Promoting Emergency Care provider responsiveness to domestic violence patients through simulation training

by

Wesley Craig

214059359

Submitted in fulfilment of the degree:

Master of Emergency Medical Care (MEMC)

Department of Emergency Medical Sciences,

Faculty of Health and Wellness Sciences,

Cape Peninsula University of Technology (CPUT)

Supervised

by

Dr Navindhra Naidoo (BTech EMC, HDE, MPH, PhD)

Mr. Lloyd Christopher (HDE, MTech EMC)

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ABSTRACT

Domestic violence is a complex healthcare burden for South Africa and the world over. In 2013, the Health Professions Council of South Africa endorsed a domestic violence-screening guideline for Emergency Care providers. It is unknown if any accredited Emergency Care training facility has implemented these guidelines so as to improve the prehospital emergency care management of domestic violence victims. The probable absence of its wide-scale implementation suggests the prehospital identification and management of domestic violence victims continues to be at the discretion of the attending emergency care provider.

To bridge the gap between theory, policy, and practice of domestic violence response, simulation training is proposed as a method of sensitising emergency care students and providers to manage cases which they may encounter in the "real world". This study aimed to position emergency care students and providers as advocates for the interests of adult domestic violence victims' during the (simulated or real) emergency care interaction so as to improve the emergency care provider responsiveness to victims of domestic violence. The primary research question was: How does the scripting of evidence-informed simulations of domestic violence cases enhance practitioner responsiveness and patient safety among prehospital emergency care students?

The paradigm and methodology for this qualitative study was social constructivism and grounded theory respectively. A literature review preceded pre-simulation focus group discussions, participant observation during patient simulations, and post-simulation focus group discussions. Each data collection method helped strengthen and focus the proceeding data collection, honing in on the emerging theory.

Through the process of constant comparative analysis, four categories of understanding emerged: 'The need for Emergency Care provider role definition in DV intervention'; 'Impediments to prehospital Domestic violence response'; 'Emergency Care provider empathy during domestic violence response' and 'Conducting effective domestic violence-based simulations'. The finding is that: scripting of evidence-informed simulations *can* improve the responsivity to domestic violence cases by highlighting the theoretical gaps in knowledge, and help participants to meaningfully engage with the relevant content (laws, regulations, screening protocol for abuse, and referral agencies). Furthermore, the scripted simulations made vivid the need for an empathic and patient-centred approach in clinical practice (in addition to the commonly used skill-orientated approach). Scripting of simulations with the use of peer-based training may be an effective method of achieving improved responsivity to domestic violence. Traditional EMS training with mannequins may not be as effective for this purpose as students require a level of feedback and fidelity through which they can convey

their empathy and history-taking skills. To make future domestic violence simulations effective they need to have clear and achievable outcomes.

The study findings are of relevance to health professions educators, emergency care education centres, the professional regulator and civil society organisations involved in domestic violence crisis intervention.

KEYWORDS

Domestic violence, gender-based violence, medical simulation, patient script, emergency care, emergency care provider, screening implementation, prehospital, qualitative, social constructivism, grounded theory

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ABBREVIATIONS

ACA: American Counseling Association

ACLS: Advanced Cardiac Life Support

AHA: American Heart Association

AIDS: Acquired Immunodeficiency Syndrome

BEMC: Bachelor of Emergency Medical Care

CPD: Continuous Professional Development

CPUT: Cape Peninsula University of Technology

DAIP: Domestic Abuse Intervention Project

DOH: Department of Health

DV: Domestic Violence

EBM: Evidence-based Medicine

EC: Emergency Care

ECT: Emergency Care Technician

ECP: Emergency Care Practitioner

ECPS: Emergency Care Practitioner Student

EMC: Emergency Medical Care

EMS: Emergency Medical Services

FGD: Focus Group Discussion

GBV: Gender-based Violence

HEI: Higher Education Institute

HIV: Human Immunodeficiency Virus

HPCSA: Health Professions Council of South Africa

ICAS: Independent Counselling and Advisory Service

IPV: Intimate Partner Violence

ITC: International Training Centre

MRC: Medical Research Council

OSCE: Objective Structured Clinical Examination

PALS: Paediatric Advanced Life Support

PBEC: Professional Board for Emergency Care

PCR: Patient Care Report

POPI: Protection of Personal Information Act

PRF: Patient Report Form

PTSD: Post-traumatic Stress Disorder

REC: Research Ethics Council

RSA: Republic of South Africa

SAPS: South African Police Service

SAMHSA: Substance Abuse and Mental Health Services Administration

SBME: Simulation-based Medical Education

SP: Standardised Patient

UK: United Kingdom

UN: United Nations

UNDP: United Nations Development Programme

WHO: World Health Organisation

WIL: Work Integrated Learning

1. CHAPTER ONE: INTRODUCTION

1.1. Introduction

Domestic violence (DV) is a complex healthcare burden for South Africa and the world over (WHO, 2013). There is a paucity of studies related to Emergency Care provider (EC provider) responses to victims of DV. Little research effort has been made to enhance healthcare worker responses to victims of DV, and at the time of this study, no research was found on how EC provider responses to DV can be improved with specialised medical simulation training. This study's aim was to determine how EC provider responses to DV can be enhanced by scripting DV-based simulations.

The following segment of this chapter aims to provide a background to the problem. Subsequently, the problem statement is provided along with the aim of the study. The research questions are preceded by the purpose and significance of the study. The chapter is finalised with a description of the research design and the scope, assumptions and limitations of the study. The chapter concludes with a definition of terms commonly used throughout the document.

1.2. Background to the problem

1.2.1. National recognition and duties towards domestic violence

The first legislative attempt made to deal specifically with domestic violence was the Prevention of Family Violence Act 133 of 1993 (South Africa, 1993). Unfortunately, this Act was severely limited as it (indirectly) excluded individuals who are in relationships but not married such as dating couples who are not living together *and* same-sex partners. The Act also made no attempt to define the term "domestic violence", this left judicial officers with their discretion when determining what action/behaviour constituted abuse. It was also unclear whether emotional/psychological abuse which was not coupled with physical violence may qualify as abuse under this Act. As a result, the final decision concerning the granting of a protection order would ultimately come from a magistrate who had no legally relevant definition for domestic violence at his/her disposal and, historically, little knowledge of the concepts such as the cycle of violence (Barnett, 1993) and learned helplessness (Seligman, 1972)[1].

Due to, but not limited to the shortcomings mentioned above in the Prevention of Family Violence Act 133 of 1993, the Domestic Violence Act No. 116 of 1998 was drafted (South

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[1] Both terms are described later in this document

Africa, 1998). A team of experts was assembled in the private, governmental, magistracy and academic fields related to law, policy and domestic violence. They were tasked with identifying and remedying the deficiencies which were found in Act No 133 of 1998. The Domestic Violence Act of 1988 was written to afford victims of DV the maximum protection from further abuse that the law can provide. The Act recognised that DV is a "serious social evil" and that there is an elevated incidence of it within the Republic of South Africa (South Africa, 1998:2). This Act is written with regard to the Constitution of South Africa; with particular stress to the right to equality, freedom and security of the person (South Africa, 1998).

This Act highlights the responsibilities of the South African Police Service at the scene of an incident of domestic violence. These responsibilities include the rendering of assistance to the victim of DV to make arrangements in finding suitable shelter and to obtain medical treatment. They are also mandated to, if reasonably possible, hand a notice containing the information as prescribed to the victim in the official language of the victim's choice. The member of the South African Police Service should also, if reasonably possible to do so, explain the content of the notice including the remedies at the victim's disposal (including but not limited to the right to lodge a criminal complaint) (South Africa, 1998).

Notwithstanding the above unprecedented legislative progress in DV legislation, throughout the Act, only one indirect reference is made to EC providers. It explicitly names health care providers, counsellors, members of the South African Police Service, social workers and teachers as people who may have a "material interest in the wellbeing of the complainant" (South Africa, 1998: 8). The aforementioned may, therefore, bring application forms for a protection order on behalf of the complainant (DV victim) (South Africa, 1998). The narrow reference to the health care sector within the DV Act leaves little obligation for certain health care personnel to assist victims of DV. This omission in the DV Act can have massive implications for the wellbeing of DV victims. The first point of contact (and often the only point of contact) that the victim has with public sector services is with the health care system (Parenzee, Artz & Moult, 2001). This puts health care workers (specifically the EC providers) in a unique and powerful position to identify abuse and provide early intervention.

1.2.2. The regulatory body in South African health care

The practice of most health professionals, including emergency care providers, in South Africa is governed by the Health Professions Council of South Africa (HPCSA)where its primary function is to protect the public and guide the professions. Registration, professional conduct, ethical behaviour, continued professional development, and education and training are regulated by the HPCSA (South Africa, 1974). It can, therefore, be said that the HPCSA is the

custos morum[2], with regards to professions within their jurisdiction. In, 2013, the HPCSA produced a domestic violence (DV) screening guideline for emergency care (EC) providers. Prior to these guidelines the prehospital identification and management of DV victims were completely up to the discretion of the EC provider at the scene. Six years later and the extent to which any HPCSA accredited EC education and training provider has implemented these guidelines into an EC programme is still unknown (Naidoo, 2017). It is also unclear if any of the 67 800 currently registered EC providers within the HPCSA (Naidoo, 2018) have taken it upon themselves to implement a DV screening guideline, one for which they may have received no training. It has been approximately twenty-seven years since the term 'domestic violence' was mentioned in South African legislation, and yet it is unknown if EC providers have received specific training for managing victims of domestic violence.

The South African government is a signatory to multiple international treaties including that of the World Health Organisation (WHO) which produced a briefing document on injury prevention. This document proposed identification, care and support programmes to prevent further violence to DV victims (Meer & Artz, 2018). The HPCSA aims to protect the community and guide the professionals, however, there is little evidence that they have linked the theory and policy of DV-screening guidelines for EC providers to clinical practice in the field. Whatever the state of affairs may be, enhancing simulated practice may hold potential value for practice change. It may appear that although legislative frameworks and policies are evolving, the clinical practice "on the ground" remains unaltered. South Africa has some of the most progressive laws and policies in the world, however, to protect women and provide comprehensive services to DV victims, these laws and policies need to be implemented appropriately, and there-in lies the challenge (Mpani & Nsibande, 2015). The consequence of poor policy implementation is that the dire domestic violence-related health care needs of the South African population are not being met (Naidoo, 2017).

1.2.3. Deficiency in EC provider responsiveness to domestic violence cases

The evidence presented in the study by Naidoo (2017), "Gender-based Violence: Strengthening the role and scope of Prehospital Emergency Care by promoting theory, policy and clinical praxis" provides the basis for this study. In Naidoo's study, a question was posed "Does implementation of a screening tool by EC providers improve detection rate of victim exposure to DV and improved referral rate of female victims (14 years and older) presenting to a public emergency medical service (EMS) in the City of Cape Town and Cape Winelands?".

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[2] Guardian of morals

To act as a baseline for EMS detection of DV there was an analysis of archived EMS patient report forms[3]. The historical domestic violence detection rate, without particular training, was found to be 5,1/1000. This means that for every 1000 EMS patients (female, 14 years and older), only 5.1 were found to have DV notation present in the patient records. After the implementation of domestic violence screening training (non-simulation) the detection rate rose to 47,9/1000. This indicates an alarming missed case detection rate of 42,8 per 1000 patients (females, 14 years and older) (Naidoo, 2017). It can, therefore, be said that approximately 42 domestic violence victims out of 1000 female EMS patients are left without any specific intervention from a physically present EC provider (no acknowledgement of DV and therefore no referral for legal/social interventions). This elevates the risk continued harm for an already extremely vulnerable cohort. For the victims who are acknowledged, there is minimal evidence to suggest that referral was optimal (Naidoo, 2017).

There are several barriers to the recognition of domestic violence by health care professionals. These factors can include a lack of training to accurately identify women or children who are being or have been abused (Baraldi, de Almeida, Perdona, Vieira & dos Santos, 2013). The recognition of domestic violence is critical for the initiation of care and referral. Therefore, any factor which contributes to the lack of EC provider responsiveness may be enough to sustain domestic violence in various households. Factors constraining domestic violence recognition by EC providers may be rooted in the personal beliefs of the EC providers themselves (Naidoo, Knight & Martin, 2013). These beliefs may stem from cultural or even religious backgrounds. In a descriptive, cross-sectional study of emergency care practitioner beliefs of domestic violence carried out by Naidoo et al. (2013)[4], it was observed that most respondents held some false beliefs[5] or myths about domestic violence. These incorrect beliefs or myths include "Women who are abused, enjoy it or are mentally ill"; "Only poor, uneducated and mostly black or coloured women are abused"; "Abused women can leave home whenever they want".

Without condoning such beliefs, and to be fair, EC providers are human and may feel insecure when dealing with DV as they too may be victims (or perpetrators) of the same injustice in their personal lives (Ragaven, 2010). The belief that domestic violence is purely a private matter which should and can only be resolved by the parties involved (abuser and abused) can also potentiate the continued violence. Another contributing factor to the non-action of EC providers may be due to learned helplessness (Naidoo, Knight & Martin, 2013). The EC

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[3] Documentation describing the nature of the patients' presentation, physical injuries, medical history, vital signs, and treatment delivered, along with the various times of dispatching, arrival on scene, departure from scene etc.

[4] Published in African Safety Promotion Journal, Vol. 11, No. 2, Medical Research Council (MRC). The MRC is mandated to promote healthcare research in South Africa.

[5] A false belief can be described as an individual's belief of the world which is divergent from reality.

provider may have a presumption that to intervene in the situation (in any way) could result in inadvertently aggravating the abuser and potentiating further violence to the victim (Baraldi et al., 2013). The argument exists that these presumptions may be irrational and the unfounded fear of adverse events itself may, in turn, result in negative outcomes. As a treatment goal, health care worker engagement with DV victims must be protective of further abuse.

The EC education and training providers (referred to in the above paragraph) undergo stringent processes to be accredited by the HPCSA. For institutions to offer Emergency Care Technician (ECT) and Emergency Care Practitioner (ECP) programmes, they need to comply with the HPCSA Professional Board for Emergency Care (PBEC) Form 332 accreditation guidelines (HPCSA, 2017). The PBEC advocates the usage of simulation laboratories which meet the skills and scopes of the qualifications to be offered. By reviewing the PBEC Form 332 accreditation guidelines (HPCSA, 2017), and its student-to-equipment ratio requirements of 15:1 for ECT or 15:2 for ECP, it is evident that psychomotor skills such as Cardiopulmonary Resuscitation, intravenous cannulation, and endotracheal intubation are stressed in the teaching environment (perhaps for appropriate reasons), but behavioural emergencies or interpersonal violence may be neglected (Naidoo, Knight & Martin, 2013).

1.3. *Statement of the Problem*

The problem being addressed in this study is the deficiency in emergency care provider responsiveness when faced with prehospital cases of domestic violence. Poor or non-responses from emergency care systems render the profession complicit in normalising the occurrence of domestic violence and in undermining opportunities for early detection and prompt care and referral. In essence, the problem is located at the intersection of professional capacity and obligations and DV victim needs for safety and health care interventions. Provider responsiveness (professional capacity and fulfilment of obligations) specific to DV has not been appropriately stressed in EC provider training.

The gap in knowledge is unpacked in Chapter 2. The problem is less about conflicting findings, but rather the almost complete lack of findings regarding the EC student and provider responsiveness to domestic violence. Further research is required into assessing the practice and efficacy of interpersonal violence simulations in the context of prehospital emergency care, as well as the perceptions and experience of the EC students and providers performing this type of training. Research is required to determine the most effective form of simulation training in the context of prehospital emergency care for dealing with victims of abuse (Naidoo, 2017).

1.4.   Aim of the Study

The study aims to position EC providers as advocates for DV victims' interests during the (simulated or real) emergency care interaction.

1.5.   Primary Research Question

How does the scripting of evidence-informed simulations of adult domestic violence cases enhance practitioner responsiveness and patient safety among prehospital emergency care students?

As the research question is qualitative in nature, it has "outcomes" but no hypotheses. The basis of grounded theory is that the researcher cannot have preconceived hypotheses. Theory obtained by this method is then truly grounded in the data (Glaser & Strauss, 1967).

1.6.   Research Sub-questions

To operationalise the research, the following sub-questions are asked:

- What are the perceptions of emergency care students regarding the implementation of domestic violence-related simulations?
  - o The current beliefs, attitudes and knowledge of EC providers is of interest. EC providers and members of the public are less likely to hold "violence supportive attitudes" if they understand the factors which enforce and perpetuate violence (VicHealth, 2014b:37).
- What is the role and value proposition of domestic violence-simulated practice in emergency care education?

1.7.   Significance of the Study

Violence against women knows no bounds; it occurs across socioeconomic status, race, age, and religion. Domestic violence is a gross violation of human rights and in South Africa particularly, it is on the rise. A survey was conducted by Stats SA in partnership with the South African Medical Research Council (SAMRC), where-in it was found that 21% of women older than 18 years-old reported that they had experienced violence at the hands of a partner. Six

percent of women over the age of 18 reported that they had experienced sexual violence. Ten percent of women living with a partner reported sexual violence against them (South Africa, 2017).

Gender equality is listed as 'Goal 5' in the Sustainable Development Goals by the United Nations Development Programme (UNDP) (UN, 2015). The goal is to end all discrimination against women and girls by 2030. This goal is not only a basic human right; it is crucial for a sustainable future. The goal 5.2 aims to: "Eliminate all forms of violence against women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation." (UN, 2015:22). In the most extreme cases, DV can result in the death of women and girls. Intimate partners and family members are the perpetrators in almost half of all intentional homicides of women worldwide, compared to about six percent of male victims (UN, 2017).

The presence of domestic violence is, in every level, a social concern which can be directly and indirectly related to burdening the healthcare system (Naidoo, 2017). This burden can be attributed to repeated callouts for EMS and peace-keeping services, visits to overwhelmed community clinics, use of social worker services and HIV clinics. Emergency personnel, namely EMS, firefighters and the police service have a distinguishing characteristic in that they are inherently the first interventionists on the scene for an emergency. This places them in an advantageous position for early detection of DV occurrences, allowing them to screen, medically treat, collect/maintain forensic evidence and refer victims to appropriate care (specialised medical or psychological care). EC providers, who are on the scene of a domestic violence incident, should realise that by the very fact that they were called to the scene, something truly anomalous has occurred and action should be taken to prevent further incidents. DV has been described as a wicked problem[6]; the very act of understanding the problem is in itself, part of the solution as it is an empowering process. EC providers and members of the public are less likely to hold "violence supportive attitudes" if they understand the factors which enforce and perpetuate violence (VicHealth, 2014b:37).

By including gender-based violence related clinical practice into the curriculum of EMS training courses, the factors influencing EMS provider suboptimal response may dissipate. These factors include learned helplessness, false beliefs and ambivalent attitudes (Naidoo, 2017).

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[6] This concept was derived by, Rittel and Webber (1973). Wicked problems are described as problems which cannot be easily defined or separated into smaller, manageable sections. Wicked problems do not have solutions which are "findable" (Rittel & Webber, 1973:160). These types of problems are common in societal or policy planning as opposed to traditional scientific or mathematical problems where is a clear mission, and clearly observable outcomes (where the problem has been solved or it has not) (Rittel & Webber, 1973).

1.8. Research Design

The research paradigm is that of social constructivism. The appropriateness of social constructivism as a paradigm for this topic will be addressed in Chapter 3. The following will be briefly outlined: a) Paradigm, b) Methodology, c) Methods, d) Data and analysis.

a) Paradigm

The research paradigm selected for this study is social constructivism.

b) Methodology

The methodology used is grounded theory.

c) The methods used to collect the data are as follows:

1. Literature review for secondary data
2. Focus group discussions
3. Participant observation during patient simulations

A literature review instigated the data collection procedure. The purpose of this practice was to discover and report on the current knowledge concerning DV based simulations and best clinical practice. The literature review was used to design the patient scripts which were used in the patient simulations so that they were evidence-informed. Focus group discussions (FGDs) were implemented before and after patient simulations (participant observation). The purpose of the FGDs was to determine the raw and subjective beliefs, attitudes and knowledge of EC provider students concerning domestic violence simulations. The purpose of the participant observation during the patient simulations was to outline the practitioner approach to a DV victim in the prehospital setting.

The voluntary participants consisted of EC providers who were registered as students in the Bachelor of Emergency Medical Care (BEMC) at Cape Peninsula University of Technology, Bellville Campus in Cape Town, South Africa. These students will, upon graduation, be registered as independent practitioners with the HPCSA as "Emergency Care Practitioners".

d) Data emerged and Analysis

Data analysis took place through a process of open coding, axial coding, and memo writing. From the data obtained, concepts were developed. Categories were derived from these concepts and the data collection was progressively focused on the emerging theory. Theoretical sampling from verbal and practical data collection occurred until theoretical replication transpired. The emerging theory was continually refined until theoretical saturation occurred.

1.9. Scope, Assumptions and Limitations

1.9.1. Scope

The study took place in the clinical simulation laboratories at CPUT, Bellville Campus. This site is also accredited by the American Heart Association (AHA) as an International Training Centre (ITC) for AHA courses.

Simulation laboratories are controlled environments, as opposed to performing these studies in the field. Participants may also feel more comfortable to perform simulations in this environment where their identity may be more easily confined to the group alone. This will aid in safeguarding participant anonymity within the limits of the methods. Video recording can be consistent in the simulation venue, to ease data collection and analysis. As a benefit to using the same venues, the background noise can also be controlled to a certain extent.

1.9.2. Assumptions

The primary assumption of this qualitative study is that gender-based violence is a human rights violation. Under the Universal Declaration of Human Rights; "Everyone has the right to life, liberty, and security of person" (UN, 1948). The South African Constitution states in the Bill of Rights that "Everyone has the right to life" and that "Everyone has inherent dignity and the right to have their dignity respected and protected" (South Africa, 1996:6).

The Health Professions Council of South Africa has an interest and regulatory obligation to promote diagnostic probity for DV cases. The HPCSA motto is to protect the public and guide the professionals. EC providers also have a clinical obligation to be capable of identifying and managing DV victims in the prehospital EC setting. The HPCSA Guidelines for Good Practice in the Health Care Professions, 2008, states that the main responsibilities of health

practitioners include "acting in the best interests of his or her patients" and "keeping his or her professional knowledge and skills up to date" (HPCSA, 2008:20).

Simulated practice, in general, and in terms of the expectations of the regulator and EC educators, enhances EC provider clinical practice education (Lateef, 2010). EC provider responsiveness will also be improved with a constructively aligned educational module (Biggs, 2003). It was assumed that participants involved in the focus group discussions and participant observation simulations would answer questions honestly and to the best of their abilities.

1.9.3. Limitations

DV affects adults and children in domestic relationships. Due to the scope limitations of a Master's degree, the study is limited to adult DV victims only. It is acknowledged that perpetrators may include children, but the behavioural pathology of adult DV victims is the object of the simulated practice in question. Care for this adult patient population is nuanced by their autonomy which is undermined by abuse.

The study began during the EC provider student academic year at CPUT Bellville, therefore there was a limitation as to how much time would be available to collect data. This data capture time was subject to EC provider student availability around assessment dates, academic holidays, Work Integrated Learning (WIL) shifts and various subject lectures.

1.10.   Summary and Notes from the Author

It would seem that domestic violence (DV) is an interminable healthcare burden for South Africa and the world. The presence of domestic violence is, at every level, a social concern which can be directly and indirectly related to burdening of the healthcare system. This burden can be attributed to repeated callouts of EMS and the South African Police Services, visits to overwhelmed community clinics, use of social worker services and HIV clinics (Naidoo, 2017). There are several barriers to the recognition of domestic violence by health care professionals (Baraldi, de Almeida, Perdona, Vieira & dos Santos, 2013; Naidoo, 2017; Naidoo, Knight & Martin, 2013). Research is required for assessing the efficacy of simulations in the context of prehospital emergency care diagnostics and care, as well as the underlying perceptions of the EC providers undergoing this type of training.

This study was completed to determine how EC provider responses can be enhanced by scripting DV-based simulations. The problem being addressed in this study is the deficiency

in emergency care provider responsiveness when faced with prehospital cases of domestic violence. This study utilized the paradigm of social constructivism. Data collection began with a literature review. Participants were recruited from the BEMC program at CPUT Bellville. Focus group discussions, patient simulations and post-simulation focus group discussions took place during the academic year. These were done to determine the raw and subjective beliefs, attitudes and knowledge of EC provider students concerning domestic violence simulations. The patient simulations were performed to outline the practitioner approach to a DV victim in the prehospital setting.

First-person personal pronouns will be used throughout the majority of the discussion. On occasion, third-person pronouns may be used. The referencing style utilised in this thesis is based on the 'author, year' structure. Page numbers for referencing will only appear for direct quotations. The bibliography style complies with Cape Peninsula University of Technology (CPUT) Harvard referencing convention.

1.11.   Definition of Terms

1.11.1. EC: Emergency Care

Emergency Care is defined in the Health Professions Act as: "...the rescue, evaluation, treatment and care of the ill or injured person in an [EC] situation and the continuation of treatment and care during the transportation of such person to or between health establishments" (South Africa, 2003:5). There is complexity within the triage of domestic violence as it is considered in the Domestic Violence Act of 1998, as "behaviour towards a complainant, where such conduct harms, or may cause imminent harm to, the safety, health or wellbeing of the complainant" (South Africa, 1998:4). If the patient is neither "ill nor injured" but his/her life is at risk it should be regarded as requiring a form of emergency care or intervention.

1.11.2. EC provider: Emergency Care Provider

Any healthcare provider registered with the Professional Board for Emergency Care (PBEC) at the Health Professions Council of South Africa (HPCSA). This term can refer to any of the various qualifications prehospital workers may hold within South Africa. In an effort to not inadvertently exclude some EC providers from the research; the abbreviation ECP is not used as it often relates to the title: 'Emergency Care Practitioner', held by EC providers with a Bachelor's degree and highest clinical scope of practice. In the same light, the term

"Paramedic" is also not used as it is a protected term for a particular registration category (South Africa, 2003:7).

1.11.3. Gender-based violence

Any harmful act that is perpetrated against a person's will and is based on socially ascribed gender differences between males and females. In the context of this study, it may be interchangeable with domestic violence or interpersonal violence.

1.11.4. Patient Simulation:

"A technique that creates a situation or environment to allow persons to experience a representation of a real health care event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions" (Lopreiato, 2016:34). The term "simulation" may hold a different meaning for people with varying professional backgrounds. Therefore, in the context of EC provider training, Simulation-Based Medical Education (SBME) will be the specific term used. SBME can comprise of various learning orientations to achieve different results namely; behaviourist, cognitivist, humanist, social learning and constructivist (Torre, Daley, Sebastian & Elnicki, 2018). In this study, a social constructivist lens is used.

2. CHAPTER TWO: LITERATURE REVIEW

2.1.   Introduction

The purpose of this narrative analysis-styled literature review was to source and synthesize relevant literature to determine what is known about the topic at hand. By acknowledging the absence of certain literature types and claims I highlight areas where future research is required. The scope of this review includes published and unpublished[7] written works, with time-frame limitations for demographic statistics of 10 years. There was no time-frame limitation for the explanation of social/behavioural research phenomena where evidence can be regarded as seminal. Only English evidence, including those that have already been translated, have been utilised as this is the researcher's first language.

The researcher notes that traditional grounded theory methodology stipulates that a literature review *should not* precede data collection. This is to allow the researcher to enter the field without preconceived notions of the topic in question (the theory generated will, therefore, be truly grounded in the data obtained, hence the name). I am acknowledging the value in withholding the literature review until after the data collection, however for the purposes of ethical conduct and the formation of evidence-informed patient scripts, I have elected to diverge from the traditional process.

On ethical grounds, I have elected to perform a literature review before conducting the focus group discussions and simulations. The topic of domestic violence is highly sensitive to all those involved. As a novice researcher, I am acknowledging my lack of understanding in the field of inquiry. That being said, there is an indubitable risk of harm to the participants in the process of data collection (this argument is detailed in the ethics section of research design in Chapter 3). To sensitise me to the topic of domestic violence and to show the understanding/empathy required to deal with participant reactions, the literature review was necessary. It can be said that by immersing myself in the literature review before making contact with the participants during data collection, I would be elevating my emotional intelligence. The document issued by the Department of Health, "Ethics in Health Research Principles, Processes and Structures" of 2015 mentions that ethical research needs to be conducted by a competent researcher "must be suitably qualified and technically competent to carry out the proposed research" (DoH, 2015:17). In addition, the DOH makes mention of the need for a favourable risk-benefit ratio. This is a scenario whereby the potential risk of harm to a participant is outweighed by the likelihood of benefit (for the participants or society)

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[7] Unpublished refers to any information source which was not officially released by a publishing house or company. Published works refers to the distribution of copies of a work to the public by sale or other transfer of ownership or by rental lease or lending (Copyright alliance, 2019).

from the data collected during the research effort. The risk of a participant having a negative emotional event as a result of my ignorance of the subject cannot be excusable. The methodology of traditional grounded theory cannot take precedence over the potential risks to the participants and research beneficence.

The second reason is that the development of the patient scripts (which were utilised in the participant observation portion of the data collection) required statistical evidence and information regarding domestic violence victimology.

2.2.   Gender-based violence contextualised

Intimate partner violence (IPV) or domestic violence (DV) is increasingly becoming recognised as a public health problem whereby injuries/symptoms expand further than the physical occurrences (WHO, 2013). DV can result in a wide range of other mental and physical health problems. IPV or DV may be described as lying on a continuum (like other health problems, whereby no one is fully healthy or fully diseased, there is always overlap). This violence may, therefore, encompass everything from coercing a person to have sex, the threat of violence, pushing or slapping, closed fist strikes, striking with objects, violent rape, stabbing or shooting[8]. Instigation of DV within the younger population is very often associated with the rejection of a man's advances to a woman, actual or suspected infidelity attempts to end relationships, resistance to partners' attempts to dictate the terms of a relationship and acts that may undermine a boyfriends' success with another woman (Jewkes, Penn-Kekana, Levin, Ratsaka & Schrieber, 2001). Therefore, the understanding of the origins of intimate partner violence (of all types) cannot be made with univariate analysis.

It has been proposed that the abuse results from the "interplay of personal, situational and socio-cultural factors at different levels in the social environment" (Jewkes Levin & Penn-Kekana, 2002:1604). Factors predisposing people to commit acts of IPV/DV include being abused as a child or being a witness to marital violence in the home or having an absent or rejecting father (Jewkes et al., 2002). The environment of a person during early childhood may also play a part in the creation of a future aggressor and these include: use of alcohol, male control of wealth and decision making in the family, poverty/unemployment, social isolation of woman and "male participation in delinquent peer associations[9]" (Jewkes et al., 2002:1604)

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[8] The order of these occurrences does not trivialise the significance of any manifestation of IPV or DV.
[9] It is well-known that youth who socialise with peers who engage in behaviour regarded as delinquent (misdemeanours such as petty theft, simple assault, trespassing, vandalism, etc.) are at an increased risk for delinquency and substance use-related activities later on in adolescence or adulthood (Leve & Chamberlain, 2007).

At a societal level, having male ownership of females, ideas of masculinity linked to aggression and dominance, rigid gender roles, a societal/religious/cultural acceptance of IPV and physical chastisement may promote the development of an individual who is predisposed to acting in a similar fashion later in life (Jewkes et al., 2002).

South Africa has a rich but violent political history. It has been proposed that as parts of the South African society have gained political power and control, they have simultaneously experienced a perceived loss of control in the homestead. South African men have been bred and raised on the notion that violence and destruction are necessary and honoured (as it may have been during the liberation). However, in the post-apartheid era, these acts are viewed as criminal and destructive (Jackson, 2007). The author of this literature goes further to say that "South African men lack personal power but live in a society that expects them to be powerful" (Jackson, 2007: 655). There is a crisis of masculinity and because violence against women was historically condoned in some customs, it has led to the point that men have attempted to reassert their power and control over women (Jackson, 2007).

The effects of domestic violence can range from short to long term morbidity and mortality. Victims of DV may sustain life-threatening physical injuries in their experiences, but they may also suffer from insidious and less obvious effects which can be just as debilitating. Aside from the physical presentations, victims may experience chronic pain syndromes, post-traumatic stress disorder (PTSD), anxiety, depression, suicidal ideologies and substance abuse (Goldsmith, 2016). Healthcare workers (physicians, nurses, dentists, physical therapists and EC providers) may, at any time, encounter a victim of DV at any point in the progression of violence severity (from a victim with a verbally abusive partner or one who routinely assaults the victim).

It is therefore stressed that healthcare providers should observe the four guiding principles of care: victim safety, victim autonomy, perpetrator accountability and advocacy for social change (Jackson, 2007). These guiding principles were promulgated by the Family Violence Prevention Fund[10] when addressing DV. Every action by the healthcare worker must have the patient's best interests at heart. This means that clinical care, assessments, documentation, safety planning and all communication must be conducted in a manner which does not place the patient in a higher risk situation. The patient (and his/her dependents) must not be placed in a worse position due to the actions of the healthcare worker. Ensuring that the victim has

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[10] The Family Violence Prevention Fund is an international organisation which works to end violence against women and children. The fund was instrumental in developing the Violence Against Women Act in 1994 (United States of America Congress).

autonomy in the process (and not just a sense of autonomy) can be regarded as the first step in restoring his/her sense of purpose and wellbeing (Jackson, 2007).

The reader must be aware that abused individuals have been stripped of the freedom to make informed choices for themselves and their children. This loss in autonomy may have taken place whereby the victim was indoctrinated to believe that only the abuser can make decisions, or they have been controlled by intimidating behaviour. Therefore, allowing the patient to make her own decisions can foster an environment where she will feel ready to take proactive steps to seek safety. Perpetrators often justify their actions by placing accountability with the victim, i.e. blaming the victim for the continued violence.

The guiding principles mentioned above (victim safety, victim autonomy, perpetrator accountability and advocacy for social change) emphasize the need for healthcare workers to reframe the violence as occurring because of the perpetrator's behaviour and not because of the victims' (Jackson, 2007). An example can be made whereby perpetrators would blame the victim for being present when the perpetrator is drunk, or for not following direct instructions, or by talking back. In all examples, the blame is placed onto the victim and away from the perpetrator's actions (which are now portrayed as 'justifiable' resultants for the victim's behaviour). In effect, this constitutes a denial of responsibility for the perpetration of violence.

As mentioned last in the guiding principles, healthcare professionals need to be aware that they can be important catalysts for change (Parenzee, Artz & Moult, 2001). Health professionals can best advocate for social change by realising that they cannot meet all the needs of survivors of abuse while practising in silos. The complex origins, progression and sustainability of DV requires a complex, progressive and sustainable strategy to identify and ultimately prevent further abuse. There are numerous impediments to DV screening and intervention, which are discussed below. A collaboration of healthcare sectors, law enforcement, religious organisations and the society at large is essential for any *meaningful* change (Parenzee et al., 2001). The term 'meaningful' is not inappropriate in this context. The change must mean an interruption in the cycle of violence (Barnett, 1993), else it may breed hopelessness. All of the stakeholders mentioned above need to hold the same belief in what constitutes DV for there to be a concentrated societal response to DV in society.

2.3.   Perceptions of healthcare workers concerning DV

The perceptions of health care workers about DV may play a role in the identification and management of DV victims. Studies from Brazil (Baraldi et al., 2013) and South Africa (Peltzer & Mabeba, 2010) yielded similar results when they questioned the perceptions of healthcare workers to DV. "The perception and attitude of physicians and nurses about violence against women" authored by Baraldi et al., in 2013, was a quantitative, cross-sectional and comparative survey including all physicians and nurses from the district basic health units in Ribeirão Preto, Brazil. This study, along with the study entitled "Attitudes and practices of doctors toward domestic violence victims in South Africa", emphasised the point that healthcare workers share a belief that they should play a role in the prevention and treatment of domestic violence. The general attitudes of the doctors to victims of DV were sympathetic and supportive (Peltzer & Mabeba, 2010). These studies share a characteristic feature in that they both originate from developing countries and focus on healthcare workers. These studies do not, however, question the perceptions of EC providers in the South African context with respect to the same issue.

In contrast to the above studies, a face-to-face questionnaire provided by Baraldi, et al. (2009), entitled "Knowledge and attitudes of healthcare workers towards gender-based violence" had 12% (n = 26) of its interviewees stating that the management of domestic violence did not form part of their professional role. This questionnaire was applied to all nurses and physicians within the internal medicine, gynaecological and walk-in clinics in five district healthcare hospitals within the Brazilian National Health System. However, it was found that just over half of the interviewees, 55.7% (n = 123) had good or high general knowledge about domestic violence and only 12.7% (n = 28) were classified as having low knowledge about the definition of gender violence.

In a study, by Naidoo (2017), South African EC providers (n = 329) were provided with a questionnaire concerning their beliefs about their role in DV. Three sets of questions were formed, each with its own theme. The first was regarding the respondent's level of belief in myths about DV. The second set was used to measure the EC providers' self-efficacy for dealing with DV cases. The final set was used to measure the EC providers' perception of their medical capacity for dealing with DV cases. It was found that there were no significant differences between the ability of women and men to define DV (which is essential to be able to act when a case arises). Surprisingly, it was found that the EC providers with less experience tended to score higher than the EC providers with more years in service. When questioned about their beliefs in DV myths, male participants were more likely to score in a manner which suggests that they subscribe to the myths. There was no other evidence to

imply that female EC providers are preferable to their male counterparts in effectively responding to DV cases in the prehospital setting (Naidoo, 2017).

Prehospital EC providers, nurses, and physicians are expected to convey an attitude which is empathic, and free of fallacious preconceptions. The evidence is showing that the majority of healthcare providers, although believing a few myths about DV, are aware that they have a role to play in the management of a DV victim who presents to them (Baraldi et al., 2013). The lapse in DV care is a product, mainly, of the lack of knowledge on how to proceed when a victim of domestic violence is identified, especially in the setting of prehospital care. There is a clear and palpable void in the education and training of healthcare professionals when dealing with domestic violence (Hamberger, 2007; Aksan & Aksu, 2007; Herrera & Agoff, 2006). In order to propose an intervention to sensitise professionals for the proper handling of cases, adequate planning, according to the reality they need to transform, is required (Baraldi et al., 2013). Simulation training is a proposed method of sensitising professionals to handle cases which they may encounter in the 'real world'.

2.4.   Simulation training defined and contextualised

Simulation is defined by the Health Care Simulation dictionary as "A technique that creates a situation or environment to allow persons to experience a representation of a real health care event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions" (Lopreiato, 2016:34). Simulation-based education is increasingly used in healthcare for training, research and assessments as a way of mitigating the challenges of present-day healthcare and the safety of patients (Tun, Alinier, Tang & Kneebone, 2015). The professions which benefit the most with this approach to training are the ones which inherently involve complex situations; where the wrong decision on the part of the professional can result in disastrous consequences (such as pilots, emergency medical staff, various military operations etc.).

During medical education, students should have exposure to live patients so that they can acquire the necessary skills (communication with patients and family members). Still, there is an ethical and moral obligation to provide optimal treatment to patients and to ensure their physical and emotional wellbeing. Students practising their skills indiscriminately place patients, who are inherently vulnerable, at risk of unnecessary harm (Lateef, 2010). In simulation training, learners are free to make decisions without any life-altering repercussions; there is no risk of self-harm, the harm of the subject (patient) or bystanders, (Alharbi, 2016).

Medical, nursing and various other healthcare staff use this form of training to develop and refine their skills, repeatedly if necessary, without putting patients at risk.

The use of simulation can enhance technical and functional training, problem-solving and decision-making skills as well as interpersonal and communication skills or team-based competencies (Lateef, 2010). The common factors in the above potential improvements are the requirements of active listening and collaboration in addition to foundational knowledge and practical skills. The evidence representing the effectiveness of simulation training in the improvement of patient care outcomes is not strong. The lack of strength in this link is due almost entirely by the lack of research on the topic. Of the very few studies which were conducted, there appears to be a correlation to an improvement in clinical performance after simulation training (in the context of anaesthesia) (Shear, Greenberg & Tokarczyk, 2013). Smith and colleagues were able to show that simulation training improved perinatal care and outcome, decrease litigation claims and reduce midwifery sick leave (Smith, Siassakos, Crofts & Draycott, 2013).

In the academic sector, however, there is a significant body of evidence indicating the improvement of educational outcomes with the use of simulation training. It is shown that learners who perform simulated tasks improve progressively when another simulated task is completed (Lateef, 2010). Excluding skill performance, researchers who were attempting to find a link between simulation training and an improvement in patient safety noted an increase in the confidence of students (based on self-reporting in questionnaires) when performing various skills, they also noted an improvement in student preparedness (Green, Tariq, & Green, 2016).

The term "simulation" may hold a different meaning for people with varying professional backgrounds. Therefore, in the context of EC provider training, Simulation-Based Medical Education (SBME) will be the specific term used. SBME can comprise of various learning orientations to achieve different results namely; behaviourist, cognitivist, humanist, social learning and constructivist (Torre, Daley, Sebastian & Elnicki, 2018). There has not been a proven "best-fit" learning orientation which supports EC provider student approaches to domestic violence incidents.

2.5.   *Understanding the value of SBME learning orientations*

The behaviourist orientation makes use of "Learning Theory". This theory is teacher-centred, where the role of the teacher is to manipulate the environment/objects in the environment to provoke a predefined response from the learner. The behaviourist learning orientation is

particularly advantageous when developing the learner's psychomotor skills such as programming a syringe driver or inserting an intravenous catheter. The cognitivist orientation "focuses on the learner's cognitive structures and internal environment, the learner will make use of his/her insight, perceptions, information processing, and memory to facilitate learning by assigning meaning to events" (Torre et al., 2006).

Social constructivism is a theory of knowledge which stipulates that all cognitive functions, including learning, are dependent on interactions with others (parents, lecturers, peers). It is for this reason that for learning to take place, a successful collaborative method is necessary. The teaching must occur in a situationally specific and contextually bound medium for learning to take place (McInerney, 2002). Social constructivism can contribute to medical simulation in specific and appropriate learning opportunities. The learners can make meaning from the practical lessons (simulations) by interacting with one another, the simulation facilitator (which could be educational staff or even other learners) and by drawing on past experiences (real-life or simulated). The situation or context of the simulation can influence the achievability of the learning outcome.

2.6.   Variations in simulation fidelity for predetermined outcomes

Depending on the specific learning outcome in question, SBMEs can be tailored to different levels of authenticity. This is important, as it may be counterintuitive to have a highly realistic simulation involving paid actors and expensive training environments when the learning outcome is for the learner to perform adequate chest compressions during cardiopulmonary resuscitation (where this can be achieved with a relatively low budget training mannequin). Simulation realism can be broadly categorised as "low," "medium" and 'high' fidelity (Reedy, 2015). The term "fidelity" has a variety of aspects. The term can encompass everything from how well a simulator replicates the setting required (emergency room or the back of an ambulance) to how realistically the case scenario represents real-life practice. Fidelity can also refer to how simulation facilitators interact with the participants (Reedy, 2015).

Low-fidelity simulations are generally used to train learners in psychomotor functions and Objective Structured Clinical Examinations (OSCEs). These simulations may comprise artificial arms and upper-airway mannequins for the performance of a pre-defined skill such as intravenous cannulation or endotracheal intubation (Lopreiato, 2016). Less emphasis is placed on decision-making and team/scene management but rather on the actual act of correctly inserting an intravenous catheter (where context is of no concern). The realism is

low, as is the relative psychological stress experienced by the learner. Simulations can then lead towards high-fidelity cases.

High fidelity simulations comprise of realistic simulation mannequins or standardised patients (actors role-playing a pre-defined patient in a realistic and consistent manner). High-fidelity simulations are made as realistic as possible with the aim of immersing the learner in the situation provided to him/her (Kim, Park & Shin, 2016). The idea is to train the learner to make various decisions under realistic circumstances which will be a factor in real-life practice (such as treating a patient while verbally abusive family members interfere with the therapy provided) (Reedy, 2015). So, simulators can be labelled as either "low", "medium" or "high" fidelity depending on how closely they represent real life. A literature review undertaken by Lewis and colleagues, in 2012, had the aim of reviewing the body of evidence regarding the use of high-fidelity simulation in the development of non-technical skills for nurses. The results indicated that simulation had a positive correlation to the improvement of interpersonal communication skills of nurses during patient handover. It also improved leadership skills as well as critical thinking and clinical reasoning in complex care situations. Furthermore, the study noted improvements, or at least potential for development, in student self-efficacy and confidence in their own abilities (Lewis, Strachan & Smith, 2012).

Another method of improving student confidence in their practice may potentially come from the appropriate use of "standardised patients". A standardised patient/simulated patient is a person who acts in a predetermined fashion with the aim of enhancing medical education (Lopreiato, 2016). The term "standardised patient" can be used as an umbrella term for both instances whereby an actual patient presents his/her own illness in a standardised way or a healthy actor who is trained to portray an illness in a standardised way. The use of standardised patients or actors in the realm of medical education has been fruitful (Webster, Seldomridge & Rockelli, 2012) Where traditional SBME trains students by focusing on technical skills, the use of standardised patients will allow the same students to practice intervening in emotionally more sensitive areas (domestic violence, HIV counselling, psychiatric emergencies) without the risk of causing harm to real patients. This method of training is ideal for training students to interact with patients in real-world scenarios. (Dieckmann, 2009; Motola, Devine, Chung, Sulivan & Issenberg, 2013; Smith, Siassakos, Crofts & Draycott, 2013)

In the absence of standardised patients, students would have to talk to a mute simulation mannequin and expect an answer from the simulation facilitator[11]. Health care providers are

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[11] This method of information delivery can be distracting for the students, and may not promote effective learning. The expectancy of a student waiting for an answer from the facilitator also leads to a form of

far more likely to encounter patients who are still conscious. The use of standardised patients may be advantageous when covering emotionally more sensitive topics, especially if the patient population is abundant yet unattainable for training purposes[12]. By using standardised patients, students will be able to practice their patient interaction, history-taking, 'talking-down/de-escalating' without the limitations of patient confidentiality and mistreatment. Ideally, these standardised patients can be trained in multiple patient presentations, this will allow for the "appearance" of any behavioural emergency patient at any time and place at the convenience of the facilitator/training institution needs. Another method of using actors in simulation training can be when applying them as a family member(s) of the patient. This may result in a diverse teaching arrangement whereby the patient him/herself is not the teaching point in the simulation, but rather the hysterical mother or husband. Training with an actor can be beneficial in that the simulation can be "paused" when the scene starts to deteriorate[13], feedback can be given to the student from the facilitator or the actor in real-time and the simulation may continue.

There are however disadvantages to the use of this simulation training. The cost of having a paid actor(s) may be overwhelming if the training is to be used regularly. Vicarious traumatisation[14] is a risk for both the standardised patient and the students/facilitator involved in the simulation. This may be especially apparent in simulations involving domestic violence/rape (this topic is further covered in Chapter 3 of this document). Simulation fidelity can vary according to the learning outcomes desired. The fidelity of SBME often comes down to the setting of the scenario as well as the patient characteristics (body habitus, injuries, medical conditions, history etc.). The design of the patient is usually dependant on the

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dependence which may shift the responsibility of adequate history taking, on the part of the student; to the act of reading back predetermined answers, on the part of the facilitator. There is a potential for students to perform objectively poor history taking and still receive all of the necessary information to continue the simulation.

[12] A large population in the real-world setting but difficult to practice due to an inclination of behavioural emergency patients to refuse treatment by students and the ethical conundrum of allowing untrained persons to deal with people in crisis.

[13] A potential point in the simulation where the student either makes an error which results in the loss of trust from the patient's perspective, or when it is predetermined that the patient will become non-compliant/aggressive etc.

[14] Vicarious trauma: this term initially described the phenomenon of counsellors working regularly with trauma survivors. It refers to the "emotional residue" that counsellors may develop from listening to the stories of trauma spoken by the victims themselves. The counsellor will become a witness to the pain, fear and terror that was experienced by the victim. This phenomenon may be characterised by a state of tension and an unhealthy preoccupation of the stories/trauma experiences described by the victims. Counsellors who experience vicarious traumatisation may avoid talking or thinking about what the victims have spoken about, or they may be emotionally unavailable to them. They may also experience symptoms of hyperarousal such as insomnia, difficulty concentrating, irritability and anxiety among others (American Counselling Association, 2011:1).

simulation facilitator or technician. Intuitively, creating simulations based on evidence has a higher fidelity.

2.7. Designing evidence-informed simulations

2.7.1. Domestic violence victim epidemiology

It was found in the South Africa Demographic and Health Survey of 2016 Key Indicator Report that younger women (18-24 years old) were more likely to report physical violence which had occurred 12 months prior to the survey (South Africa, 2017). Ten percent (n = 1041) of women aged between 18 and 24 years old experienced physical violence from a partner in the past 12 months compared with 2% (n = 701) of women aged 65 and older. Separated and divorced women are more likely to experience violence (40%, n = 338) compared to women who are staying with their partners (31.1%, n = 693). There is no statistically significant difference between urban and rural respondents, however, it was found that women in poorer households were more likely to experience physical violence (24.4%, n = 1096) compared to women living in wealthier/higher-earning homes (13%, n = 1230). Experience of sexual violence by any partner was higher amongst women who are divorced or separated, followed by those who are living with their partners but not married (South Africa, 2017).

In terms of employment, the percentage of *reported* cases of physical violence was higher in the group of women who are employed (22.4%, n = 2301) compared to women who are not employed (19.2%, n = 3573) (South Africa, 2017). This report cannot account for the number of unreported incidences of physical violence in the unemployed group. A United Kingdom-based study found that higher rates of female unemployment were associated with increases in domestic violence. These data emerged from surveys and interviews of around 12000 women of working age in England and Wales (University of Royal Holloway London, 2014).

The reported incidents of physical violence were higher in the group of women who had completed their primary education but not their secondary (30.7%, n = 257) (South Africa, 2017). In terms of wealth, women who fall in the lowest wealth quintile are the most likely to have experienced physical violence in their lifetime (26%, n = 1096). Six percent (n = 1041) of women aged 18 years and older have experienced sexual violence by a partner (husband or boyfriend). It appeared that the experience of sexual violence by any partner in the 12 months prior to the survey decreases with age (South Africa, 2017). Experience of sexual violence by any partner was highest amongst women who are divorced or separated, followed by those who are living with their partners but are not married (South Africa, 2017). A study conducted in Amsterdam by Reijnders, van der Leden and de Bruin, in 2006, collected data from 450 DV

victims (adult women). Forty-two percent (n = 189) of the cases were inflicted by the partner and 26% (n = 117) was caused by the ex-partner (Reijnders et al., 2006).

Victims of DV are at increased risk of contracting HIV/AIDS (WHO, 2004). There are many factors while align to this statement, where the common theme is the loss of autonomy. Victims being forced into sexual relations with an infected partner is seen as a direct transmission. Examples of indirect transmission include; victims not being able to negotiate the use of a condom for sexual intercourse and abusers having sexually risky lifestyles (WHO, 2004).

2.7.2. The Cycle of Domestic Violence and its theoretical implications

The "Cycle of Domestic Violence" is a theory developed by Lenore E. Walker in 1979 (Barnett, 1993). The theory, often displayed as a cyclic diagram, encapsulates the repetitive nature of a perpetrator's actions that prevent or hinder a victim's ability to leave an abusive relationship (Barnett, 1993). The cycle typically consists of three or four stages/phases, namely, 'Honeymoon', 'Tension building' and 'Explosion'. In other depictions of the cycle, the 'Honeymoon' phase is broken down further into 'Reconciliation' and 'Calm', or into 'Remorse', 'Pursuit', and 'Denial'. The 'tension building' phase can be categorised by 'build-up' and 'stand-over' phases. In these moments the tension between the people in the relationship increases with verbal and emotional abuse being the most common. The stand-over phase refers to the time interval between extreme tension in the relationship and the acute explosion of violence (Barnett, 1993) (MICAH Projects Inc. 2017). The 'Explosion' or 'Acute Explosion' phase refers to a release of tension in a physically abusive manner and is the phase most likely to result in the EMS being summoned. The following phase, 'Honeymoon', involves the abuser apologising, buying gifts or being overly affectionate to the victim. Promises are made to end the abuse. This phase is often the reason that abuse survivors stay in the relationship (Barnett, 1993) (MICAH Projects Inc. 2017). Figure 1 displays the above description of the DV cycle of violence. EC must consider its role in interrupting this cycle of violence.
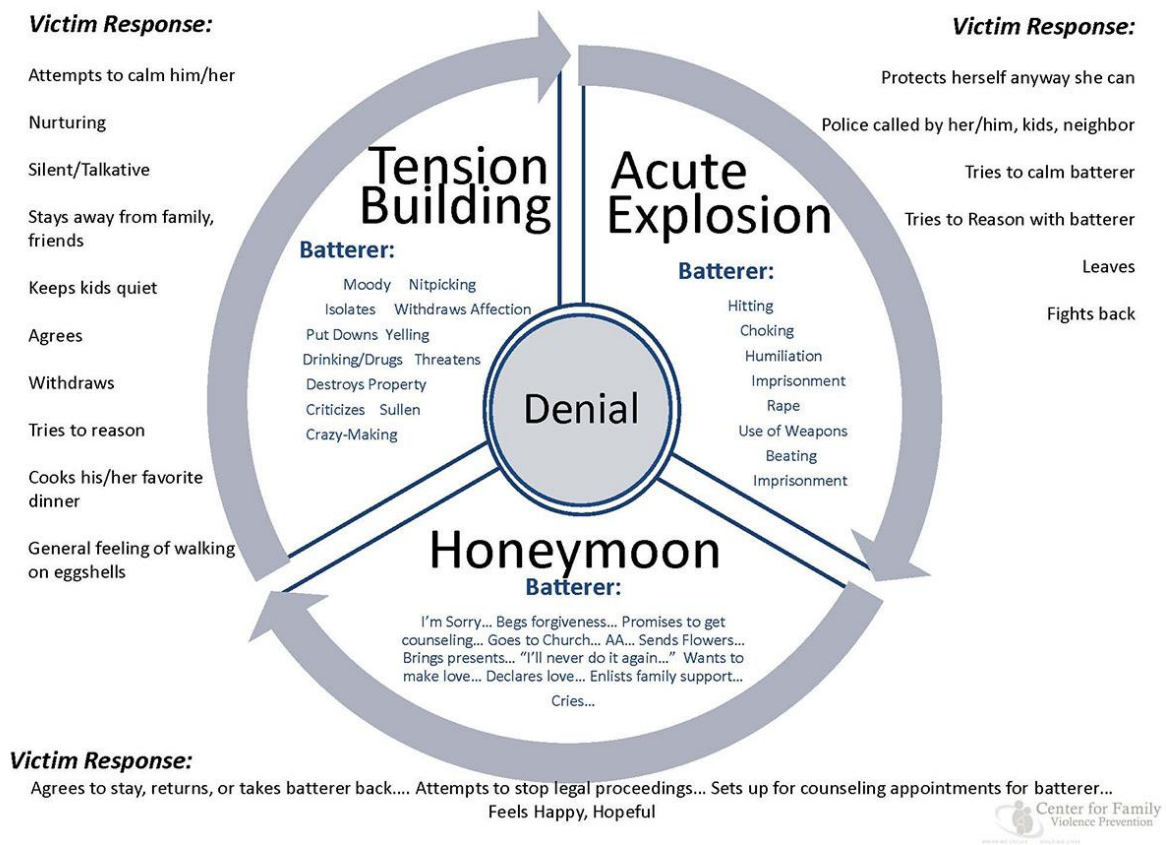
Figure 1: Cycle of violence - Center for Family Violence Prevention

The Cycle of Violence, although simple to understand, does not come without criticism. There are many who believe that the cycle perpetuates victim-blaming by the fact that it refers to abuse as a cycle. The argument comes into play when asking victims "why did you not just leave during the 'calm' phase?" The cycle is problematic because it assumes that domestic violence is a predictable progression when it is in fact random. The victims are thus blamed for the continuation of the violence (DAIP, 2019). Another model which goes to explain how and why violence is perpetuated is the "Duluth model[15]" or Domestic Violence Intervention Project", developed by the staff at the Domestic Abuse Intervention Project (DAIP) in 1984. The model, also represented using a circle diagram, named the "Power and Control Wheel", consists of eight factors that abusers use to continue to exercise power over their victims. The figure below shows the "Power and Control Wheel" with its components; coercion and threats, intimidation, male privilege, economic abuse, using children, minimising, denying and blaming, isolation and emotional abuse.

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[15] Named after the city in which it was developed, Duluth: Minnesota.

Figure 2: Power and Control Wheel - Domestic Abuse Intervention Project (DAIP)

This model, however, is also not without its own criticism. The criticism is centred on the feminist foundations of the model. There is no mention of the fact that male victims and female perpetrators exist. The models' idea is that males are socialised in a patriarchy that condones or even enforces male violence and women are violent only in self-defence. The model does not make an effort to link DV to substance abuse, or abuser psychological problems (his or her own childhood trauma or neglect), history of socialisation etc. The model also makes no mention of same-sex intimate partner violence (male on male, female on female). Interestingly, there are more reports of female on female violence than male on male violence (Walters,

Chen & Breiding, 2013). In this case, the patriarchy is absent (as the power relation between a male and a female is not present.

In response to the question of why the Power and Control Wheel is not gender-neutral, the Domestic Abuse Intervention Programs website states that "The Power and Control Wheel represents the lived experience of women who live with a man who beats them. It does not attempt to give a broad understanding of all violence in the home or community but instead offers a more precise explanation of the tactics men use to batter women" (DAIP, 2019:1). They go further to say that due to the higher incidence of male-on-female violence; the focus is kept on the women's experience. By gender-neutralising, the Power and Control Wheel, the power imbalances in heterosexual relationships would be masked and therefore not reflect the power imbalances in society as a whole. "By naming the power differences, we can more clearly provide advocacy and support for victims, accountability and opportunities for change for offenders, and system and societal changes that end violence against women" (DAIP, 2019:1). When creating patient simulations, the above concepts of DV patterns and cycles may be used as they provide a useful outline on how victims and perpetrators may present in the prehospital setting. The criticism which accompanies both proposed models of violence perpetuation rests heavily on the understanding of the social determinants of violence (be it alcohol/previous childhood abuse/socioeconomic standings etc.). For the purposes of simulation script drafting and implementation, the meaning of the above explanatory models can be considered.

2.7.3. Factors influencing the continuation of marital abuse

Due to historical and cultural norms, a massive emphasis is placed on the success of marriage even if it is at the expense of the wellbeing of the victim. Historically, during the rule of the roman empire as well as during the fourteenth through to the seventeenth century in the western world, a wife was objectified by being viewed as her husband's property. This ownership was enforced through corporal punishment and other methods (Jackson, 2007). To this day there are still factors which drive women to remain with their abusive partners. Ting and Panchanadeswaran (2009) interviewed 15 African immigrant women from the sub-Saharan countries (West Africa (the majority of participants), Central, East and South Africa)[16]. All of the women were survivors of intimate partner violence and voluntarily participated in the study. It was highlighted in the results that women in the African society place a particular

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[16] The women all immigrated to the United States between 1 and 17 years prior to the study.

importance in marriage (particularly early marriage) and child-rearing (Ting & Panchanadeswaran, 2009).

There is a stigma, in some of these communities, that women who are not married or who turn down marriage proposals are promiscuous or lesbian. While having higher levels of education, formal careers and financial independence, many women in this cohort ignore the general trend of a more feminist societal norm (where the need for women to get married is less stressed). There was also a trend for women to terminate their education (at various levels) in order to prioritise marriage and child-rearing. There was also a phenomenon of women rapidly remarrying after a failed and abusive first marriage (Ting & Panchanadeswaran, 2009). This could stem from the belief that if a man divorces a woman, the blame will be cast unto her, with little discussion placed on the cause of the divorce. One respondent from the study stated that her mother told her "marriage is suffering for women", this reinforces the normalisation of violence within more than one generation. Many women experience deep shame in being a victim of DV (Cravens, Whiting & Aamar, 2015). Often times, marital abuse continues because the victim feels too proud or ashamed to inform family or authorities. Some victims may have been warned previously by members of their family or concerned friends that the husband (future husband) would be violent or aggressive in the future. These women may now find themselves in a situation where they either leave their abusive relationship (and get told "I told you so") or remain as a victim with their perceived dignity intact.

Loyalty towards the abusive partner is also a factor which cannot be understated. This aspect often underpins the "reconciliation" phase of the cycle of violence. Victims may pity their abuser for a multitude of reasons; the abuser's childhood (abuse, neglect), stressors of work, loss of a job, aggression only when drinking (Ting & Panchanadeswaran, 2009). The fact that it is statistically plausible that the abuser would have an abusive past just potentiates the cycle of further abuse into the next generation. Some women remain in abusive relationships with the belief that they can help their spouses change for the better. "I thought I could help him change. I didn't want to abandon him." (Cravens et al., 2015:7). There is a sense of obligation to keep the nuclear family intact. This sense of obligation may be manifested as a mother trying to rationalise the abusive situation to her children and to a certain extent, herself (Cravens et al., 2015:7).

2.7.4. Vulnerabilities of illegal immigrant DV victims

Women and men who are illegal immigrants may be predisposed to incidents of domestic violence. The data concerning this population is limited. There is a myriad of factors through which these vulnerable people can become victims and importantly, remain as victims. The

fear of authorities and officials (EMS, police, social workers, doctors etc.), lack of support structures (little to no relatives or friends), minimal financial power, lack of housing, and overall fear of deportation, may all impact this phenomenon (Amuedo-Dorantes & Arenas-Arroyo, 2019).

The under-reporting of DV cases involving this cohort is of significance. Victims may have a greater motivation to maintain the toxic relationship than being found as an undocumented migrant with its own repercussions. If there are children included in the household, the victim may have greater fears for their wellbeing. Stringent immigration laws and the associated police enforcement thereof may limit DV victim cooperation with law enforcement. DV victims may be compelled to remain in abusive relationships if the partner is a national and has the power to adjust the victims' immigration status. Abusive partners may very well use this form of leverage to control the relationship (Amuedo-Dorantes & Arenas-Arroyo, 2019) (Ting & Panchanadeswaran, 2009). Compounding the above factors, illegal immigrants may not be fully aware of their rights within the country. If they also do not speak the national language(s), there may be hesitation when speaking to authorities. Some victims may be in a situation where they cannot speak the national language but their partner can. This leaves them essentially speechless in the face of potential help (police, EMS, social workers, etc.) where the partner can say his/her side of the story with impunity.

2.7.5. Injuries obtained in DV cases

In the previously mentioned study by Reijnders et al. (2006), conducted in Amsterdam, it was found that of the injuries inflicted, 85% (n = 382.5) of victims had injuries in more than one area of the body. These injuries were mostly confined to the central portion of the body with damages mostly sustained to the side of the face, the orbits, the throat or the neck. Fewer injuries were found on the arms, legs, mouth, hands and anterior and posterior chest (Reijnders et al., 2006). Contrary to popular belief, 79% (n = 355.5) of the victims' injuries were at a site that was *visible* to the outside world and the general public. 64% (n = 288) of the 450 women enrolled in the study had injuries inflicted in more than one method. There appeared to be a perceivable pattern to the type of injuries sustained, the location, visibility and "multiplicity" of those injuries (Reijnders et al., 2006). According to Burnett (2018), characteristic signs of physical DV include bilateral injuries to the extremities and injuries to more than one site on the victim's body. Soft-tissue injuries such as abrasions, lacerations and bruises are common throughout most cases. Cigarette and rope burn also feature in more severe cases (Burnett, 2018). The value of reviewing common injuries obtained in DV is that it alludes to likely patient presentations upon which simulated practise can be based.

2.8. Inter-professional training to promote holistic management of DV victims

Knowing the roles of the individual stakeholders in DV management (EC providers, nursing staff, physicians, social workers, police services etc.) will help improve the care received by DV victims (Joyner & Mash, 2014). In an effort to increase the awareness of DV in hospital settings and to understand the inter-professional role of social work and midwifery, a high-fidelity simulation and study were orchestrated by, Kuliukas, Oehlers, and Berlingeri (2017), entitled "An inter-professional day of high-fidelity simulation of family and domestic violence with midwifery students and social work students".

Hired actors were tasked with being standardised patients in the simulation, rather than simulation mannequins. The actors were briefed about the role they were to play and given scripts with scene descriptors. This simulation had no scripted dialogue and improvisation was encouraged. These simulations were run with flexibility, allowing students to stop the scenario to consult their peers and facilitators, consistent with a social-constructivist learning orientation. A mini-debrief followed each scenario and a post-evaluation questionnaire was undertaken following the simulations. The results of the evaluation indicated a strong positive reaction to the simulation. Issues which may require further consideration include; pre-simulation preparation (which the learners found integral to a successful simulation) and simulation participation and exposure, along with the importance of debriefing. "Peer review was a valuable part of debriefing as it encouraged student observation skills in order to give constructive feedback" (Kuliukas et al., 2016). The other objectives of the study were for participants to understand and implement the screening tool and risk assessment for DV as well as to develop communication skills between different professions (Kuliukas et al., 2016).

A study conducted by, Marken (2010), had the objective of teaching inter-professional teams to recognise and engage in difficult conversations with patients. It concluded in a similar light by stating that simulation is an effective technique to allow students to develop competency in areas that may not be available consistently during the practical phases of their studies (Marken, 2010). The expected outcomes of this study were that participants would be able to identify difficult conversations in history taking, recognise signs and symptoms, diagnosis, treatment and provide referral options for intimate partner violence. Lastly, the participants were expected to demonstrate competence when functioning as a member of an inter-professional team engaged in difficult conversations. This study consisted of twelve

volunteers[17]. These volunteers were exposed to didactic sessions which provided content and a framework of understanding about the various professions' scopes of practice, IPV and suicide. They were also exposed to self-assessments, brief readings and scenarios (actively participating or observational). The scenarios included standardised patients and high-fidelity human simulators. The standardised patients were recruited from the UMKC School of Medicine Standardized Patient Program. Students who participated in the simulations were provided time to debrief and actively share their feelings and reactions to the simulations. The participants reflected on their own past experiences and learned from each other's experiences; this was under the guidance of the faculty. Throughout the program, approximately 75% of the time was spent on participating/observing simulations (with standardised patients or human simulators) and their associated debriefing sessions.

Development of patient scenarios was a team exercise with consultation by the director of the standardized patient program. Every scenario included an inter-professional team (one representative from each profession to treat the child (human simulator) and interact with the mother (standardised patient)). The participants were not briefed on their individual roles; however, they naturally assumed the functions within their respective scopes of practice. The scenarios were based on the same concept whereby a sick child is a presenting patient and the mother who has accompanied the child is exhibiting the signs and symptoms of IPV or suicidal thinking. The mother and child set-up remained in all three simulations however, the healthcare setting where they presented to differ. In addition to this, the signs and symptoms of the mother also differed in how obvious they were made to the inter-professional team[18].

Participant performance during the simulation was assessed using a rubric compiled by the faculty observers. Participants completed both an "Inter-professional Teams in Difficult Conversations Self-Assessment" and a task with directed questions on past difficult conversations before the first session. At the end of the last simulation, another self-assessment (identical to the first) was completed by the participants before leaving the simulation venue. In addition to the above, they were asked to write three statements that they believed about difficult conversations at the end of the second session. Conversations surrounding death and dying, mistakes, team conflict and patients questioning or refusing care were found to be the most challenging, the participants self-reported the feeling of

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[17] These volunteers, by profession, included senior nursing students (4), senior pharmacy students (1), first-year pharmacy residents (3), paediatric medical residents (3) and a paediatric emergency medicine fellow (1).

[18] Signs and symptoms of the mother ranged from her giving verbal clues about her situation, to her showing the team bruises on her arms. In another scenario, her partner calls while the child is being seen, and asks her when she would be ready to leave. The standardised patients displayed obvious anxiety/distress as she spoke to him on the phone.

helplessness, depression, stress, incompetence but also sympathy when they encountered those situations. The majority of participants indicated that the program "mostly met" or "entirely met" the stated learning objectives. The participants, in completion of the programme, expressed great interest in wanting to engage in additional simulation scenarios as they found them to be the "the most beneficial method of learning to communicate with patients and other health care providers" (Marken, 2010: 6).

An article by Shefet et al., (2009) entitled "Domestic violence: a national simulation-based educational program to improve physicians' knowledge, skills and detection rates" was based in Israel and had the aim of developing a national DV experiential training program. This training program was designed out of a need to improve the DV detection rates of physicians by improving their knowledge and related skills. The program that was created included three branches of DV namely; intimate partner violence, child abuse and elder abuse. Each branch included an eight-hour workshop which utilised standardised patients. The workshops, which were developed by a committee of DV experts, included 8 scenarios of relation to regularly found DV encounters. These scenarios consisted of just a patient or they would include patients, family members and caretakers depending on the outcome required for the simulation. 15 of the above-mentioned workshops were run between November 2004 and January 2005. There were 150 participants included in this study. It was noted that 41.4% of the participants (58) self-reported to have had previous DV related education[19].

Outcome measures for this study were self-perception of knowledge and skills, reported case management (routine screening, reported detection and referral rates) and perceived intervention barriers. These outcomes were recorded via self-assessment questionnaires, the first one being on the morning of the workshop and the latter being 6-months after the intervention. The results of this study were of interest. All outcomes, frequency of routine screening of DV, diagnosis and referral, perceived intervention barriers were shown to have improved after the workshop interventions. It was found that all frequencies of reported actions taken were increased[20]. When the physicians were asked about their perceived barriers to DV intervention in the initial questionnaire, the three highest-rated barriers were lack of knowledge, time and privacy constraints and lack of communication. After the workshop, 6 months post-intervention, it was noted that lack of knowledge, lack of communication skills, unfamiliarity with support systems and psychological difficulties all received a markedly (and

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[19] Approximately 30% of these participants attended a DV related course which lasted 2 hours; the remaining percentage had previously attended courses which lasted up to 8 hours.
[20] "Actions taken" refers to the actions of the physician when encountering a case of potential DV. These actions include documentation of the violence in the medical chart (patient care report), victim empowerment by making relevant information accessible to the patient and by referring the patient to the appropriate agencies for therapy/treatment/further interventions.

statistically significant) reduction in scores. These results made it apparent that there was an improvement in the physicians' attitudes regarding those barriers (Shefet, Dascal-Weichhendler, Rubin, Pessach, Itzik & Benita, 2009).

With a similar objective, a prospective, observational study conducted in the United States titled, "Standardized patients to teach medical students about intimate partner violence", by Heron, Hassani, Houry, Quest and Ander (2009) attempted to observe a change in medical student comfort and communication skills with intimate partner violence patients. This study made use of standardised patients in Observed Structured Clinical Examinations (OSCE) to assess 4th-year medical students. These students completed pre- and post-test surveys (same survey applied before and after intervention) which measured their self-reported confidence levels and knowledge on IPV. The process included forty-one students (n = 41) of which 49% were female. In the study, participants received one hour of interactive didactic training after being separated into small groups. These sessions focused on family and intimate partner violence. OSCEs followed these training sessions by a couple of weeks. The standardised patients themselves received two hours of IPV training by the principal investigator; this training was adapted from Reteguiz and Cornel-Avendano's workbook of standardised patient cases (Heron et al., 2009).

The individual indicators for the standardised patient scenario included; screening for IPV, addressing injuries, assessing the victims' safety and providing resources and counselling. Feedback was delivered to the student immediately after the standardised patient encounter, this feedback was based upon the observation of the student's communication skills, physical examination technique and discussion of the diagnosis and plan/referral strategy with the victim (standardised patient) (Heron et al., 2009). Communication skills ranged from good to very good in the majority of students, whereas competency, professionalism and patient care indicated average to very good composite scores. There was a positive correlation between the self-reporting of student comfort and the results obtained in the scenarios. This indicates that a student who feels uncomfortable dealing with victims of IPV, may not fare as well compared to a student who is comfortable (with regards to patient treatment, empathetic communication and professionalism) (Heron et al., 2009). These correlations, although positive, were not universally statistically significant. With the use of the pre- and post-test after standardised patients' simulations, it was found that the training did not significantly improve the self-reported comfort level of the students (initially mildly uncomfortable to comfortable). It should be noted, however, that there is little research to determine how best to set a passing standard on standardised patient-based scenarios/simulations (Heron et al., 2009).

The authors concluded that future research using standardised patients should include standard-setting methods. To replicate research findings, future authors should provide adequate detail when outlining their research methodology, particularly when describing the use of standardised patients. There were several limitations to this study; previous experiences with IPV were not recorded from the participants[21]. Findings could not be extrapolated to the rest of the 4th year medical class due to the small sample size, therefore, it is unknown if the results which were found in this study would be replicated in future attempts with larger groups. Another limitation which prevented the potential for richer data is due to the fact that there was no opportunity for the reporting of ethnicity and gender on the pre/post-test surveys. It would have been possible to infer biases from the students if these information points were accounted for. The loss to follow-up was an issue with this study as not all participants completed both the pre- and post-test surveys. Lastly, the authors from this study declared that the standardised patient case and form which were utilised in the study were not validated, and they would require repetitive usage in other student populations to test its validity and reliability (Heron, Hassani, Houry, Quest & Ander, 2010).

2.9.   Summary

There are large gaps in the theory and praxis regarding prehospital EC education in DV intervention. Since EC providers operate in the prehospital environment, they are in a unique position to investigate and intervene if/when domestic violence is suspected/identified (as the victims' first contact with a public service). The availability of direct evidence on this subject is limited. The evidence presented above indicates the personal beliefs, approach to and understanding of domestic violence from the positions of physicians, nursing staff, and social workers. There is also evidence to suggest that simulated practice can enhance students' comfort levels, communication skills and professionalism. There is however limited evidence which addresses the use of DV-based simulation training aimed at EC provider students. This fact may further support the need for continued research efforts. There is evidence to suggest that it may work (as there have been studies with doctors and nurses) however the knowledge concerning how it may work is still outstanding. The different learning orientations for education and specifically simulation training indicate that a social constructivist theory of knowledge may be beneficial to teaching this topic when compared to the other theories (behaviourist and cognitivist).

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[21] This experience could have taken place through clinical experience, lectures or personal experiences.

The evidence indicates that by using patient scripts when conducting simulations outcomes may be favourable. This research study aimed to contribute to the elimination of the gap discovered in the above literature review by determining what the current EC provider students' beliefs, thoughts, attitudes are on DV and how improvements can be made to the DV responsiveness of EC providers when DV-based simulation training is utilised.

3. CHAPTER THREE: RESEARCH METHODOLOGY

3.1. *Objectives of the Study*

The objectives of this study are as follows:

1. To document EC provider/student personal beliefs and professional attitude regarding emergency care simulated practice.
2. To design evidence-informed domestic violence patient simulations with associated patient scripts
3. To inform the development of patient simulations outlining the practitioner approach to DV victims in the prehospital setting.

3.2. *Research Design*

A qualitative research design was regarded as the most appropriate instrument for obtaining the data required in this study. It is an essential design when used to increase understanding about topics of which little is known (Griffiths & Mooney, 2012). It may also be of use to explore the perceptions (knowledge, attitudes, beliefs, and practices) of participants concerning the topic at hand (domestic violence-related emergency care). Using focus group discussions and participant observation, non-verbal language and cues can be observed and may provide rich data (body language, mannerisms, signs of distress (sweating, breaking off eye contact) which can be added to the verbal answer of the participant (Oltmann, 2016). By contrast, a quantitative design will not be appropriate to answer my research questions as it may not provide an in-depth description of the nature underpinning complex events (Fahie, 2014). This study uses focus group discussions before and after simulation testing, as well as participant observation during the simulation testing. Participant observation further concretes the use of a qualitative design as simulation training is a display of behaviour and human behaviour is classically a qualitative observation. Therefore, the study follows a social-constructivist, grounded theory design to guide, collect and code data in order to identify emerging categories and generate practice theory (Charmaz, 2008).

As this is a qualitative study, an assumption is made that although the physical world exists apart from perception, reality itself is social (Feeler, 2012). This reality emerges in the language individuals use to refer to their experiences (and perceptions) of that world, in conjunction with the researcher's involvements and interactions. What the researcher brings to the data influences what they see within it (Charmaz, 2008).

3.3. Research Paradigm and the Determination of "Posture" (Appropriateness of research design and research approach)

A paradigm may be described as a whole system of thinking (Neuman, 2014:96). When a research paradigm is selected, a framework for how reality is observed and understood is specified. Incorporated into this decision are the frame of references, theories, data collection approaches, and traditions of that paradigm. The topic under discussion is not one which can be viewed from a univariate perspective. Domestic violence is not a phenomenon which can be described with a single variable or singular event with a subsequent chain of reactions. The occurrence is global and reaches individuals of all races, socio-economic profiles, ethnoreligious groups, levels of education and ages. "In seeking an epistemological position… one needs to also consider the ontological lens (world view) and methodological paradigm most befitting the aims and objectives of the study" (Naidoo, 2011:186).

Social constructivism is a theory of knowledge which stipulates that all cognitive functions, including learning, are dependent on interactions with others (parents, lecturers, peers). The central idea of the paradigm is that human learning and knowledge are constructed and shared through social interaction rather than being an individual experience (Vygotsky, 1978). Vygotsky's theory of the Zone of Proximal Development may tie into the teaching of DV to EC provider students as it acknowledges that there are ranges of skills or tasks which may be too difficult for an individual to master alone, however with assistance or guidance by peers and/or more knowledgeable individuals the task can be mastered (Vygotsky, 1978). It is for this reason that for learning to take place, a successful collaborative method is necessary. In the "Handbook of Constructionist Research" by Kathy Charmaz (2008) it is said that the extent to which grounded theorist invoke social constructionist premises depends on their epistemological stance and approach to research practice (Charmaz, 2008). Charmaz, who was a student of both Glaser and Strauss (the founders of traditional grounded theory) has emerged as an advocate and promoter for constructivist grounded theory. The varied disciplines of psychology, education, nursing, and occupational and environmental medicine have all made use of Charmaz's theory in developing their constructivist approach for their respective studies (Mills, Bonner & Francis, 2006). This study which easily draws from the philosophies of education, psychology, forensics, medicine and social work can readily make use of the theories postulated by Charmaz.

3.4. Sampling and Setting

The sampling of study participants was purposive. This is a non-probability sampling method whereby participants were selected based on their characteristics and the objective of the study. This is also known as selective sampling (Crossman, 2018). The inclusion criteria for participant selection consisted of EC providers who were registered as students in the Bachelor of Emergency Medical Care (BEMC) at Cape Peninsula University of Technology, Bellville Campus in Cape Town, South Africa who are soon to be independent practitioners (as of 2019). Undergraduate students were included and postgraduate students excluded since simulated practice is absent amongst postgraduate students (and people who are already employed in the operational sector). The ideal participant was a student who was regularly training in the simulated environment as to avoid the performance anxiety and associated 'confounding' of first-time simulated practice.

The value proposition of simulated practice may be relative to the design of the educational programme, hence a singular HEI familiar to the researcher and participants was selected. As part of the selection criteria, the EC providers must have been registered by the HPCSA as students (e.g. ECPS (Emergency Care Practitioner Student)). Students who were registered as EC providers with the HPCSA at the time of the study were included. Students who had no EC provider qualification other than their student registration were not excluded. These criteria potentially allowed for rich data to be collected during the focus group discussions and simulation testing, as some participants may have years of experience and others had no experience in encountering DV in the prehospital setting (notwithstanding personal experiences with DV). The exclusion criteria of the participant selection consisted of people who were studying a qualification other than the one mentioned above or those who are not students at CPUT, Bellville. People not registered by the HPCSA at the time of the study were also excluded. Finally, because this sampling is based on volunteerism, people who did not wish to take part in the study were self-excluded. There was no unfair exclusion or inclusion.

Six to eight participants were required for each of the four participation groups (one group for each year of study), therefore, twenty-four to thirty-two participants were required for the study. This number of participants allowed for a lively discussion during Focus Group Discussions but also maintained a small enough group so that everyone would be able to contribute to the discussion (Rewey, Zimmerman & Scholz, 2011).

The recruitment strategy was based on direct recruitment of potential study participants. The researcher met with potential participants, during the start of the 2019 academic year. This recruitment meeting was conducted in one of the lecture venues at CPUT, Bellville where the information letter was provided and any questions were answered before the potential

participants accepted or rejected the request. This process was conducted four times, one per year group (1st to 4th year).

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3.5. Methods

The methods (discussed below) used to collect data were:

1. Literature Review
2. Pre-simulation focus group discussions
3. Participant observation during the patient simulations
4. Post-simulation focus group discussions

3.5.1. Literature Review

The first phase of data collection consisted of a narrative analysis literature review which commenced in 2018. The purpose of this literature review was to expose the gaps in the current literature and aim the study towards achievable outcomes. The review is presented in Chapter Two of this document.

3.5.2. Pre-and post-simulation Focus Group Discussions

The focus group discussions took place on the premises of CPUT Bellville, in the simulation laboratories during the academic year in 2019 (Annexure A). Focus group discussions can be used for generating information on collective views and determining the rationale for those views. Like interviews, they are useful in generating a rich understanding of participant perceptions. They should not, however, be used if participants are uneasy with each other (as this may result in participants not openly discussing their feelings and opinions) (Gill, Stewart, Treasure & Chadwick, 2008). Focus group discussions can be used in a multi-method design to explore a topic (and collect group languages and narratives[22]) to be used in later stages of

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[22] Different participant groups may have various interpretations/beliefs of a specific topic. Alternatively, each participant cohort has the potential to bring across an identical belief to other cohorts, however, they may use different vernacular/narratives to portray this belief.

the data collection phase. The data gained in these discussions were used to help develop patient scripts for implementation in the participant observation phase of data collection.

There were eight FGDs throughout the data collection period: one FGD before and one after a patient simulation session for each group. This study is based on a grounded theory methodology and by its nature, the FGD frequency should be based on when theoretical saturation transpires. Using the concept of "theoretical saturation" as a practical reference for this study was problematic as the logistics concerning venue and participant availability was a limiting factor. Therefore, the above frequency of focus group discussions was seen as the minimum required for the study (where more would be required if the theoretical model being developed did not stabilise)[23]. By definition, theoretical saturation could only be determined during or after data analysis (Guest, Namey & Mckenna, 2016). These FGDs lasted approximately 60 minutes at a time (all were audio recorded) and were performed over a period of one month. During this time, EC provider/student personal beliefs and professional attitudes regarding DV victims and emergency care simulated practice were documented.

Focus groups were facilitated by the researcher as this ensured a standardised approach to data collection and participant interaction. Having different facilitators for these discussions could have elicited an exposure to confounding factors such as facilitators with various worldviews, methods of phrasing questions and handling of sensitive topics. The researcher was developing his skillset through the process of this study. Having one focus group facilitator promoted the authenticity of the study and provided a method of celebrating insider status. The Focus Group Facilitation Plan is attached as Annexure B and displays the process taken when performing this section of the data collection phase.

3.5.3. Participant observation during the patient simulations

Participant observation is a useful method to collect data on observed behaviour as there were multiple opportunities to observe for nonverbal expression of feelings and interactions between participants. I was able to observe events that participants may be unable or unwilling to share due to societal norms or out of politeness towards other participants (Kawulich, 2005). Participant observation during simulated practice commenced soon after the initial focus group discussions. As this study used grounded theory as a methodology, there was no contrived

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[23] An empirically-based study by (Coenen, Stamm, Stucki & Cieza, 2012) discovered that five focus groups were enough to reach saturation for their inductive thematic analysis (Coenen et al., 2012). In another methodological study by Brown (2017) which monitored thematic discovery and code creating, it was found that the majority of themes were identified within the first focus group, and nearly all the important themes were discovered in the subsequent three focus groups (out of 40 focus groups conducted) (Brown, 2017).

focus during the participant observation. The time interval between the first FGD and the simulations allowed for patient scripts to be designed and drafted based on the information and evidence gained during the discussions and preceding literature review. The total frequency of the simulations depended on the data gathered from the FGDs (to reach saturation). There was, however, be a minimum of one simulation per year group, thus a minimum of four simulations in total. These simulations lasted, on average, about 10 minutes. The purpose of the simulations was to outline the practitioner approach to a DV victim in the prehospital setting. These simulations were video recorded. A web-based software, iRIS®, was used to help design and implement the patient simulations. At no time during the simulations was the dignity of the participants impaired. Any guidance from the researcher, during the participant observation, was guided by educational and researched best practice to not render participants vulnerable to undue bias and influence.

3.6.   Instrumentation

The instrumentation used in this study were the Standardised Patient Briefs 1 to 4 (now called 'scripts' when referred to as a collective and 'DV Case 1 – 4' when referred to as a singular entity). The scripts are attached as Annexure C to F. These scripts were designed online on the iRIS™ software. iRIS™ is a "web-based platform created for the purpose of designing high-quality scenarios that offer the best learning experience" possible (iRIS™, n.d). iRIS™ can be utilised for simulations consisting out of task trainers, high-fidelity manikins and in the case of this study, standardised patients.

The evidence which guided the creation of the scripts is presented in Chapter 2 under the heading "Designing evidence-informed simulations". The headings which were provided and exported by iRIS™ into a Microsoft Word™ format were generic for standardised patient simulations therefore some headings were non-applicable. The terms 'victim' and 'patient' were used interchangeably throughout this description as both were appropriate. There were twelve phases to designing the standardised patient simulations on this web-based platform.

1. Patient demographics:

All patients were female, as they are the most likely victims of DV. This researcher recognises that DV occurs across all genders, however, the most common occurrence of DV is gender-based violence (generally male-on-female violence). Using the Statistics South Africa (2016), report published in (South Africa, 2017) it was found that the most common victim age group for physical violence from a partner was the range (18 - 24 years old). Therefore, all but one

patient was aged within this range. The patient scripts did not have a race assigned to the victim.

In South Africa, separated and divorced women are more likely to experience DV (South Africa, 2017). For the purpose of simulation, the patients in DV cases 1, 3 and 4 were still married to their abusers, DV case 2 had recently broken up with her partner (ex-boyfriend).

The demographics of the patients in DV case 3 and 4 were almost identical; however, the patient in DV case 3 was an undocumented immigrant (with no support from family or friends).

2. Description:

The description of the simulation varied according to the individual simulation. The description includes; a brief identification of the type of call the EC provider participant was 'dispatched' to (e.g. assault, fall from height, abdominal pain), the narrative of what happened to the patient, the general impression of the patient, and how the patient will respond to being transported for further care. The abuser was not physically present in the performed simulations; however, the threat of his return was made in all of the cases.

3. Presenting history:

This is what the EC provider participant was told just before the simulation started.

4. Previous medical history and allergies:

The medical histories of the scripted patients were mostly insignificant in all the of the scripts. The patient in DV case 4 was HIV positive and on medication (WHO, 2004).

5. Patient opening statement:

There were no quoted lines the standardised patient had to say (Rantatalo et al., 2018; Kuliukas et al., 2017), however, each DV case had its guideline for how the patient should respond to the EC provider at the start of the simulation.

6. Presentation and behaviour of patient:

The simulations were initially divided into the various phases of the Cycle of Violence namely; 'Honeymoon', 'Tension-building', 'Explosion' (Barnett, 1993; MICAH Projects Inc, 2017). The victims' situation in DV Case 1 displayed signs of the 'Honeymoon' phase. The victims' situation in DV Case 2 displayed signs of the 'Tension-building phase'. The victims' situation in both DV Cases 3 and 4 displayed signs of a recent 'Explosion' phase (after further investigation).

The presenting injuries were specific to the case description. The injuries presented in the simulation were mostly confined to the central region (head and back) and limbs (Reijnders et al, 2006). The scripts included a bruised orbit[24] from being punched in DV case 1, no current trauma (however a history of being pushed against a wall) in DV case 2, a fractured arm in DV case 3 and bruising/cuts/abrasions to the patients' chin, elbows and hands in DV case 4 (Burnett, 2018).

The presentation and behaviour of the patient (general appearance/body language/mood and extent of communication) varied according to the extent of the injuries sustained and the phase of DV which was in effect.

7. Open-ended questions and guidelines:

The patients in DV case 1 and 2 shared information openly, however, the patients in DV case 3 and 4 required more questioning and trust before they could share more details. The patient in DV case 1 was comfortable with her situation and saw nothing abnormal (DAIP, 2019; Cravens et al, 2015), she, therefore, spoke openly. The patient in DV case 2 had separated from her boyfriend however, she was worried he would come back, she spoke openly as she wanted to support and more protection from him. The patients in the last two DV cases were still terrified of the potential consequences of speaking to authorities (Jackson, 2017; Ting & Panchanadeswaran, 2009), therefore more questioning was required by the EC providers before they gave details. This part of the script included narrative points which were to be discussed with the EC provider.

8. Patient history of present illness (violence):

This section was specific to the individual injuries sustained.

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[24] The bone structure surrounding the eye.

9. Family medical history:

None of the scripts had a patient with a family medical history.

10. Social medical history:

None of the patients were abusing substances. Concerning the patient's home environments; most did not feel safe at home. The patient in DV case 3 was not allowed out of the house unless permission is granted by her husband. The patient in DV case 1 had a dynamic home environment were arguments led up to her being assaulted. Most of the patients did not have significant social support. Only 1 out of the 4 scripts had a patient who was currently employed (unemployed women are at an increased risk of experiencing DV).

11. Physical exam findings:

This is what the EC provider would have discovered in his/her inspection of the patient.

12. What should the patient expect from the visit?:

All of the scripts had "professionalism, no judgement" under this heading.

3.7.   Procedure

3.7.1. Data collection

The data collection procedure employed in this study is based on the grounded theory process of constant comparative analysis and is explored below. The research design phase was essential in determining both the scope of the study and the methods of data collection required to achieve the research outcomes. This phase was conducted in the form of a minor literature review (relative to the one provided in Chapter 2). The purpose was to expose gaps in the current literature and to aim the study towards achievable outcomes. The next phase consisted of planning the data collection protocol and physically obtaining the data. The three data collection methods used included a literature review, Focus Group Discussions, and scripted patient simulations with participant observation. The rationale for using these three methods collaboratively was to increase the trustworthiness of the study while simultaneously

potentiating rich data generation. Potential themes could be derived from triangulating the methods used, focusing on the emerging theory. Focus group discussions were semi-structured and allowed to snowball as participants became more comfortable with one another.

The data was collected flexibly and opportunistically. This data collection quirk holds to the grounded theory approach, where evidence may not always be produced when active data capturing is occurring. Participants may comment the researcher after the focus group discussion had taken place, which may be of value (participants were notified that this could occur and their informed consent was noted). This element has the potential to hasten analysis and contribute to the formation of themes during the later phases. The phase succeeding the initial FGDs concerned the development of the evidence-based patient scripts used for the patient simulations. The evidence used for these scripts came from the literature review and the data gathered during the FGD. The act of using only evidence-based scripts meant that there was a greater chance for producing high-level categories during the data analysis phase. Basing scripts off of anecdotal evidence/previous experiences of the researcher or participants in isolation (be it personal or professional) meant that the potential for gaining high-level categories would be less likely. The participants' experiences of one of these cases may be significantly different to what happened (which may be of interest) however, to make these drafted scripts universal they need to be based on the incidences of violence which are contextually relevant.

The simulation scripts used in the participant observation phase of the data collection are attached as Annexures C to F. Multiple factors influenced the design of these simulations. Scripts could only be drafted after the initial FGDs had taken place. It was essential that the simulations were at a level that the participants may find challenging, yet still informative. The assumption was made that if the simulations were too in-depth and emotionally charged, the participants would struggle to achieve their outcomes of providing holistic care to the patient. In traditional EMC simulation training, scenarios become progressively more complicated throughout the programme, where new learning outcomes are introduced and the students are exposed to real patients in their Work-Integrated Learning (WIL) shifts. The implementation of DV related simulations should also be based on the concept of knowledge scaffolding. There may be little value in having highly complicated and hyper-realistic simulations when the knowledge base of the student is ill-formed. Vygotsky's "Zone of Proximal Development" speaks to the above as the content which needs to be covered in the simulation may be too difficult for the participant to master alone, however, "it can be mastered with the assistance or guidance of adults or more-skilled peers" (Vygotsky, 1962).

It was decided that four simulations would suffice for the implementation of the patient simulations. This decision was based on the cycle of violence (which consists of three to four stages), the number of participants in each group was a maximum of eight (this therefore allowed participants to partner up for simulations), and finally, due to the nature of grounded theory, if theoretical saturation did not occur, more simulations could have been conducted. There were four groups of participants and a maximum of eight participants per group.

In the prototypical stages of DV related prehospital scripts, it was important to keep the patient demographics, history, social history etc., as close to the real-life victimology as possible. Standardised patients (student actors)[25] were utilised for the study, as part of the simulation aspect of the study, the participants were asked to separate into two groups (one being the EC providers and one being the DV victims). The standardised patients were provided with a pre-brief before the scenario (indicating patient characteristics, mannerisms, medical history, social history, etc.). The standardised patients were scripted not to dialogue but rather to the actions/inactions of the participant playing the role of the EC provider. Improvisation was encouraged for the scenario to flow realistically. The data obtained during the research events (Literature review, FGD and patient simulations) was arranged chronologically, this was used to streamline the data analysis and enhance the evaluation of the study to ensure validity. This aspect was particularly important due to the process of constant comparative analysis where all the existing data collected is constantly compared with one another and subsequent data collection attempts are aimed at deriving categories of high-level. The data analysis process is complex. The data was analysed through the process of open coding, axial coding and memo writing. The processes of data analysis and theoretical sampling are discussed in the following paragraphs.

The final step of "Reaching closure", describes theoretical saturation. This is when the entire data collection procedure is terminated as the themes which are emerging from subsequent data collection events become repeated or redundant. Hence, no theoretically unique data are collected. Table 1 below summarises the above data collection procedure.

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[25] Different case scenarios may require patients with different levels of consciousness or interventions, e.g. a conscious patient with no injuries admitting that her husband is abusing her vs a victim found lifeless with multiple stab wounds. The process of simulating these cases needs to be universal for the implementation in various training facilities (with varying capabilities (in terms of equipment and budget)).

Table 1: Data Collection Procedure

Phase		Activity	Rationale
Research Design Phase			
Step 1	Review of technical literature	Research question stated and clarified	To expose gaps in the current literature and aim the study towards achievable outcomes
Data Collection Phase			
Step 2	Development of data collection protocol	Three data collection methods were used 1. Literature Review 2. Focus group discussions before and after simulations 3. Participant observation during scripted patient simulations	Use of multiple data collection tools increases reliability and validity while also potentiating rich data generation. The emerging theory was strengthened through the triangulation of evidence from three data collection events.
Step 3	Entering the field	Data collection was flexible and opportunistic in nature.	In the true nature of grounded theory, evidence may not always be produced when active data capturing is initiated (i.e. during the recording of FGDs where it does not easily get categorized into participant observation or a focus group discussion)). This will hasten analysis and contribute to the formation of themes during Step 6.
Step 4	Selecting cases	Theoretical, evidence-informed cases to be drafted, not randomly selected by the researcher. Information stemmed from the literature review and first set of FGD.	Only evidence-informed cases will be drafted to concentrate efforts on producing potential high-level categories for analysis.
Data Ordering Phase			

Step 5	Data ordering	Arranging research events chronologically	To streamline data analysis and enhance the evaluation of the study to ensure validity.
Data Analysis Phase			
Step 6	Analysing data	Data analysed through a process of open coding, then axial coding, Memo writing	From data obtained, concepts will be developed. Categories will be derived and the data collection will progressively be focused on the emerging theory. Writing about codes, analysis, and gaps in coding.
Step 7	Theoretical sampling	From verbal and practical data collection: theoretical replication to transpire.	Sampling for key categories[26]. Emerging theory will be refined continually while redirecting to step 2. This until theoretical saturation occurs.
Step 8	Reaching closure	Theoretical Saturation	The process is terminated when emerging themes become redundant.

3.7.2. Data Processing and Analysis

Grounded theory is a methodology which makes use of coding for data analysis. The methodology makes use of progressive identification and integration of categories to form meaning from data. Categories are formed with the grouping together of occurrences (topics covered in interviews or events which occur during simulations) which share a common characteristic (Neuman, 2014). If these occurrences are not specific, they can contribute to a category at a low level of abstraction (viewed as descriptive labels/concepts). As the method continued, I was able to identify categories at a higher level of abstraction i.e. analytic categories. These categories with a high level of abstraction allow researchers to interpret occurrences of phenomena rather than simply label them. Charmaz and Henwood, 2008, provide an appropriate summary of the process to grounded theory:

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[26] Key categories are created by considering all possible theoretical understandings of the data, constructing tentative categories, gathering data to fill out properties for this category and checking this category against new data. (Charmaz, 2016)

"We gather data, compare them, remain open to all possible theoretical understandings[27] of the data, and develop tentative interpretations about these data through our codes and nascent categories. Then we go back to the field and gather more data to check and refine our categories." (Charmaz & Henwood, 2008:241)

Figure 3 below details the process of data collection and analysis. The research question is determined, and participants are recruited for the study. Data collection starts with a literature review, then pre-simulation focus group discussions, simulations and finally post-simulation focus group discussions. Data analysis took place through a process of open coding, axial coding, and memo writing. From the data obtained, concepts were developed. Categories were derived from these concepts and the data collection was progressively focused on the emerging theory. Theoretical sampling from verbal and practical data collection occurred until theoretical replication transpired. The emerging theory was continually refined until theoretical saturation occurred. This process is referred to as the constant comparative method. The write up occurs after the fully formed categories are determined.

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[27] In the context of this research study it will be limited to practice theory
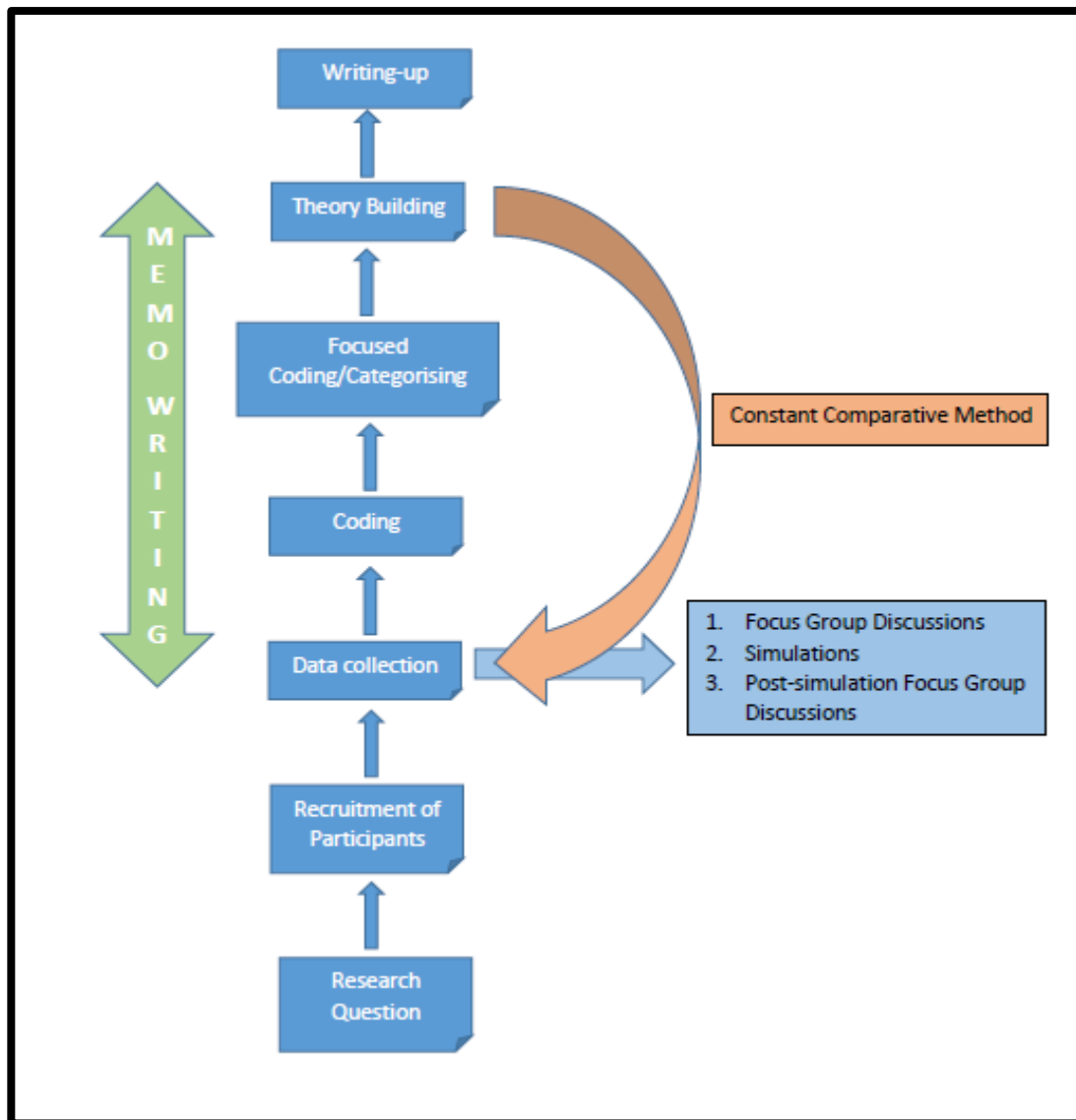
Figure 3: Grounded Theory Process adapted from (Tweed & Charmaz, 2012)

3.7.2.1.   Theoretical sensitivity

For data to be conceptualised into a normal theoretical model, the researcher needs to maintain theoretical sensitivity. This term refers to both the analytic temperament and analytic competency of the researcher (Noble & Mitchell, 2016). Analytic temperament infers that the researcher can maintain analytic distance from the data, as well as have the patience to tolerate regression. Analytical competency refers to the researcher's ability to be able to develop theoretical insights and abstract conceptual ideas from various sources and types of data (interviews, focus group discussions, surveys etc). Analytical competency is fundamental when transitioning from open to axial coding (with category and theme generation) (Mills, Bonner & Francis, 2006; Willig, 2013).

3.7.2.2. Substantive Coding

Substantive coding is the process of conceptualising the empirical data, after collection. This is how the theory, which is generated later, can be regarded as grounded. The process starts with the initial open coding of data to the emergence of a core category. The data analysis continues with selective coding until the core categories and sub-categories (related categories) are theoretically saturated (Willig, 2013).

3.7.2.3. Open Coding

Open coding can be performed in a multitude of ways. Line-by-line coding and incident-to-incident coding are the most common. The former manner of coding, performed by naming each line of data, allows the researcher to gain the most detailed observations from the data at hand. The researcher, when communicating closely with the raw data, can produce detailed and fresh insights into the emerging theory (Chun Tie, Birks & Francis, 2019). Line-by-line coding, specifically, forces the researcher to verify and saturate the formed categories; it will also mitigate the ever-present risk of missing relevant categories. The latter manner of coding compares incidents to one another, this method helps the researcher to view and rationalise observations in new and analytical ways. There is value in comparing events which are dissimilar as further insights can be grasped (this could contribute to the divergent validity in the study). For this study, line-by-line coding was used for the coding of the FGDs and incident-to-incident coding was used for patient simulation analysis. In essence, the data collected in the simulations were converted to text and then coded in the same fashion as the FGDs.

To sustain theoretical sensitivity, the following questions were considered; "What is actually happening in the data", "What is this data a study of?", "What does this category indicate?" (Willig, 2013). For the research to remain grounded in the theory, there should be a focus on the patterns which emerge from the code. As the coding becomes more detailed, the researcher can become more confident that the emerging theory is relevant and true to the data. Furthermore, detailed coding allows the researcher to see which direction to proceed with theoretical sampling before becoming too selective and focused on a particular issue. The process of sequential comparison is essential for the generation of grounded theory (Mills, Bonner & Francis, 2006).

3.7.2.4. Constant Comparison and Theoretical Sampling

Grounded theory is funded on the two principles of constant comparison and theoretical sampling. In general, the aim of constant comparison is to ensure that the initial data support, and later data continues to support the emerging categories. With reference to Figure 1, once it was found that certain themes were starting to develop from the initial focus group discussions, further discussions and simulations were aimed towards these themes (to strengthen or refute those claims). By using this process, the emerging theory can be substantiated by the data, allowing for a detailed, built and charged theory. Redundant data collection can be avoided when alternating the data collection with coding and conceptual memoing. This is because once a category has been saturated (i.e. it lacks new conceptual properties and depth after further data collection), the researcher will no longer need to collect additional data for that particular category (Noble & Mitchell, 2016).

The process of constant comparative analysis involved three phases of comparison. The first phase involves the comparison of incidents to other incidents; this will establish uniformity and the varying conditions of the newly generated concepts and hypotheses. The second phase constitutes the comparison of the emerging theory to more incidents (with further data collection). The purpose of this phase is to elaborate on the emerging concepts and to determine theoretical saturation. It will allow the formed concepts to become clearly defined. The final phase involves the comparison of emerging concepts with each other. The purpose of this phase is to establish a 'best fit' between the potential concepts and a set of indicators, the conceptual levels between concepts that refer to the same set of indicators and their integration (theoretical coding) into hypotheses to become theory (Chun Tie et al., 2019).

Theoretical sampling refers to the process of deciding which data to collect next to continue the development of the emerging theory (Chun Tie et al., 2019). This implies that the process of data collection cannot be completely planned in advance of the emerging theory. The initial coding and category formation are required to direct the researcher towards saturating the emerging codes with more data. The potential to have an unwieldy number of categories exist, therefore data must be collected according to theoretical criteria[28].

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[28] These criteria (of theoretical purpose and relevance) are applied in the simultaneous process of data collection and analysis.

3.7.2.5. Interchangeability of Indicators

The model of concept-indication requires concepts and their properties to earn their relevance in the theory by systematic generation and analysis of data. The researcher is thus forced to compare the similarities and differences between the indicators. An underlying uniformity is thus generated, which in turn results in a coded category and the beginnings of the properties/characteristics of that category (Holton, 2010). By constantly comparing incidents (indicators) to one another and generating new properties of specific concepts, there comes a point of diminishing returns, this is where theoretical saturation occurs (mentioned below). This interchangeability of indicators continues to facilitate the transferability of the theory to other substantive areas, thereby creating the potential for the generation of formal grounded theory (Holton, 2010; Willig, 2013).

3.7.2.6. Core Category Emergence

Constant comparative analysis eventually leads to the emergence of a core category. The core variable may be any kind of theoretical code and is not limited to ranges, conditions, dimensions or any other factor. The purpose of the core category is to amalgamate the generated theory and render it dense or saturated (minimising the potential for contradictory theories). The core category will then become the focus of further selective data collection (as mentioned above) (Mills, Bonner & Francis, 2006).

3.7.2.7. Delimitation of selective codes

Once a potential core variable has been identified, selective coding begins. Data which is collected after the core variable being identified will be delimited to what is relevant to the emerging conceptual framework (i.e. the core category and the other categories that relate to the core). Delimitation of selective codes speeds up data collection and analysis by reducing the quantity of irrelevant data (Mills, Bonner & Francis, 2006). The subsequent data collection is aimed at the core and its related categories. The above process continues until the researcher has successfully integrated the concepts of the core category into the other relevant categories. Through the process of delimiting theory, the original list of categories will diminish. The theory will become reduced yet condensed into a form which can easily embrace a mass of data (Charmaz, 2006). Only the categories which are related to the core category are included in the theory. The list of categories (which was initially formed after coding) becomes delimited for additional selective coding, as this is a continuous process, theoretical saturation is achieved for each category (Andrews, Higgins, Andrews & Lalor, 2012).

3.7.2.8.   Theoretical Saturation

Data collection stops when it is no longer required. The point that data are no longer needed can be described as theoretical saturation (Andrews et al., 2012). The constant comparison continues until no new properties of each category or concept are gleaned from the data. As stated by Glaser (2001:191) the "intense property development" produces the conceptual density necessary to "lift the theory above the description and enable its integration through theoretical propositions as abstract conceptual theory" (Glaser, 2001:191).

3.8.   *Ethical Considerations*

This qualitative study involved human participants and the bulk of the information and data gathered was personal. The researcher was aware of the ethical considerations related to this research. The Information Sheet: Attached as Annexure G and the Informed Consent and Non-Disclosure Agreement Form (Attached as Annexure H) give expression to the ethical considerations below. The purpose of the CPUT Health and Wellness Sciences Code of Ethics for Research on Human Participants REC is to review the ethics of this research proposal to assess the risks and benefits to the participant. The committee is responsible for assessing critical factors such as the extent to which the research could be socially or psychologically invasive or damaging. This research can be considered ethical as it is predicated on content and contextual relevance as referenced in the research background and literature review sections of this document. There are specific objectives and outcomes, so resources were not being used frivolously (by not having an aim in mind when conducting the study).

The research design is not demarcated by parochial ideologies. Any assumptions held by the researcher are declared in the assumptions section of this document. This research study had the intention of beneficence and non-maleficence towards the participants and the DV victims encountered after the study. The Department of Health guidelines (20150 entitled "Ethics in Health Research: Principles, Processes and Structures" notes that the research being performed needs to have relevance to the greater needs of the South African population. The study design and methodology were robust to produce useful and relevant data, thus ensuring ethical work. Key role players (power-brokers) were consulted with when researching to raise the acceptability of the work being done; this circumvented the potential for a "power differential" in the later stages of the study. The risk of harm to the participant was comparatively low when aligned with the potential benefits to both the participant and the community. This refers to a desirable risk-benefit analysis with regards to the data collection methods intended.

As mentioned in the introduction of Chapter 2, the literature review was performed to satisfy the ethical requirements mentioned above. Although a literature review should not normally be conducted before entering the field (concerning traditional grounded theory methodology), I acknowledged my naivety as a researcher in the study of domestic violence and therefore attempted to mitigate the risk of harm to the study participants. In addition, the need for evidence-informed simulation scripts was a critical requirement for safe practice. Arguably, the researcher's own masculinity, his prior personal and professional encounters with DV contexts would need to be balanced by knowledge in this field to enable the generative mechanism for coding.

3.8.1. Autonomy and Confidentiality

For this research; the human participants were seen as both objects of the study, as well as informants. Under the Declaration of Helsinki, I did everything within my power to protect the participants' physical, social and psychological welfare and to protect their dignity and privacy (World Medical Association, 2001; Orb, Eisenhauer & Wynaden, 2001). "The World Medical Association developed the Declaration of Helsinki as a statement of ethical principles to provide guidance to physicians and other participants in medical research involving human subjects" (World Medical Association, 2001:373). The declaration was amended seven times since its conception in 1964, with the most recent amendment taking place in 2013 at the General Assembly. This concept is echoed in the Department of Health guidelines entitled "Ethics in Health Research: Principles, Processes and Structures" (DoH, 2015). The broad ethical principles of beneficence and non-maleficence, distributive justice and respect for persons (dignity and autonomy) are emphasised in research concerning human participants.

Finally, this research had the utmost respect for the autonomy of the participant (Naidoo, 2011). The participants were aware that they had the right to withdraw from the research process at any time and without explanation. The withdrawal of the participant from the research would not have affected his/her academic progress. Each participant was fully informed as to the aims and possible implications of the research (Orb et al., 2001). The participant was, during the process of recruitment, required to read and sign an informed consent and non-disclosure agreement form (Annexure G and H respectively) without coercion from the researcher (or associates). All research documentation (consent forms/scripts) were provided in English as it is the researchers home language. The participants who are studying at CPUT Bellville are required to attend lectures and perform all of their assessments in the English language, so this would not have been an added disadvantage to participants. The participants were also asked to sign a non-disclosure

agreement form before the study commenced. During the group discussions, the questions that were asked were not posed in an insulting or an embarrassing manner as the "considerations related to the well-being of the human subject should take precedence over the interests of science and society" (Orb et al., 2001). Confidential matters that could have placed the informant in an embarrassing, false or compromising position were handled holistically.

3.8.2. Emotional Support

Due to the nature of this study, there was a potential for participants to experience emotional distress. Performing respectful and sensitive interviews with people regarding their experiences of distressing and traumatic incidents can be challenging (Fahie, 2014). The researchers' intent was not to directly question individual participants about their past experiences with DV, however, group discussions are dynamic and had the potential to move onto the topic (Gill et al., 2008). Participants had ready access to student counselling if they required it. The counselling was to be provided by student counsellors at CPUT Bellville (Annexure I). The permanent staff at CPUT Bellville included two Educational Psychologists, one Counselling Psychologist, and one Clinical Psychologist all registered with the HPCSA as per their respective titles. All of the mentioned psychologists had a Master's degree in their respective fields of expertise. In addition, there was also one social worker employed in the department on a full-time basis (CPUT, 2017). These counsellors had been trained to provide trauma counselling as well as professional, personal, emotional, social and welfare support to any registered CPUT students free of charge. Their normal office hours ranged from 08:00 to 16:00 every day (CPUT, 2018). These times coincided with the times of data collection for this study.

Counsellors were not present during the focus group discussion, or simulations. Simulation training in the context of prehospital emergency care has inherent risks of emotional discomfort (for example, the premature death of children and young adults). These emotional risks are normal and are anticipated as part of EC provider training. In the day-to-day EC provider simulation training environment, there are no psychologists present for immediate use. The researcher encouraged participants to self-report any emotional distress when they felt comfortable to do so. The researcher was aware of the risk of vicarious traumatisation and was attuned to any conduct which is considered to be out of character for the participant concerned. If there was a need, the researcher would have approached the participant and offered the assistance of student counselling if the issue could not be managed at that time. The care that would have been provided by the student counsellors would only have been

initiated if the participant requested it. This approach was proactive rather than reactive (e.g. having student counsellors present during focus group discussions or simulations) because having support resources closer in proximity to the participants does not mitigate the risk of emotional harm caused during the data collection period. The researcher is a Western Province EMS employee and therefore had access to the support of ICAS™ (Independent Counselling and Advisory Service), a private organisation for corporate employee psychological well-being if the need arose.

3.8.3. Data Storage

Recorded audio and video data were kept private when stored on an external hard drive. The simulation videos were originally kept on the CPUT EMS server where other confidential simulations practices are stored (simulations used for examinations). A backup external hard drive was kept in a safe on the premises. The hard drive was locked in a bag during transit and secured in a safe when stationary. Any information (video and audio recordings) concerning a participant will have a number on it instead of a name (in the write-up participants will be referred to as "participant") (Aldridge & Medina, 2008). Only the researcher will know which number is assigned to which specific participant and this information will be locked in a safe (Lin, 2009). The password to the safe was known by the researcher only. Files stored on hard drives or a laptop were encrypted and only accessible by the researcher. By doing the above, the researcher took appropriate and reasonable technical measures to prevent unlawful access to the data, per the Protection of Personal Information Act, No. 4 of 2013 (South Africa, 2013). This act aims to promote the protection of personal information processed by public and private bodies. It has a purpose to ensure that all South African institutions responsibly conduct themselves when collecting, processing, storing and sharing another entity's personal information by holding them accountable should they abuse or compromise this information in any way. The Data Protection Act of 1998 supplements the above (United Kingdom, 1998). The Act "regulates the processing of information relating to individuals, including the obtaining, holding, use or disclosure of such information. The Act gives individuals rights of access to personal data which is about them which means that participants can ask for copies of personal data collected by a researcher." (United Kingdom, 1998).

3.9. Internal and External Validity

The validity of this study is based on the (Cohen & Crabtree, 2008) and (Northcote, 2012) criteria. The originators of the above criteria are external to the study thus promoting critical distance (Corby, 2017). A detailed description of the above criteria is provided in Chapter 5 under the heading "Study Trustworthiness".

Internal validity can be assured through the process of data triangulation (literature review, FGDs, and simulations). The rationale for conducting the literature review before entering the field has been discussed in the introduction of Chapter 2. This was the only deviation from traditional grounded theory methodology, and it served to mitigate for researcher naivety on the subject, develop evidence-informed instruments and avoid unnecessary participant risk exposure. The instruments used for data collection included the FGD facilitation plan (Annexure B) which had open-ended questions allowing the discussion to snowball. The patient simulation scripts were based on the evidence found in the literature review, with particular emphasis on the DV cycle of violence, victim marital status, level of education, employment status, citizenship and the presenting injuries. This process of evidence guidance means that the simulations were not based on my own experiences or randomly crafted. They are thus true to the literature. The "difficulty" of the simulations stemmed from the focus group discussions. The participants expressed their gaps in knowledge and this helped mould the simulations into activities which had achievable outcomes. This theory holds to Vygotsky's' "zone of proximal development" and his theory of scaffolding (Vygotsky, 1962).

3.10. Study Limitations

The study took place during the EC provider student academic year at CPUT Bellville, thus there was a limitation as to how much time would be available to collect data. The data collection time was subject to EC provider student availability around assessment dates, academic holidays, Work Integrated Learning (WIL) shifts and various subject contact sessions. Participant loss to follow-up was a factor i.e. getting the same participants (who took part in the original focus group discussions) to partake in the proceeding patient simulations. Some participants dropped out of the study due to family responsibilities, surgical operations, and other personal issues. Owing to the nature of volunteerism-based participant recruitment there was a possibility that participants who were aware of their DV involvement (either as victim or perpetrator) could have declined participation in the study. This factor could have altered the data collected in the study, and therefore it can be noted as a limitation.

3.11.   Summary

The first objective of this study was to document EC provider personal beliefs and professional attitude regarding emergency care simulated practice. The second was to design evidence-informed patient scenarios with associated patient scripts. The final purpose was to inform the development of patient simulations outlining the practitioner approach to a DV victim in the prehospital setting. The paradigm being claimed in this study was that of social constructivism. The research design was qualitative and made use of a grounded theory methodology. This methodology utilises progressive identification and integration of categories to form meaning from data.

Twenty-nine participants were recruited for this study. The methods of data collection included four pre-simulation focus group discussions with each year group (1st to 4th-year Bachelors of Emergency Medical Care students), patient simulations with participant observation and four post-simulation focus group discussions. The data were analysed using open and axial coding with memo writing, constantly returning to collect data until theoretical saturation occurred. For this study; the human participants were seen as both the objects of the study, as well as informants.

This research can be considered ethical as it is predicated on content and contextual relevance as referenced to in the research background and literature review sections of this document. Data storage protocols are in accordance with the POPI act of 2013. The ethics approval was granted by the HWS REC (reference number: CPUT/HW-REC 2018/H28), duly accredited by the National Health Research Ethics Council. No adverse events or ethical breaches were reported. The next chapter delves into the results obtained from the data collection procedures mentioned above.

4. CHAPTER FOUR: RESULTS

4.1.   Introduction

The research problem being investigated in this study is the deficiency in emergency care provider responsiveness when faced with prehospital cases of domestic violence. This study utilised Focus Group Discussions (FGDs) and patient simulations with participant observation. This study consisted of qualitative data only. The data collection started with a literature review seen in Chapter 2. Data collection with human participants began with pre-simulation focus group discussions (FGDs), which then led to patient simulations with participant observation and finally post-simulation FGDs. Participant voices are provided in-text with the researcher voice to foreground emergent textual representations.

The initial FGDs highlighted the student EC provider self-reported weaknesses concerning DV patient interactions. The simulations which followed allowed the participants a first-time opportunity to experience a planned scenario with a focus on DV. The FGDs which were performed after the simulations acted as both a simulation debriefing session as well as an opportunity for the participants to air their thoughts, perceptions and beliefs about DV in general and the practice of DV related clinical simulations. Individual selective codes are presented with their respective paragraphs. These selective codes are displayed using the Freemind™ mind-mapping software for ease of interpretation. This software was used throughout the process of data collection and analysis. The selective codes are expressed as seen in Figure 4 below. "Selective Code Generated" refers to the name of the selective code. "Data source" refers to either "Pre-Sim FGD" (Pre-simulation Focus Group Discussion), "Sim" (Simulation) or "PS FGD" (Post-simulation FGD).

Figure 4: Displaying of selective codes

4.2.   Pre-simulation Focus Group Discussions

All four of the initial FGDs, which lasted between 50-70 minutes, began with a small introduction (reiterating the purpose of the study, consent and the non-disclosure agreement which was previously explained during the participant sampling). A small ice-breaker ensued with participants being provided with a blank name tag and requested to create an alias for themselves (this alias was used throughout the FGDs). The researcher played the role of the FDG facilitator by opening the session with a broad question "What are your thoughts about Domestic Violence?" and allowed the discussion to snowball. Participants were reminded that there could be no wrong answers as the way that they perceive the question would, as a result, direct their answers. The facilitator managed the discussion by encouraging participation in those who may have been more reluctant to share their opinions. Four FGDs took place on separate days with each group consisting of a different year group of Bachelor of Emergency Medical Care students. These FGDs took place in the 'postgrad venue[29]' within the Emergency Medical Care building on CPUT Bellville campus.

Participants were all registered as Emergency Care Practitioner Students (ECPS) with the HPCSA. Some participants have had experience in the prehospital environment (either with Work-Integrated Learning or whilst working under another HPCSA register. A total of 29 EC provider students took part in the four FGDs. The combined time for the focus group discussions (all four groups) was 261.72 minutes (4.36 hours). The memorandum for the pre-simulation focus group discussion is attached as Annexure J.

4.2.1. Pre-simulation FGD selective code 1: The need for EC provider role definitions and accountability in DV responses

This code (Figure 5) aggregated from the following axial codes; "Insufficient guidance for EC providers", "Impediments to good history taking", "Lack of role definitions", "Factors precluding DV response", "EMS role and accountability" and "The value of a multi-disciplinary approach".

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[29] The postgrad venue is designed for post-graduate students to complete their studies in comfort. This level of comfort served well to keep the participants relaxed for the duration of the FGDs.

Figure 5: Display of first selective code derived from Pre-simulation FGD

The atmosphere observed during the discussion was initially one of discomfort caused by uncertainty. The uncertainty experienced by the participants was due to their perceived lack of training on the subject of DV response. The overwhelming guidance for almost every other intervention in the EC provider scope of practice was sharply contrasted to the void in DV response training. The exact definition of DV was not universally known amongst the participants. The questions "What is discipline and what is abuse?" and "Is BDSM considered abuse?" arose from the discussion as the participants tried to determine the definition of DV. The participants all agreed that DV involved "any physical or emotional abuse" in a relationship or co-habitation

Furthermore, the role of the EC provider in the context of DV response was ill-defined. "We are not there to police [the] abuser…not there for emotions. We are there to treat the patient no matter what". The ambiguity of the role of EC providers responding to DV was a major impediment to the current approach. The intersectionality of the roles of EMS, South African Police Service, social workers, doctors and nurses was poorly defined by the participants.

All of the participants decided that the role of EC providers can be viewed as the catalyst which initiates the cascade of events for appropriate intervention. They decided this after identifying that EC providers are very often the first on scene for DV cases (whether the EC provider knows it or not). The term "appropriate intervention" was however loaded with ambiguity. It was concluded that the role of EMS changes depending on the extent of the EC providers' knowledge on the topic. The participants were frustrated that they were expected to carry out specific tasks but had no guidance on how to achieve those tasks. The participants mentioned that "EMS workers don't know what to do…EMS never had the education on what abuse looks like.". DV education is thus imperative for there to be any appropriate intervention. Before intervention can take place DV needs to be defined and the victims' rights, EC providers' rights and relevant legislature must be known "…there needs to be a lecture on domestic violence" "Training must start with identification". "There must be an appropriate approach, not *one* approach".

What sets DV response aside from other emergencies is the potential to cause more harm to the patient "…that cannot be undone". This statement was made in reference to comparing clinical procedures (such as drug administration) to DV response. In most other interventions there are commonly antidotes or procedures to reverse the negative effects of the practitioner's action. There is a sense of uncertainty when conversing with victims of DV, participants do not feel adequately prepared to counsel victims or at the least, build trust. The element of risk, for both the victim and practitioner, became apparent. Practitioners may find themselves positioned between the victim and the abuser where the threat of physical harm may materialise. The decision to get South African Police Service on the scene is also one which can influence the progression of the case. The presence of law enforcement may result in immediate protection for the practitioners and victim, but the consequences for the victim, if she/he remains with the abuser, may be grave. Other factors which could make history taking problematic include the fact that practitioners often service the areas in which they live. It is therefore likely that the victim and/or abuser may be known to the EC provider attending the scene. Practitioners may be intimidated into not performing their full duties in fear of retaliation by the abuser or due to the risk of harm to his/her friends and family.

4.2.2. Pre-simulation FGD selective code 2: Personal and shared beliefs regarding DV response

This code (Figure 6) aggregated from the following axial codes; "Personal beliefs", "Lack of support" and "Toxic Masculinity".
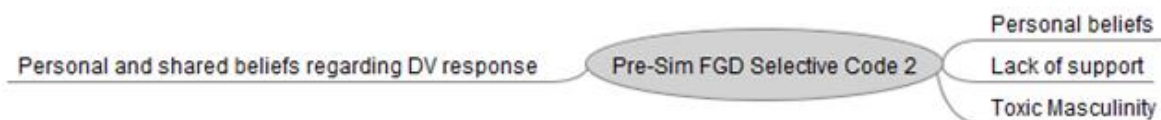
Figure 6: Display of second selective code derived from Pre-simulation FGD

DV has become normalised in the public eye. Since EMS workers are members of the same public it can be assumed that EC providers may contribute to the false beliefs and stigma regarding DV. One participant explained that the occurrence of the DV in South Africa can be partly blamed on the racialised past of the country (including the Apartheid policies that fostered this racism). "White males look down on black and coloured females", "…not equal, they are seen as lesser.", "They might not be introduced to a lot of cultures". Another participant disputed this statement by saying that people can easily lose accountability for wrongdoings or holding false beliefs by saying that it is "because of the history of South Africa". There was consensus amongst the participants that the environment in which a person grows up can greatly influence their perception of DV, "If you grew up around domestic violence it is

normalised". One participant explained that the way some victims view violence can also vary from one case to the next, "He hits me because he loves me. If he hits me because I talk to another man, it means that he is jealous and therefore he loves me". The topic of an individual's culture invariably moulding their view of DV was continued with statements such as "In typical Afrikaans culture…women must be seen, not heard, they must stay at home…no job…". The participants all agreed that "education can change those wrong beliefs".

EMS originated from war times, so historically it was masculine by nature (as men were called to war more often than women). As a result of this, EC providers found it difficult to express their emotions (on scene/with their colleagues) without some form of consequence (humiliation or pity) "…paramedics cannot cry on the road".

These consequences may be manifested in a loss of respect from peers, or even as a negative influence on their potential to get a job in the future. Participants expressed concerns that during their university career they are constantly being judged by potential employers (when doing work-integrated learning shifts) so any sign of weakness expressed by the student may be misconstrued by the potential employer as a reason to not hire them when they are qualified, "Everything is about reputation". The term "There is no such thing as a pink paramedic" is known by all the participants. This may highlight the false belief that femininity and EMS are incompatible.

There is a large emphasis on "grow up, man up" and that may be negatively influencing how EC providers cope with their emotions, and dangerously, influencing how they treat their patients. Participants expressed concern that by desensitising the practitioner, patient treatment may become compromised (especially when dealing with instances of behavioural emergencies, and crisis intervention). The participants believe that by having the EMS staff/students emotionally healthy they will be ready to deal with the psychological trauma that they may encounter in the field. This point was succinctly summarized in the statement "helping us might help the patient". The suggestion is that not supporting one's psychological wellbeing is counter-productive to the goal of sustainable human resources and patient safety. One participant group mentioned the "It's okay to not be okay" movement which helps to promote the emotional wellbeing of EC provider students. The extent of this movement is not well-known.

4.2.3. Pre-simulation FGD selective code 3: Practitioner sensitivity to DV responses

This code (Figure 7) aggregated from the following axial codes; "EMS desensitisation", "Triggers in DV training", "Risk-benefit of forced exposure" and "Sensitising vs desensitising practitioners".

Figure 7: Display of third selective code derived from Pre-simulation FGD

The fact that EMS workers see so much physical trauma on a day to day basis can result in them becoming desensitised to the pain of others. This phenomenon can be further viewed as EMS workers becoming impatient to anything that is not physical trauma. Being trained in trauma and medical emergencies only result in a "see the bleeding, stop the bleeding; see the fracture, splint the fracture" mindset.

The risk of secondary trauma/vicarious trauma is a reality for many EC providers, a common method for avoiding this or even as a side effect of this trauma is to detach from the patient "…dissociating yourself from the issue". The problem arises when the EMS provider is expected to show empathy or sympathy to the patient. The drawback of having desensitised practitioners is that the patients might not receive the empathy or sympathy they require to trust the practitioner, therefore further helpful interaction is halted or lost completely. Participants also made mention of the various sources of pressure they are under to complete emergency callouts as quick as possible "There is not enough time with patients to build trust…red zones…quick scene times" "Time with patient is too short to build a relationship" "The service that you work for may impact how the call goes…time spent on scene…dispatch asking why so much time is spent on scene or hospital".

One participant mentioned that he would want to work shifts in a DV centre for more experience dealing with the victims. The discussion progressed to some participants agreeing with the statement on the premise that more exposure (seeing real victims of DV) will be beneficial to their practice. The participants then began to talk about who will actually be benefiting from this intervention. The participants realised that by exposing victims to untrained EC provider students, more harm may befall them. They agreed that forced exposure may not be that helpful, as exposure is likely to happen regardless. It was determined that the value

proposition of this intervention would be nil. By running DV based simulation training, there is a risk for students to become "triggered". This is a risk which is, to a certain extent, unavoidable. Students should be taught how to debrief effectively, in a written and verbal capacity. One participant asked the group "What if a student is triggered in class?" The consensus after the discussion was that EC providers will not be able to choose their patients once they become operational. It is an inherent risk that some patients will be more emotionally demanding than others, and the EC provider classroom should not be any different. Participants highlighted the need for psychological support for EC providers and students. Appropriate support is needed, with specialists in trauma counselling "There needs to be support, not just campus psychologist". This, in addition to adequate training on debriefing tactics, would be enough to support the implementation of DV simulations.

4.2.4. Pre-simulation FGD selective code 4: The potential value in peer-based training for DV related simulations

This code (Figure 8) aggregated from the following axial codes; "Weaknesses of doll-based simulations", "Value in peer to peer training" and "Simulations as a Proxy for DV education".

Figure 8: Display of fourth selective code derived from Pre-simulation FGD

There may be value in learning about DV response in the form of simulation training. Simulations are helpful to learn the approach to different patients. Currently, the simulations that are performed only include medical and trauma-based scenarios. When questioned about their current experiences of patient simulation training the participants had a strong agreement that it was beneficial. These benefits were mostly concerning learning clinical skills, muscle memory, practising of protocols/algorithms and learning how to manage stressful situations, "[Simulations] teaches students how to recognise patterns and how to fix them". The weaknesses, however, were soon registered, "It only prepares you physically, not emotionally".

The current training in EMC utilises a simulation mannequin with the drawbacks of students not being able to visualise any facial expressions, or have any face to face communication "[Simulation] mannequins can't be used to train for domestic violence" "It [domestic violence] is psychological, not physical". These factors are essential for training in DV response. The

individual partaking in the simulation will be able to benefit from seeing the patient's eyes move, seeing discomfort and picking up on subtle micro-expressions. The solution to this problem would be to have students practice on each other. "Students need to have some experience…they need practice… needs to be real, not just dolls…students can learn from each other… even just peer interviews…". This peer-to-peer learning will allow students of different languages, race, age and gender to interact with one another while meeting simulation objectives. "The [students in the] class will be enough to get enough views on how to talk to patients".

4.3.   Patient Simulations (Participant Observation)

4.3.1. Venue

The simulation sessions were held in a specialised venue designed specifically for training EC providers. The same venue underwent accreditation to conduct the American Heart Association (AHA) courses such as Paediatric Advanced Life Support (PALS) and Advanced Cardiac Life Support (ACLS). The rooms, named "Sim Lab 7 back and front" and "Sim Lab 8 back and front", are found within the Emergency Medical Sciences building on CPUT Bellville campus. The structural layout of the venue includes four rooms situated in a square formation with a control room in the centre. Each of the four simulation rooms has a sensitive microphone, a fixed-position camera (dome camera) and a dynamic camera which can be positioned in any direction (with zoom capabilities). The control room allows the lab technicians to view each simulation room directly through the tinted glass and electronically through computer monitors which display live video footage from each camera. For these simulations, no mannequin or elaborate set-up was required. Each room was equipped with two chairs only. The chairs were positioned close to the mounted microphones (the centre of each room) and the moving cameras were focused on the position of the chairs. Figure 9 below indicates the structure of the simulation labs used.
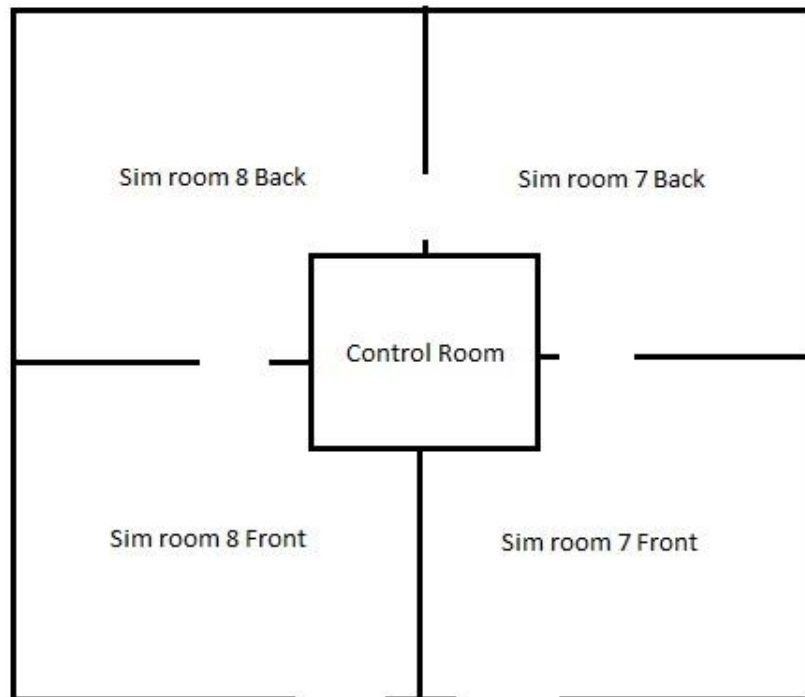
Figure 9: Layout of simulation venue

4.3.2. Procedure

The DV-based simulations took place on four separate days with each session consisting of a different year group of Bachelor of Emergency Medical Care students. A total of 25 participants took part in the simulations. The participants gathered in one room and had a few minutes to chat amongst themselves before the session began. The briefing for the simulations included a description of the purpose of the session as well as a reminder that partaking in the simulation will not affect their academic progress. Participants were also reminded that the sessions would be audio and video recorded for purposes of data analysis. With volunteerism, half the group allocated itself to the role of standardised patients and the other half as EC providers. The EC provider group was briefed and handed the screening protocol for abuse (Annexure K) and a safety planning checklist (Annexure L). The standardised patients were briefed and randomly assigned the DV patient scripts. The simulations only commenced once all of the participants were comfortable with their role. Thereafter, two participants (one standardised patient and one EC provider) were allocated per simulation room. All of the simulations ran simultaneously for each participant group.

During the simulations, the researcher performed the function of a facilitator and observer. At the beginning of all the sessions, the researcher stood in the control room with a view of all the simulation. The participants were allowed to ask for guidance throughout the session on

various elements of the simulation such as implementing the screening protocol, communication techniques, and embellishment of the scenario if required. The facilitator then walked between the rooms, observing the participants and directing them when required. The guidance provided by the facilitator was discussion-based (not straightforward answers). This allowed for an open environment to test different patient approaches between the various patient scenarios.

The first session consisted of six second-year participants. The second session consisted of six fourth-year participants. The third session consisted of eight first-year participants and the fourth and final session consisted of five third-year participants. In total, fourteen simulations were conducted: three in the first session, three in the second session, four in the third session and four in the fourth session. The total simulation time which accumulated was 3.06 hours. Table 2 below displays the number of participants in each group, the number of simulations conducted along with total simulation times and average simulation times. The final column indicates the mean time spent doing simulations per participant group with the average of these results presented in the bottom-most right corner.

Table 2: DV Simulation duration for different year groups

Session	Participant Group	Number of participants	Number of simulations conducted	Total Simulation Time	Average Simulation Time
1	2nd years	6	3	32 minutes	10.6 minutes
2	4th years	6	3	57 minutes	19 minutes
3	1st years	8	4	68 minutes	17 minutes
4	3rd years	5	4	27 minutes[30]	6.75 minutes
Total		**25**	**14**	**184 minutes**	**13.3 minutes**

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[30] One participant arrived late to the session (two simulations were already in progress). Because there were not enough participants only two rooms were used out of the four. Participants switched roles and the next two simulations were conducted. One simulation had an EC provider with a partner and a standardised patient (due to the uneven number).

4.3.3. Findings

Note: The findings are presented in the order that the data collection took place, not in the order of BEMC year progression.

Selective codes are presented after the individual year group summaries. Axial codes from incidences are presented in square parentheses and are typed in bold font, e.g. [**axial code**]. The memo containing notes from the individual simulations is attached as Annexure M.

4.3.3.1. Second year group summary:

This was the first group to perform DV-based simulations. The groups were quite varied in their approaches. Personal and EMS operational experience appeared to have been an advantage for some participants during the patient interactions. Those with previous experience in talking to victims of DV used it to their advantage; this was evident in their tone of voice, body language and content of speech. Those with little to no *real* patient interaction in the past struggled to communicate with patients in a natural manner. Examples of this included; not getting to the patients' eye level when talking, opting to follow the DV screening protocol word-for-word rather than make it a conversation and not actively listening to the victim's responses (observable with repeated questioning) [**Adequate history taking**]. The latter resulted in more focus placed on the individual points of the DV screening protocol (with little success in manipulating the questions into a more victim-friendly format). The DV screening protocol provided a format/skeleton on which all participants could base their victim encounters. By using the screening protocol, there was no case where a participant did no intervention [**The DV screening protocol as an asset to patient care**]. The energy level between the participants was calm, no one was overly enthusiastic (with flamboyant body language or exaggerated diction) which kept the environment professional and free of unnecessary humour.

There was a sense of shared uncertainty amongst the participants which allowed them to become comfortable with each other and provide support for one another when required [**Movement from traditional simulations to peer-based simulations**]. The students used their surroundings to make the scene appear more realistic. For example, one student who played the role of a victim who was pushed down a flight of stairs opted to lean against a wall whilst on the floor instead of being found seated on a chair (which was provided in each room) [**The value in semi-structured simulations**].

4.3.3.2. Fourth year group summary:

The participant group who was in the final year of their studies were visibly academic driven. There was a heavy emphasis on following the DV protocol to its entirety. Participants also felt the need to confirm with me that this patient simulation would not influence their true academic results. As with the other groups, participants with a disclosed/self-reported history of dealing with DV victims (personal or in a professional setting) were likely to bring that experience into the simulation. This was claim was evident with participants displaying care in body language and tone of voice. Participants would maintain a low, almost hushed, tone of voice in an attempt to keep the victim calm [**Active decision-making to enhance victim comfort**]. Interestingly and contrary to the above, one participant with previous experience in dealing with DV victims chose a more firm/strict approach with patient interaction. She was very upfront with the victim in terms of the threat of violence and the need to seek help. The participant, when noticing that the victim was breaking eye contact and looking at the door, immediately asked if there was a history of violence in the household [**Probing of DV history**]. The participant was also more direct by telling the victim that the violence is not going to go away. In addition, the same participant asked about the colouration of the bruising to the victims' arm (therefore determining the timing of the injury (past injury vs current injury) [**EMS to forensic history taking**]. This approach was contrasted to those with little experience and a gentler approach with victim interactions [**Variability in DV interventions**].

One participant started asking questions (not all of which were relevant) in a persistent manner. After the participants finished their simulation, they spoke with each other and determined that the participant acting as the EC provider got comfortable too quickly and was not shy to probe more into the victims' situation. The victim found that this was "a bit too personal" and got in the way of the DV screening protocol [**The point of diminishing returns in EC provider comfort**]. The participants had a substantial focus on results; this included results for improvement in patient condition and their own results for their performance during the simulation.

4.3.3.3. First year group summary:

One set of participants (male (EC provider) and female (DV victim)) decided amongst themselves to speak in their home language (Afrikaans) for the duration of the simulation. They found this to be more comfortable and natural. The participant, finding that the victim resorted to speaking her home language, quickly switched from English to Afrikaans to allow for a more flowing conversation [**The benefits of EC provider tact**] [**Multi-factorial benefits of achieving comfort during victim interactions**]. his point emphasised the value of peer-

to-peer training as this element in training would not have been possible with a mannequin. Another set of participants found that the patient scripts were very realistic (this was mentioned between simulations). The realism was also emphasised when a participant, with no previous history of DV victim interaction or work-related experience, followed the script provided and acted in a manner that her "EC provider" found realistic. The participant playing the part of the EC provider had the first-hand experience in interacting with DV victims (in previous academic programmes). This small occurrence may indicate a face validity of the created standardised patient scripts.

his group was the only one to bring up (in conversation) the idea of having realistic medical simulations combined with DV screening (i.e. fractured arm needing splinting and analgesia) [**Factors influencing simulation realism**] [**The use of clinical skills**]. There was an emphasis placed on the biomedical view of healthcare, compared to the other groups who focused more on the emotional and mental wellbeing of the patient.

4.3.3.4.   Third year group summary:

Some participants, when realising that the victim did not want to go to a hospital, chose to use that time to discuss DV (what defines it, what the victim should do if it happens again, who to call etc) [**Value in victim education**]. Due to the occurrence of a participant arriving late to the simulation session, and due to it being an uneven number (generally one EC provider to one DV victim) [**Limitations of peer-based simulation training**]. It was decided that there would be one room with a DV victim and an EC provider with her partner. This change in dynamic appeared to help with the overall patient interaction [**DV intervention considerations**]. The benefit was highlighted as the partner could perform routine vital sign measurements (heart rate, blood pressure etc) whilst the EC provider could perform the patient interview, DV screening protocol, risk assessment and safety planning. The scenario containing two EC providers influenced the primary EC providers' perceived sense of security when interacting with the patient [**Constitutions of simulation realism**] [**EC provider and victim comfort**]. It allowed for the primary EC provider to focus on just the DV screening rather than the medical tests/interventions too.

4.3.3.5.　Simulation selective code 1: Factors which align to realistic simulations

This code (Figure 10) aggregated from the following axial codes; "Constitutions of simulation realism", "Factors influencing simulation realism", "Limitations to peer-based simulation training", "Movement from traditional simulations to peer-base simulations" and "The value in semi-structured simulations".
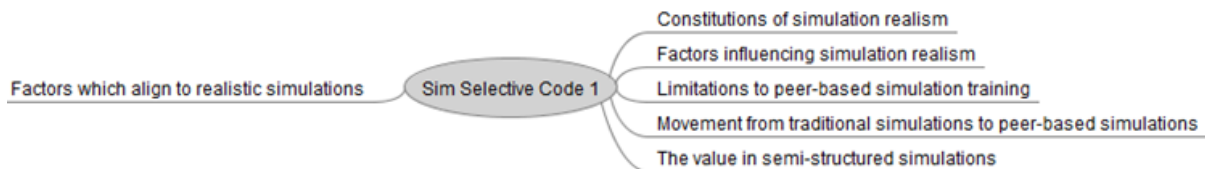
Figure 10: Displaying of first selective code from simulations

4.3.3.6.　Simulation selective code 2: Comprehensive history taking in the prehospital setting

This code (Figure 11) aggregated from the following axial codes; "Probing of DV history", "EMS to forensic history taking" and "Adequate history taking".
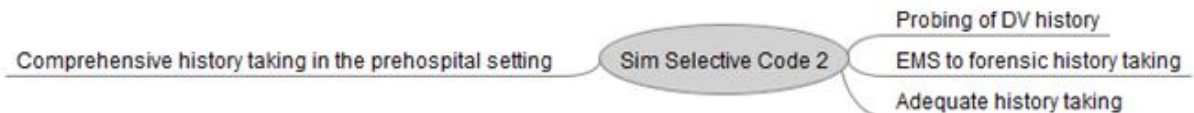
Figure 11:Displaying of second selective code from simulations

4.3.3.7.　Simulation selective code 3: Optimising victim comfort zones with EC providers

This code (Figure 12) aggregated from the following axial codes; "EC provider and victim comfort", "The point of diminishing returns in EC provider comfort", "Active decision-making to enhance victim comfort", "Multifactorial benefits of achieving comfort during victim interactions", and "The benefits of EC provider tact".
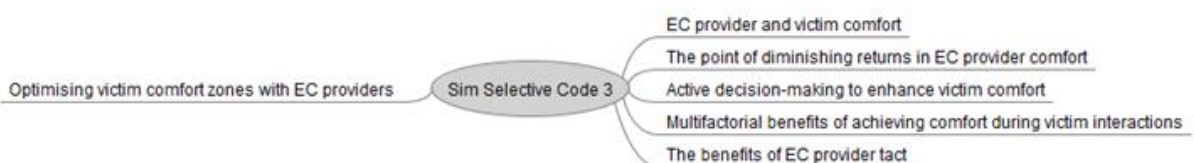
Figure 12: Displaying of third selective code from simulations

4.3.3.8. Simulation selective code 4: DV intervention considerations

The final selective code (Figure 13) that emerged was "". This code aggregated from the following axial codes; "DV intervention considerations", "Variability in DV interventions", "Value in victim education", "The DV Screening Protocol as an asset to patient care", and "The use of clinical skills".
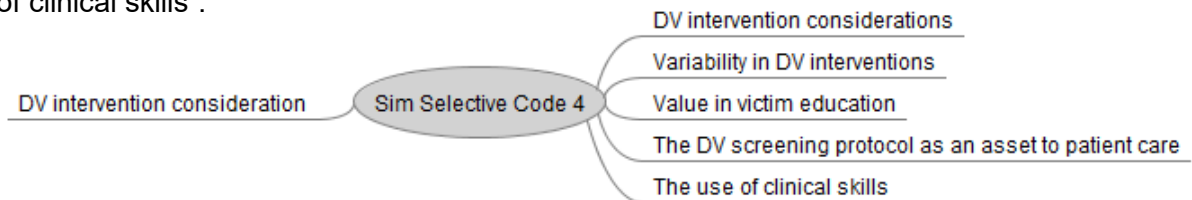
Figure 13: Displaying of fourth selective code from simulations

4.4. Post-simulation Focus Group Discussions

All four of the post-simulation FGDs, which lasted between 50-70 minutes, began with a reminder that the session will be recorded. The importance of the non-disclosure agreement was also highlighted. The FGDs were initiated almost immediately after the simulations so that most of the communication between participants were confined to the discussion. The researcher played the role of the FG facilitator by opening the session with a broad question "How were the simulations for you?" and allowing the discussion to snowball. The facilitator managed the discussion by encouraging participation in those who may have been more reluctant to share their opinions. Four post-simulation FGDs took place on separate days with each group consisting of a different year group of Bachelor of Emergency Medical Care students. These FGDs took place in "Sim Lab 8 Front" within the Emergency Medical Care building on CPUT Bellville campus. A total of 25 EC provider students took part in the 4 FGD. The combined time for the post-simulation focus group discussions (all four groups) was 244 minutes (4.06 hours). These selective codes are displayed using the *Freemind™* software for ease of interpretation. This programme was used throughout the process of data collection and analysis. The term "PS Selective code" refers to post-simulation FGD selective codes. The memorandum for the post-simulation focus group discussion is attached as Annexure N.

4.4.1. Post-simulation FGD selective code 1: The realism in DV based simulations

This code (Figure 14) aggregated from the following axial codes; "Realism in DV based simulations", "Importance of standardised patient briefing", "The value of patient scripting" and "The value of a learning centred simulation environment".
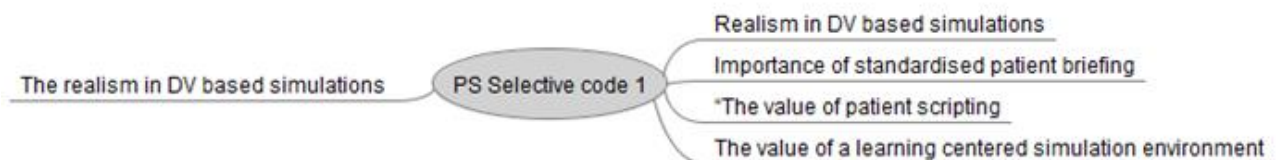
Figure 14: Displaying of first selective code from Post-Simulation FGDs

Many points of discussion were centred on the elements which can make a simulation life-like. For simulations to be effective in its role of training, realism is essential. Participants found that responding to DV in the real-world is made challenging due to the potentially hostile environment and the "unknown" (entering a house without the suspicion for DV). Because the simulations were performed in a "controlled environment" and the theme for the data collection session was DV, this element of surprise was lost. The participants found that the simulations were extremely immersive in terms of; depth of conversation between the patient and EC provider, body language, patient history and presentation, "Thought is being put into it [simulation scripts]", "more should be done". There was a connection made between the level of perceived realism in simulation training and the magnitude of effective learning. Simulations require outcomes as well as limitations. At least one person (the standardised patient or the EC provider student) should know when the simulation will end. This point came from a participant asking "Where does it [simulation] begin and where does it end?".

It was found to be critical to have a Standardised Patient briefing before the simulation begins, "They should brief you…to instil the gravity of the sims.", "Sim [simulation] victims should have a proper briefing, [the facilitator should start by] chatting to the victims". Simulations involving standardised patients are only as effective as the standardised patient is prepared. Standardised patients should be comfortable and knowledgeable about their role. Although the patient scripts were user-friendly, there was still a need to have the facilitator go through key points for individual standardised patients before the commencement of the simulations. Scripting of the patient's role was found to be highly effective. Participants without experience in the prehospital environment or experience interacting with victims of DV were able to play the role of the patient effectively. One participant mentioned that, in his experience working

with DV victims (in a previous academic programme), the participant (who only made use of the script to guide her presentation) performed in a manner indistinguishable from a real victim. Patient scripting was therefore critical to the progression of the simulation.

The environment in which the simulations took place was one which fostered comfort. Participants did not feel the subjective experience of judgment whilst performing their simulations. This is contrasted to the environment in which "normal" EMC simulations are performed, "Someone breathing down your neck won't help". The subjective experience of the participants was that the DV simulations were learning centred as opposed to a "stress-testing" or an assessment-based event. A participant explained that DV simulation training was "a subtle art" and should be treated as such. The ability for feedback to occur from the victim's point of view was appreciated, participants were able to tell each other if they were "sitting too close or too far" away during the simulation.

4.4.2. Post-simulation FGD selective code 2: The gaps in current EMS training

This code (Figure 15) aggregated from the following axial codes; "Shortfalls in current education", and "Gaps in current education".
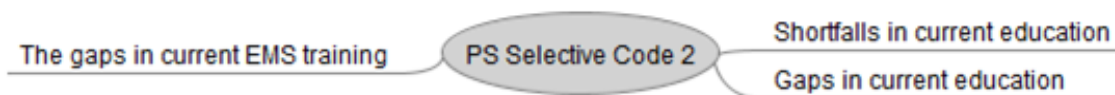
Figure 15: Displaying of second selective code from Post-Simulation FGDs

Practitioners are expected to empower victims of DV. This empowerment comes in the form of patient education (about their rights, locations and contact numbers for support/shelters, legal advice for protection orders, the responsibilities of the South African Police Service, contact numbers for social workers if needed). A scenario developed where the participants were unable to effectively empower the standardised patients because they did not feel empowered. The participants were not aware of all the legal proceedings involved in obtaining protection orders, or for lodging complaints at the local police station. Some participants asked "Can SAPS (South African Police Service) put you in protective custody?", "If you suspect domestic violence, should you anonymously report to SAPS (South African Police Service?". They were also unsure of the relevant contact numbers for victim help-lines or emergency shelters. The participants hence found themselves powerless to empower the victims of DV, "It is frustrating for the paramedic if you do not know what to do", "We do not know the law", "Paramedics must be prepared, must have helpline numbers on hand".

Apart from the practical application of knowledge, the participants also found lapses in certain aspects of their emotional intelligence when confronted with the DV victim. Some participants felt unequipped to identify and manage the psychological needs of victims. There was agreement amongst the participants that superficial training in psychological or behavioural psychology and trauma counselling could be beneficial to EC providers and their potential patients, "There should be a side programme on how to talk to people", "…superficial theory on psychology", "…or a module in behavioural psychology or trauma counselling".

4.4.3. Post-simulation FGD selective code 3: The role of EMS empathy during patient communication

This code (Figure 16) aggregated from the following axial codes; "Limitations to effective patient interactions", "The value in contextual patient approaches", "Empathy development" and "The value of human intuition".

Figure 16: Displaying of third selective code from Post-Simulation FGDs

Effective communication was a theme which emerged from all of the FGDs. Participants found that the progress of the simulation rests almost completely on how communication is achieved with the standardised patient, "It was interesting to see how difficult it was to help someone…especially if they don't want to go to hospital". Building trust with the victim was essential as further intervention cannot occur without the victims' buy-in. It was common across all focus groups, that there was difficulty in asking questions and relating to the victim. Some participants said there was a need to "…get taught how to question someone". From the perspective of the standardised patient, it was unsettling that the EC providers were asking questions based on the DV screening protocol, but there was no indication of where the questions were leading, "Phrasing of questions is important, as a patient [may] not [be] sure where the questions are going", "Are they sincere or not?".

The risk of harm to the EC provider and victim during the patient interview was recognised by all groups. This risk of violence can influence the effectiveness of communication. The EC provider would want to remove him/herself and the victim from the environment in the most

time-efficient manner. This may result in a sacrifice of the patience which is generally needed for patient comfort and trust. Patient comfort is almost unachievable if the EC provider him/herself is uncomfortable in the situation. DV response and a "one-size-fits-all" EC provider approach is not advised, "Scripting is important, they were all different patients, who behaved differently".

Participants found that depending on the situation some patients will benefit from "softer" approaches and some may benefit from a "sterner" approach. This refers to how the EC provider confronts the patient. Especially for male EC providers, care must be taken to not be too overbearing, as this can result in a loss in patient comfort throughout the encounter. A parallel was made between an abuser who makes him/herself out to be "all-knowing" and the EC provider who is telling the victim what he/she must do in this situation. A participant brought this point across by saying, "Being a knowledgeable paramedic, with all the information, can put them in the same league as an abuser…can be overpowering".

In the same notion, some cases will benefit from having police on the scene and some cases will not. Patients and their situations are extremely diverse and there is little value in a one a one-size-fits-all approach. The EC provider must be able to read the patient's demeanour and act accordingly. There was value found in the simulated scenarios of having victims who did not verbally disclose abuse but rather showed signs that could be interpreted by the EC provider. Promotion of human intuition during EMC simulations was never before experienced by the participants. One participant asked the group, "How do you apply the protocol to someone who does not want to talk?", the suggestion was that the patient's family member and the police service should be contacted for guidance.

4.4.4. Post-simulation FGD selective code 4: Constraints to effective DV victim care in EMS

The final code (Figure 17) aggregated from the following axial codes; "Patient advocacy within EMS", "Normalisation of DV", "Integration of services" and "The value in a two-person approach".

Figure 17: Displaying of fourth selective code from Post-Simulation FGDs

The concept of victim-blaming still penetrates the health sector in various ways. One of the most prominent issues is staff members holding false beliefs about DV. Participants shared their experiences when working in the operational sector of EMS. The majority have experienced instances where EC providers or hospital staff have spoken in a derogatory fashion towards victims. Comments such as: "Why don't you just leave him?" (imply the notion that the victims of DV can effortlessly leave their abusive partners without repercussions) are very common in the experiences of the participants. The effects on the victims can be profound. Victims cannot be expected to seek further help if "the help" does not understand and respect their situation. The participants explained that the EMS personally has to advocate for their patients to receive appropriate care, "You should not normalise abuse", "Tell the patient that it [DV] is not normal". EC providers need to work in the patient's best interests and display a high level of professionalism. For a victim to seek help, they need to acknowledge that they are a victim and that abuse is occurring. For EC providers to respond to DV, they need to acknowledge that DV, in any form, is an abnormal occurrence. Only once a situation is deemed "abnormal" can an intervention meaningfully take place.

The topic of calling the police service was not straightforward. The topic started when a participant stated that "There needs to be integrated services". The participants agreed that victims are different and "…the approach needs to be diverse.", "Some cases will benefit from SAPS (South African Police Service), some cases it will not". If the police are required it is more useful to contact people in the service directly. The point that the participant is alluding to is that due to the large volume of calls directed at the police service (through the national call centre, and it's associated long waiting periods), it is more helpful to contact the sector commander as you are then speaking to the officers who are "on the ground". The participant, who has a background in law enforcement within the country stated that you "need to personalise your connections with the local SAPS (South African Police Service)" to get a quick response.

Participants made mention of the one-on-one interaction between the EC provider and victim in the simulation. Although it may help foster a more trusting relationship, with more privacy, the EC provider felt greater exposure to danger, "The abuser can assault you.". One of the participants (who had a partner in the simulation) said: "It's nice having someone, he [the partner] could do the examination while I can ask the questions". In a different conversation, a participant stated that it is "…more difficult to treat [the] patient and have a discussion". The partner could also potentially "distract the abuser, ask questions and cross-examine [the abuser]".

4.5.   Category formation

Categories are formed with the grouping together of occurrences (topics covered in pre-simulation FGDs, and post-simulation FGDs and events which occurred during simulations) which share a common characteristic (Neuman, 2014). As the method continued, I was able to identify categories at a higher level of abstraction i.e. analytic categories. The formation of categories may be seen as a testament to the convergent validity of the study (discussed in Chapter 5).

The first category "**The need for EC provider role definitions in DV intervention**" consists out of the selective codes; "The need for EC provider role definitions and accountability in DV responses", "The gaps in current EMS training", "DV intervention considerations" and "Comprehensive history taking in the prehospital setting". These selective codes were obtained from the pre-simulation FGDs, simulations, and post-simulation FGDs.

The second category "**Impediments to prehospital DV response**" consists out of the selective codes; "Personal and shared beliefs regarding DV response" and "Constraints to effective DV victim care in EMS". Both selective codes were obtained from the pre- and post-simulation FGDs.

The third category "**EC provider empathy during DV response**" consists out of the selective codes; "Practitioner sensitivity to DV responses", "The role of EMS empathy during patient communication" and "Optimising victim comfort zones with EC providers". These selective codes were obtained from the pre-simulation FGDs, simulations, and post-simulation FGDs.

The fourth and final formed category: "**Conducting effective DV based simulations**" consists out of the selective codes; "Potential value in peer-based training for DV related simulations", "The realism in DV based simulations" and "Factors which align to realistic simulations". These selective codes were obtained from the pre-simulation FGDs, simulations, and post-simulation FGDs

4.6.   Summary

Data collection for this study comprised of a literature review (presented in chapter 2), four pre-simulation focus group discussions, patient simulations with participant observation and four post-simulation focus group discussions. Axial codes were obtained from each method. By using the Freemind™ software axial codes were compared with one another in their respective methods and selective codes were formed. Selective codes from all data collection methods (excluding the literature review) were compared and categories emerged.

The categories were "The need for EC provider role definition in DV intervention", "Impediments to prehospital DV response", "EC provider empathy during DV response" and "Conducting effective DV based simulations". The next chapter aims to interpret and explain these results and answer the research question.

5. CHAPTER FIVE: DISCUSSION/INTERPRETATION

5.1. Introduction

The primary research question was: *How does the scripting of evidence-informed simulations of domestic violence cases enhance practitioner responsiveness and patient safety among prehospital emergency care students*? This study aimed to position EC providers as advocates for the DV victim's interests during the (simulated or real) emergency care interaction. The study used a grounded theory methodology with pre-simulation FGDs, participant observation during patient simulations and post-simulation FGDs. The qualitative data were analysed using constant comparative analysis as described in the previous chapter. The data were progressively abstracted to four main categories namely; "The need for EC provider role definition in DV intervention", "Impediments to prehospital DV response", "EC provider empathy during DV response" and "Conducting effective DV based simulations".

The discussion begins with a short description of the factors which influence observational research. Thereafter, the validity of the study is discussed. The categories obtained from the data collection are then discussed in detail with the trustworthiness of the study concluding the chapter.

5.2. Factors Influencing Observational Research

The purpose of performing the simulations was to observe the behaviour of the participants while they were experiencing a scenario/simulation. Participant observation is a period of intensive social interaction between the researcher and the participants. Due to the intimacy of the data collection procedure, there may always be an element of the observer effect. The observer effect occurs when the physical act of viewing participants, influences the actions of those participants[31]. In the context of behavioural studies, the phenomenon of participants altering their normal behaviour after awareness of being observed is known as the Hawthorne effect (Landsberger, 1958, cited McCambridge et al., 2014). When this effect was originally observed during the analysis of Landsbergers' experiments it was discovered that workers performed better at their job functions when they knew that they were being observed. In many qualitative research designs, having the participants aware of the researcher and his/her intentions may be a flaw in the integrity of the design, however, this may have been to my

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[31] In the physical science setting, this phenomenon may be manifested when measuring the current within an electrical circuit. In order to measure the current, an ammeter needs to be introduced to the circuit. Therefore, by its very presence, the ammeter influences its own reading (by adding to the resistance within the circuit), thus a truly accurate measurement of current is not achieved.

benefit. Due to my recent graduation from the Bachelor of Emergency Medical Care programme and operational experience[32], some of the participants recognised me in the initial briefing session. This factor aided in 'breaking the ice' and allowed for a more natural interaction as I was not a stranger to all participants. The element of trust was already there for many participants. The participants needed not to view me as an educator (the connotation being that I would be assessing them). This would infer that there were correct and incorrect answers to the questions posed to them. Having the participants understand that their responses would not affect their academic progress was essential to obtain their honest thoughts/attitudes/beliefs about the subject of DV.

Owing to the nature of the data collection process, the element of observer bias was ever-present. This phenomenon refers to the possibility that certain characteristics of the ideas/beliefs of the researcher may bias what is seen and/or reported. This effect is particularly relevant due to the process of constant comparative analysis (which is embedded in the grounded theory methodology). The process is described by entering the field to collect data, analyse said data and then re-enter the field to collect more data and compare it with the existing information to compare codes/categories/themes. The risk is present where I may potentially see a trend emerging from the data and focus solely on that trend, consequently ignoring other codes/categories/themes which may be of value.

5.3.   Convergent Validity

Convergent validity is one of the fundamental aspects of construct validity; with discriminant validity forming the final aspect. Convergent validity, in general, is a measure of how well different theoretical constructs (findings) relate to each other when observed, as they are expected. Discriminant validity is a measure of how different theoretical constructs (findings) do not relate to each other, as expected. These terminologies and methods are commonly used in quantitative studies; however, they can also be applied in qualitative work. The various selective codes obtained in each of the data collection methods (FGDs and patient simulations) may be juxtaposed to determine congruency. There are similarities in the selective codes which emerged from all of the data collection sources. Concerning discriminant validity, this study does not demonstrate that theoretical constructs, which should not relate to each other, and in fact, do not relate to each other. Therefore, the full extent of

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[32] Due to my operational requirements it is common to interact with BEMC students while in the pre-hospital environment as they fulfil their work-integrated learning programme requirements. I am, however, not in the employ of the University where the participants study and am not directly involved in their programme.

construct validity cannot be achieved. For the purposes of this study the convergent validity, per se, can be used to help judge the methodological rigour.

5.4. Categories derived from data collection

5.4.1. The need for EC provider role definitions in DV intervention

The need for EC provider role definitions in DV intervention — Category 1
- The need for EC provider role definitions and accountability in DV responses
- The gaps in current EMS training
- DV intervention considerations
- Comprehensive history taking in the prehospital setting
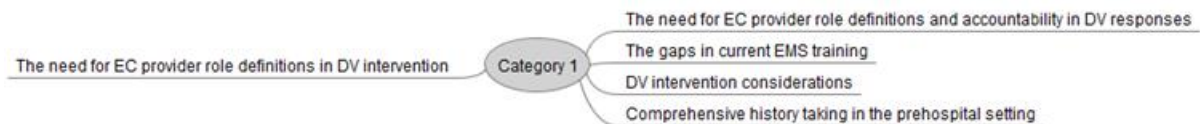
Figure 18: Displaying of first theoretical category

This theme has been ever-present throughout the data collection/analysis procedure. There are numerous elements which contribute to the creation of this theme and each one hinders the responsivity of EC providers to DV victims. The lack of DV education in existing prehospital EC provider training programmes is almost universal or equally inadequate. Training constitutes the foundation on which good practice emanates. The above Figure 18 displays the first formed category which was derived from the pre- and post-simulation FGDs as well as the simulations. The selective codes (on the right-hand side of the diagram) include "The need for EC provider role definitions and accountability in DV response", "The gaps in current EMS training", "DV intervention considerations" and "Comprehensive history taking in the prehospital setting".

EC providers cannot be expected to perform interventions which are out of their job descriptions. In the same light, if EC providers do not know what defines their pre-existing roles, they cannot be expected to fulfil those requirements. EC providers/students (at the time of this study) do not know what is expected of them when they are confronted with a DV victim in the prehospital setting. This factor is exasperated when you include the knowledge that most of the victims themselves do not know what the correct procedure is. At present, it appears that the level of DV intervention will only occur to the extent of the EC providers' knowledge on the subject (Naidoo, 2017). The role and extent of the EC provider response to DV victims compared to the roles of the police, social workers, doctors, nursing staff etc., is not defined. EMS providers and police services are often the first officials on the scene of a DV complaint, the care of the victim will suitably fall with the EMS providers, and this can be seen as the catalyst for the rest of the DV response. This means that from the moment the EC provider makes the first contact, the most appropriate (case appropriate) interventions should follow in a flowing and victim-centred fashion. For an adequate DV response to occur, DV

needs to be defined, EC providers need to know their responsibilities, the rights of the victims and the relevant legislation which enforce both.

As mentioned in Chapter 1, the Prevention of Family Violence Act 133 of 1993, although the first of its kind, left many voids to appropriate DV intervention. The Act did not adequately define DV which left magistrates and law enforcers with the task of determining abuse through their understanding. The overall result was that DV victim remained in a vulnerable state. The Act also placed all of its focus on the nuclear family (one husband, one wife and their children) with no mention of same sex-marriages or abuse within couples who are not married (who may or may not live together). The Domestic Violence Act No 116 of 1998 attempted to remedy the above faults however it makes no direct reference to EC providers and their duties to a victim. The roles of the police, for example, are outlined appropriately (although police compliancy to this Act leaves much to be desired) (Parenzee, Artz & Moult, 2001). There is good evidence to say that by having the role of an EC provider clearly defined for DV intervention, rates of reported DV abuse would increase (Naidoo, 2017).

The role of EC providers for DV should include; the identification of DV abuse through universal screening, documenting said abuse in Patient Report Forms (PRF)/Patient Care Reports (PCR), displaying an empathetic and non-judgmental attitude to victims, providing the most appropriate medical care, conducting safety assessments and safety planning to victims and appropriately referring victims for further assistance. These interventions, although simple to understand, may require specific training.

The Screening Protocol for Abuse (Martin & Jacobs, 2003) starts with the single question "Have you ever experienced physical, sexual and/or emotional abuse?" If the patient answers "No" to the question, the appropriate response from the EC provider would be to respect the answer, document it and provide information regarding DV. If the patient responds "yes" the EC provider should inquire about the timing of the abuse, asking if it was within the last 12 months. If the victim replies with "no", the focus should shift to his/her long-term safety. The victim should be asked if he/she still maintains contact with the abuser. If the victim does not, the health consequences of DV should be explained, a medical examination should be performed and documented, the victim should be informed of his/her legal remedies and finally, appropriate referrals should be made if necessary. If the victim states that the abuse had occurred within 12 months the EC provider should ask if the abuse is currently happening and if he/she feels safe at that moment (all the while keeping a supportive and non-judgemental attitude). The EC providers' actions, depending on the victim's response to the previous question, are mostly similar in that comprehensive care should be provided as per a standardised management protocol, all information should be documented on a DV

examination form, a safety assessment should be conducted, the Domestic Violence Act should be explained, the victim should be asked if he/she wants to obtain a protection order and/or report the case of assault/rape with the police service. Appropriate referrals should be made (if the victim feels safe or not). One difference in the approach is that if the victim does not feel safe at that moment the EC provider should assist him/her with safety planning (Martin & Jacobs, 2003).

Current EMC (Emergency Medical Care) training focuses heavily on the critical skills of IV access, intubation, CPR and drug administration etc., and rightfully so. These skills are crucial to operating as a competent EC provider. Furthermore, EC providers performing these skills incorrectly or applying the skills in an inappropriate context can have harming or deadly consequences for the patients they are supposed to be healing. The focus on "soft skills" (preferably referred to as "core skills") has an objectively smaller focus. These skills often attribute to the emotional intelligence of the students including but not limited to; active listening, conflict resolution, empathy, cultural awareness and respect. Challenges to DV response in terms of prehospital care often has little to do with the biomedical model of health and more on the emotional and social aspects of it. If the patient has critical/life-threatening injuries, EC providers would resort to their clinical training. The aspects of emotional and social factors in DV response rely heavily on the "core skills" of EC providers. All of the above interventions require that the EC provider truly understands and appreciates the extent of harm which is posed to the victims. EC providers cannot be expected to empower victims if they are not empowered. Empowerment starts with education and this education cannot only begin once the EC provider is qualified and operational. The teaching of DV theory, laws, regulations and intervention considerations needs to start within the classroom. Currently operational EC providers can be taught and brought up to optimal standard[33].

5.4.2. Impediments to prehospital DV response

Figure 19: Displaying of second theoretical category

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[33] This is a common occurrence. As new literature is published, stating for a change in current EC practice, EC provider training institutions change their respective curricula for future students entering the field and operational EC providers undergo short-term training programmes (accredited by the HPCSA).

Figure 19 above describes the formation of the category "Impediment to prehospital DV response" (left side of diagram) it derives from the following selective codes (right side of diagram); "Personal and shared beliefs regarding DV response" and "Constraints to effective DV victim care in EMS".

EC providers cannot appropriately manage victims of DV if they do not fully understand what defines it. An understanding of a topic rests heavily on the individuals' perceptions or beliefs of that topic. There have been a couple of studies which have sought to find out the perceptions of DV with nurses, social workers, doctors (Baraldi et al., 2013; Peltzer & Mabeba, 2010) and until recently EC providers (Naidoo, 2017). The majority of participants in all of the above studies did not hold false beliefs about DV. However, there were no studies which indicated that no participant held a false belief or misconception concerning DV.

It would be nonsensical to have an individual, who is acting in an official capacity, assist a DV victim when he/she does not believe that which constitutes the crime. This can be a massive constraint to affect DV victim care in the pre-hospital environment. The racial, cultural and political history of a country, South Africa in particular, can aggravate this factor. The evidence within the literature review supports this claim (Jackson, 2007). While the public holding false beliefs about DV is damaging to society, health care workers holding the same beliefs can be disastrous to the victims.

False beliefs regarding DV include but are not limited to the notions that victims can leave the abusive household at any point, that they are weak, poor, black or mixed race, that they may enjoy being beaten by their partners and that they are mentally ill. These beliefs are false because they are individuals' understandings which diverge from reality. Asking a victim, "Why don't you just leave?" may eventually lead to a situation of victim-blaming. It insinuates that the solution to DV is a one-size-fits-all approach. The sympathy provided is short term (if any), and if the victim does not follow the advice, the blame is cast away from the abuser and inappropriately placed on the abused. The notion that if the victims "simply leave", the abuse will end "constitutes a barrier to intellectual curiosity and critical thinking about intimate partner violence" (Adelman, Rosenberg & Hobart, 2016:1452). The UN (2017) shares the sentiment by saying that the social acceptability and widespread impunity for perpetrators are among the main challenges contributing to violence against women (UN, 2017).

Appropriate responses to DV cannot occur if the victims' point of contact with the state (police, EMS, hospital staff) subscribe to the above beliefs (Naidoo, 2017). The participants mentioned during the FGD that South Africa's politically fuelled racial history is a factor as to why false beliefs are still held by many. They went further to say that it cannot, however, be an excuse for continued subscription to those beliefs. There has to be a point where individuals take

accountability for their beliefs and corresponding actions. Some of the more innocuous beliefs, which can be detrimental to both the DV victim and EC provider, are those which hint to "toxic masculinity".

The term "toxic masculinity" was used in many of the pre-simulation FGDs. This was often in the context of EC provider training and work culture. The phrases "there is no such thing as a pink paramedic"; "real men don't..." and "paramedics cannot cry on the road" were also used more than once in different participant groups. There is no universally agreed-upon definition for toxic masculinity but the term is often used "to refer to a loosely interrelated collection of norms, beliefs and behaviours associated with masculinity which is harmful to women, men, children and society broadly" (Sculos, 2017:4). The participants used the term "toxic masculinity" when describing their struggle to share/express their emotions to colleagues within the emergency medical services (with particular emphasis on male EC providers). Some female participants felt the judgement too, describing the use of the statement "there is no such thing as a pink paramedic". This statement reinforces the false belief that the emergency services professions are not made to suit women[34]. The parallel was made when looking at the history of emergency medical services and its battlefield conception (where mostly men were called to work) (Eisenberg, 1997). Feminine EC providers were not the historical norm in the service.

Phrases such as the above reinforce "hegemonic[35] masculinity". There has been previous research performed which describes how men who adhere/subscribe to hegemonic masculinity have worse mental health (Sharpe & Heppner, 1991) and general well-being (O'Neil, 2008 cited in Fleming et al, 2014) than men who do not adhere to this mentality. Furthermore, men who endorse this form of masculinity are more likely to maintain a power relation over their female partners with physical and sexual violence (Mahalik, Talmadge, Locke & Scott (2005) cited in Fleming et al., 2014). Regarding the above and the fact that EMS and other first responders were known to foster a culture of "manly men", one can only be left with cognitive dissonance. The previously held belief that the first responders are protectors for the vulnerable and is now met with the new knowledge that if those first responders enforce those "toxic" traits they too may be the perpetrators of gender-based/domestic violence. DV intervention may, therefore, be further impeded.

Along with the victims, the psychological well-being of the EC provider needs to be protected for them to be a benefit to their patients. One participant, in the FGD, summarised this quite

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[34] Further enforcing the cultural norm that the colour pink is affiliated with the female gender.
[35] Ruling/dominant in the social or political context (Oxford dictionary, N.d)

succinctly "Help us [EC providers] to help them [victims]". More needs to be done to foster an open dialogue between EC providers and between other services to promote mental health.

5.4.3. EC provider empathy during DV response

Figure 20: Displaying of third theoretical category

EMS personnel and other first responders are notorious for their desensitisation in the line of duty. Figure 20 above describes how the selective codes obtained in the data collection (right side of the diagram) help form the category (left side). The volume of physical and emotional trauma witnessed on a day to day basis can have lasting consequences (Stewart & Swartz, 2005; Ward, Lombard & Gwebushe, 2006; Fjeldheim et al, 2014; SAMHSA, 2018). Witnessing countless strangers in pain will eventually set a new threshold as to what constitutes pain for the EC provider, often leading to compassion fatigue[36] (Cornelius & Swayze, 2015).

Empathy helps to foster a positive relationship between health care professionals and their patients. The term "empathy" is derived from the Greek *empatheia* which means the "ability to understand and share the feelings of another" (Oxford dictionary, n.d). The term can be further described as having both cognitive and affective (emotional) aspects. The latter refers to an individual experiencing the feelings of another, while the former describes the ability to understand the experiences/feelings of others while also being able to relay those feelings back to the person. When the term "empathy" is juxtaposed to the term "sympathy", an important differentiation is made. Empathy may be more constructive to EC providers in that it entails "self-other differentiation". This is the phenomenon whereby a person can separate his/her own emotions from those of the other person. Objectivity is thus maintained and there is evidence to suggest that this helps to reduce anxiety and distress for healthcare workers. There is a link between the level of empathy in healthcare providers (EC providers, nurses, doctors, etc.) and the incidences of burnout; however, the direction of influence is still unclear. Burnout is described as a sequence of three factors; emotional exhaustion, depersonalisation and reduced personal accomplishment.

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[36] "The stress resulting from helping or wanting to help a traumatised or suffering person" (Figley, 1995:268 cited in Cornelius & Swayze, 2015)

"The relationship between empathy and burnout - lessons for paramedics: a scoping review", a study performed by Williams, Lau, Thornton and Olney in 2017, discovered that there was a negative correlation between burnout and empathy. They also determined that the strength of the relationship differed depending on the samples[37] and their settings. Out of the twenty-six articles[38] which were reviewed, three studies concluded that having a low empathy could be a contributing factor for a high incidence of burnout. Six other articles implied the contrary, is that burnout might result in low levels of empathy. The first three articles concluded that raised cognitive empathy levels may reduce the incidence of burnout. There was also a suggestion that declining levels of empathy was a defence mechanism against human suffering, as it subconsciously attempts to protect the healthcare worker from being emotionally drained (emotionally exhausted) by patients. One article (Bradham, 2008, cited in Williams et al, 2017) found that nursing staff, who were burnt out, lost the ability to empathise with their patients.

The primary focus in most EC provider training programmes is the performance of clinical skills and clinical reasoning (determining when to apply or withhold said skills). There is a strong biomedical focus in current training and this inevitably leads students to hone in on physical or easily noticeable mental abnormalities. DV cases in their early stages (with reference to the Cycle of Violence) may not include physical violence which requires medical attention. This, therefore, infers that if EC providers are called to the scene, it will be an instance of emotional distress, and/or a victim who is in denial about the presence of danger (among other case examples). There may be an ineffectual response which can arise from a combination of EC providers who are desensitised to trauma and DV victims who require empathetic responses. The reader is thus left with a paradox; DV victims require an empathetic response from EC providers to get the most from the encounter but, EC providers who give too much empathy could burnout resulting in lower levels of empathy for the next patient.

The patient simulations indicated a promising future, almost all of the participants who played the role of the EC provider in the DV scenarios immediately got to the victims' eye-level by crouching or sitting. Those who did not immediately assume eye level did so when the DV screening protocol was used or when the conversion got more personal. This display indicates an act of empathy in the victim encounter. The participants subconsciously felt that the victim

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[37] Nurses and doctors (there are no high-quality works of research performed on the EC provider cohort, however the results should be transferable due to the close relationship between the professions (long hours, irregular sleeping patterns, multiple experiences with critical incidents etc.).

[38] Out of 1270 articles only 26 were found to be applicable by meeting the criteria of; examining the relationship between empathy and burnout, studies performed on physicians and/or nurses and articles available in English.

would feel more comfortable speaking to someone who is not standing and looking down on them.

During the course of the first focus group discussions a topic arose which concerned the use of *forced exposure*[39]. This idea was suggested with the example of having EC provider students perform some of their work-integrated learning shifts at DV victim shelters. The notion was that EC provider students would be "sensitised" to the trauma that these victims have endured and thus make them more responsive to future interactions with DV victims in the pre-hospital setting, i.e. improve their emotional intelligence to make them more empathetic to victims. There is no theoretical evidence to suggest that this could improve EC provider response to DV (and soon after this point was raised in the discussion, other participants expressed their opinions against the idea).

"The importance of training healthcare professionals in techniques of emotion regulation is emphasised. These findings provide an important background for future paramedic research…" (Williams et al, 2017:334). The quote above, taken from "The relationship between empathy and burnout – lessons for paramedics: a scoping review" by Williams et al., summarises this category succinctly. There is no argument as to the importance of mental health to the EC provider; in addition, the need for empathetic first responders in the case of DV intervention is paramount. There is evidence to suggest that it is possible to meet both of these outcomes, however specific interventions are needed during EC provider training. An argument can be made that this could be best taught as the EC provider gains experience in the field, however it may be in the best interests of both the victims and the EC providers to make this an upstream intervention[40]. The result may therefore be that more EC providers are trained in the most efficient amount of time. The risk of new EC providers entering the field and inadvertently causing harm to victims may also be mitigated.

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[39] This term was mentioned in the data collection period thus for the sake of continuity and transparency it was used again in the discussion. The more common usage of the word comes from the advertising industry where the testing of different advertising techniques can either take place in the natural setting (with people performing their day-to-day activities) or as a *forced exposure* (such as focus group discussions) where participants are *exposed* to certain pieces of advertising and subsequently provide their feedback.

[40] These are interventions which generally affect "large populations through regulation, increased access, or economic incentives" (Brownson, Seiler & Eyler, 2010:1).

5.4.4. Conducting effective DV based simulations

Figure 21: Displaying of fourth theoretical category

Figure 21 above describes how the category (right side of diagram) was constructed from the selective codes (left side of diagram). The selective codes are; "Potential value in peer-based training for DV related simulations", "The realism in DV based simulations" and "Factors which align to realistic simulations".

A study was conducted by Rantatalo, Sjoberg and Karp, in 2018, entitled "Supporting roles in live simulations: how observers and confederates can facilitate learning". The objective of this study was to examine the extent and content of what students learn from participating in live simulations when they partake in roles other than that of the primary participants. The study by (Rantatalo et al., 2018) relates to the data collected in this study. It was determined that valuable information can be obtained from the participant acting as the DV victim. The standardised patient can provide face-to-face feedback in real-time to the participant playing the role of the EC provider. The study by (Rantatalo et al., 2018), used Swedish police trainees during their simulation education. It concluded that participants engaged in simulations, who are not the primary participants, are crucial for producing realistic scenarios for the primary participant to act in. They can also effectively adjust the difficulty of the simulation, therefore contributing to the learning outcomes of the simulation (Rantatola et al., 2018). The above study strengthens the information gained in the data collection and it reinforces Vygotsky's theory of sociocultural learning where the learner needs to be engaged in the learning process as learning happens with the assistance of other people (Vygotsky, 1978). During the simulations, there was a singular instance where one pair of participants broke character. In the start of the simulation, the participant playing the role of the EC provider wanted to know where the victim was in relation to her surroundings. For future simulations, it is recommended to have clear descriptions of the simulated surroundings. This will assist in getting the participants to feel encapsulated in the scenario.

The lack of previous DV simulation training was evidenced in the observations. This was manifested in an almost identical DV victim approach regardless of the participants' year of study. There was a universal uneasiness experienced by each of the participants. In times of student uneasiness, protocols are used to provide structure. The DV screening protocol provided the structured approach to the DV victim interaction. This was, however, a "bare-bones" outline. The participants needed to add their conversational techniques for the

standardised patients to provide information. This was particularly important for the standardised patients which were guided (by the script) to not freely disclose information. Participants in this study agreed unanimously that the use of peer-based training in simulations can be beneficial, specifically in DV education. The topic of simulation realism was common within all the groups of participants. A contrast was made between traditional EMS (simulation mannequin) based training and the use of peer-based training. It was agreed that practicing clinical procedures such as intravenous access and intubation on mannequins was appropriate but gaining patient history (medical, social) was problematic. In the same light, encouraging EC provider-patient dialogue with a student and a mannequin[41] appeared counter-productive. The participants found this highly distracting and unrealistic, therefore hindering potential learning opportunities. There is a growing base of evidence which indicates that the mere presence of a participant in a simulation does not necessitate learning. The simulation must be purposefully designed, with measurable outcomes, to potentiate active learning (Dieckmann, 2009; Hopwood et al., 2016; Sjöberg et al., 2019).

An element which makes DV response challenging is its limitations in measurable outcomes. The category is named "Conducting effective DV based simulations", the word "effective" holds little value if outcomes cannot be evaluated. An outcome is a statement which reflects measurable change due to an intervention/effort which was made (National Resource Center on Domestic Violence, n.d). The outcome evaluation assesses what occurred as a direct result of the program, it must be "measurable, realistic and philosophically tied to program activities" (National Resource Center on Domestic Violence, n.d:1). The overall outcome for DV based simulations must be along the lines of "promoting the safety of DV victims". It is not feasible, realistic or easily measurable to have an outcome which states "to reduce the incidences of domestic violence-related deaths by 50%" (for example). Victim satisfaction ratings based off of EC provider responsivity would be ideal but this is largely unrealistic. Following up on victims is challenging, time-consuming and expensive. The use of EC provider self-reporting of their response can be beneficial however this will never be a true reflection of the DV response due to self-reporting bias. Creating systems which can monitor victim movement from one intervention to the next could be a solution (however this too will never be truly accurate). This idea refers to seeing when and where an EC provider made contact with the victim, where he/she was transported to (if transported), which facility doctor/nurse made contact if the patient was referred to a social worker if counselling services were utilised if legal proceedings took place if a victim shelter was used and finally if the victim later returned to the abuser (indicating a continuation of the cycle of abuse).

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[41] The simulation facilitator would often take the role of speaking for the patient. Any questions directed to the patient from the participant would be answered by the facilitator.

The future of EC provider DV education may very well be the use of simulation training in addition to theoretical sessions. The simulations required no equipment and the only resources which were used were the patient scripts and a copy of the DV screening protocol.

5.5. Study Trustworthiness

Evaluating the quality of qualitative research has been a dilemma for researchers. There are limitations to judging qualitative research on its "objectivity, reliability and validity[42]" as some research may have a lack of objectivity in its methodology. Oftentimes, qualitative research is inappropriately evaluated on the same criteria used to judge quantitative research methods. The positivist paradigm is most popular for quantitative researchers, where there is a belief that true knowledge is based solely on the experience of the senses (usually visual, audible, and tactile) and it can be obtained by observation and experiment. This positivist paradigm often dominates the research world and therein lies the challenge for qualitative evaluation. The researcher, evaluators and readers are met with the challenge of determining the quality of the research they are presented with. To say nothing of the lack of direction provided for judging qualitative research, there has been a dispute amongst researchers regarding whether or not to use criteria at all. Cohen & Crabtree postulate that due to the wide-ranging nature of qualitative research, it cannot necessarily be considered a "unified field". It is for this reason that even if an appropriate criterion were to be designed, there may still be considerations as to whether it should be implemented universally.

In an attempt to determine criteria for good qualitative research, Cohen & Crabtree (2008) analysed research studies which focused on the rigour within qualitative research. There are seven discovered criteria which could potentially result in good qualitative research. The research should be carried out ethically and its importance must be brought into question. The methods used in data collection must be appropriate and rigorous while the research output must be clear and coherent. The researcher must be reflexive in determining his/her bias during the course of data collection and analysis. Research validity and credibility must be established and finally, the importance of verification and reliability of the research must be stressed (Cohen & Crabtree, 2008).

Northcote (2012), tabulated several guiding principles and criteria used to evaluate qualitative methods. These guiding principles aimed to assist researchers (particularly novice researchers) when they are applying the processes of designing and conducting qualitative research. Those principles are as follows. The research must be contributory. By completing

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[42] This is often referred to as the "holy trinity" of good quantitative research.

the research there should be an advance in the knowledge or understanding about an area of interest/policy/practice or theory. The collection, analysis and interpretation of the qualitative data must be rigorous in conduct through systematic processes and transparency. The research strategy should be defensible in design (Northcote, 2012). In other words, the researcher should be able to pre-empt evaluative questions which may be posed. The research design must, therefore, be trustworthy and clearly linked to the objectives and questions of the study. The research outputs should be credible in terms of being able to provide adequate evidence to back up well-founded arguments. Finally, the research must be affective in nature. This refers to acknowledging the excitement associated with novel discoveries, the enthusiasm of the researcher and the emotional involvement of the participants (be it positive or negative).

When reflecting on this study, the above criteria were used as a set of markers to determine quality. This study went through the process of research ethics committee evaluation to ensure the safety of the participants and the privacy of the data collected. The background and significance section in Chapter 1 gives expression to the importance of this study to DV victims. The methods used were highly appropriate for the study as discussed in Chapter 3. The data collected were clear and coherent, ambiguous data were explained to grasp the full extent of the research gathered. Attempts were made to alleviate elements of researcher bias and the observer effect. These interventions included; creating DV simulations guided by evidence not by personal experience, volunteerism-based recruitment strategies, asking participants to choose their own simulation partners, randomly selecting simulation scripts for individual participants (DV cases). The process of triangulation between the literature review, focus group discussions and simulations promote the credibility of the study. The evidence gained in this study can be transferable to forensic sciences, education for other first responders (EC providers of different qualifications/firefighters/police). If the services can conduct simulations using patient scripts, they can obtain value from conducting DV-based simulations. Confirmability of the study is addressed by making explicit the data obtained during data collection and analysis (as seen in Chapter 4, 5 and the relevant Annexures).

5.6.   Summary

Participant observation is a period of intensive social interaction between the researcher and the participants. Due to the intimacy of the data collection procedure, there may always be an element of the observer effect. In many qualitative research designs, having the participants aware of the researcher and his/her intentions may be a flaw in the integrity of the design, however, this may have been to my benefit.

Convergent validity is one of the fundamental aspects of construct validity; with discriminant validity forming the final aspect. Convergent validity, in general, is a measure of how well different theoretical constructs (findings) relate to each other when observed, as they are expected. The various selective codes obtained in each of the data collection methods (FGDs and patient simulations) may be juxtaposed to determine congruency. There are similarities in the selective codes which emerged from all of the data collection sources. Through the process of constant comparative analysis, four categories of understanding emerged.

"The need for EC provider role definition in DV intervention": EC providers cannot be expected to perform interventions which are out of their job descriptions. In the same light, if EC providers do not know what defines their pre-existing roles, they cannot be expected to fulfil those requirements. EC providers cannot be expected to empower victims if they are not empowered. Empowerment starts with education and this education cannot only begin once the EC provider is qualified and operational.

"Impediments to prehospital DV response": EC providers cannot appropriately manage victims of DV if they do not fully understand what defines DV. An understanding of a topic rests heavily on the individuals' perceptions or beliefs of that topic. There is still a masculine image being embraced by the Emergency Medical Services, the idea that men cannot share their feelings or show signs of weakness without a negative recourse (real or perceived) highlights the "toxic masculinity" within the workplace. Subscribing to the beliefs of toxic masculinity may place an individual into the same ontological viewpoint of a DV perpetrator (Mahalik, Talmadge, Locke & Scott, 2005 cited in Fleming et al., 2014). There is value in helping to remove the traits of this type of masculinity from EMS, as it may reduce the chances of making EC providers perpetrators of domestic violence.

"EC provider empathy during DV response": EMS personnel and other first responders are notorious for their desensitisation in the line of duty. The volume of physical and emotional trauma witnessed on a day to day basis can have lasting consequences (Stewart & Swartz, 2005; Ward, Lombard & Gwebushe, 2006; Fjeldheim et al, 2014; SAMHSA, 2018). Empathy helps to foster a positive relationship between health care professionals and their patients. There is a link between the level of empathy in healthcare providers (EC providers, nurses, doctors, etc.) and the incidences of burnout; however, the direction of influence is still unclear. There is no argument as to the importance of mental health to the EC provider; in addition, the need for empathetic first responders in the case of DV intervention is paramount. There is evidence to suggest that it is possible to meet both of these outcomes, however specific interventions are needed during EC provider training. An argument can be made that this could be best taught as the EC provider gains experience in the field, however, it may be in

the best interests of both the victims and the EC providers to make this an upstream intervention[43].

"Conducting effective DV based simulations": In comparison to the previous use of simulation mannequins, there were apparent benefits when using standardised patients during the conduction of DV simulations. Participants were able to make eye-contact with other human beings who could react to poor conversational techniques/unwelcoming body language. In addition, feedback could be provided from the victim perspective which could enhance future attempts at the victim-EC provider encounter (simulated or real). The future of EC provider DV education may very well be the use of simulation training in addition to theoretical sessions. Furthermore, the peer-based simulations required no equipment and the only resources which were used were the patient scripts and a copy of the DV screening protocol.

This study referred to the criteria for good qualitative research by, Cohen & Crabtree (2008). The criteria were developed by analysing research studies which focused on the rigour within qualitative research (Cohen & Crabtree, 2008).

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[43] These are interventions which generally affect "large populations through regulation, increased access, or economic incentives" (Brownson, Seiler & Eyler, 2010:1).

6. CHAPTER SIX: RECOMMENDATIONS AND CONCLUSION

6.1. *Recommendations for future research*

A. Further research may be needed on how to best assess the outcomes for scripted simulations of DV cases for EC providers.

Simulations need outcomes to make them effective (Rantatalo et al., 2018). There is little evidence to suggest the most effective method of assessing standardised patient simulations with a DV context (Heron et al., 2009). There is no found evidence to suggest this in the EC provider context. As with the phenomenon of DV, DV simulations have an inherent complexity. Intuitively, it would be unwise to assess simulation participants on how well they follow a script, as the "human element" is what makes scripted simulations beneficial. The quality of DV documentation in a peer-based simulation could be a component of a greater assessment. Victim intervention with rigorous quality control measures for documentation will potentiate improvements for future emergency care.

B. There is secondary evidence suggesting that inter-professional training can be a benefit for cases such as DV (Kuliukas, Oehlers & Berlingeri, 2016). There is thus room for further research into this proposition for the South African context, which may include South African Police Services, Emergency Medical Services, hospital staff (doctors and nurses) and social workers. This may promote a culture of DV response within the public sector (the stakeholders for DV intervention) therefore supporting the needs of some of society's most vulnerable.

C. Along with the victims, the psychological well-being of the EC provider needs to be protected for them to be of benefit to their patients. More needs to be done to foster an open dialogue between EC providers and between other services to promote mental health. There is no argument as to the importance of mental health to the EC provider; in addition, the need for empathetic first responders in the case of DV intervention is paramount. There is evidence to suggest that it is possible to meet both of these outcomes, however specific interventions are needed during EC provider training (Williams et al., 2017).

6.2. Conclusion

The paradigm of social constructivism enabled the topic of DV intervention by emergency care providers to emerge naturally. The central idea of the paradigm is that human learning and knowledge are constructed and shared through social interaction rather than being an individual experience (Vygotsky, 1978). The grounded theory methodology allowed me to delve into a topic which was not well researched in South Africa before. The use of grounded theory methodology in the field of emergency care is evidenced by this study and may hold significant value for future research endeavours.

The study aimed to position EC providers as advocates for DV victims' interests during the (simulated or real) emergency care interaction. The primary research question, which was designed to narrow the focus of the aim was "How does the scripting of evidence-informed simulations of domestic violence cases enhance practitioner responsiveness and patient safety among prehospital emergency care students?"

This study utilised a literature review, pre-simulation focus group discussion, patient simulations with participant observation and post-simulation focus group discussions. The literature review indicated that although efforts were made to determine the use of simulations in various contexts, little work was performed on EC providers for this topic. Prior research was conducted on what the thoughts, attitudes and beliefs were for nurses, doctors and social workers however the evidence for EC providers in general, was limited. The literature review included evidence which was used to construct the patient simulations and scripts. This allowed me to create simulations using real-world data rather than personal judgement or experience. To my knowledge, this was the first attempt at creating evidence-based (EB) DV simulations catered for EC provider audience.

The pre-simulation focus group discussions were the first time that the participants have ever had an open discussion about the topic. This process helped cement the topic and confirmed the literature reviews' conclusion regarding the need for further research. The simulations with participant observation were also a novel idea for EC provider students. None of the participants had previous experience with DV-related simulations, although some had experience with real victims (further highlighting the need for an intervention). The post-simulation focus group discussions were used as simulation debriefing sessions as well as platforms for participants to air their ideas about simulation training and how it can be used in the future for DV response training. Participants expressed their enthusiasm for the idea, with some who stated that more can be done to improve the realism of the scenarios.

Each data collection method helped strengthen and focus the proceeding collection attempt thereby honing in on the emerging theory. Through the process of constant comparative analysis, four categories of understanding emerged.

A. **"The need for EC provider role definition in DV intervention":** EC providers cannot be expected to perform interventions which are out of their job descriptions. In the same light, if EC providers do not know what defines their pre-existing roles, they cannot be expected to fulfil those requirements. EC providers cannot be expected to empower victims if they are not empowered. Empowerment starts with education and this education cannot only begin once the EC provider is qualified and operational. The teaching of DV theory, laws, regulations and intervention considerations needs to start within the classroom.

B. **"Impediments to prehospital DV response":** EC providers cannot appropriately manage victims of DV if they do not fully understand what defines it. An understanding of a topic rests heavily on the individuals' perceptions or beliefs of that topic. While the public holding false beliefs about DV is damaging to society, health care workers holding the same beliefs can be disastrous to the victims. There is still a masculine image being embraced by the Emergency Medical Services, the idea that men cannot share their feelings or show signs of weakness without a negative recourse (real or perceived) highlights the "toxic masculinity" within the workplace. Subscribing to the beliefs of toxic masculinity may place an individual into the same ontological viewpoint of a DV perpetrator (Mahalik, Talmadge, Locke & Scott, 2005 cited in Fleming et al., 2014). There is value in helping to remove the traits of this type of masculinity from EMS, as it may reduce the risk of making EC providers perpetrators of domestic violence.

C. **"EC provider empathy during DV response":** EMS personnel and other first responders have, as an occupational risk, desensitisation in the line of duty. The volume of physical and emotional trauma witnessed on a day to day basis can have lasting consequences (Stewart & Swartz, 2005; Ward, Lombard & Gwebushe, 2006; Fjeldheim et al, 2014; SAMHSA, 2018). Witnessing countless strangers in pain will eventually set a new threshold as to what constitutes pain for the EC provider, often

leading to compassion fatigue[44] (Cornelius & Swayze, 2015). Empathy helps to foster a positive relationship between health care professionals and their patients. There is a link between the level of empathy in healthcare providers (EC providers, nurses, doctors, etc.) and the incidences of burnout; however, the direction of influence is still unclear. There is no argument as to the importance of mental health to the EC provider; in addition, the need for empathetic first responders in the case of DV intervention is paramount. There is evidence to suggest that it is possible to meet both of these outcomes, however specific interventions are needed during EC provider training. An argument can be made that this could be best taught as the EC provider gains experience in the field, however, it may be in the best interests of both the victims and the EC providers to make this an upstream intervention.

D. **"Conducting effective DV based simulations"**: In comparison to the previous use of simulation mannequins, there were apparent benefits when using standardised patients during the conduction of DV simulations. Participants were able to make eye-contact with other human beings who could react to poor conversational techniques/unwelcoming body language. Also, feedback could be provided from the victim perspective which could enhance future attempts at the victim-EC provider encounter (simulated or real). The future of EC provider DV education may very well be the use of simulation training in addition to theoretical sessions. The simulations required no equipment and the only resources which were used were the patient scripts and a copy of the DV screening protocol. The methods for grading DV simulations for summative assessments are yet to be determined however, this should not be a reason to delay DV education for EC providers.

In order to conduct effective DV-based simulations a structured approach is recommended. Such an approach might take the following format:

I. To assess teaching strategies; questionnaires regarding DV beliefs and EC provider responsibilities may be provided to learners before any educational engagement (pre-intervention questionnaire). Outcomes for interventions need to be measurable (National Resource Center on Domestic Violence, n.d.).

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[44] "The stress resulting from helping or wanting to help a traumatised or suffering person" (Figley, 1995, p. 268 cited in Cornelius & Swayze, 2015)

II. Laws, regulations and EC provider role and responsibilities regarding DV intervention can be covered in a foundations level subject for academic institutions. The role of EC providers for DV response should include: identifying DV abuse through universal screening, documenting any information concerning abuse, displaying an empathetic and non-judgmental attitude to victims, providing the most appropriate medical care, conducting safety assessments and safety planning to victims and appropriately referring the victims for further assistance. This topic may be covered in a classroom environment.

   i. EC providers who are already operational may be orientated by their human resources department (or any derivative) in the interest of continuous professional development.

III. Peer-based DV simulations may proceed with the foundations level lecture and participant pre-briefing session (Kuliukas et al., 2017).

IV. Simulations should always be followed by debriefing sessions between the individual participants (informal) and the simulation facilitator (formal) (Kuliukas et al., 2016; Levett-Jones. & Lapkin, S. 2014; Nyström et al., 2016).

V. Post-intervention questionnaires should be provided to learners to determine the depth of knowledge gained (National Resource Center on Domestic Violence, n.d.).

The research aim was achieved with the finding that scripting of evidence-informed simulations can improve the responsivity to DV cases by highlighting the theoretical gaps in knowledge and helping participants to engage with the relevant content (laws, regulations, DV screening protocol, referral agencies etc.). EC providers need to know what their roles are in relation to DV. Professionals cannot be reasonably expected to fulfil their duties if they do not know what those duties entail.

Furthermore, the scripted simulations made vivid the need for an empathic and patient-centred approach in clinical practice (in addition to the skill-orientated approach which is commonly used in EC provider training). The importance of EC provider empathy during patient interactions is stressed in DV victim response and patient satisfaction. Effective DV-based simulations need to have clear and achievable outcomes. Scene setting and role play during simulation training can be enhanced with adequate participant briefing and clear descriptions of the victim and the environment.

The value proposition of domestic violence-simulated practice in EC (with reference to the instrumentation developed in chapter 3) is that future simulations can be developed using real-world statistics thereby mitigating simulation facilitator bias in DV education[45]. EC provider responsivity may be enhanced by allowing students to interact with standardised DV victims who can; provide a level of authenticity through which they can convey their empathy and history-taking skills, and provide feedback during and after simulations, all of which were lacking in mannequin-based simulated practice. The benefit of is further compounded as this form of simulation training is inexpensive; therefore, resource intensity will not become a barrier to a scaled implementation of simulated practice which aims at enhancing DV intervention capacity within the academic and operational sector.

DV is a national crisis with an urgent need for intervention. The high rates of domestic violence have been identified as having a "significant negative impact on a country's development" (Gould, Burger & Newham, 2012:5). DV must be seen as a medicolegal concern for all those involved. The criminal act of DV is repetitive in nature, and in its worst form, may lead to grievous bodily harm or the death of its victims. In 2012, globally, women were as likely to die by the hands of an intimate partner or a family member as they were to die by the hands of a stranger (UN, 2017). Poor or non-responses from emergency care systems render the profession complicit in normalising the occurrence of domestic violence and in undermining opportunities for early detection and prompt care and referral. Provider responsiveness (professional capacity and fulfilment of obligations) specific to DV has not been appropriately stressed in EC provider training. It is imperative that EC providers respond to the health effects of DV by working to interrupt the cycle of abuse, provide care for victims and not hinder the process of criminal prosecution while performing their duties.

With regard to furthering the research, more is required to determine the full potential of using DV-based simulation for promoting DV response in the prehospital setting. However, there is sufficient evidence in this study to start the process of educating EC providers on the topic by using simulated practice.

This thesis has determined that simulated practice can help change, or at the very least, foster a change in the knowledge, attitude, belief and EC provider practice in relation to DV response. Not performing an intervention such as simulation training may constitute a practice bias that prejudices EC competence in DV case management. This is already evident as little has been done to implement DV education into EC provider training institutions, with the low rates of EMS DV records seen as the consequence (Naidoo, 2017). Identification of DV may constitute

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[45] This factor become more important when noting the potential for current EC providers to hold false beliefs about DV (Naidoo, 2017).

the first step in prehospital DV intervention; and in response, DV-related simulated practice provides this education as a minimum standard. Interventions cannot occur if the problem is not identified.

The infrastructure and content for DV simulated practice exist, what remains to be seen is a will and commitment from the health professions education community, in particular, emergency care.

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ANNEXURES

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Annexure A: Request to use CPUT as a data collection site

Name of Researcher: Mr. Wesley Craig
Student number of the researcher: 214059359
Name of Institution: CPUT
Name of Project: Promoting Emergency Care provider responsiveness to domestic violence patients through simulation training

To whom it may concern

I am, Wesley Craig currently enrolled towards a Master of Emergency Medical Care at CPUT.

In order to achieve this qualification, I am required to conduct a research project on patient simulations in relation to domestic violence clinical practice (identification, management, and referral of such patients). This study will use focus group discussions and participant observation during patient simulations. It will follow a social-constructivist grounded theory design to guide, collect and code data in order to identify emerging categories and generate practice theory. Please see the attached research proposal and research ethics approval documentation. Ethics clearance number: CPUT/HW-REC 2018/H28

To achieve this goal, I require a site for the collection of data. I am therefore enquiring about the use of the simulation laboratories on the premises of CPUT Bellville, Department of Emergency Medical Sciences, Health and Wellness Faculty. The department was selected as it is the source of the study participants, the simulation facilities are highly conducive to quality video recording for data collection and it is in close proximity to all individuals concerned with the project. For the study I will require simulation recording equipment. The duration of data collection (and the use of the simulation laboratory) will be from May 2019 to June 2019.

I hope you will consider the above to assist me with my goal.

My supervisor contact details are found below

Dr Navindhra Naidoo
- o Office: 021 953 8408
- o Email: naidoon@cput.ac.za

Mr. Lloyd Christopher
- o Office: 021 953 8409
- o Email: lloydc@cput.ac.za

Kind Regards, Wesley Craig

Cape Peninsula University of Technology

FACULTY: HEALTH & WELLNESS SCIENCES
Department: Emergency Medical Sciences
Contact: Ms N Deliwe   (DeliweN@cput.ac.za)
Telephone: 021 953 8408   Fax: 021 959 6190

Ref: 184/EMC/13
Date: 01 October 2018

Student Number: 214059359
Student Name: Mr Wesley Craig
                    68 Bethanie Street
                    Sonstraal
                    Durbanville
                    7550

Dear Mr Craig

Re: Proposed MEMC study at CPUT, EMS

Your application to this department to pursue a Master: EMC study and to use the Department of Emergency Medical Sciences as a study site has reference.

Your study titled: "*Promoting Emergency Care provider responsiveness to domestic violence patients through simulation training*" is of great relevance to the profession and to the department. Your application has been studied and Departmental permission is hereby granted to collect data from the Department's student population on the following conditions:

1. Participation is voluntary and informed consent will be attained.
2. There will be no unauthorized disruption of the learning programme.
3. You attain Faculty Research and Ethics Committee approval as well.

We wish you well on your post-graduate endeavor.

Kind regards

Mr. Benjamin de Waal
Acting Head of Department: Emergency Medical Sciences
Faculty of Health and Wellness Sciences
Cape Peninsula University of Technology

1

Annexure B: Focus Group Facilitation Plan

Introduction:

- Welcoming (thanking students for their participation in the research)
- Introducing the researcher and the research topic (elaborate on what was mentioned in the information sheet Annexure G).
- Explain the purpose of the discussion.
- Explain the presence and purpose of the recording equipment. How recorded data will be stored (written and audio confidentiality).
- Confidentiality: Provided participants the written informed consent and non-disclosure agreement form (Annexure H) that explains what their rights are and how privacy and confidentiality will be secured. All information collected will be confidential and participants names will not be disclosed neither will any attributions for quotes be made in the final report.
- Explain the ground rules for when participating in the group discussion. Create decorum of how participants should interact with one another so that everyone will feel safe and willing to participate.
  - Refreshments will be made available (juice, tea, coffee) before the session starts and during the session, if it will not distract the speaker/disrupt the focus group.
  - Participation in the focus group is entirely voluntary.
  - Participants have the right to abstain from discussing specific topics if they are not comfortable.
  - All responses are valid (there are no right or wrong answers).
  - Participants must respect the opinions of others, even if they do not agree with what was said.
  - Participants may speak openly as they feel comfortable.
  - Some comments may be limited to make sure that everyone gets a chance to share their point.
  - Turn-taking is encouraged, one person speaks at a time so that everyone can follow the conversation.
- Opportunity to ask questions

Ice-breaker

Core-questions before simulation: *(Questions asked iteratively)*

- What are your thoughts/opinions on treating victims of domestic violence in the field?
- What is your attitude/viewpoint/outlook regarding EMC simulation training with a domestic violence context?
- What role does simulation have in your current EMC training?

Core-questions after simulation: *(Questions asked iteratively)*

- What are your thoughts on how the simulation progressed?
- What do you think about future EMC training (simulation in DV)?

Closing: Closure of the discussion

Annexure C: Standardised patient brief for simulation 1

Domestic Violence Case 1   *(SP Briefing)*

Created By: **Produced On:**

W Craig   9-Jun-2019

Description

The participant is dispatched to a P2[46] call for an assault. The patient was punched in the eye the previous night when she and her husband were arguing. The ambulance was only dispatched the following morning.

The husband is extremely apologetic and acting kind to the patient. This is not the first time this has happened, 2 months prior, her husband had shoved her into the wall because she was not listening to him. The patient believes that it was her fault. At the moment she feels safe around her husband as she knows that he only hits her when he is intoxicated. The patient will refuse to go to the hospital and will not want to lay criminal charges against her abuser.

Patient Demographics and Candidate Brief

Abi, Female, 24

Presenting History (Candidate Storyboard)

You are dispatched on a Priority 2 call for an incident which had happened the previous night. An adult female patient was punched in the eye.

Previous Medical History

None

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[46] Priority 2: In Western Cape EMS, this is a lower priority case (non-life threatening) compared to a Priority 1 case (P1).

Known Allergies

None

Patient Opening Statement

Light-heartedly say that you do not need an ambulance. You called for EMS in the heat of the moment last night, but this morning your husband apologised for everything.

Presentation and Behaviour of Patient and Carers

Role	General Appearance	Body Language	Mood/Affect	Communication
Patient	The right eye is bruised and tender. You should be relaxed and appear content.	Relaxed, open body language.	Light mood, you are not concerned with the situation or what happened last night.	You should be very open about the events of the previous night.

Open-Ended Questions and Guidelines

Information to Share	Information to Withhold
You should share that you were punched in the face by your husband. Your husband is extremely apologetic and acting very kindly now. This is not the first time that this kind of thing has happened. Two months ago, he shoved you into the wall because you were not listening to him, you believe it was your fault. You do not want to go to the hospital or lay charges. You feel safe around your husband because you know that he only hits you when he is drunk.	Nothing

Patient History of Present Illness   Jun 10, 2019

Location	Right eye
Quality	Aching
Severity	4/10
Duration	Since last night
Timing	Last night @ approximately 21:00
Context	You were punched in the eye the previous night when you and your husband were arguing.
Modifying Factors	Putting an ice-cloth on it feels better.
Associated Signs and Symptoms	None

Past Medical History

Illnesses/Injuries	Hospitalisation	Surgical History	Gynaecologic History (if relevant)
Shoved into the wall about 2 months ago in another argument with your husband. Bruising to her back.	None	None	None

Medications (prescription, OTC, supplements)	None
Allergies and reaction (e.g. meds, environmental, food)	None

Family Medical History

Family Tree Info	Conditions/Chronic Diseases
None	None

Social Medical History

Substance Abuse	Home Environment	Social Support	Occupation
Not me, but my husband drinks a lot.	The home environment changes a lot. There were a lot of arguments leading up to the incident from last night. But things are a lot better now. I feel safe at home.	I have friends, but I don't see them often.	Currently unemployed, my husband says that I do not need to work if I keep the house looking nice.

Physical Exam Findings

Bruised right orbit.

What Should Patient Expect from this Visit?

Professionalism, no judgment.

Guidelines for Feedback

Feedback will take place in the post-simulation focus group discussion.

Annexure D: Standardised patient brief for simulation 2

Domestic Violence Case 2 *(SP Briefing)*

Created By: **Produced On:**

W Craig   9-Jun-2019

Description

The participant is dispatched to a P2 call; an adult female patient with abdominal pain.

During the routine DV screening, the patient mentions that she had her head slammed into the wall last week by her (now) ex-boyfriend who was living in her house.

They argued constantly, and he would pick fights over small things. Last week he lost his temper and shoved her, this is when her head hit the wall. He apologised but she does not believe him. She still has tenderness to the back of her head. She will want to take legal actions if informed.

Patient Demographics and Candidate Brief

Jennifer, Female, 32

Presenting History (Candidate Storyboard)

You are dispatched to an adult female patient for abdominal pain.

Previous Medical History

No medical history

Known Allergies

No allergies

Patient Opening Statement

You should greet the EC provider showing signs of slight discomfort, holding your abdomen. You should display more concern than what is expected for your symptoms, hinting to another cause of anxiety.

Presentation and Behaviour of Patient and Carers

Role	General Appearance	Body Language	Mood/Affect	Communication
Patient	You should hold your abdomen, slightly slouched over.	You should constantly look at the door with concern.	You should be visibly concerned, made obvious to the EC provider.	You should talk openly.

Open-Ended Questions and Guidelines

Information to Share	Information to Withhold
You should share that you have experienced physical abuse recently. You do not feel safe in your house. You and your boyfriend were dating for 5 months and living together for 1 month. You felt like you had to tip-toe around him because he was behaving erratically. You asked him to pack his things and leave last week. He moved, but you feel like he might do something, he is very unpredictable.	

Patient History of Present Illness

Location	Abdomen
Quality	Spasmodic pain
Severity	6/10
Duration	Pain lasts for a few seconds at a time. But has been present since the day before
Timing	Started last night
Context	You ate seafood the previous day. Might have been rotten after inspection.
Modifying Factors	Nothing makes it better or worse.
Associated Signs and Symptoms	Nausea the previous day, but not now.

Past Medical History

Illnesses/Injuries	Hospitalisation	Surgical History	Gynaecologic History (if relevant)
Bruising to the back of the head, from being pushed against the wall.	None	None	None

Social Medical History

Substance Abuse	Home Environment	Social Support	Occupation
None	Your boyfriend was living with you. You did not feel safe/happy and asked him to leave the house. You, however, do not feel safe.	You have friends who know your boyfriend, but they do not know about the violence/arguing.	You work as an IT consultant.

Physical Exam Findings

Tenderness to the back of the head on the occiput.

Abdominal pain is spasmodic. Palpation of abdomen elicits slight discomfort.

What Should Patient Expect from this Visit?

Professionalism, no judgment.

Annexure E: Standardised patient brief for simulation 3

Domestic Violence Case 3   *(SP Briefing)*

Created By: **Produced On:**

W Craig   9-Jun-2019

Description

The participant is dispatched to a P1 call for an adult female patient who fell from a height.

The patient is found lying on the ground leaning against the wall. Her right arm appears to be fractured (visibly swollen over radius/ulna). The incident happened about an hour ago. She hid the pain from her husband. She did not think the arm was broken, but the swelling and pain were getting worse, she then decided to call an ambulance. With an adequate line of questioning, it was discovered that the husband had pushed his wife down the stairs while arguing. The husband is out with a friend; she is scared for his return. She does not feel safe in the home. The patient is not a legal citizen in South Africa. She will eventually concede to going to a hospital; however, she will not lay criminal charges.

Patient Demographics and Candidate Brief

Judith, Female, 21

Presenting History (Candidate Storyboard)

You are dispatched to an adult female patient who fell from a height.

Previous Medical History

None

Known Allergies

None

Patient Opening Statement

You should be relieved to see the EC provider but must show concern about his/her being there. You are worried that your arm is fractured but more concerned about the husband coming home.

Presentation and Behaviour of Patient and Carers

Role	General Appearance	Body Language	Mood/Affect	Communication
Patient	You are found lying on the ground leaning against the wall. You should be visibly scared. Your right arm is swollen, and you are holding it with your left arm. There are no other injuries visible to the EC provider.	You should be withdrawn, and seem uncomfortable with the encounter. Look out the door often, expecting your husband to come home.	There should be an undertone of danger.	You should be soft-spoken, and not give any information unless asked by the EC provider.

Open-Ended Questions and Guidelines

Information to Share	Information to Withhold
The incident happened about an hour ago. You hid the pain from your husband. You did not think the arm was broken, but the swelling and pain were getting worse, you then decided to call an ambulance while your husband was out of the house. He is with a friend. You should only provide information to the EC provider if he/she asks you. On initial questioning, you should tell the EC provider that you accidentally fell down the stairs. You are not from South Africa; you will not say which country you are from. You do not have immigration papers. You should eventually concede to going to the hospital but will not lay criminal charges.	Only after further questioning should you tell the EC provider that your husband pushed you down the stairs during an argument.

Patient History of Present Illness

Location	Right arm (radius and ulna)
Quality	Throbbing, dull pain
Severity	5/10
Duration	Constant
Timing	Happened about an hour ago.
Context	You fell down the stairs.
Modifying Factors	Holding your arm/support makes it feel better.

Associated Signs and Symptoms	Swollen right arm.

Review of Body Systems

Body Systems	Pertinent Positives/Negatives
Skeletal	Swelling of right arm. Pain 5/10. Pulses, motor function and sensation all present.

Past Medical History

Illnesses/Injuries	Hospitalisation	Surgical History	Gynaecologic History (if relevant)
HIV +, for 3 years.	Never	None	None
Medications (prescription, OTC, supplements)		ARVs Taking them as prescribed.	

Family Medical History

Family Tree Info	Conditions/Chronic Diseases
None	None

Social Medical History

Substance Abuse	Home Environment	Social Support	Occupation
None	You are not allowed out of the house unless you have permission from your husband.	None	None

Physical Exam Findings

Fractured right arm (swelling and tenderness over radius and ulna region), closed fracture.

What Should Patient Expect from this Visit?

Professionalism, no judgment.

Guidelines for Feedback

Feedback will take place in the post-simulation focus group discussion.

Annexure F: Standardised patient brief for simulation 4

Domestic Violence Case 4 *(SP Briefing)*

Created By: Produced On:

W Craig   9-Jun-2019

Description

The participant is dispatched to a P1 call for an adult female patient who fell from a height.

The patient is found lying on the ground leaning against the wall. She appears to have a cut and bruise on her chin with bruising and abrasions to her hands and elbows. The incident happened about an hour ago. She hid the pain from her husband. She decided to call the ambulance because she did not know what else to do. With an adequate line of questioning, it was discovered that the husband had pushed the patient down the stairs while arguing.

The husband is out with a friend; she is scared for when he comes home. She does not feel safe at home. And does not want to go to the hospital. Her sister can pick her up in a few minutes as she lives around the corner. The patient decides to go home with her sister and lay criminal charges at the police station.

Patient Demographics and Candidate Brief

Janet, Female, 21

Presenting History (Candidate Storyboard)

You are dispatched to a call for an adult female patient who fell from a height.

Previous Medical History

None

Known Allergies

None

Patient Opening Statement

You should be relieved to see the EC provider but must show concern about his/her being there.

You are not that worried about your injuries, but more concerned about the husband coming home.

Presentation and Behaviour of Patient and Carers

Role	General Appearance	Body Language	Mood/Affect	Communication
Patient	You should be visibly scared. There is a minor laceration and bruising to your chin. Your elbows and hands have abrasions.	You should be withdrawn and look uncomfortable with the encounter. You should constantly look at the door, waiting for your husband to come home.	There should be an undertone of danger.	You should be very soft-spoken. Do not provide information to the EC provider unless he/she asks directly.

Open-Ended Questions and Guidelines

Information to Share	Information to Withhold
The incident happened about an hour ago. You hid the pain from your husband. You decided to call the ambulance because you did not know what else to do and your husband was out of the house (with a friend). You should only provide information to the EC provider if he/she asks you. On initial questioning, you should tell the EC provider that you accidentally fell down the stairs.	Only after further questioning should you tell the EC provider that your husband pushed you down the stairs during an argument.

Patient History of Present Illness   Jun 11, 2019

Location	Chin, elbows and hands
Quality	Throbbing pain
Severity	4/10
Duration	1 hour
Timing	About an hour ago
Context	You fell down the stairs.
Modifying Factors	Nothing makes it better.
Associated Signs and Symptoms	The patient cannot get comfortable while sitting.

Review of Body Systems

Body Systems	Pertinent Positives/Negatives
Integumentary / Exocrine	Minor laceration and bruising to the patient's chin. Abrasions to the elbows and hands.

Past Medical History

Illnesses/Injuries	Hospitalisation	Surgical History	Gynaecologic History (if relevant)
None	None	None	None

Medications (prescription, OTC, supplements)	None
Allergies and reaction (e.g. meds, environmental, food)	None

Family Medical History

Family Tree Info	Conditions/Chronic Diseases
None	None

Social Medical History

Substance Abuse	Home Environment	Social Support	Occupation
None	You do not feel safe at home.	Your sister lives in the neighbourhood.	You are unemployed.

Physical Exam Findings

Small laceration and cut to the patient's chin. Abrasions to the elbow and hands.

What Should Patient Expect from this Visit?

Professionalism, no judgment.

Annexure G: Certificate of Consent and Non-Disclosure Agreement Part 1

This Informed Consent Form is directed to Emergency Care students studying at CPUT, Bellville who are invited to participate in a research study, titled "Promoting Emergency Care provider responsiveness to domestic violence patients through simulation training".

Name of Researcher: **Mr. Wesley Craig**
Name of Institution: **CPUT**
Name of Project: **Promoting Emergency Care provider responsiveness to domestic violence patients through simulation training**

This Informed Consent Form has two parts:
    • Part I: **Information Sheet** (to share information about the study with you)
    • Part II: **Certificate of Consent** (for signatures if you choose to participate)
        You will be given a copy of the full Informed Consent Form

PART I: INFORMATION SHEET

Introduction

I am currently enrolled toward a Master of Emergency Medical Care at CPUT. In order to achieve this qualification, I am conducting a research project on patient simulations in relation to domestic violence clinical practice (identification, management, and referral of such patients). You are invited to participate in this research.

Purpose of the research

South Africa has one of the highest rates of gender-based violence in the world. Gender-based violence includes physical, sexual, psychological or economic harm imposed on an individual as a result of the normative role expectations associated with each gender. Since EC providers operate in the out-of-hospital environment, they are in a unique position to investigate and intervene when domestic violence is identified (potentially before the victim seeks help). At the moment there are large knowledge gaps with regards to the training of EC providers on how to appropriately handle domestic violence cases. The purpose of this study is to determine how simulation training can narrow this gap. This study also aims to document participant personal beliefs and professional attitude regarding domestic violence.

Type of Research Activity

This research will involve your participation in focus group discussions, and patient simulations.

Participant Selection

You are invited to take part in this research because we understand that as an EC provider student (with or without past experience in the field) you may, at some point in your career, contact a victim of domestic violence. You may be in an ideal position to positively influence the victim's experience of the healthcare system and refer him/her to appropriate care. At present, you are studying at a facility with all the capabilities to perform these simulations.

- Participants will have to be registered as students in the Bachelor of Emergency Medical Care programme at CPUT.
- They will also need to be registered with the HPCSA as a Paramedic or ECP student.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Your choice to not participate will have no bearing on your academic progress as a student. You may choose to withdraw your participation at any time.

Procedures

If you accept, you will be asked to participate in focus group discussions and simulation testing. There will be a minimum of two focus group discussions in each year group. These discussions will be guided by myself. One discussion will be held before the simulation development and one after simulation testing.

The discussions will be audio-recorded, and the simulations will be video recorded for data analysis.

The group discussions will start with me making sure that you are comfortable. We will also answer any questions about the research that you might have.

Discussions and simulations will take place on the CPUT premises, and no one else but

myself and the participants will be present. If you wish to add to the data collection by making a comment to me after the group discussion, this will be allowable.

Duration

The focus group discussions may last between 30-60 minutes each.
The simulation testing that may last between 10-30 minutes each.

Risks

Participants may share some personal or confidential information, and you may feel uncomfortable talking about some of the topics. You do not have to answer any questions or take part in the discussion if you do not wish to do so.

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. I do not wish for this to happen. You do not have to answer any questions or take part in the discussion if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits

There may be a benefit to both you and the DV victims you encounter if your participation is educative. You may leave the study with greater knowledge on how to appropriately manage DV victims in the pre-hospital setting. The knowledge that you gain is intended to be directly applicable to your clinical practice.

Reimbursements

You will not be provided any financial incentive to take part in the research. However, your travel expenses may be covered.

Confidentiality

The information that we collect from this research will be kept confidential. Any information about you will have a number on it instead of your name (in the write up you will be referred to as "a participant"). Only the researcher will know what your number is. No-one will be identified by name on the recordings (audio). The recordings will be kept on an external hard drive in a locked bag during transit and stored in a safe when not in transit. The information recorded is confidential (limited by the group participation), and no one else, except myself and my supervisors, will have access to it.

With regards to group discussions: I ask you and others in the group not to talk to people outside the group about what was said during the discussion. We will, in other words, ask each of you to keep what was said in the group confidential and to sign a non-disclosure agreement form.

Sharing the Results

Nothing that you say during the study will be attributed to you by name. A summary of the results will be shared with the participants for verification, on request.

The results may be published.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your academic progress as a student. You may stop participating in the discussion/interview/simulation at any time that you wish. I will give you an opportunity at the end of the discussion/simulation to review your remarks and you can ask to modify or to remove portions of them (if you do not agree with my notes or if I did not understand you correctly).

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following
- Mr. Wesley Craig
  - o Cell: 072 571 4955
  - o Office: 021 938 6946
  - o Email: Wesley.Craig@westerncape.gov.za

- Dr Navindhra Naidoo
  - o Office: 021 9538408
  - o Email: naidoon@cput.ac.za

- Mr. Lloyd Christopher
  - o Office: 021 9538409
  - o Email: lloydc@cput.ac.za

This proposal has been reviewed and approved by the CPUT Health and Wellness Sciences Research Ethics Committee which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find out about more about your rights, contact Ms. Seth at 021 9596917(or at sethn@cput.ac.za).

Ethics Clearance Number: CPUT/HW-REC 2018/H28

Annexure H: Certificate of Consent and Non-Disclosure Agreement Part 2

PART II: CERTIFICATE OF CONSENT AND NON-DISCLOSURE AGREEMENT

I have been invited to participate in research concerning EC provider domestic violence response. My participation in this study involves me being actively involved in group discussions and/or patient simulations. I am aware that at any point during this research I will be allowed to withdraw without any repercussions. I have been informed that no aspect of this research or my participation in it will have an effect on my academic progress while I am studying.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study. I also undertake to not disclose information about incidents, experiences or individuals learnt during the focus group discussions.

Print Name of Participant: _____

Signature of Participant: _____

Date: _____

             Day/month/year

Annexure I: Request for the use of student counselling

Name of Researcher:	Mr. Wesley Craig
Student number of the researcher:	214059359
Name of Institution:	CPUT
Name of Project:	Promoting Emergency Care provider responsiveness to domestic violence patients through simulation training

To whom it may concern

I am, Wesley Craig, currently enrolled towards a Master of Emergency Medical Care at CPUT.

In order to achieve this qualification, I am required to conduct a research project on patient simulations in relation to domestic violence clinical practice (identification, management, and referral of such patients). This study will use focus group discussions and participant observation during simulation testing. All of the study participants are registered as full-time CPUT students. The maximum number of participants for this study will be 32 and the planned minimum will be 24. Due to the nature of this study, participants may experience emotional distress. The researchers' intent is not to directly question individual participants about their past experiences with domestic violence, however, group discussions are dynamic and may move onto the topic.

Ethics clearance number: __CPUT/HW-REC 2018/H28__

This letter is intended to make the student counselling unit of CPUT Bellville aware of this study, and to request support for these students should they approach the unit following the data collection process. It will, however, not be necessary to have a counsellor present during the group discussions or simulation training. The duration of data collection (and the potential use of student counselling) will be from May 2019 to June 2019.

Kind Regards

Wesley Craig

My supervisor contact details are found below

Dr Navindhra Naidoo
- o Office: 021 9538408
- o Email: naidoon@cput.ac.za

Mr. Lloyd Christopher
- o Office: 021 9538409
- o Email: lloydc@cput.ac.za

Annexure J: Individual Pre-Simulation Focus Group Discussion Results

Focus Group Discussion One:

The first FGD had 7 participants. The results that emerged from the 2nd year participants included the following axial codes; personal beliefs regarding the source of violence, toxic masculinity, the lack of guidance for EMS, weaknesses of traditional "doll-based" simulations, the risk-benefit of DV "exposure", the void of support for EMS staff.

Personal beliefs regarding the source of violence

Participants agreed amongst themselves that to a certain extent DV has become normalised in the public eye. There is an element of victim-blaming, be it intentional or unintentional, which may directly promote the continuation of DV in South Africa. The participants agreed that education is a key point for having false beliefs rectified. One participant explained that due to the racial segregation in South Africa's past; it is still common to see white males look down on black or coloured females, as they may not have been introduced to a lot of cultures. They are "...not equal, they are seen as lesser". There was a disagreement when another white male participant stated that "There is an error of causation vs correlation." He referred the Alice Springs in Australia, where there was a similar history of segregation but more importantly oppression of race and ownership of women. He furthered his point by saying that people may lose accountability for wrongdoings or holding false beliefs by saying that it is "because of the history of South Africa". He went further to say that "Black is too broad of a term", and that there are numerous cultures within the "Black race".

There was consensus amongst the participants that the environment in which a person grows up can greatly influence their perception of DV. For example, if a child grows up seeing women getting beaten by men every day, that DV becomes normalised. A female African participant shared a point which all participants found interesting. She explained that in certain cultures there is a false belief amongst women that "he hits me because he loves me", she went further to say that some women may rationalise DV by believing that if the husband/boyfriend were to hit her because she spoke to another man, it means that he is jealous and therefore he loves her. The discussion went into a series of unanswered questions amongst the participants such as, "when does kinky sex become abuse?", "What is regarded as disciplining a child and when does that become abuse?".

The lack of guidance for EMS

There is a sense of uncertainty for intervening in cases of DV. Participants are not sure of the procedure for dealing with DV to achieve the best care for victims. They expressed frustration in the fact that they are trained in a protocol for almost everything in emergency medical care except for DV. They accept that training for DV intervention must start with identification of DV in all of its forms. Along with not knowing which questions to ask the victims, the participants also expressed frustration in not knowing which facilities to take their patients to (along with alternate facilities if the primary destination is closed or at full capacity). Participants are also unsure of which facility contact numbers to give to victims.

Weaknesses of traditional "Doll-based" simulation training

The participants shared their ideas of the usefulness of simulation training in EMC. They agreed that simulations are mostly used for exams and for determining competency for specific skills and bundles of care. One participant stated that during patient simulations the time constraints make her theory "jumbled" and often results in her feeling incompetent. The discussion migrated to how simulations are useful in that they are controlled environments, they are used so that students do not have to experience something for the first time in real-life. Patient simulations are useful for stress-testing students and testing applied knowledge. One participant added that simulations are there to "be as difficult as possible". Overall, there was a sense of hopelessness in that the simulations will never properly prepare students to handle real-life patients. The simulations (with simulation mannequins) will not help you to talk down/de-escalate a hysterical patient as you cannot simulate the emotions or behaviour of people, the student will not be able to see the look in the patient's eyes and pick up on subtle human cues.

Toxic Masculinity

The axial code of toxic masculinity arose from a statement which a participant made; it was that "Paramedics cannot cry on the road". One participant reminded the group that EMS came from war times, so historically it was masculine by nature (as men were called to war more often than women). As a result of this EC, providers found it difficult to express their emotions (on scene/with their colleagues) without some form of consequence. These consequences may be manifested in a loss of respect from peers, or even as a negative influence on their potential to get a job in the future. Participants expressed concerns that during their university career they are constantly being judged by potential employers (when doing work-integrated

learning shifts) so any sign of weakness expressed by the student may be misconstrued by the potential employer as a reason to not hire them when they are qualified. Participants added that the phrase "There is no such thing as a pink paramedic" is still spoken by some practitioners. This may highlight the belief that femininity and EMS are incompatible. There is a large emphasis on "grow up, man up" and that may be negatively influencing how EC providers cope with their emotions, and dangerously, influencing how they treat their patients. Participants expressed concern that by desensitising the practitioner, patient treatment may become compromised (especially when dealing with instances of behavioural emergencies, and crisis intervention).

The risk-benefit of DV 'exposure'

This axial code was brought up after the talk about simulation realism. One participant mentioned that he would want to work shifts in a DV centre for more experience dealing with the victims. The discussion progressed to some participants agreeing with the statement on the premise that more exposure (seeing real victims of DV) will be beneficial to their practice. The participants then began to talk about who will be benefiting from this intervention. The participants realised that by exposing victims to untrained EC provider students, more harm may befall them. They agreed that forced exposure may not be that helpful, as exposure is likely to happen regardless. From the experience of one participant, DV shelters are morbid and victims may be exposed to further trauma. In addition to that, students may be exposed to trauma vicariously, if you were to couple that with a lack of training and coping mechanisms the risk-benefit ratio does not suggest an opportunity. That being said, it was stated that interacting with survivors/educators, who have experience in the field (experts), could promote an enriching learning environment.

The void of support for EMS staff

The belief that there is not enough support for EMS staff and EC provider students was unanimous. The participants explained that there was not enough support for their psychological needs and that when they qualify, it is unlikely that things will get better. They wished that there were specific people in the department which were available for counselling students (be it trauma-related or personal). The participants believe that by having the EMS staff/students emotionally healthy they will be ready to deal with the psychological trauma that they may encounter in the field. This point was succinctly summarized in the statement "helping us might help the patient".

Focus Group Discussion Two:

The second FGD had 8 participants. The results that emerged from the 3nd year participants included the following axial codes; The impediments to good history taking, lack of role definitions for first responders, lack of DV education for EC providers, EMS desensitisation.

Impediments to good history taking

The participants mentioned several factors which may make identifying and treating victims of DV difficult in the field. Many of these factors have a theme of risk to the patient and the practitioner. The victims themselves may be too frightened to speak openly if the abuser is present. The lives of the victims might be put in more danger just with EMS being present. If violence has taken place the victim may not want the abuser to be prosecuted for a multitude of reasons. The victim may fear direct physical retaliation from the abuser or it may be due to other financial considerations (if the abuser is the victim's only source of income or whether there are children involved) where the result is that the victim refuses to leave the abuser and/or legal action is not taken.

The EC provider may also personally know the abuser/victim especially if he/she is working in the same area as they live. In the same light, EC providers cannot work anonymously, they have to have their identity displayed to the public. This may result in the practitioner not "wanting to step on toes" in the performance of his/her duties. There is a perceived risk that if they report something or if there are any repercussions for the abuser that there will be consequences for the attending practitioner. Another impediment to good history taking for DV is the fact that one cannot report DV if they cannot identify it. The participants agreed that there is a massive focus on physical trauma (in their training), but not enough on interpersonal relations or behavioural emergencies, this statement ties into the following axial code of "Lack of DV education for EC providers".

One of the more prominent rationales for the lack of history taking is that EC providers may not take DV seriously enough to warrant an adequate patient interview. The focus is purely on injuries and less about the cause or prevention of further injuries. The participants agreed that in the cases of EC providers incorrectly "diagnosing" DV, the risk is not as great when compared to the risk of incorrectly believing that no DV took place.

Finally, participants expressed frustration with regards to the information they receive when being dispatched to a call. The information which they are provided with rarely indicates instances of DV. For example, one participant was dispatched to a patient having an asthma

exacerbation. On arrival, it was determined that the patient was having a panic attack. When the patient was moved into the ambulance for further assessment the crew members noted bruises on her arms. The patient's husband was present and acting "lovey-dovey" to the patient. The female crew member asked both the husband and male EC provider to leave the ambulance while the patient was counselled.

Lack of DV education for EC providers

A discussion ensued about how EC providers were expected to treat DV victims in the best possible manner; however, they have never received training for this exact purpose. They admitted that it would be a challenge to change the personal beliefs that are held by EC providers. It was agreed that before any intervention can be made DV needed to be defined appropriately and identified correctly. Identification of DV cannot be viewed as a straightforward "monkey see, monkey do" procedure. Historically, there has never been a class on how to pick up on small psychological signs which may prompt the EC provider into action, and this may be required.

The participants expressed helplessness when talking about DV intervention. One participant stated that in his time working operationally, under a different HPCSA register, he had come across three child rape cases, and for each one he had no idea of how to manage the victims or the legal procedures which followed. It was agreed that if DV training were to be brought into the program, it should be professionals/experts on the topic doing the lecturing or facilitating the process of learning. There was a discussion concerning the timing of DV education. i.e. when the topic should enter the curriculum for the four-year degree program. Foundational knowledge of DV should be introduced in 1st year and new information should be added afterwards. DV education may be introduced as its subject or as a module within Emergency Medical Care.

EMS desensitisation

The fact that EMS workers see so much physical trauma on a day to day basis can result in them becoming desensitised to the pain of others. This phenomenon can be further viewed as EMS workers becoming impatient to anything that is not physical trauma. Being trained in trauma and medical emergencies only result in a "see the bleeding, stop the bleeding; see the fracture, splint the fracture" mindset. The combination of desensitized and biomedically trained practitioners may lead to DV cases being seen as anything other than true emergencies.

Coping mechanisms may provide another rationale for the desensitisation of EC providers. The risk of secondary trauma/vicarious trauma is a reality for many EC providers, a common method for avoiding this or even as a side effect of this trauma is to detach from the patient. The problem arises when the EMS provider is expected to show empathy or sympathy to the patient. For cases like this, the participants agreed that the EC provider should talk to the victim in the capacity of a human being and not just a uniform.

The need for first responder role definitions

A question arose in the discussion concerning the placement of EMS at the scene of DV. "Should EMS get involved, and if so, how should they get involved?". The role of EC providers in cases of DV response can be viewed as the catalyst which initiates the cascade of events for appropriate intervention. The EC providers should have an algorithm for when confronted with a potential case of DV. This would mitigate the risk of missing important pieces of information in the history-taking process. A referral pathway for different DV centres/call centres/safe houses should be included in this algorithm. These factors will make the role of EMS at a DV scene more defined. The result would be a confident practitioner, which may greatly determine the conclusion of the case. One of the participants mentioned that EMS should carry rape kits. This led to a disagreement with another participant. The risk-benefit of this intervention in the pre-hospital environment did not make sense. The risk of psychological/physical trauma inflicted upon the victim by EC provider in the back of the ambulance was not justified. The participant jokingly answered by saying that they must 'just give the patient midazolam'.

The legal implications for EMS getting involved in DV cases were also noted. There was uncertainty amongst the participants of the role that they should play if one of their patients were to testify against their abuser in a court of law. Some believed that they may need to testify alongside the victim. There was a fear that a false accusation of DV by an EC provider could lead to legal action by the patient in question. There was a strong agreement that social workers and South African Police Service should be on every scene where there is suspected DV.

Focus Group Discussion Three:

The third FGD had 6 participants. The results that emerged from the 4th year participants included the following axial codes; Factors precluding DV response, EMS role and accountability in DV response, Potential value in peer-to-peer training and Triggers in DV training.

Factors precluding DV responses

DV has a multitude of factors, one being, the pattern of isolation (emotional, social, physical), these factors may hinder responses of EMS workers as victims may be coached by the abuser to not give off telling information. There could also be an element of Stockholm Syndrome whereby the victim would protect the abuser from any misfortune. DV responses have an inherent risk for both the victim of abuse as well as the EC providers responding to the case. Because these cases can be so diverse, there cannot be a one-size-fits-all approach to DV. Calling for a police presence on the scene might make the situation safer or it may result in the opposite effect by frightening both the victim and abuser, potentiating more violence or a loss of trust. Like many EMS call-outs, DV can be a high-stress situation and de-escalation training for emotional or psychological emergencies is not included in most EC provider training programs. It is for this reason that practitioners would avoid interacting with these patients to the level that is required to intervene effectively.

DV often differs from the textbook descriptions of violence, EMS needs to have a paradigm shift from treating injuries to treating emergencies (be it physical or emotional). The fact that there is no formal training on implementing DV screening, or managing DV incidents is a precursor to inaction. The participants understand that EMS can only be one link in the chain of events, however, what constitutes that link is unknown. Patient safety, referral to definitive help, empowering of the victim, risk identification and legal action were all identified amongst the group, however, the extent and manner of achieving those outcomes were again, unknown. It may be the combination of the above factors which allow practitioners to continually duck out of responsibility when faced with a case of DV.

EMS role and accountability in DV responses

There is a feeling of helplessness when EC providers are confronted with DV cases. Much of this helplessness comes to play when the EC providers are unaware of the result of their actions/inactions. The practitioners cannot confirm if the victim will return to the same location of violence. In the same breath, there is little to no follow-up of these calls and therefore little to no accountability for any adverse events (the victim being murdered at a later stage). This phenomenon is contrasted to other interventions which are regularly performed (medical quality assurance protocols). EC providers are not provided with structured feedback/debriefing after a DV case where they can air their insecurities and talk about ways in which to improve.

Potential value in peer-to-peer training

Simulation training has a place in EMC training however the use of simulation mannequins is limited when the topic turns to behavioural or interpersonal emergencies. The participants agree that practical training is a necessity when teaching EC providers how to respond to DV. These limitations present when students need to gather information, other than the vital signs from the patient. It is impossible to notice distress signals or even general anxiety in a simulation mannequin. The solution to this problem would be to have students practice on each other. This peer-to-peer learning will allow students of different languages, race, age and gender interact with one another while meeting simulation objectives.

Triggers in DV training

By running DV based simulation training, there is a risk for students to become "triggered". This is a risk which is, to a certain extent, unavoidable. Students should be taught how to debrief effectively, in a written and verbal capacity. One participant asked the group "What if a student is triggered in class?". The consensus after the discussion was that EC providers will not be able to choose their patients once they become operational. It is an inherent risk that some patients will be more emotionally demanding than others, and the EC provider classroom should not be any different. Simulations help students to process certain aspects of the job at hand. By constantly being exposed to simulations with bleeding patients or patients with broken bones or those who are found dead, students become less sensitive to their natural emotions and can treat the patient effectively.

Participants highlighted the need for psychological support for EC providers and students. Appropriate support is needed, with specialists in trauma counselling. This in addition to adequate training on debriefing tactics would be enough to support the implementation of DV simulations.

Focus Group Discussion Four:

The second FGD had 8 participants. The results that emerged from the 1st year participants included the following axial codes; The value of a multi-disciplinary approach, sensitising vs desensitising practitioners, simulations as a proxy for DV education.

The value of a multi-disciplinary approach

The role of EMS in the DV approach is made more effective if the other stakeholders are actively involved in the process. The role of EMS is to provide access to help for the victim. EMS may assist by empowering the victim to make a change in his/her life. The only person who has the power to change the victims' circumstances is the victim him/herself. The role of EMS changes depending on the extent of the EC providers' knowledge on the topic. DV education is thus imperative for there to be an appropriate intervention. Before intervention can take place DV needs to be defined and the victims' rights, EC providers rights and relevant legislature must be known. EC providers should know the relevant call-centres and victim-friendly shelters for their specific locations. The term "multi-disciplinary" comes into play when the other stakeholders perform their specific duties. This refers to social workers, the South African Police Service, hospital staff (nurses and doctors) as well as the local courts if necessary. It is agreed that if EMS is to arrive on scene first, they are supposed to start care, however, they lack the tools to intervene. EC providers are trained specifically for life-threatening cases, and the majority of DV cases do not fall into this niche of medical care. The participants acknowledge that although a given case of DV may not involve life-threatening injuries, the potential for this exists, and therefore actions should still be taken. DV is a cycle of violence, and interventions need to be made to combat this cycle. The call-takers also have a role to play in screening for DV, as well as assisting EC providers who are on the scene (by providing relevant contact information, or by referring to the most appropriate facilities (ones with active social workers).
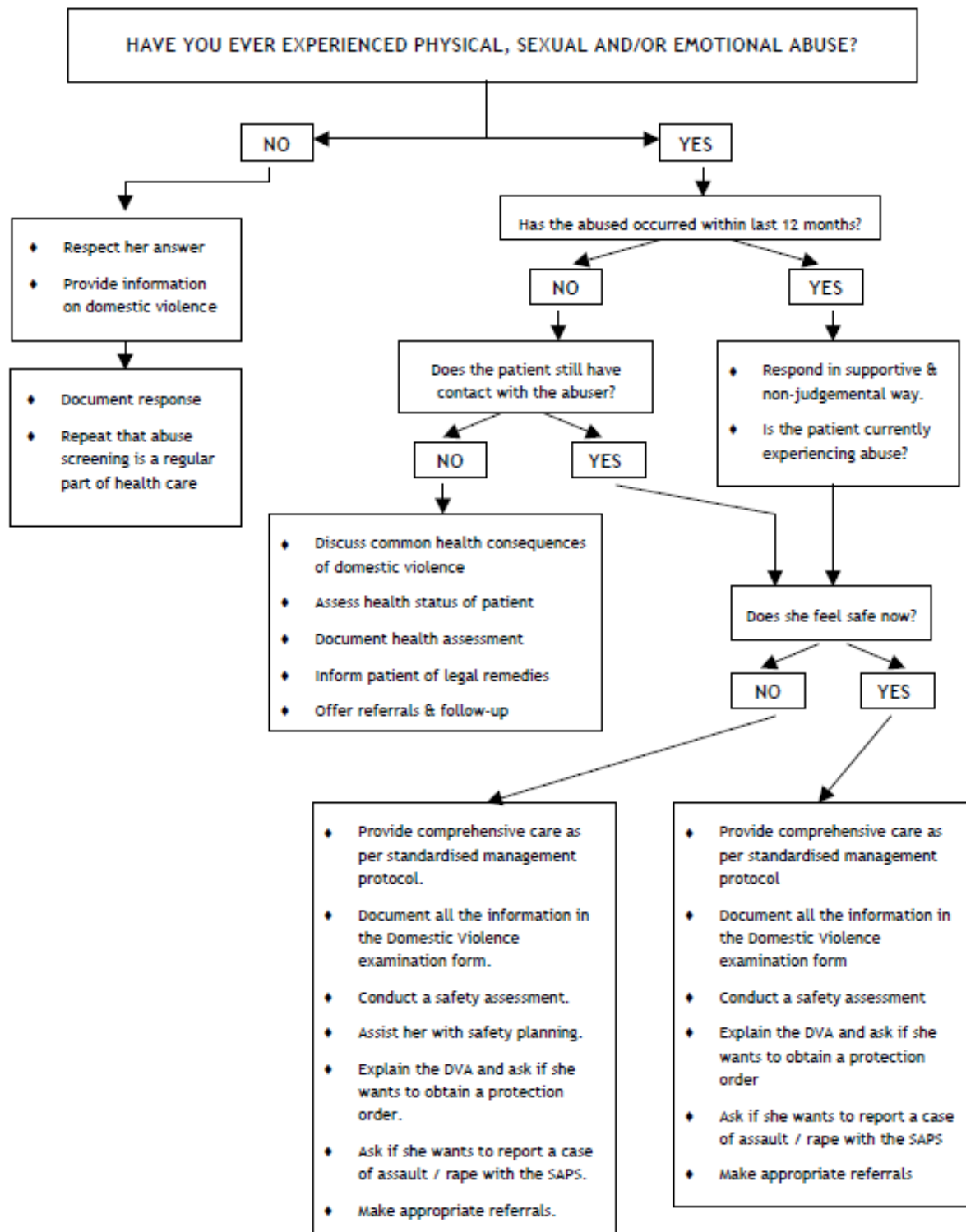
Sensitising vs desensitising practitioners

The topic of desensitizing EC providers came under focus. The participants stated that EC provider desensitisation can be both a result of continuous exposure to traumatic experiences but also as an active tool to employ for preventing emotional fallout. The drawback of having desensitised practitioners is that the patients might not receive the empathy or sympathy they require to trust the practitioner, therefore further helpful interaction is halted or lost completely. One participant explained that there is a place for superficial sympathy in the treatment of DV patients. However, this is based on the personality and characteristics of the practitioner and victim involved and may not work on everyone. The victim must know that the practitioner cares and understands the situation at hand. It is for this reason that the practitioner may have to talk to the patient in a manner which displays his/her humanity. This may not come as naturally to some EC providers. It was proposed that EC providers should be 'sensitised' to DV rather than desensitised. The participants had attended a sensitivity training class during the year; the focus of the class was predominantly on the use of preferred pronouns for the LGBTQI community. The session had nothing to do with dealing with emotions, self-regulation or dealing and responding to the emotions of others.

Simulations as a proxy for DV education

There may be value in learning about DV in the form of simulation training. Simulations are helpful to learn the approach to different patients. Currently, the simulations which are performed only include medical and trauma-based scenarios. The simulation dolls are sophisticated but their use is limited to medical and trauma-based scenarios. There is little to no value in using these mannequins for simulations which require emotional intelligence. Treating real patients is very different from treating mannequin in the simulation laboratories. Students struggle to figure out the patients' symptoms unless provided by the simulation facilitator. This limitation is of little consequence when teaching students how to identify and treat a patient with hypothermia or haemorrhagic shock. However, this barrier in relating to the mannequin is not conducive to optimal DV training. The participants would prefer interacting with each other in simulations over the synthetic counterpart. Simulation training can include techniques to talk down/de-escalate situations involving patients who are suicidal or have PTSD or patients who have been raped. It was reiterated that EMS is a high-stress profession and that simulations will teach students how to deal with that stress and still function at a competent level. The DV based simulations must have a similar purpose in helping students to deal with the related stress. The participants noted that their simulations have not properly prepared them for what they have witnessed in their work-integrated-learning shifts. They

believe that simulations can never fully prepare a student for the real-world environment, and there is an element of helplessness considering this.

Annexure K: Screening Protocol for Abuse

HAVE YOU EVER EXPERIENCED PHYSICAL, SEXUAL AND/OR EMOTIONAL ABUSE?

NO

- Respect her answer
- Provide information on domestic violence

- Document response
- Repeat that abuse screening is a regular part of health care

YES

Has the abused occurred within last 12 months?

NO

Does the patient still have contact with the abuser?

NO

YES

- Discuss common health consequences of domestic violence
- Assess health status of patient
- Document health assessment
- Inform patient of legal remedies
- Offer referrals & follow-up

YES

- Respond in supportive & non-judgemental way.
- Is the patient currently experiencing abuse?

Does she feel safe now?

NO

YES

- Provide comprehensive care as per standardised management protocol.
- Document all the information in the Domestic Violence examination form.
- Conduct a safety assessment.
- Assist her with safety planning.
- Explain the DVA and ask if she wants to obtain a protection order.
- Ask if she wants to report a case of assault / rape with the SAPS.
- Make appropriate referrals.

- Provide comprehensive care as per standardised management protocol
- Document all the information in the Domestic Violence examination form
- Conduct a safety assessment
- Explain the DVA and ask if she wants to obtain a protection order
- Ask if she wants to report a case of assault / rape with the SAPS
- Make appropriate referrals

Key: DVA- Domestic Violence Act 116 of 1998

        SAPS- South African Police Service

Martin, L.J. and Jacobs, T.2003. *Screening for Domestic Violence: A Policy and Management Framework for the Health Sector*. University of Cape Town: South Africa: Institute of Criminology.

Annexure L: Domestic Violence Safety Planning

d)   Survival Techniques - in challenging her to act

Planning ahead for an emergency

If you are being abused or if you fear the threat of abuse, be prepared in case it is necessary for you and your children to leave home quickly. Here are some basic preparations you can make to leave home quickly and safely if the need arises, and which will simplify your situation once you've left.

1.	Pack a set of clothes for yourself and your children. Store the suitcase at the home of a friend of a neighbour or hide it in your house where you can get to it easily.
2.	Have an extra set of keys to the house and car and keep them hidden in your suitcase.
3.	Collect and save evidence such as names and addresses of witnesses, pictures of your injuries and police and medical reports. Document dates of incidents of physical abuse for possible legal action.
4.	Take extra cash, savings and cheque books and any other personal valuables with you. This will help you provide food and shelter for yourself and your children.
5.	Pack a favourite book or toy for the children.
6.	Take with you legal documents (interdict, etc.) and important papers such as identification, birth certificates, medical cards, driver's license, marriage certificate, documentation of car ownership. Keep these together where you can get to them easily and quickly. You may need these documents for a number of reasons. Keep them in a safe place outside your home such as your workplace, your mother's, etc.
7.	Most important of all, plan ahead. Call the Advice Desk for Abused Women hotline at **(031) 2044862/2044923** for help with this planning and other matters.

Padayachee, A. & Singh, D. 2010. *Domestic Violence: a manual for crisis interventionists.* Durban: Advice Desk for the Abused.

Annexure M: Simulation Participant Observation Results

For the purposes of clarity, the participants acting in the capacity of the EC provider will be referred to as the "EC provider". The participants acting in the capacity of the victim will be referred to as the "victim".

2nd year group:

Room 3: Domestic Violence Case 2

The simulation started with a "Hazards, Hello, Help" approach. The EC provider dictated his initial approach, verbalising that he is looking for injuries, asked if the victim was as he found it etc. He then lowered himself to the eye level of the victim. History (medical and social) was taken and noted. There was empathy in the manner the EC provider posed questions to the patient and listened to the answers. The EC provider then decided to take the patient to the ambulance so that he could talk there with more privacy and to allow the victim a sense of security. Throughout the interaction, there was a strong reliance on the DV screening protocol to ask questions. Pain medication was administered for abdominal discomfort and the patient was transported to the hospital with a referral to see a social worker.

Room 2: Domestic Violence Case 4

The victim positioned herself in the corner of the room, huddled and leaning against the wall. On arrival, the EC provider immediately got to the patient's eye level. He tried to determine scene safety by asking the victim if she was alone in the house. Vital sign readings (blood pressure, heart rate, pulse oximetry) were obtained. The EC provider attempted to make the patient comfortable by asking her if she would like to sit on a chair. He was very soft-spoken to the victim and asked early on in the patient interaction if she would like to go to the hospital (or at least to the ambulance). She agreed to go to the ambulance while walking to the ambulance, the EC provider asked her if she had her ID and cell phone in her possession. The EC provider soon determined that the victim did not simply fall down the stairs, but was rather pushed by her husband. The EC provider was upfront when telling the victim that she was not safe in her current environment. The EC provider did not make use of the DV screening protocol as much as the other participant groups. After the simulation, the EC provider explained to me that he has had previous experiences in interacting with victims of DV in real life. The victim explained that the EC provider was very willing to listen to her. She added that some people might not want to hear that they are a victim of abuse and that this statement may end up damaging the trust the victim has for the EC provider.

Room 4: Domestic Violence Case 1

This simulation involved two male participants. The simulation started with the EC provider introducing himself to the victim. Both participants were comfortable utilising the scripts for the duration of the simulation. The victims' acting was realistic in displaying denial about the instance of violence. The EC provider requested that the victim's husband go fetch the victim a glass water (to remove him from the scene for a short amount of time). In this time, he enquired about the history of abuse. The questions posed were respectful and cautious in phrasing. The DV screening protocol was used to cover all bases. The EC provider proceeded to explain the definition of DV to the victim. The victim maintained that she is not a victim and blames herself and his drinking for any violence which may have occurred. The EC provider was cautious to not cause more harm to the patient (emotional). While the DV screening protocol was used, the EC provider used more patient-friendly words.

The axial codes which were derived from this groups' simulations are as follows: "The value in semi-structured simulations", "Active decision making to enhance victim comfort", "Movement from traditional simulations to peer-base simulations", "Adequate history taking", and "The DV screening protocol as an asset to patient care".

4th year group:

Sim room 3: Domestic Violence Case 2

The EC provider immediately got to the patient's eye level. The medical history and assessment of the chief complaint took place. The victim stated without prompting that her ex-boyfriend physically assaulted her the previous week. The EC provider asked the victim where he was now (scene safety). The acting was realistic on the part of the victim. The DV screening protocol was referred to often during the simulation. When asked if she feels safe in her home, the victim replies that she does not, and says that her boyfriend's actions are erratic. The partner (not present in the simulation) is requested to perform a reading of vital signs. More questions were posed at the abdomen pains (chief complaint). During the simulation, the EC provider took the time to read the DV screening protocol to determine his next action. He asks the victim if she wants more done for her immediate safety. The victim responds and it is decided that the police will be called to the house and alerted about the situation. The decision is made that she will go to the hospital, get the police involved and make a statement. Throughout the interaction, the element of compassion was never lost. After the simulation, the victim told the EC provider that he should have assessed her head (due to the injury sustained the previous week).

Sim room 4: Domestic Violence Case 4

The participants spoke comfortably with each other. ABC's were checked and vital signs were taken. The patient's injuries were determined and treated. The participants broke character and started laughing when the EC provider asked about the scene setup. The EC provider promptly picked up on the victim constantly looking at the door. She could sense the victim's anxiety when the victim stated that the husband would be back soon. Patient history was taken and there was a quick search for blood on the patient's clothes. The EC provider asked me about the colour of the patients' bruises (to determine the timing of the injury). The EC provider states that she is uncomfortable assuming that there is DV. She did not want to jump into asking about the abuse. She asked for guidance from the facilitator (I told her to act as she would if it was a real call). She decides to ask if there has been abuse. An ambulance was requested but the victim said that she would rather go with her sister. Questions were asked about the weapons at home, previous violence and more consultation with the DV screening protocol.

Sim room 2: Domestic Violence Case 1

The acting from both participants was good. They sat facing each other at eye level. The EC provider explained what domestic violence was to the patient in a non-judgemental fashion. There was a relaxed body-language from both the EC provider and the victim. The EC provider started asking questions which were not specific to the screening protocol and were potentially off-putting for the victim (too personal). The EC provider appeared to get too comfortable with the victim too soon. The question was asked, "How do you know this won't be the last time?". The EC provider then suggested couples counselling, drinking rehabilitation for the husband. There was also a life coaching session where the victim was told that there is more to life than just cleaning the house. The EC provider attempted to show the victim her worth in a very short amount of time. The session concluded with the EC provider providing the victim with contact details for helplines, which can be used to empower the victim.

The axial codes which were derived from the group simulations are as follows: "Factors influencing simulation realism", "Variability in DV interventions", "Point of diminishing returns in "comfort" and "EMS to forensic history taking".

1st year group:

Sim room 1: Domestic Violence Case 4

The EC provider immediately got to the patient's eye level. A physical assessment was performed and the fractured arm was splinted. Medical history was obtained and soon after the EC provider enquired about the victims' previous abuse incidents. The victim's script stated that she had to continuously look towards the door in expectation of the husband returning. The EC provider was too focused on the DV screening protocol and therefore picked on the cue later on (compared to his colleagues). The EC provider chose a very education position with the victim, explaining in detail what DV is and what can be done about it should she choose to make a change. The EC provider spoke calmly to the patient and made her feel comfortable. He informed her of the places that she can go to for guidance and support (contact numbers). He reminded her that she is not the only one who is going through this. At the end of the simulation, he said that he would try to convince her to call the police and get her in contact with a social worker.

Sim room 2: *Domestic Violence Case 1*

The EC provider remained standing throughout the entire simulation while the victim sat in the chair. The history-taking started soon with the EC provider immediately asking what made the victim call the ambulance service today. The victim explained according to the patient brief which allowed the EC provider to follow with more questions about the history of the violence. The questions which followed included normal history taking (past medical history, allergies, etc). The EC provider spoke calmly to the victim and with respect. Questions were asked regarding the whereabouts of the husband. The EC provider then went through the DV screening protocol line-by-line along with the risk assessment. The victim was provided with emergency contact numbers and guidance on what to do if the same event occurs again. The victim ultimately refused care and remained at home.

Sim room 3: Domestic Violence Case 2

At the beginning of the simulation, the participants had a small discussion about the particulars of the scene. The EC provider wanted to know the patient's age, setting, body shape etc. This was appropriate as both participants were male and one was playing the role of a female victim. The EC provider gained the patient's medical history. He soon determined that the patient had food poisoning. The EC provider chose to stand during the initial medical assessment and interview. He performed a physical assessment and obtained vital signs. Entonox was administered for the patient's abdominal discomfort. The patient sat at the patient's eye level and enquired about the victim's boyfriend, extent and timing of the physical

assault. He then referred to the DV screening protocol and asked for the South African Police Service to come to the scene. The simulation ended and he told the victim and me that he would want the victim to follow-through with obtaining a protection order.

Sim room 4: Domestic Violence Case 4

Both participants in this pair were Afrikaans. At the beginning of the simulation, they immediately resorted to speaking in their home language. The EC provider knelt to the victims' eye level and began the interview process. He started with a medical history and physical assessment. The EC provider enquired if the patient lived alone after her response, he concluded that the story of the patient falling by herself was not that believable. Calmly, he asked the patient if she would like to go to the hospital, where she agreed.

The axial codes which were derived from this groups' simulations are as follows: "Limitations to peer-based simulation training", "The use of clinical skills", "Value in victim education", "The benefit of EC provider tact" and "Multifactorial benefits of achieving comfort during victim interactions".

3rd year group:

Sim room 3 first: Domestic Violence Case 1

The simulation began with the EC provider doing a scene survey and assessing risk to himself/others. Throughout the simulation, the EC provider remained standing while the victim was sitting on the ground. There was a strong emphasis on the use of the DV screening protocol and little variation from it. The EC provider asked if the victim wanted to come to the back of the ambulance where the rest of the interview could take place. There was little improvisation or "making the scenario there own".

Sim room 3 second: Domestic Violence Case 3

This group had an EC provider with her partner seeing to the victim. The partner performed all on the physical assessments (injuries and vital signs) while the EC provider asked about the victim's husband and history of violence. The partner noted bruising and swelling during the physical assessment. The victims' acting was superb with both the EC provider and partner being fully engrossed in the simulation. The EC provider asked if the victim has experienced abuse previously. Throughout the simulation, the victim did not maintain eye contact with the EC provider and her partner. The EC provider asked about the husband's temperament with little reaction from the victim. The EC provider resorted to using the DV screening protocol. She explained to me that she could not force the victim to admit abuse. The patient did not

want to go to the hospital and this made the EC provider feel helpless. She explained to me that she could not force the victim to admit abuse. The patient did not want to go to the hospital and this made the EC provider feel helpless.

Sim room 4 first: Domestic Violence Case 2

The EC provider immediately got to the patient's eye level. The injuries were exposed and the physical assessment included the vital signs being measured. The EC provider asked about previous abuse and the victim responded openly. The EC provider then gave survival tips (which were included in the notes for the EC provider) for the victim to use for future instances of violence. This simulation was not as flowing as the previous runs of simulations. there was a heavy focus on the DV screening protocol which resulted in instances of non-communication with the victim. These participants had as much time for reading through the case/script as the previous participants.

Sim room 4 second: Domestic Violence Case 4

The EC provider started the simulation asking the victim about the chief complaint. He then bandaged the cuts on her hands. The initial victim interview occurred while the EC provider was standing (and the victim on the ground). When he started talking to the victim about the instance of abuse, he opted to sit and assume her eye level. There were not many clues given to the EC provider before he started asking her about abuse. The patient preferred that her sister would pick her up and take her to the police station to file a complaint and/or open a case. The EC provider then informed the victim about how to maintain evidence which can be used in court at a later stage.

The axial codes which were derived from this groups' simulations were as follows: "Constitutions of simulation realism", "Probing of DV history", "EC provider and victim comfort", and "DV intervention considerations".

Annexure N: Individual Post-Simulation Focus Group Discussion Results

Post-Simulation Focus Group Discussion One:

The first FGD had 6 participants. The results that emerged from the 2nd year participants included the following axial codes;

Realism in DV based simulations

When asked about their personal experiences with the simulations which just took place, the participants explained that it was "surprising and different". One participant explained that the act of talking to victims of DV can be frustrating. When prompted to continue, the participant explained that it is frustrating if he (the practitioner) knows that the patient is a victim of DV but is unaware of it or will not admit it. The participants explained that because the simulations were confined to DV only, it gave the participants a narrow focus for patient approach and treatment. The simulations were performed in controlled environments and focused on DV only. This was to be expected, but it removed some of the realism from the participant experience. The participants agreed that true realism was therefore not completely achievable. There was appreciation in the fact that the simulations were evidence-based. The fact that thought was put into the development of the simulations was proved in that every question which was posed to the standardised patient, by the EC provider, had an appropriate response. In the performance of the simulations, participants realised that by simply asking questions, it was not necessarily certain that the standardised patients would provide a satisfactory answer. The EC provider would have to show a certain level of empathy and make the patient comfortable before getting any real information. This was contrasted to how patient information was usually gathered in an EMC simulation, where patient history is performed by simply reciting the "OPQRST" or "SAMPLE" pneumonic.

There is value in having one participant act the role of the patient. Having a subjective experience of the patient-EC provider encounter from both perspectives is crucial in developing patient rapport tactics. It was noted that simulations should have limitations/end-goals. This refers to the point in the simulation when the objectives are met and the session can end. Simulations should have a clear beginning (at which point of patient care/interaction does the EC provider come in contact with the patient?), it should also have a clear ending (where does the simulation end? When the patient accepts that he/she is being abused? When both the patient and the EC provider are in the ambulance? When the patient is being handed over to the doctor in the hospital?). Participants also mentioned the importance of adequate documentation in the patient care process. There was a question posed on whether students

who are performing simulation training, should carry notebooks/patient care report forms. There was an agreement for this as many participants feel wholly unprepared for documenting any patient care (for more than just DV). There was uncertainty with regards to which aspects of patient information are important for documentation.

Patient advocacy within EMS

The discussion moved to how DV patients are received in various facilities. The participants recounted experiences they have had when bringing DV patients to the hospital. They have all had experiences where a hospital staff member had asked a patient "Why don't you just leave (the abuser)?". This experience confirms that there are still many who hold false beliefs about DV. Participants also explained that the topic of DV is a gossiping matter in hospitals where staff members would talk amongst themselves about a specific patient's predicament (without the intention of intervening). In addition to how DV victims are treated in the hospital, there is also a lack of cohesion between EMS staff and hospital staff, particularly during patient handover. If the two parties are not working together properly, the relaying of important patient information is compromised. The participants explained that the EMS personally have to advocate for their patients to receive appropriate care. They need to work in the patient's best interests and show a high level of professionalism.

Shortfalls in current education

When asked about their uncertainties with regards to the DV approach, participants were not comfortable with the legal processes. Practitioners can only guide victims if they know the processes themselves. Because the participants did not know how to open cases, get restraining orders, or get interim restraining orders themselves, they could not tell the victims how to do so. The participants found this frustrating, as they wanted to do more for the patient but were unable to do so. There was a need to have course content on relevant legislation and legal procedures. To empower the victim, the EC providers need to be empowered themselves.

Post-Simulation Focus Group Discussion Two:

The second FGD had 6 participants. The results that emerged from the 4th year participants included the following axial codes;

EC provider and patient comfort in DV encounters

The participants found the simulations challenging. They felt that they were operating out of their comfort zones as their usual simulations (for the last four years) were based strictly on medical or trauma emergencies. The major factor which made these simulations different was the inclusion of patient communication (human interaction). The participants found that they were not able to effectively communicate with the patients and were not sure which questions to ask (and how to ask them). From the perspective of the patient, it was unsettling that the EC providers were asking questions based on the screening protocol, but they were not sure where the questions were leading. There was a question about practitioner sincerity when performing the DV screening protocol ("is it performed because the practitioner actually wants to know the answers to the questions?", "or because it is a procedural requirement?").

Limitations to effective patient interactions

Participants found that when responding to real-life DV cases, there are many factors which can hinder effective patient interactions. They described that depending on the EMS company, the longer you spend on the scene talking to patients the more pressure the dispatcher will place on the EC provider. This increase in pressure may disturb the connection between the EC provider and victim which is essential for a favourable outcome (the victim admitting that there is a problem, seeking further help etc). Another factor which the participants have acknowledged is that of the risk of violence for the victim or the practitioners on the scene. If the abuser is present on the scene, the risk for violence can increase. There was also fear of the abuser not being present on arrival of the EMS crew, but having him/her arrive at a later stage and seeing an ambulance/police vehicle parked outside of the property. The participants feel that they are not adequately trained in how to de-escalate situations.

Normalisation of DV

It was found that in some of the simulation scenarios a major part of the EC providers objective was first to get the victim to realise and admit that this was an instance of DV. The theme of

DV normalisation occurred. This theme applied both to the victim as well as the EC providers. This was particularly relevant in the "Honeymoon phase" case, where the violence was not acknowledged as being an emergency. The participant who received this case needed to convince the victim that there was a problem in the household, and remind her that what happened was not a normal event in society. Only once a situation is deemed "abnormal" can an intervention take place.

Shortfalls in current education

There was a commonality between the first simulation group (2nd years) and this group in that they did not know the legal proceeding for various interventions (open of a docket, laying complaints, obtaining a protection order). The whole concept of empowering a victim rests on the knowledge of the practitioner. If the practitioner says that the victim must call a victim helpline/DV helpline, but does not have a number saved or written down somewhere, the effort may be futile. The EC providers should have a list of working contact numbers for helplines, a knowledge of the closest victim-friendly shelters, knowledge of which hospitals have an available social worker etc. The participants found it exceedingly frustrating that they could not provide the patients with this knowledge off-hand (it was provided as a handout before the initiation of the simulations).

Contextual patient approaches

The topic of contextual patient approaches began when participants started comparing the patients they had experienced during the sim. Some patients were in complete denial that they were being abused and some knew they were victims but were not empowered to act. The importance of different EC provider approaches become apparent when one participant explained that it may be necessary to have a "tough love" attitude with the patient. This was specific to the "Honeymoon phase" case where the participant playing the role of the EC provider asked the standardised patient "And what if it (physical assault) happens again?". The EC provider, in this case, wanted to get the patient to understand that the situation might get worse at a later stage. On the other hand, if the patient is aware that the situation could get worse, but is scared to take action, the same approach could just be perceived as an unwarranted threat. This can result in the patient feeling uncomfortable with the EC provider, which can be detrimental to further intervention. In this case, the patient may benefit from a more empathic and an overall sensitive approach to build rapport.

Importance of a standardised patient briefing

The briefing of standardised patients is crucial to the successful running of a simulation. The participants stated that by having a small briefing session with the simulation facilitator, before the start of the session, standardised patients would be more comfortable and knowledgeable about their role. They explained that the script was very user-friendly and that there was no ambiguity in its wording. However, the experience could be more stimulating by having someone explain the case to them verbally and answer any questions they might have. The objectives for these simulations (other than to provide holistic care) were not provided, to prevent end-of-sim orientated approaches. For example, if the goal of the simulation was to get the patient to decide to go to the hospital, it could have resulted in the EC provider persuading the patient to go (potentially on false pretences) to finish the simulation. This would have diminished the idea of learning during the simulation. Explaining how standardised patients should regulate their emotions was also found to be important. Having one standardised patient act in a manner that is conducive to effective communication, and having another act in a manner which allows for no communication may result in some participants losing out on the valuable experience in the learning environment.

Post-Simulation Focus Group Discussion Three:

The third FGD had 8 participants. The results that emerged from the 1st year participants included the following axial codes;

Reaction

When asked about their opinions of the simulations, the participant stated that it was uncomfortable. They have had some experience performing simulations but this session was very different. They had never had to communicate with a patient in the capacity of dealing with another human being. The participants found the simulation very useful in learning about their shortcomings, this approach to training makes it easy for participants to incorporate their own real-world experiences into meeting the objectives.

The value in contextual patient approaches

The idea that every DV patient can be approached in the same manner is not realistic. The discussion moved to how EC providers should speak to and the direct patient to seek further

help. Because each participant had a different patient with different personalities and situations, there were varied responses to EC provider intervention. Some participants argued that the approach should be harder, and you should force the patient to go (to hospital/shelter) if you know they are not safe. Another participant stated that the EC provider must build trust with the patient and maybe after the 5th visit to the house you can ask the patient to go to the hospital. There was disagreement where the group rationalised that it is unrealistic that the same practitioner will be going to the same patient that many times. It is also not safe to allow the patient to be in that situation for so long before any intervention is made. Another argument was made that the "tough love" approach will not work on every patient. Depending on the phase of domestic violence the patient finds him/herself in, they may be more responsive to a specific approach. In the same notion, some cases will benefit from having police on the scene and some cases will not. Patients and their situations are extremely diverse and there is little value in a one size fits all approach. Care must be taken to not 'over-sell' the DV response. Especially for male EC providers, care must be taken to not be too overbearing, as this can result in a loss in patient comfort throughout the encounter. This type of situation may be encountered when a victim calls EMS for pain medication and first aid treatment after being assaulted, but the practitioner provides the victim with unwanted information about seeking help, safety planning and legal action against the abuser. The EC provider must be able to read the patient's demeanour and act accordingly.

Integration of services

The topic of service integration came under discussion. The idea that the South African Police Services are extremely understaffed and not adequately trained to handle DV cases was discussed. One participant mentioned that to get an appropriate response from the local police service you will need to contact the station commander directly. Knowing the telephone number of the local police station and being on a first-name basis with the staff can greatly influence the response from the South African Police Service. The participant mentioned those slow responses often result from people calling the national call centre and not the local police station. If you "cut out the middle man" you can save a lot of time in police responses.

Empathy development

There is an agreement that the simulations can help participants to build empathy. The participants mentioned that these simulations force the participant acting as an EC provider to think about how the patient may be feeling. In the past, little thought was placed in this regard.

The patient may be feeling judged, this can result in a refusal to seek further help (call a helpline, see a therapist/social worker, go to the hospital). The patient may be feeling the pressure that the EC provider cannot account e.g. judgment from the family (if news spreads about her abuse there can be gossiping amongst family members and associated embarrassment). The risk of the patient feeling judged may also increase if other services are involved, as the South African Police Service does not have the best reputation for showing empathy to victims.

The value in a two-person approach

The importance of having a partner, during the simulations, was emphasised. By having another person in the simulation there can be a 'second set of eyes' on the situation. The discussion then moved to realism and applying what was learnt in the simulations to real life. The participants mentioned that although having a partner can be useful for safety reasons and convenience (letting the partner do vital signs and routine checks while the other performs the patient interview) there can be drawbacks. If the partner is not as sensitive to the patient's emotions at the time, it could greatly influence patient interaction. Some participants said that for cases like that, it may be best to limit the patient's interaction with that crew member.

Value of patient scripting

When asked about the use of the patient scripts for the simulation, one participant said that she had no experience in the field, and had never seen a victim of domestic violence. She asked the group whether it would be best to get experience before performing the simulations. It was decided that the simulations are there for her to get comfortable, to a certain extent, before interacting with victims. She went on to say that because she had no experience dealing with victims when she was given the role of the patient, she just used what was written on the brief (patient wording and body language). Her simulation partner (who played the role of the EC provider and who had experience as a therapist) mentioned that she played the part very realistically. He then continued to say that for someone who has never seen any patient/victim before, she acted exactly the way that some of his clients had presented in his experience.

Post-Simulation Focus Group Discussion Four:

The 4th and final FGD had 5 participants. The results that emerged from the 3rd year participants included the following axial codes;

Reaction

Participants found the simulations "intense" and "surreal having to act it out". It was their first experience having a patient's perspective. One participant, who played the part of a patient said that it "felt like it was me". When asked about how the "patient" experienced the simulation one participant explained that she struggled to feel the emotional aspect of the patient but could only perform the physical aspects (body language and verbal cues). The participants agreed that it was interesting to see how difficult it was to help someone, especially if the patient was in denial of there being a problem. There was a demand to have similar simulations in the future, not just with a DV context but including other behavioural emergencies. The participants all felt that the simulation was not completely real life, as EC providers generally do not expect to find DV (which was the case during the simulations). They felt that because the research being done was based on DV, they "boxed" the case into DV. In a real-world setting, they may not have picked up on the clues of DV, which they found interesting. One participant explained that she used to get frustrated with victims of DV because she could not understand how they could let the situation get to that point. She still gets frustrated at how helpless she feels when confronted with victims of DV.

The participants found that body language was very important, both for how to read the patients emotions but also how to present themselves to ensure patient comfort. Building a rapport with a victim is essential to get any information which could be used to help them. By participating in simulations, the participants can practice reading emotions and signs of distress which can be extremely useful in a real-world application. By being able to simulate different scenarios participants will be able to trial different ways of getting out of challenging situations.

The value in human intuition

For some participants during the simulation, they were able to tell that something was wrong based on the patient's body language and speech even when the patient did not verbally disclose DV. The participant acting as an EC provider might not have known the cause for the patients' distress but they could acknowledge it. The participants found this important as they

knew they could not just leave the scene (even when the patient said that nothing was wrong). This level of patient assessment cannot be taught in a classroom or with training mannequins. Only real-world experiences and interactions with other human beings can help develop this skill.

Gap in current education

Participants acknowledged their lack of communication skills with victims of DV. They found it challenging to advise the patient on what to do when they did not know, themselves, what to do. They explained that if they knew the details on shelters and how the legal proceedings work for obtaining a protection order they would be able to empower the victims. Victim empower begins with practitioner knowledge. The participants also feel that they are unprepared to confront victims of abuse. A superficial course on psychology or a module in behavioural psychology/trauma counselling would be appreciated in the EC provider programmes. One participant suggested a short lecture on establishing patient rapport which could be brought into the first year, Foundations of Practice subject. Since it is more likely that basic and intermediate level workers will come into contact with DV cases, it was suggested that any training which is done to enhance EC provider responsiveness should include these EC providers.

Value of a learning centred simulation environment

The participants agreed that for learning to take place in this type of training, it was essential that patience was emphasised. This is contrasted to the traditional practice of EMC related simulation training. The participants mentioned that they would not be able to perform properly and that there would be little value in having 'someone breathe down their necks' while they are performing a DV simulation. The practice of DV response is subtle and therefore it would not benefit from an identical approach to trauma resuscitation. Participants found it useful having a partner involved in the simulation. This allowed the EC provider to perform a patient interview while the partner performed vital sign/physical assessments. In other cases, the partner would be able to potentially distract the abuser while the EC provider spoke to the patient (or vice versa). Having two EC providers on the scene will not only enhance the perceived safety of the EC providers but it can potentially ameliorate tension. If both parties (abuser and victim) are receiving attention simultaneously there may be less chance of outbursts (from either party).