalise and internalise experiences
- Ways to cope with experiences

TOTAL CATEGORIES: 19

Addendum Q: Evaluation document for review panel

Dear Colleague,

Thank you for agreeing to evaluate the EEC support strategies that I developed as part of my doctoral study in diagnostic radiography. Your input would assist me to optimise the EEC support strategies to ultimately aid undergraduate diagnostic radiography students to effectively cope with death and dying during workplace learning.

You are required to evaluate the strategies using the evaluation rubric attached. I would appreciate it if you could provide comprehensive, written feedback on how each strategy meets the evaluation criteria. If you are of the view that the strategy requires refinement, kindly indicate how the strategy could potentially be enhanced to better meet the evaluation criteria. You may provide your feedback as comments in the document containing the strategies or write a separate report. Should you opt for the latter, it would be appreciated if you could clearly indicate the strategies referred to by using the strategy heading or heading number as a reference point.

For context, my study's title and objectives are outlined below.

Title

Death and dying patients: experiences and coping mechanisms of undergraduate diagnostic radiography students during workplace learning

Objectives

- *To explore and describe the experiences of undergraduate diagnostic radiography students regarding death and dying situations in the workplace.*
- *To explore and describe the coping mechanisms adopted and employed by undergraduate diagnostic radiography students to deal with death and dying situations in the workplace.*
- *To describe the nature of the relationship between undergraduate diagnostic radiography students' experiences and coping mechanisms pertaining to death and dying patients in the workplace.*
- *To develop and describe support strategies to facilitate coping with death and dying in the workplace, by undergraduate diagnostic radiography students.*

Thank you for your assistance and valuable insights in achieving the final objective of my doctoral study. Should you have any queries do not hesitate to contact me at riaan330@gmail.com or riaan.vandeventer@mandela.ac.za.

Kind regards,

Riaan

EVALUATION RUBRIC	
1.	CLARITY OF THE STRATEGIES
	<ul style="list-style-type: none"> ➤ Ask the question: How clear is each strategy? ➤ Aspects to consider: semantic clarity, semantic consistency, structural clarity and structural consistency. ➤ In general, semantic clarity relates to how well the strategy can be understood and how consistently were the ideas conceptualised. ➤ Structural clarity and consistency refers to the link between concepts within the strategy as well as the overall strategy (Chinn & Kramer 2018:203-208).
2.	SIMPLICITY OF THE STRATEGIES
	<ul style="list-style-type: none"> ➤ Ask the question: How simple is each strategy? AND Is the strategy practical and a general guide for practice? ➤ Aspects to consider: number of elements encompassed in each descriptive category is minimal, particularly concepts and their interrelationships. ➤ Complexity implies many theoretic relationships between and among many concepts (Chinn & Kramer 2018:208).
3.	GENERALITY OF THE STRATEGIES
	<ul style="list-style-type: none"> ➤ Ask the questions: How general is each strategy? AND Can the strategy be applied to more than one clinical training site? ➤ Aspects to consider: to whom or what do these strategies apply and when does it apply; does it apply to all radiography educators, clinical supervisors, qualified radiography staff and radiography students and/or psychologists/registered counsellors or just particular groups. ➤ Generality refers to the breath of scope and purpose of the strategies. The more limited the scope of application of the strategy, the less general the strategy. Generality can also refer to parsimony – meaning are the strategies conceptually simple (Chinn & Kramer 2018:208–209).
4.	ACCESSIBILITY OF THE STRATEGIES
	<ul style="list-style-type: none"> ➤ Ask the question: How accessible is each strategy? ➤ Aspect to consider: Assess the extent to which the empiric indicators for concepts can be singled out, i.e. to what degree can the purpose of each strategy be met. For example: If a strategy is to be used for improving practice, its theoretic concepts should be linked to the empiric indicators that are available in practice. ➤ Empiric indicators are perceptually accessible experiences that can be used in practice to assess the phenomena that the strategies describe to determine if the purpose of the strategy was achieved (Chinn & Kramer 2018:209–210).
5.	SIGNIFICANCE OF THE STRATEGIES
	<ul style="list-style-type: none"> ➤ Ask the questions: How important is each strategy? AND Can these strategies be used in practice, education and research? AND Are these strategies useful for creating a valuable and desired future? AND Are the purposes and assumptions of the strategies grounded in practice? ➤ Aspect to consider: Does these strategies create an understanding about what is required to support undergraduate diagnostic radiography students to cope with death and dying in the workplace? ➤ The significance or importance is closely linked with the idea of the strategies' clinical significance or practical value (Chinn & Kramer 2018:210–211).

Addendum R: Reviewer demographic information form

DEMOGRAPHIC INFORMATION

Surname:	
Name:	
Years of work experience in current role:	
Sector of work, including country:	
Current occupation:	
Qualifications:	
Contact details:	

I pledge not to divulge, store or share any of the contents of the strategies or methods employed to review them without the explicit permission of the researcher.

Signature

Date