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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION TO THE BACKGROUND OF THE PROBLEM

Many people work shifts because of socio-economic considerations and for them stopping shift work is not a realistic option. Shift work can have a negative impact on the health and well being of workers. The reason for this is that in every individual's body there are many rhythms/cycles, which are designed for daytime work. When these rhythms are disrupted as in nighttime work, they need time to adjust so that they may all function as one. These rhythms do not adjust instantaneously; therefore the impact on the body is negative. This in turn, leads to a reduction in performance attentiveness, as well as an increase in the risk of accidents and injuries.

Most shift workers do not know how to adjust their lifestyle to minimise the negative effects of working around the clock as companies do not provide the required programmes for their well being, thus increasing the chance of suffering from stress. If this is so, then, not only will the well being of the individual or employee be disrupted, but so too will productivity, as well as the profits of the business. This therefore means that shift work could in the end diminish the economic gain it was designed to create.

"A tailor-made shift system should be a compromise between the employer's goals, the wishes of employees, and ergonomic recommendations for the design of shift systems" (Knauth, 1997:21).

According to Ahasan (2002:09): **"Currently there is little information available in the literature that supports the effective design of shift schedules, which offer effective productivity levels, while maintaining the health and safety of shift workers"**.

It therefore has to be realised that there is no ideal shift system, which is going to fully meet an organisations needs, as well as the well being, social and family needs of each and every single employee within the organisation. Employers and employees can work together in order to learn how to identify and control shift work hazards. Also, employees need to learn how to cope better with the demands of their work schedule. Due to the many disruptions encountered in their personal life, social life and physical well being, the existence of stress-related illnesses is increased in shift workers. Employers may pick up signs of stress when the following factors are monitored on a regular basis, as well as investigated if and when variances occur:

- ⊕ Higher absenteeism
- ⊕ Lower productivity
- ⊕ A drop in safety
- ⊕ Higher labour turnover
- ⊕ Decrease in performance
- ⊕ Change in employee health

Stress prevention techniques should, for the above-mentioned reasons, be implemented within companies who employ individuals as shift workers. These techniques should however, not only focus on stress in the work environment, but also in the non-work environment. The reason for this is because employees take the stress of work home and they also bring the family responsibility, financial and social stress to their place of work.

1.2 PURPOSE AND OBJECTIVES OF THE STUDY

The main aim of this research project was to develop, as well as implement a stress management module. The module was to be utilised in order to help shift workers to cope better with the stress and pressures thereof. The stress management module was aimed at helping companies maintain a more healthy and productive workforce, benefiting both the employer and employee.

In order to arrive at the stress management module, a questionnaire was developed to establish whether different shifts create different levels of stress.

All the above mentioned will be clarified and supported through the following phases within the research methodology:

Phase 1 focuses on the distribution of the questionnaire within the three companies being researched.

Phase 2 discusses interviews, which the researcher had conducted in order to obtain clarity with regards to the questionnaires, which were completed.

Phase 3 outlines the development of the stress management module

Phase 4 is the implementation of the stress management module within the sample chosen

1.3 CLARIFICATION OF BASIC TERMS AND CONCEPTS

Various basic terms and concepts are clarified in a glossary, in the event of those terms not been clarified when first encountered. This glossary may be perused in Addendum 1.

1.4 IMPORTANCE OF THE STUDY

Shift work is a modern fact of society. This means that it is here to stay. Shift work benefits the company's day-to-day functioning, as well as the profits reaped. The staff of any organisation must be recognised and appreciated, as they are to a large extent responsible for the success of the organisation. While the employee benefits are similar, in that they receive a shift allowance for every shift worked, shift work still has a negative effect on the individual employee. This dissertation therefore serves to introduce a shift management module for these employees to help them cope better with the pressures thereof and to ensure that the organisation does not suffer due to stress.

Another aim of this study was to benefit, not only the companies, where the study is to be conducted, but many other industries in similar situations. Many organisations are dependent on shift work and not on the employees who are to perform the shift work. Therefore, this module was designed to address the well being of each and every individual employee working shifts in the various industries worldwide.

The health consequences of shift work were not anticipated. The effect of shift work tends to set off a chain of negative effects within a human's body. Shift work eventually leads to sleep disorders, gastrointestinal disorders, appetite disturbances, emotional disturbances and increased occupational injuries, among others. It also has behavioural effects that can impact health; examples of these types of effects include altered eating habits, excessive drinking and smoking, and altered sleeping habits. These negative effects, which disrupt body rhythms, in due course result in stress. A certain amount of stress is by no means negative for an individual or even an organisation for that matter.

However, it must be understood that prolonged and intense exposure to stress is detrimental to both the individual, as well as the organisation. Indications of stress within an individual are those examples that have been mentioned above. With regards to an organisation, indications of stress or stressful situations would result in increased absenteeism, increased accidents and errors, poor employment relations, low quality of work and low

productivity and also, an increasing number of staff with low morale. Furthermore, employees who have encountered such a high level of stress that they are not able to cope, do not only harm themselves, but may unintentionally harm the safety of other employees working in the same vicinity. True, humans are largely responsible for their own health and well being. However, whether a person is experiencing high levels of stress due to personal or work problems, these problems tend to be carted wherever they may go.

For this very reason, many problems arise and linger at the workplace. The employer therefore needs to establish a balance with regards to a certain amount of stress, which challenges employees to try to achieve at their optimum level and a level of stress, which is negative and detrimental for the individual and in the long run, just as harmful for the organisation. An employer therefore needs to recognise that dealing with employee stress has now become a necessity.

Also, systems need to be put in place, which will facilitate employers and managers with regards to assessing and supporting employees struggling with stress. Hence the importance of a stress management module, a useful instrument to be utilised by organisations. By doing this both parties benefit as, this programme helps employees cope better with stress and the pressures thereof and in terms of company goals it discovers techniques through which stressors may be minimised or even prevented, so that the company too does not lose employees to stress, nor does the company suffer with regards to production.

1.5 SUMMARY

This chapter discussed the reality of shift work, as well as stress, which develops as a result of continuous shift work. These two variables play a vital role in the day-to-day functioning of any organisation possessing shift workers. It is here that the importance of a stress management module is understood. This is solely due to the fact that it is aimed at facilitating companies maintain a more healthy and productive workforce. Stress management has now become an essential requirement for companies possessing shift workers, as the staff need to be recognised, appreciated and cared for. The outcome of such a valuable instrument would be beneficial for both parties concerned.

For employees it would mean that an assistance programme would now be available at their place of work. This means that employees do not have to go to a doctor and of course the main factor where employees are concerned, is that this type of facilitation would be free of charge. With regards to companies, even though this sort of assistance programme would amount to a relatively hefty amount of funds, which in most organisations has not been

budgeted for, management should rather try to assist the employees and view this type of assistance as an investment in the day-to-day functioning of the business. This is because even those employees, who are suffering from stress, now have the assistance they require in order to overcome the problem of mismanaged stress and will function at their full potential. Should employers not acknowledge the importance of such a programme, stress would then have an overpowering negative effect on certain factors. They are as follows:

- ⊕ The quality of work
- ⊕ Absenteeism
- ⊕ Accidents and errors
- ⊕ Production targets
- ⊕ Motivation
- ⊕ Employee and employer relationships

“Employee assistance or wellness schemes are often considered a nice-to-have but are kept low on the priority list as they are seen to cost the business a lot without producing direct measurable benefits. But is it really true that the benefits of these schemes can’t be measured in money-saving terms but only in respect of improving on the soft issues?” (Stelzner, 2005:14).

Stress management highlights the impact that stress has on both the employee and the employer. Therefore, the rationale behind such an important programme is so that companies *may take preventative steps continuously in order to assist potential stress bearers so that it does not encompass such a negative effect on the individual employee, nor the employer.*

“Shift work and other forms of working at unusual hours, and especially working at night, have always raised some health concerns. Shift workers, their employers, and governments responsible for health and safety legislation, are rightly interested in some serious questions about shift work and health:

- Does shift work damage health?
- In what health areas does it carry risk?
- Are the short-term and long-term effects different?
- Can occupational doctors and nurses monitor and reduce these effects?
- Can shift workers themselves reduce these effects?”

(Wedderburn, 2000:1).

The following chapter, which is the literature review will elucidate:

- ⊕ The development of shift work
- ⊕ Shift work effects
- ⊕ A definition of stress
- ⊕ The effects of stress
- ⊕ Workplace stress

Knowledge of the above-mentioned topics is imperative with regards to understanding shift work and stress, in order to develop and maintain a stress management module.

CHAPTER 2: LITERATURE REVIEW

2.1 THE DEFINITION OF SHIFT WORK

The standard nine-to-five, Monday to Friday, is no longer the norm within the working world. The reason for this is due to the existence of shift work. A variety of diverse references have been consulted with regards to a definition and a conclusion has been drawn; there is no specific term which defines shift work. Shift work is therefore, hours which have been worked *outside of the nine-to-five parameter. Companies' shift times will therefore differ from one another, depending on the nature of the company. After reviewing the times worked by the research sample, the following definition will be used in this dissertation when referring to the various shifts worked.*

MORNING SHIFT

This shift covers the hours of work between 06H00 and 15H00. Any hours worked between these times will be considered the morning shift. The morning shift is also the most common shift worked.

AFTERNOON SHIFT

This shift covers any hours between 15H00 and 23H00.

NIGHT SHIFT

This shift covers any hours between 23H00 and 07H00.

WEEKEND SHIFT

These hours may vary from company to company, as the work is required. This shift is normally twelve hours, therefore any hours worked between 07H00 and 19H00 or 19H00 and 07H00 into the next day, will be considered weekend work.

There are also a few more definitions with regards to shift work, which must be understood before the research methodology is discussed. They are as follows:

DIRECTION

There are only two directions that shifts may move in. They are clockwise and counter clockwise. Clockwise moves forward from day-to-afternoon-to-night shift. Counter clockwise moves backward from night-to-afternoon-to-morning shift.

FIXED SHIFT

This when an employee works only one shift, which is the same shift everyday. The two shifts, which may be chosen for a fixed shift, are the morning shift and the afternoon shift.

THREE-SHIFT CYCLE

This type of shift involves the same shift being worked for one week, followed by a week of a different shift. The direction of the shifts may be either clockwise or counter clockwise, as long as a different shift is being worked each week. For example; one-week morning shift, followed by one-week afternoon shift and finally one-week night shift. Employees working the morning shift are not required to work the weekend, as they have the weekend off. However, should employees work the afternoon shift and are required to work the weekend; those employees may only work as long as the hours fall between those of the morning and the afternoon shift. Should employees be working the night shift, they must only work the night shift for the weekend.

CONTINENTAL SHIFT

This type of shift begins with shift workers working three morning shifts, then two afternoon shifts and then two night shifts. Shift workers are endorsed to take breaks between shift changes. Once again, the direction of the shifts may be in the opposite order.

SPLIT SHIFTS

This type of shift is divided into two divergent divisions with quite an immense break in between. A shift such as this one is not used in all industries; it is generally utilised within companies where the workload is increased at different times of the day due to the product being produced or the service that is provided, for example: the transport and service industries.

2.2 THE DEVELOPMENT OF SHIFT WORK

Many origins have exact dates, as well as inventors with regards to their development, for example; the car, telephone and penicillin. However, with regards to shift work no exact time frame exists with regards to the development. Surely when shift work began, the intention was not to have a negative influence on employees. Shift work began purely due to the nature of the business. This was due to the fact that the product being produced or the service being provided was now required at all hours of the day and night. The long-term effects or consequences were not thought of at such an early stage. Shift work and even work in itself has undergone significant changes.

Over the years there have been changes in life-style, working habits and family life. With regards to the employee, all of these factors have some effect. The life-style of today is very different from many years ago; so too are family life and working habits which all contribute in some way to the negative effects of shift work. More females and younger individuals have entered the workplace. Also individuals spend more time at their place of work than with their families, whereas, in the past there was a clear distinction between work and family time. Employees of those days would not take work home, once their work was completed for the day, the remainder of the day was considered to be only for family. In the past family played a more extensive role in an individual's life; moreover, family also played a role with regards to an individual's choice about their work. Before, people worked so that they and their family could live; today, work has become much more important than just helping one's family to survive. In previous years, the measurement of many work related statistics were not considered important and therefore ignored.

Today in all industries, the statistical analysis of work related studies are constantly being measured so that companies may capitalise on their opportunities and improve their business; weaknesses and errors are also detected in this way and corrected before any major harm falls on the company.

"The concept of the *economic man*, embraced by many managers and administrators during the early part of the 20th century, held that a worker is motivated primarily by economic gain and that a worker's output can be maximised only through financial incentives. With that concept in mind, Taylor created the *differential piece-rate system*, whereby workers would receive a higher rate of pay per piece produced after the daily output standard had been achieved" (Grobler, Warnich, Carrell, Elbert & Hatfield, 2002:7). *As in business today, shift workers, as well as day workers received an incentive in the form of money, which was given to employees for producing more than the target set, in the form of a bonus. Also shift workers received an allowance over and above their remuneration as compensation for the diverse hours worked.*

However, this monetary incentive does not always compensate for the emotional and psychological trauma that some individuals undergo due to the long-term negative effects of stress. When shift work began, it was not intended that the hours employees worked would become less important and that the focus would be on daily outputs. Shift work was just a means by which companies were capable of producing more and also being able to produce for all twenty-four hours of each day.

“... A widespread managerial attitude of the early 20th century: along with raw materials, capital and machinery, the employee is simply another factor of production. As such, the scientific management approach resulted in work methods and techniques that showed great concern for employee output but little concern for employee satisfaction” (Grobler et al, 2002:7). The above-mentioned statement proves that not much consideration was given to employees, as the concerns in companies were mainly on the quantities and qualities of either the product being produced or the service being offered. This is due to the fact that management might not have had the appropriate training, as well as the correct abilities or even skills, in order to acknowledge that the employees play a major role with regards to the production targets that are being reached. Management did not realise that with regards to employees, it was imperative that certain aspects of work were to be monitored and then evaluated to determine if employees were satisfied and more importantly, whether they were experiencing any negative influences. A few of these aspects are as follows:

- ⊕ A decrease in efficiency
- ⊕ Absenteeism
- ⊕ Labour turnover
- ⊕ Accidents and errors
- ⊕ Hours of work
- ⊕ Work environment
- ⊕ Workload

Roberts (1999:42-88) maintains four reasons for the development of shift work. Firstly, he explains that before machinery became antiquated, the aim of all employers was to increase their output; this was due to the fact that at that time the working industry was more concentrated on the capital. Secondly, the days of more free time and less working hours became obsolete in this phase, as organised labour insisted on full employment. Thirdly, capturing increased capital by continuing business 24 hours a day was the result of global competition, which has impacted on most companies. Finally, for most companies the economy gradually became more difficult to continue existence in, therefore companies became more flexible in order to cope with the economy and they demanded the same from their workers.

Shift work therefore exists solely due to the fact that the economy changed and grew rapidly over the years. Employers were therefore compelled to make radical, as well as rapid strategic decisions with regards to the continuance of the company. These decisions had little concern for the health and well being of the employees of the company.

2.3 THE NEED FOR SHIFT WORK

Shift work is highly prevalent within certain occupations and industries and almost entirely absent from others. "Shifts were most common among occupations that provide services that are needed at all hours – such as protective service and food service – and among those employed as operators, fabricators and labourers. Similarly, the incidence of shift work was much greater among industries providing services used at all hours of the day as opposed to nine-to-five" (Beers, 2000:33).

Shift work is a modern fact of society. More and more people are working shifts, which has led to an increase in jobs in certain sectors. In society, more and more companies, in the various industries, are dependent on shift work in order to reach their productivity targets, as *the demand for their service or product remains high, making a transformation to a 24-hour society. Due to the fact that these goods and services are being provided all through the day and night, people are required to work at all hours. Society demands and relies on these and other services, as well as the production of certain goods.*

Many large manufacturing industries upgrade their machinery constantly in order to keep abreast of technology. This leads to expensive machinery being utilised within certain companies. In order for these machines to be profitable for the company, they need to be operated constantly. This leads to an operator having to continuously be at the machine in order to operate it. However, it is not possible for one person to perform that same task for *twenty-four hours. Long hours of work could lead to fatigue and the person would become more accident-prone due to a lack of concentration. This leads to the urgency of shift work, as more than one operator would be required to perform the same task at different hours of the day. Also, work contributes to finances and social needs which are met in the workplace and it is also a source of personal identity, as well as a source of self-actualisation. Therefore, more and more people are starting to work shifts as they rely on this work in order to feed their families. Due to this reason more women and younger individuals are entering the workplace.*

2.4 THE SHIFT WORK LIFESTYLE

"Shift work has implications for the whole way of life of human beings" (Haider, 1981; Kogi, 1985). "Although there is a lack of research information on the effects of shift working issues such as fatigue, absenteeism, work errors and accidents; shift work remains a complex issue" (Ahasan, Mohiuddin and Khaleque, 2002:116).

This is because shift work affects and relates to individual behaviour, attitude and health. Humans are by nature day orientated. This means that humans' physiological functions are geared towards daytime activity and nighttime rest. Shift work tends to confuse one's inner clock. Continuous shifts involve night work, the hardest work period for the human body to tolerate, and weekend work, which in turn has family implications. Intervening factors will vary among different employees, depending on factors such as job satisfaction, organisational culture, family, attitude, marital status, age, gender and so forth.

The above-mentioned are some of the factors to be considered when dealing with shift work and its development. The rest of these factors may be reviewed in Table 2.1 below.

<u>Individual's characteristics</u>	<u>Family situation</u>	<u>Social conditions</u>
Age, sex, eating and sleeping habits, fitness, experiences, personality traits such as circadian style, neurotic tendency, morning – eveningness and/or introversion – extraversion.	Marital status, number and age of children, housing, socio-economic level, family attitudes to shift work, partner's shift schedule, and family location or living area.	Labour market, local shift traditions, leisure activities, social supports, community size, commuting times, means of transport, distance of workplace from home, etc.
<u>Working conditions</u>	<u>Shift Schedules</u>	<u>Economic situation</u>
Working hours, working conditions, factory environment, climatic seasonal variations, job-task, work load, canteen, separate toilets for women, rest rooms, first aid, safety posters, etc.	Type of schedules, direction of rotation, length/number of shift cycles, number of consecutive night shifts, number of free weekends, shift cycle, time of start and end	Income level, qualification, human relations, economy, career opportunity, medical facility, first aid, safety surveillance, overtime hours, salary, fringe benefits, etc.

Table: 2.1.

Intervening factors influencing tolerance of shift work in a developing country.

Source: Ahasan, Campbell, Salmani and Lewko (2001:166).

2.5 SHIFT WORK EFFECTS

2.5.1 Body Rhythms

“ It is not impossible: most researchers and practitioners have met fit and contented people who have been shift workers for many years. But it can be difficult for others, perhaps the majority. And it can affect their health” (Wedderburn, 2000:1).

Shift workers have irregular patterns of eating, sleeping, working and socialising. When shifts are worked, the body's natural sleep/wake cycle must be adjusted to whatever shift is being worked. However, these rhythms or cycles within an individual's body do not adjust instantaneously.

In fact, the body might only adjust once the shift has already come and gone. The problem here is that if individuals rotate onto a different shift before their rhythms have had time to adjust, then their rhythms may enter a state where they are never fully synchronised with one another. This is because the main physiological functions such as:

- ⊕ Body temperature
- ⊕ Hormone production
- ⊕ Heart rate
- ⊕ Blood pressure
- ⊕ Gastric activity
- ⊕ Sleep/wake cycle

all have cycles of approximately 25 hours. Many workers change shifts frequently, thus intensifying the severity of rhythm disturbance. The body simply cannot rest and build when these rhythms are frequently disrupted. As mentioned before, humans are day orientated. Shift work, in particular night shift, will have a negative effect, as the body must adjust to the times that are being worked; to the body this is now abnormal. This would result in a reduction of performance and attentiveness. This is what makes certain people better suited to shift work than others. Also, many factors, for example age and family demands, make shift work difficult. This is what makes certain people more susceptible to suffering from higher levels of stress than they should be experiencing, as part of their everyday life.

2.5.2 Interaction between work, family and social life

“The interaction between work and family life may lead to stress” (Boggild, 2000:16). Certain shift rotations lead to shift workers having to sleep during the day and even on weekends. This may hinder family time, as well as social contact as the shift worker is not available due to the fact that it is their rest time. For social contact it may be that they are unable to attend a dinner party, where as for family responsibility, they might miss out on a school play that their child is taking part in. Events such as these are considered to be valued moments and leisure time.

The problem that arises here is that sleep may too often be compromised, so that valued events are not neglected. It is general knowledge to all that humans need seven to eight hours sleep per night. Daytime sleep is however shorter than nocturnal sleep, due to family and social responsibilities. Loss of sleep accumulates, which may lead to a lack of concentration, as well as making an individual more accident prone, among other things. A loss of sleep also leads to irritability and moodiness, which could cause conflicts at home, work and in the individual's social circle.

Shift work also has an impact on the quality of a couple's relationship, due to the fact that the parties who are involved are not spending time with each other. This leads to a lack of communication and feeling and the relationship suffers. Shift work therefore does not only impact on the individual's work, but the person's family life as well. **“A healthy social and domestic life is an important foundation for good physical and mental well being”** (Wedderburn, 2000:25).

2.5.3 Eating Habits

Leonard (1996:19) found in a survey, **“That lunch is skipped by 25% of night workers, probably to avoid interrupting their sleep. Also 16% of night shift workers drink more coffee at night and 13% smoke more. While 64% of workers on three shifts smoke, compared with 44% on office schedules”**.

There are many companies in today's world who have the facility through which they can offer the workers a warm cooked meal (the workers are held liable with regards to payment for their meals). However, of these companies, there are not many that offer a warm cooked meal for the night shift workers. Many companies have vending machines, which offer employees snacks such as: chips, chocolate, cooldrinks and sweets. These are all luxuries, which lead to an insufficient consumption of starch, vitamins, fibre, protein and much of the other nutritional goodness that the human body requires in order to remain healthy. Morning and afternoon shift workers have the advantage of still having time after their shift to have a

decent warm cooked meal with all the nutritional goodness, which their bodies may have missed out on during the course of their shift. The night shift staff might have this cooked meal, but because it will be at an awkward time for the body, night shift workers become susceptible to risk. Night shift workers should be additionally aware of the fact that the digestive system is somewhat inactive at night. This is due to the fact that the circadian rhythm for the gastrointestinal function is at its minimum during the night and its peak during the day. This means that some foods which are tolerated well during the day, cause digestive problems when eaten at night. Gastrointestinal problems are therefore more common among shift workers. The reasons for these gastrointestinal problems are:

- ⊕ There is less access to nutritional meals at night and workers rely on snack foods with a high fat content
- ⊕ Night shift workers drink more coffee to stay alert. Heavy coffee consumption increases the risk of developing ulcers
- ⊕ Meals are taken at irregular times and are often rushed or interrupted

2.5.4 Cardiovascular problems

"The stress connected to shift and night work may have adverse effects on the cardiovascular system through both direct and indirect means" (Wedderburn, 2000:21).

In 1986, Knutsson's first study, a 14-year follow-up study of 504 workers in a paper mill plant, showed up to twice the incidence of heart disease in relation to the level of exposure to shift work. For the first twenty years of shift work experience there was a monotonic rise in cardiovascular disease in the workers. After that time, presumably, those who could not tolerate shift work had either died or switched to day work; and then the remaining shift workers no longer had a higher incidence than the day workers. Judging from Knutsson's study, it should therefore be important to monitor shift workers' health regularly, as well as to promote known counter measures for heart disease.

2.5.5 Women's Problems

Wedderburn learnt of a large Japanese study of about 2,000 women in industry which recorded that women involved in night work, particularly those between 25 and 34 years of age, complained more frequently of irregular cycles and menstrual pains. Uehata and Sasakawa in 1982 stated that the same findings have been reported from other countries and in different work activities such as the textile, airline, hospital and steel industries.

According to Wedderburn (2000:23), "On fertility, some extensive epidemiological studies in the last 15 years have recorded a significantly higher risk of miscarriage, as well as lower rates of pregnancies and deliveries (particularly in those having irregular menstrual cycles) and severe menstrual pains among those working on rotating or irregular shifts. Some main findings are reported below.

- ⊕ Uehata and Sasakawa (1982) found a higher frequency of miscarriages in shift workers (28% versus 17.8% in day workers.)
- ⊕ Lower rate of pregnancy (10% versus 18.1% in day workers).
- ⊕ Axelsson (1984 & 1989) found that women working on rotating and irregular shift schedules had a higher risk of miscarriage than those working on day or permanent evening and night shifts.

McDonald (1988), in a large Canadian study involving more than 56,000 women in six occupational groups, found that rotating shift work in health and service sectors was associated with a higher incidence of spontaneous abortions.

In a study of a group of 252 nurses, Costa (1996) reports finding a slightly higher frequency of irregular menstrual cycles among shift workers (22.1% versus 18.2% of day workers), and a higher prevalence of premenstrual and menstrual syndromes (24% versus 19% of day workers)"

"Males have a rewinding of the stress hormones after going home from work, while females have a persistent high concentration because of the responsibility to look after the home" (Boggild, 2000:18).

Another factor which female shift workers face and feel responsible for is the care of their children. Due to this factor and their irregular patterns of work, they often lose out on obtaining an adequate amount of sleep. Fair enough, the topic of women's gynaecological problems have not yet been fully researched, nor are any of the above-mentioned studies recent. However, much more care and consideration from the employer should be given in order to avoid placing female shift workers at risk.

2.5.6 Age Tolerance

It should not be rare for someone at a later stage in their career to start having difficulty coping as he or she gets older, even if that particular person has been working shifts all of their life. As we are all aware, as one gets older changes occur within the body, as well as on the outskirts of the body. These changes affect the co-ordination of the various body rhythms.

Shift work in general affects one's body rhythms. If ageing is added to this equation, the effect is that shift work may very well hinder an individual's ability to cope. The very real threat of ageing creeping into one's life, makes people under the age of 40 better suited for night work or irregular patterns of shift work. Also a younger individual for example; someone in their twenties, who has no children or house, might be better suited for irregular patterns of shift work, as they would have fewer responsibilities or external negative factors interfering with their work. There are some companies in various industries that utilise people over the age of 40 for three-shift and continental shift cycles; in these instances, annual or biannual health assessments should be offered to the employee. Should the employee not visit their general practitioner frequently, they can rest assured that their health is being monitored at their place of work.

2.5.7 Gastrointestinal Disorders

Once constant change is present within the digestive system, the normal cycle/rhythm will eventually be disrupted and irritated. Signs of this disruption are more commonly identified as constipation, diarrhea and cramping. As mentioned before, the digestive system is somewhat inactive at night. While working shifts an employee will get to a stage where they work the night shift, which will then disrupt the digestive system, which in turn will not be able to adjust instantaneously; thereby causing problems for the employee.

2.5.8 Absence

“As shift workers complain more frequently about their health and well being, it may be assumed that they would always be absent due to illness more frequently than day workers. Sometimes this is found to be the case.” (Wedderburn, 2000:8).

Wedderburn then goes on to say that the selection effect has an impact on absence most of the time. Should an employee have a job that he or she may not be able to fulfil effectively, that particular person may be absent from work quite frequently. However, that particular person may not want to leave the job, as it is their major source of income. This would have a negative influence with regards to the company's absenteeism ratio, as it would be increased as a result of the employee constantly being absent. Therefore, the most important factor with regards to filling a particular position, would be that of recruiting a candidate who possesses the correct attitude, personality, skills and knowledge that are required to perform the tasks of that specific job efficiently, as well as effectively. By recruiting such a person, both the employee and employer may benefit. With regards to the employer, the tasks to be performed daily would be executed in the manner in which they were intended to be.

The quantity, as well as quality of the work performed would be up to standard; the employer is therefore very satisfied with that particular employee as the company benefits from employee job performance. Another benefit for the company is the fact that no extra money would have to be spent on any more recruitment as they have found a capable candidate and would not have to start the lengthy and expensive process over. Also, the employee performing those tasks would be satisfied in their role in the company and would work towards their development and advancement. If a worker is unable to cope with the stress of shift work, then they should move from shift work and return to day work. However, with regards to the fast paced economy that industries find themselves in; it is not just a matter of leaving shift work.

Shift work is a means of income and employment for the employee and a means of attaining production targets set for the employer. Should an employee decide that they cannot cope with shift work, who is to say that a post is available in the normal nine-to-five day work? Also, what is that employee qualified to do? It often is the case that an employee has no other option but to work shifts, as they are unskilled. For these two reasons alone, it is not just a matter of stopping shift work and this is why employees working shifts tend to be absent due to illness more often than normal nine-to-five employees.

Absence in shift work is due to a variety of factors. The reason for this is due to the fact that shift work itself is a complex issue for the body to handle and even more complicated for the body to adjust to. Firstly your sleep cycle/rhythm is constantly changing, which immediately sets off a chain of events. The body cannot keep up with the continuous change and the consequence of this would be a lack of sleep for the employee. Tiredness would set in and the person would become more accident-prone. This would put the individual at risk as well as his/her fellow employees with safety.

The fact of the matter with regards to absence in shift work is that sickness is not the only reason for people being absent. All the above-mentioned factors including eating habits, social life and family life are all grounds for absence with regards to shift work and the reason for this is that shift work tends to have a negative effect on all these factors, due to the strain and stress that the employee is placed under.

"The issue of absenteeism and unscheduled leave has always been of importance to businesses interested in their bottom line. Recently there has been more awareness of the costs of absenteeism and employers are beginning to assess its true impact on every aspect of their business. As they do a better job of tracking absenteeism

employers are beginning to realise how much they are actually spending on it, and are often surprised at the actual figures when they are all added up” (<http://www.braunconsulting.com/bcg/newsletters/winter2003/winter20032.html>. pp1).

2.6 STRESS

2.6.1 WHAT IS STRESS?

“**Stress is the mental and physical condition that results from a perceived threat or demand that cannot be dealt with readily**” (Dubrin, 1994:169). It has been said that a certain amount of stress is not bad or dangerous to an individual.

Stress is simply part of the human condition. This is because it is part of the wear and tear of everyday and cannot, nor should not be avoided. It should be understood that stress is an unavoidable feature of life. Challenges and changes add spice to life and spur people on to new achievements, if handled the right way. For some people at certain stages in their lives, stress can be challenging and exciting, which in turn can lead to improved performance, a greater sense of accomplishment, as well as an increase in satisfaction. Dubrin terms this type of stress *Eustress* (1994:177).

However, what is dangerous is when too many of the specific stress symptoms are encountered. Too much stress makes people temporarily ineffective, as they become distracted. Dubrin terms this type of stress *Distress* (1994:177). Stress can sadly result in emotional problems such as distrust, anger, rejection and depression, which in turn can lead to health problems such as headaches, upset stomachs, rashes, insomnia and high blood pressure.

Figure 2.1 is a model used to help people understand what stress is and also why a set of conditions may create stress for one person and not another. This figure summarises what will be discussed in greater detail in this chapter.

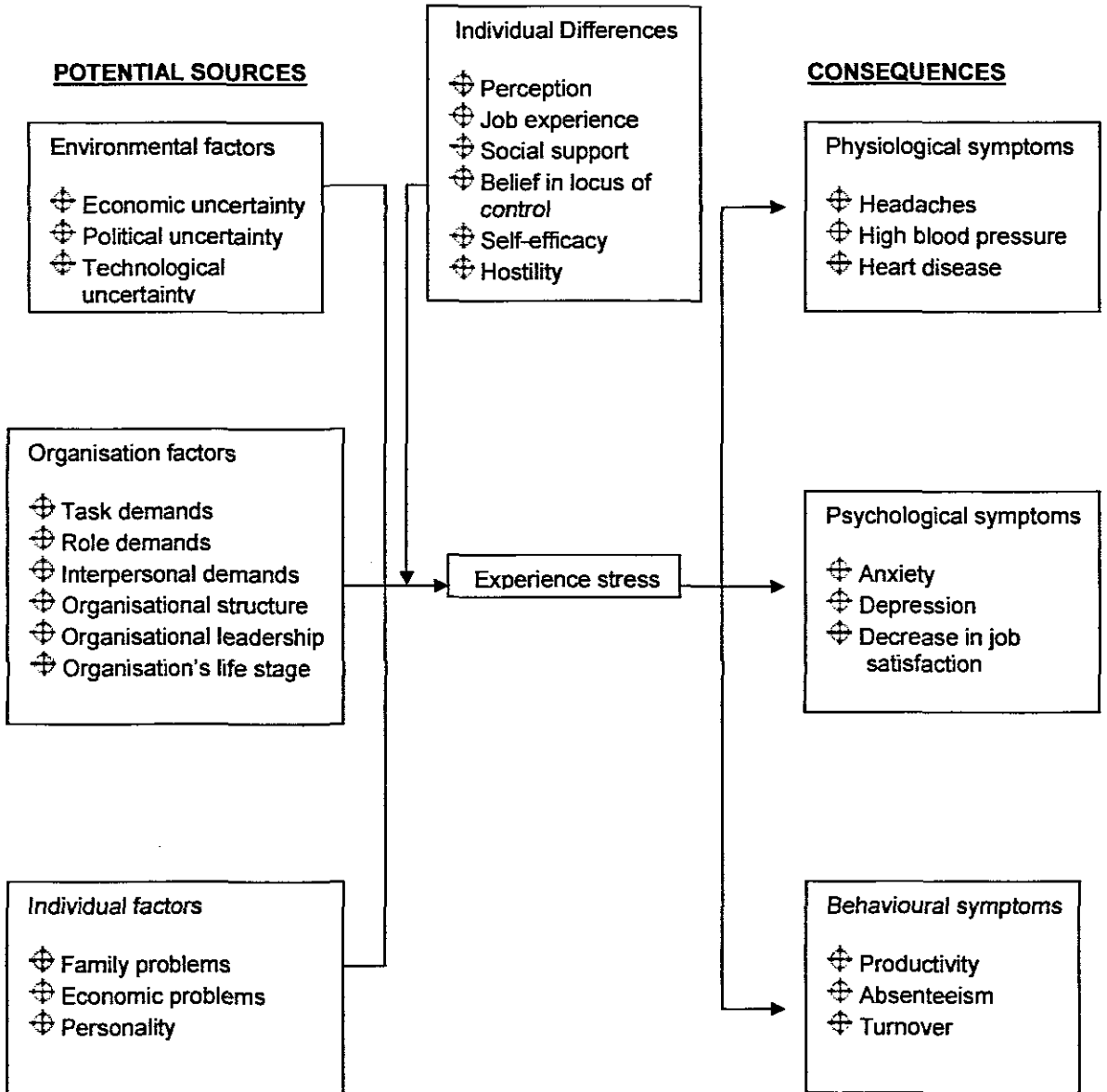


Figure: 2.1

A Model of Stress

Source: Robbins (2005: 571)

UNDERSTANDING STRESS AND ITS CONSEQUENCES

“What causes stress? What are its consequences for individual employees? Why is it that the same set of conditions that creates stress for one person seems to have little or no effect on another person?” (Robbins, 2005:571).

The above model has identified three sets of factors, which perform as potential sources of stress. They are:

- ⊕ Environmental factors
- ⊕ Organisational factors
- ⊕ Individual factors

“Whether they become actual stress depends on individual differences such as job experience and personality. When stress is experienced by an individual, its symptoms can surface as physiological, psychological, and behavioural outcomes” (Robbins, 2005:571). Robbins (2005:571-575) gives a brief overview of figure 2.1.

POTENTIAL SOURCES OF STRESS

Environmental Factors

Just as the design of an organisation's structure is influenced by environmental factors, so to are the stress levels between employees within that organisation. Business cycle changes will create economic uncertainty. For example, should the economy be contracting, people then become increasingly anxious with regards to their job security. Political uncertainties may tend to create stress; this is due to the political threats and changes. Countries which have stable political systems and in which change is implemented in an orderly approach, will not tend to create stress for individuals. The third type of environmental factor that may cause stress is technological uncertainty.

“Because new innovations can make an employee's skills and experience obsolete in a very short time, computers, robotics, automation, and similar forms of technological innovation are a threat to many people and cause them stress” (Robbins, 2005:572).

Organisational Factors

“ There is no shortage of factors within the organisation that can cause stress. Pressures to avoid errors or complete tasks in a limited time, work overload, a demanding and insensitive boss, and unpleasant co-workers are a few examples” (Robbins, 2005:572).

These factors have been categorised around task, role, and interpersonal demands; organisational structure; organisational leadership; and the organisation’s life stage.

Task demands - deals with factors related to a person’s job. These would include the design of the individual’s job (autonomy, task variety, degree of automation), working conditions and the physical work layout. Working in a room that is overcrowded may increase anxiety and stress.

Role demands – this would refer to the stress and strain, which is placed on a particular employee due to the role he or she is responsible for within the organisation. **“Role conflicts create expectations that may be hard to reconcile or satisfy. Role overload is experienced when the employee is expected to do more than time permits. Role ambiguity is created when role expectations are not clearly understood and the employee is not sure what he or she is to do”** (Robbins, 2005:572).

Interpersonal demands – deals with the stress that an employee might experience due to the fact that he or she has a lack of support from his or her colleagues. It may also consist of poor interpersonal relationships.

Organisational structure – refers to where decisions are made, rules and regulations and also the different levels that exist within the hierarchy of the organisation’s structure. Stress will transpire should an employee not be involved in decisions that affect him or her.

Organisational leadership – refers to the style of management used within the organisation from the senior management. A manager, who believes in tight controls and generates unrealistic pressures to perform, would create a culture of fear and tension, emerging into stress.

Organisation’s life stage - refers to the four-stage-cycle, which an organisation goes through. The establishment, the growth, maturity and eventually the decline. The pressures that employees experience are mainly created at the establishment and the decline stages. Much excitement, as well as uncertainty is experienced in the establishment stage, while in the decline stage, employees sense a feeling of uncertainty as retrenchments may occur.

Individual Factors

“Some people thrive on stressful situations, while others are overwhelmed by them. What is it that differentiates people in terms of their ability to handle stress? What individual difference variables moderate the relationship between *potential* stressors and experienced stress? At least six variables – perception, job experience, social support, belief in locus of control, self-efficacy, and hostility – have been found to be relevant moderators” (Robbins, 2005:573).

“Perception, therefore, will moderate the relationship between a potential stress condition and an employee’s reaction to it. For example, one person’s fear that he’ll lose his job because his company is laying off personnel may be perceived by another as an opportunity to get a large severance allowance and start his own business” (Robbins, 2005:573).

Potential stress would therefore lie in the individual’s interpretation of a certain condition and not the actual condition. Negatively related to work stress is that of on the job experience. As stress occurs more frequently, people try to develop means by which they can deal with stress. As this takes time, it is believed that staff members who have been employed at the company for a long period of time are more likely to possess the skills required to manage stress and should therefore experience less stress.

Social support is known to have a calming effect on employees, due to the fact that it alleviates the harmful effects of job strain. Therefore relationships with colleagues and supervisors are vitally important for all employees.

“Those with an internal locus of control believe they control their own destiny. Those with an external locus believe their lives are controlled by outside forces. Evidence indicates that internals perceive their jobs to be less stressful than do externals. When internals and externals confront a similar situation, the internals are likely to believe that they can have a significant effect on the results. They, therefore, act to take control of events. In contrast, externals are more likely to be passive and feel helpless” (Robbins, 2005:574).

Self-efficacy may also manipulate stress outcomes. Individuals with weak or low self-efficacy may very well act in a negative response towards the strain they are experiencing, generated by a work overload and even extended hours of work. Strong self-efficacy individuals will not be affected in such a negative manner, as their reaction to this situation will be less pessimistic.

“Some people’s personality includes a high degree of hostility and anger. These people are chronically suspicious and mistrustful of others. Evidence indicates that this hostility significantly increases a person’s stress and risk for heart disease. More specifically, people who are quick to anger, maintain a persistently hostile outlook, and project a cynical mistrust of others are more likely to experience stress in situations” (Robbins, 2005:574).

CONSEQUENCES OF STRESS

The symptoms of any individual may be displayed in a number of ways. These symptoms have been categorised into three categories: physiological, psychological and behavioural symptoms. Psychological symptoms are also known as subjective effects. Examples of the above-mentioned three categories will be provided in 2.6.3 under the heading of potential *specific effects*.

2.6.2 Stress Symptoms

According to Hodgetts (1996:458), the main symptoms of stress are:

- ⊕ Feelings of inability to cope
- ⊕ Emotional instability
- ⊕ Digestive problems
- ⊕ High blood pressure
- ⊕ Nervousness and tension
- ⊕ Chronic worry
- ⊕ Inability to relax
- ⊕ Excessive use of alcohol, drugs and/or smoking
- ⊕ Problems with sleeping
- ⊕ Unco-operative attitudes

No two individuals will react in the same manner in a stressful situation. The same stressor can provoke different responses in different individuals; the same individual may act differently at different times. This is also dependent on an individual’s level of resilience. According to NIOSH (1999:7), **“Stress sets of an alarm in the brain, which responds by preparing the body for defensive action. The nervous system is aroused and hormones are released to sharpen the senses, quicken the pulse, deepen respiration and tense the muscles. This response (sometimes called the flight or fight response) is important as it helps us defend against threatening situations. The response is programmed biologically.”**

All people will respond in more or less the same way, despite whether the stressful situation is at home or work. There are three basic ways of reacting to stress. They are fight, flight and flow responses. Each of these will work in some situations. None of these responses should be considered good or bad, however when one relies too much on just one type of response, trouble may occur. A brief review of each of these responses may be reviewed below.

2.6.2.1 Fight Response

This type of response has two forms, external and internal. The external involves meeting problems head on, in some instances the problem may even be encountered before it arises. People who tend to rely on this type of reaction tend to be ambitious, competitive and energetic people; people who are high achievers and constantly push themselves to strive for more. However, it is these people who find it hard to relax and can be at risk for heart disorders. Problems can also be dealt with by the internal fight response. People who use this type of response appear to be unemotional, organised and in control. They will have fixed ways of doing certain things and will strongly object should anyone suggest change. In this type of response people are prone to suffering from a stomach ulcer or irritable bowel syndrome.

2.6.2.2 Flight response

In this type of response people avoid their problems whenever possible. They pretend that the problem does not exist or they will give up on the problem and wait for someone else to deal with it. This type of response may eventually make individuals lose control of their lives and become dependent on others. People who use the flight response may never realise their full potential. Dangers with this type of response include: withdrawal, sense of isolation and so forth.

2.6.2.3 Flow Response

This involves accepting the stressor without fighting or running away from it. Here the idea is to follow, let the feelings of the event guide one through the situation. With this type of response people may find it hard to make firm decisions and take action and in some instances, a "nothing really matters" attitude would be displayed. Due to this, people who use the flow response may be susceptible to accidents and mild illnesses.

2.6.3 Potential Specific Effects

Stress is associated with a variety of potentially negative effects. These effects can be perused in table 2.2.

<u>CATEGORY</u>	<u>POTENTIAL SPECIFIC EFFECTS</u>
Subjective Effects	Anxiety, aggression, apathy, boredom, depression, fatigue, frustration, guilt and shame, irritability and bad temper, moodiness, low self-esteem, threat and tension, nervousness and loneliness
Behavioural Effects	Accident proneness, drug use, emotional outbursts, excessive eating or loss of appetite, excessive drinking and smoking, excitability, impulsive behaviour, impaired speech, nervous laughter, restlessness, trembling, and excessive sleep or the inability to sleep
Cognitive Effects	Inability to make decisions and concentrate, frequent forgetfulness, hypersensitivity to criticism, mental blocks and denial
Physiological Effects	Increased blood and urine catecholamines and corticosteroids, increased blood glucose levels, increased heart rate and blood pressure, dryness of the mouth, sweating, dilation of pupils, difficulty in breathing, hot and cold spells, lump on the throat, numbness of tingling in parts of the limbs, hives and indigestion
Organisational Effects	Absenteeism, poor industrial relations and low productivity, high accident and labour turnover rates, poor organisational climate, antagonism at work and job dissatisfaction

Table: 2.2

Potential Specific Effects

Source: Richard Hodgetts (1996:45).

2.6.4 Stress as an Everyday Ailment

The challenge of stress can be stimulating, inspiring some people to strive for their best. However, some people can only cope for so long before they encounter physical problems. According to NIOSH (1999:7) **“Short-lived or infrequent episodes of stress pose little risk. However, when stressful situations remain unresolved, the body is kept in a constant state of activation, which increases the rate of wear and tear to the body’s biological systems”.**

Stress hormone levels normally drop once the stressful situation has passed and only then may the individual relax. The problem that could persist is that, if the stress continues, the stress hormone levels will remain high. Research indicates that stress contributes to as much as 75 per cent of diseases including:

⊕ High blood pressure – Obvious risk factors for high blood pressure are being overweight or having a family history of hypertension. Hidden emotions are also the cause of at least half of all cases of high blood pressure. This is a very intricate disease as there are numerous occasions which there are no symptoms what so ever that an individual may be suffering from this disease. This is extremely hazardous for an individual as high blood pressure is a disease, which may eventually destroy major internal organs such as the heart and kidneys. Common symptoms include headaches, dizziness and blurred vision.

⊕ Heart attack – A heart attack occurs from a clot in the muscle around the heart, because of this clot, the tissue around the muscle dies. A heart attack may occur at any given time and there is no warning before hand. High cholesterol is a major cause of heart attacks. The cholesterol breaks off and travels through the blood vessels and causes a blockage. As the blood vessels are narrow, the blood cannot flow through to the heart, causing a heart attack.

⊕ Stroke – **“In a stroke, an artery to the brain is obstructed or small blood vessels inside the brain burst. Both scenarios sound deadly, and they are”**
(Gottlieb.2002:557).

Many stroke survivors suffer from speech problems, paralysis, and diminished mental capacity, all caused by the death of oxygen-deprived brain tissue during the stroke. Also, second strokes are very common.

⊕ Depression – A depression for longer than two weeks is known as a clinical depression. It includes a variety of symptoms such as: the constant sad and empty feeling, a loss of pleasure in life, loss of appetite, disturbed patterns of sleep and lack of concentration. People having suicidal thoughts are severely depressed. For some conditions of depression, antidepressant drugs can be useful; however, for the more severe conditions, a treatment programme including counselling will be required in order to cure the patient.

⊕ Anxiety – Firstly, it needs to be understood that there is nothing anomalous about being a high-anxiety person, people just need to learn how to manage their anxiety better. Should one get the impression that the anxiety being experienced in a situation is more overpowering than what one is accustomed to, or should these immense feelings of anxiety persist for months subsequent to the actual situation, then there may be an anxiety disorder. Should this occur, only a therapist who specialises in anxiety disorders should be made use of; the reason for this is that tranquilisers and other medication tend to impede the treatment that is in fact effective.

⊕ Chronic fatigue syndrome – **“We suspect the core defect that underlies the disease is a defect in the energy furnaces found in each and every cell: the mitochondria”** (Gottlieb.2002:152).

Should these cells be functioning inadequately, then not enough energy to power all the functions of the body will be generated. Should a person experience a few of the symptoms for no less than six months, then that person may have chronic fatigue syndrome. The symptoms are as follows: short-term memory loss, sore throat, muscle pain, joint pain, headaches, increased thirst, lack of sleep, bowel dysfunction, recurrent or persistent infections, and tiredness after exertion that lasts for more than 24 hours.

⊕ Irritable bowel syndrome – **“Medical science hasn’t figured out what triggers it, which is why physicians call it a functional disorder, meaning a problem with no obvious cause”** (Gottlieb.2002:403).

Symptoms of irritable bowel syndrome include: constipation, diarrhea, or even a combination of both, feeling bloated or nauseas, intense indigestion and abdominal pain such as cramps or sharp stabs. Should one experience several of these symptoms and they persist for longer than four weeks, a gastroenterologist should be consulted.

✦ Eating disorders – The body requires carbohydrates, fats, proteins, vitamins, minerals, fibre, and much more to function in good health; and all this needs to be maintained. Too much of the one and too little of the other would eventually lead to bad health. This is where eating disorders set in. These disorders fall into three categories: anorexia, bulimia and obesity. Sudden weight loss due to stress or illness and teenagers dieting in excessiveness would set off **anorexia**. Here, the persons affected by this disorder become obsessed with being thin. The sufferer would see being thin as the solution to what ever problems or pressures are being experienced. Anorexics do have an appetite, however the hunger is ignored. Should the condition deteriorate, serious side effects would occur and chronic illness may even set in if the condition remains untreated.

Bulimia also stems from the need to be thin. However, here the sufferer has cravings for food, which leads to overeating, followed by either self-induced vomiting or taking laxatives in order to get rid of the food. Regular use of vomiting and laxatives could lead to problems with certain organ functioning, such as the kidneys. **Obesity** is caused when more food and liquids are consumed than the body can burn up. The excess food will then be stored as fat. This excess weight will eventually lead to many problems for the obese person and even increase the likelihood of having a heart attack.

✦ Headaches, both migraine and tension – According to Gottlieb (2002:313), “**The biological or physical cause of headaches is a genetically based deficiency of the brain chemical serotonin. This deficiency alters the physiology of the blood vessels, pain receptors, and other elements in the brain to produce a headache**”. This causes an array of headaches, however the most common types are migraines and tension headaches. A migraine is when a throbbing pain is experienced, but only on the one side of the head. Attached to this pain is nausea, dizziness and visual disturbances. A tension headache covers the whole head and feels as if the head is being squeezed and constricted.

✦ Respiratory problems – There are many different conditions that may make breathing complicated such as colds, influenza, tonsillitis and bronchitis. “**Other viruses and bacteria are responsible for tuberculosis, pneumonia and pleurisy, which affect the lungs and surrounding tissues. Recurrent infections – and exposure to dust or cigarette smoke – can cause the lungs to become over inflated, resulting in emphysema. The respiratory system is particularly susceptible to allergy because irritating substances such as grass, pollen or house dust are easily breathed in, and may trigger hay fever or asthma attacks**” (Anon-Readers Digest 1992:301).

⊕ Backache and other pain syndromes – Backache and many of the other pain syndromes exist due to genetics, stressful times and many other reasons. What is important is that once problems that have never been experienced before start occurring, a medical doctor should be consulted immediately. The reason for this is so that the doctor can treat not only the pain before it gets even worse, but help the person with posture, exercises, relaxation, stress, lifestyle habits and much more. In many instances people can recover without an operation; also operations with pain syndromes can have unpredicted complications, which could worsen the pain in the long run.

⊕ Sexual dysfunction – This refers to disturbances with regards to one's normal sexual activities. This dysfunction may well arise during any stage of one's sexual performance. An example of this could be an individual having a sexual yearning, but not being able to function sexually. Some of the major problems experienced sexually are impotence in men and frigidity in women. An alike problem experienced in both male and female is that of not being able to experience an orgasm.

⊕ Ulcers – The main symptom of an ulcer is a troubled pain that is experienced in the stomach after one has eaten a meal. It may even occur during the night. This pain will come and go for days, maybe even weeks. Should this be experienced, then a doctor should be consulted. Symptoms of a bleeding ulcer are sharp constant pains in the stomach, bloody or even black stools and bloody vomit. This type of ulcer is more serious and a doctor should be consulted immediately.

⊕ Menstrual irregularities – This is a deviation from the normal cycle. Should a cycle be too short or too long or with a missed period it would be classified as a menstrual irregularity. Stress, rapid weight gain or loss, exercise, hormones, drugs, alcohol and even certain types of medication will cause menstrual irregularities.

Constant stress also upsets the immune system, making one more prone to cancer, infections and auto immune diseases, in which the body's immune system turns against its own cells. Examples of these diseases are:

⊕ Rheumatoid arthritis – Arthritis occurs when the cartilage between the bones is broken down. Therefore, bone rubs against bone and this is what causes the pain experienced in the fingers, hips, toes, spine and knees. Rheumatoid arthritis is when the immune system wrongly identifies parts of the body as enemies. Not only do the joints experience pain, but swelling also occurs. However, the damage is not limited to joint pain only as the eyes, heart, kidneys, lungs and many other parts of the body may be damaged.

⊕ Lupus – This is an unremitting sore disease, as tissue throughout the body becomes inflamed. Body tissue is attacked constantly from inside the body and this causes the inflammation. This disease is more common in females than males.

⊕ Thyroid disease – If one is overweight and has been for a while and a lack of concentration is experienced, constipation, dry skin and even a bit of depression, it may be due to a thyroid problem. This problem is more commonly known as an under active thyroid gland.

“The hormones pumped out by the thyroid gland regulate your body’s temperature, so when thyroid hormones are low, so is your temperature, usually by a degree or two. When your temperature is low, many of the body’s energy-producing enzymes can’t do their job. When they don’t work, your body doesn’t work very well, either, and every system, from your brain to your bowels, is stuck in first gear”

(Gottlieb.2002:570).

Standard tests in some cases may not detect the underactive thyroid. Therefore, it is vital that the doctor being approached is willing to do a variety of tests in order to accurately detect whether the problem being experienced is an under active thyroid.

⊕ Certain types of anaemia – This disease is also one that is more common in females than males. Symptoms of this are normally feeling cold, having a colourless complexion and a feeling of no energy. Should one be anaemic, a change in one’s diet and lifestyle would be highly recommended. **“The body needs iron to produce red blood cells. Women who don’t get enough iron in their diets or who have heavy menstrual periods may have insufficient levels of either red blood cells or hemoglobin, the oxygen-carrying protein in red blood cells”** (Gottlieb.2002:21).

⊕ Fertility problems – These are problems relating to difficulty in conceiving a baby. **“Some women naturally take longer to conceive than others, so infertility is not diagnosed until a couple have been having regular sexual intercourse without using contraceptives for at least a year”** (Anon-Readers Digest. 1992:200).

There are a variety of causes that may reduce a couple’s fertility, such as smoking, an increase in the amount of alcohol being consumed and many physical disorders.

2.6.5 Causes of Stress

Common causes of continual stress include:

- ⊕ Loss or bereavement – It is a loss or passing away of a spouse, family member or loved one. This loss tends to bring much more than just sadness to mind. There could have also been many responsibilities that the deceased could have helped with. This also brings along the stress of money worries and insufficient relaxation, as the help is no longer around; which in turn leads to the person who experienced the loss maybe being overworked.

- ⊕ Poor relationships – A happy relationship is important especially with regards to mental health. A poor relationship will affect both parties involved, in turn leading to unnecessary strain on both parties. The strain being experienced in the relationship will be carried with the parties and will in turn have a negative impact on other factors such as work.

- ⊕ Money worries – For those with responsibilities, money is a constant worry. Bills need to be paid, there must be food in the fridge, children's school fees need to be paid, the bond, insurance, petrol, clothes, and much more. Money is what is needed to survive and the more people have, the more people want. Therefore money will always play a role in peoples lives with regards to stress, due to the strain it may create for them.

- ⊕ Unemployment – This ties up with money worries. Unemployment means no job, but the major problem here is the fact that this in turn means no income. Therefore mouths can't be fed and bills will not be able to be paid and this will cause tension and stress for many people, as day-to-day living becomes more and more intricate due to no income.

- ⊕ Poor time management – Constantly not having enough time, be it at work or at home will lead to one feeling as though one is overworked and just can't cope anymore. This is a result of poor time management. If planning is done before hand, enough time will be allocated to those factors that require more time and effort.

- ⊕ Insufficient recreation and relaxation – Insufficient recreation and relaxation stems from being overworked. This, in many instances is due to the fact that time management is being utilised ineffectively. With better time management there will be ample time to fit everything into one's schedule. The feeling of never being able to relax, play a game of

golf or go to a friend's dinner party would leave one feeling stressed and as if there was no way to release the tension being experienced.

- ⊕ Boredom – A job that is not challenging and monotonous would eventually leave one experiencing boredom more often than usual. The reason for this is that the same tasks will be performed daily by the individual. After this has occurred for a specific period of time, the individual will be accustomed to performing those set tasks and the time frame that was initially allocated to perform the job would now seem excessive.

- ⊕ Overworked – Constantly waking up at the same time everyday, seeing to the children, going to work, meeting deadlines, picking up the children, making supper, helping with homework, cleaning the kitchen and so forth are all examples of what makes some people overworked. Most times it is women suffering from feeling overworked as women tend to have more responsibilities around the house.

- ⊕ Ill health – This refers to any person who constantly suffers from any sickness at any time. Should one be terribly sick then that individual would stay home, as their sickness and medication would eventually affect their performance. Also, should this appear to be occurring frequently, then that particular individual would be absent from work more often than usual. This constant absenteeism causes continual stress based on the following two reasons. Firstly, the fear that one's sick leave will eventually run out is a problem, as this means that one's income will be dramatically reduced. Secondly there is the very real threat that should one's absenteeism be a constant dilemma, the organisation will take action, as it affects the company in an immense way. This is when an individual would fear losing their main source of income: their job.

2.6.6 External and Internal Stressors

People may experience two different types of stressors. They are:

EXTERNAL STRESSORS

External stressors include unfavourable physical conditions or stressful psychological environments.

INTERNAL STRESSORS

Internal stressors may also be physical, such as an illness. An example of an internal psychological stressor is an extreme worry about an event that may occur in one's life.

2.6.7 Acute and Chronic Stress

Stressors may also be defined as short-term (acute) or long-term (chronic).

According to Simon, Cannistra, Etkin, Godine, Huang, Heller, Shellito & Stern (2001:1-8), a definition as well as the effects of these types of stress are as follows:

ACUTE STRESS. Acute stress is the reaction to an immediate threat, commonly known as the *fight or flight* response. The threat can be any situation that is experienced, even subconsciously or falsely, as a danger. Common acute stressors include:

- ⊕ Noise – Noise in many instances is a disruptive condition. In some organisations should a great deal of noise be experienced, then employees may blame the poor performance on the noise. However, the factor of noise is mostly confronted in manufacturing organisations; those companies possessing industrial workers. Here employees are compelled to withstand the noise. Should any employee not be able to get used to the noise, then it would lead to a source of physical and psychological stress for that particular employee.

- ⊕ Crowding – A fear of people or society is known as anthropophobia. However there are certain individuals who may communicate and even socialise with people perfectly, until the size of the crowd becomes enlarged. Be it during a social event or a business task, large crowds and in extreme cases even public speaking terrifies these people. During such an episode, the individual would just freeze up and then experience an anxiety attack. In these incidents the individual is not in control, by the response that they reveal due to the crowding that they cannot cope with. This places strain on individuals, as it affects their work and social life.

- ⊕ Isolation – This is a lack of contact with either a certain individual or people in general. The reasons for this isolation are either: an individual's fear of being disliked or something that may have happened to that person in the past, which ended exceedingly dreadfully; leading to that individual withdrawing himself or herself from society.

- ⊕ Hunger – Hunger develops from a psychological need for food. However, the term hunger may be used for cravings of many sorts and not only for that of food; the term hunger is therefore used metaphorically when an individual is longing, pining or desires something. What the person may be longing for, will leave an empty feeling.

⊕ Danger – Danger is a state of being vulnerable to harm or injury. For example, should one embark on a project without carefully assessing the risks, then that individual would be putting themselves in danger. Some individuals on the other hand go to the other extreme, not proceeding with any ventures due to the probability of a dangerous incident occurring. Fearing this danger, could place unnecessary stress and tension on individuals.

⊕ Infection – There are many forms of infections that humans are susceptible to: bacterial, viral and fungal infections to name a few. Should an individual have any sort of infection, that person may not function as he or she normally would due to either the treatment or medication. While mild signs of stress may result in infections, while having an infection and experiencing stress could worsen it.

⊕ Imagining a threat or remembering a dangerous event – Recalling a tragic or shocking event may cause an individual to tense up and even experience an anxiety attack. This is due to the fact that the particular event may place stress upon the individual subconsciously. Examples of such events would be: a car accident, a robbery, hijacking, and so forth. On the other hand, fearing and imagining a dangerous event that may or may not occur, would also place tension and stress on an individual subconsciously.

Under most circumstances, once the acute threat has passed, the response becomes inactivated and levels of stress hormones return to normal, a condition called the *relaxation response*.

CHRONIC STRESS. Frequently, however, modern life poses on-going stressful situations that are not short-lived and the urge to act (to fight or to flee) must be suppressed. Stress, then, becomes chronic. Common chronic stressors include:

⊕ On going highly pressured work – All persons must endure pressure at many times during work in order to meet deadlines, besides a little pressure every now and then creates that extra enthusiasm and excitement for the work being done. What could create major levels of stress are: when an individual's work is such a large amount that one individual may not complete it without help, constant deadlines that must be met and unnecessary conflict arising in the department which must be resolved in order for the work to be completed. This topic ties up with work overload, which will be discussed later.

- ⊕ Long-term relationship problems – As mentioned earlier, according to Wedderburn (2000:25), “A healthy social and domestic life is an important foundation for a good physical and mental well being”. Relationship problems create stress, be it a wife, a husband, fiancé, girlfriend or boyfriend. Whether one is living with the other party or not, stress may still be experienced. The reason why this is an example of chronic stress is that these relationship problems are carried to work with the individual as the problem is constantly on the individual’s mind. It therefore not only affects the relationship, but both parties’ performance at work is negatively affected and neither is aware of this.
- ⊕ Loneliness – Each and every individual needs time to himself or herself, to do what he or she chooses. However, people who are withdrawn have minimal contact or interaction with people. Even if there are family members, this person will choose not to communicate. This will place a large amount of stress on an individual due to the fact that should that particular person need someone to talk to he or she would rather bottle the feelings inside. Also, by always wanting to be alone and not communicate with people, that person may experience problems when the time arises to communicate with either a colleague or a manager at work. This is due to the fact that the particular individual, may not know how to address the person, as the individual has had minimal contact with people and has not learnt people skills.
- ⊕ Persistent financial worries – As established earlier, it is well known that financial worries do cause stress. Persistent financial worries is a major source of chronic stress as it is not a short-lived problem. Constant and unrelenting problems that have already caused stress will only aggravate it even more. For that reason, the only way to dismiss the stress is to dismiss the worries by mending them.

2.6.7.1 What are the Effects of Acute Stress?

The various effects are as follows:

2.6.7.1.1 The Brain's Response to Acute Stress

A part of the brain called the *hypothalamic-pituitary-adrenal* (HPA) system is activated.

Release of Steroid Hormones. The HPA systems trigger the production and release of steroid hormones (*glucocorticoids*), including the primary stress hormone *cortisol*.

Cortisol is very important in marshalling systems throughout the body (including the heart, lungs, circulation, metabolism, immune systems and skin) to deal quickly with the situation.

Release of Catecholamines. The HPA system also releases certain neurotransmitters (chemical messengers) called *catecholamines*, particularly those known as *dopamine*, *norepinephrine* and *epinephrine*.

- ⊕ “Catecholamines activate an area inside the brain called the *amygdala*, which apparently triggers an emotional response to a stressful event.
- ⊕ Neurotransmitters then signal the hippocampus (a nearby area in the brain) to store the emotionally loaded experience in long-term memory.
- ⊕ During a stressful event, catecholamines also suppress activity in areas at the front of the brain concerned with short-term memory, concentration, inhibition and rational thought. This sequence of mental events allows a person to react quickly to the situation, either to fight or flee from it. (It also hinders the ability to handle complex social or intellectual tasks and behaviours)” (Simon et al.2001:2).

2.6.7.1.2 Response by the Heart, Lungs and Circulation to Acute Stress

An individual's heart rate and blood pressure will increase instantaneously as the stressful situation comes closer. This is due to the following:

- ⊕ As the lungs take in more oxygen, breathing becomes rapid
- ⊕ The blood flow increases
- ⊕ The blood is able to transport more oxygen, as the spleen discharges red and white blood cells.

2.6.7.1.3 The Immune System's Response to Acute Stress

The effect on the immune system from confrontation with a situation is similar to a mother looking out for her child. This is because the immune system redistributes immune molecules to parts of the body where they are most needed. An example of this would be the skin, as it is prone to infections.

2.6.7.1.4 The Acute Response in the Mouth and Throat

The minute the stressful situation becomes more authentic and begins to exert a certain amount of pressure on an individual, **“fluids are diverted from nonessential locations, including the mouth. This causes dryness and difficulty in talking. In addition, stress can cause spasms of the throat muscles, making it difficult to swallow”** (Simon et al.2001:3).

2.6.7.1.5 The Skin's Response to Acute Stress

As the heart and muscle tissues must be supported, the stress effect diverts the blood flow away from the skin. This is where clammy or sweaty skin stems from.

2.6.7.1.6 Metabolic Response to Acute Stress

“Stress shuts down digestive activity, a non-essential body function during short-term periods of physical exertion or crisis” (Simon et al.2001:3).

2.6.7.1.7 The Relaxation Response: the Resolution of Acute Stress

The stress hormones will return to normal only once the stress has passed and the effect has not been harmful. This in turn means that the body's system will also return to its normal state.

2.6.7.2 The Negative Effects of Stress

As alluded to earlier, a certain amount of stress is good for any individual at any given time, as it spurs people on to new achievements and also could increase one's levels of performance. **“If stress becomes persistent and low-level, however, all parts of the body's stress apparatus become chronically over or under-activated. This may produce physical or psychological damage over time”** (Simon et al.2001:3).

Stress-related conditions that are most likely to produce negative physical effects include:

- ⊕ An accumulation of persistent stressful situations, particularly those that a person cannot easily control (for example, high pressured work plus an unhappy relationship).
- ⊕ Persistent stress following a severe acute response to a traumatic event (such

as a car accident)

- ⊕ An inefficient or insufficient relaxation response
- ⊕ Acute stress in people with serious illness, such as heart disease

2.6.7.2.1 Psychological Effects of Stress

Should stress be present in an individual's life, due to the fact that the individual is worried, depressed, tense or nervous, the stress will reduce the person's feelings of accomplishment, joy, pleasure and so forth. Very often in stressful situations, relationships and current jobs are at risk.

2.6.7.2.2 Heart Disease

According to researchers, incidents of stress have been associated with a higher risk for serious cardiac events. What is the reason for this?

“ **Stress activates the sympathetic nervous system**” (Simon et al.2001:4). Such actions and others may negatively affect the heart in several ways:

- ⊕ Sudden stress increases the pumping action and rate of the heart and causes the arteries to constrict, thereby posing a risk for blocking blood flow to the heart.
- ⊕ Emotional effects of stress alter the heart rhythms and pose a risk for serious arrhythmias in people with existing heart rhythm disturbances.
- ⊕ Stress causes blood to become stickier (possibly in preparation for potential injury), increasing the likelihood of an artery-clogging blood clot.
- ⊕ Stress may signal the body to release fat into the bloodstream, raising blood-cholesterol levels, at least temporarily.
- ⊕ In women, chronic stress may reduce estrogen levels, which are important for cardiac health.
- ⊕ Recent evidence confirms the association between stress and hypertension (high blood pressure). People who regularly experience sudden increases in blood pressure caused by mental stress may, over time, develop injuries in the inner lining of their blood vessels.

The above-mentioned are the negative effects that stress may have on the heart; however, the actual harm of stress on the heart, according to researchers, has not yet been confirmed.

2.6.7.2.3 Susceptibility to Infections

As mentioned before, the heart and muscle tissues must be supported during stressful situations and blood is therefore diverted to these areas. This may “impair a person’s response to immunisations” (Simon et al.2001:5).

Should someone under stress start to come down with the flu, these flu symptoms would be intensified, as the immune system has been impaired. Improvement in health would improve at a sluggish rate, as long as stress is present.

2.6.7.2.4 Gastrointestinal Problems

“The brain and the intestine are strongly related and mediated by many of the same hormones and nervous system” (Simon et al.2001:5).

Therefore if stress is present for a long period of time, then the digestive system will eventually be disrupted and irritated. Examples of this are: constipation, diarrhea, cramping and bloating.

IRRITABLE BOWEL SYNDROME. Irritable bowel syndrome (or spastic colon) is strongly related to stress. With this condition, the large intestine becomes irritated, and its muscular contractions are spastic rather than smooth and wave like. The abdomen is bloated and the patient experiences cramping and alternating periods of constipation and diarrhea. Sleep disturbances due to stress can further exacerbate irritable bowel syndrome.

PEPTIC ULCERS. It is now well established that most peptic ulcers are either caused by the pylori bacteria or by the use of nonsteroidal anti-inflammatory (NSAID) medications (such as aspirin and ibuprofen). Nevertheless, studies still suggest that stress may predispose someone to ulcers or sustain existing ulcers.

INFLAMMATORY BOWEL DISEASE. Although stress is not a cause of inflammatory bowel disease, there are reports of an association between stress and symptom flare-ups.

2.6.7.2.5 Eating Problems

Without even conducting research, we are all aware that stress will have different effects on different people with regards to eating; these effects are negative.

WEIGHT GAIN While exposed to stress, weight gain is something that may occur in some individuals, even with a healthy diet.

WEIGHT LOSS Everybody is different; therefore some people may burn their food much quicker than others, while others may have a loss of appetite. These are the effects that stress may trigger.

EATING DISORDERS Highly associated with many adjustment problems in response to emotional issues and stress are the eating disorders known as anorexia nervosa and bulimia.

2.6.7.2.6 Pain

MUSCULAR AND JOINT PAIN Chronic pain caused by arthritis and other conditions may be intensified by stress.

HEADACHES Tension-type headache episodes are highly associated with stress and stressful events.

2.6.7.2.7 Sleep Disturbances

As alluded to in Table 2.2, the behavioural effects of stress are either excessive sleep or the inability to sleep or even a combination of both. This is due to the tension of unresolved stress.

2.6.7.2.8 Sexual and Reproductive Dysfunction

SEXUAL FUNCTION Stress can lead to a diminished sexual desire and an inability to achieve orgasm in women. Stress response can also cause temporary impotence in men. Part of the stress response involves the release of brain chemicals that constrict the smooth muscles of the penis and its arteries. This constriction reduces the blood flow into and increases the blood flow out of the penis, which can prevent an erection.

FERTILITY Stress may even affect fertility. Stress hormones have an impact on the hypothalamus gland, which produces reproductive hormones. Severely elevated cortisol levels can even shut down menstruation.

EFFECTS ON PREGNANCY Maternal stress during pregnancy has been linked to a 50% higher risk for miscarriage. It is also associated with lower birth weights and increased incidence of premature births, both of which are risk factors for infant mortality.

2.6.7.2.9 Memory, Concentration and Learning

As stated in Table 2.2, under the cognitive effects of stress, an individual suffering from stress will be unable to concentrate. Be it at work or at home, this lack or loss of concentration will lead to the specific individual being more accident-prone.

At the same time a person's memory and learning skills may also be affected as stress impairs skills. The reason for this is because stress activates a part of one's brain when stressful situations are present.

2.6.7.2.10 Self-Medication with Unhealthy Lifestyles

People who are under a tremendous amount of stress sometimes end up looking for the answers in drinking, smoking, drugs and even abnormal eating patterns. These destructive behaviours cause more harm than good. The reason for this is that these behaviours tend to interfere with sleeping patterns, heart disease, eating patterns, increased tension, concentration and so forth.

2.6.8 Who is at Risk for Chronic Stress or Stress-Related Diseases?

2.6.8.1 General Factors that Increase Susceptibility

During every person's life, there will come a time that they will be exposed to stress. Different people will react differently in the same stressful situation, due to the nature of their personality, as this is what makes each individual different from the other. Simon et al (2001:8), articulates that people respond to stress differently depending on different factors:

- ⊕ Early nurturing. (Abusive behaviour towards children may cause long-term abnormalities in the hypothalamus-pituitary system, which regulates stress.)
- ⊕ Personality traits. Certain people have personality traits that can cause them to over-respond to stressful events.
- ⊕ Genetic factors. Some people have genetic factors that affect stress, such as having more or less efficient relaxation response.
- ⊕ Immune Regulated Diseases. Certain diseases that are associated with immune abnormalities (such as rheumatoid arthritis or eczema) may actually impair a response to stress.
- ⊕ The length and quality of stressors. Naturally the longer the duration and more intense the stressor, the more harmful the effects.

Studies indicate that the following people are more vulnerable to the effects of stress than others, even though they may have been overlooked in the past.

- ⊕ Younger adults. No one is immune to stress; however it may simply go unnoticed in the very young and old.
- ⊕ Women in general
- ⊕ Working mothers. (Working mothers, regardless of whether they are married or single, face higher stress levels and possibly adverse health effects, most likely because they bear a greater and more diffuse work load than men or other women.
- ⊕ Less educated individuals
- ⊕ Divorced or widowed individuals. (A number of studies indicate that unmarried people generally do not live as long as their married contemporaries.)
- ⊕ *The unemployed*
- ⊕ Isolated individuals
- ⊕ People who are targets of racial or sexual discrimination

2.6.8.2 Stress in the Elderly

It is common knowledge that once a person starts to age, the body starts to wear out and the systems working inside the body becomes less efficient. The body's response to stress is therefore impaired. Also the elderly are often faced with stressful situations, such as, the death of a spouse, medical problems and so forth. The problem here is they are not fully equipped to handle these stressful situations.

2.6.8.3 Lack of Social Network

Everyone looks forward to relaxing with friends or family. Be it a dinner party, going out or even just staying at home, mingling with people is what helps people to relax and helps the mind let go of the worries which occupy it. Even though one might not be aware of it, a lack in the social networking department will lead to an increase in the tension levels while dealing with a stressful situation.

2.6.8.4 Work Risk Factors

According to Simon (2001:10) among the intense stressors at work are the following:

- ⊕ "Having no participation in decisions that affect one's responsibilities
- ⊕ Unrelenting and unreasonable demands for performance
- ⊕ Lack of effective communication and conflict-resolution methods among workers and employers
- ⊕ Lack of job security
- ⊕ Long hours
- ⊕ Excessive time spent away from home and family

2.6.9 Why Stress Results in a Disastrous Condition for Some People

On any given day, trillions of messages are sent and received in the brain. The messages that are happy, upbeat messages are carried by the brain's biogenic amine system. Stress, however, causes problems with the brain's biogenic amine system. The amount of stress that one can tolerate before the biogenic amine system of the individual malfunctions, is referred to as the person's ***stress tolerance***. This is set by genetic inheritance. So, why is it that stress results in a disastrous condition for so many people?

There are three main components in the biogenic amine system:

- ⊕ **Serotonin (required for sleep)**
- ⊕ **Noradrenalin (gives energy)**
- ⊕ **Dopamine (sets pleasure and pain levels)**

These are the brain chemicals that begin to malfunction when stress levels become too much for a person to handle. Simon et al (2001:3-5) elucidates briefly each of the main components.

2.6.9.1 Serotonin

Serotonin is required for sleep; however, it must work properly in order for the individual to arrive at the end result, which is sleep. Serotonin is responsible for making sure that

one's body's physiology is set for sleeping. If serotonin does not do its job properly, then the individual will not be able to obtain a restful sleep, no matter how hard that person may endeavour.

Serotonin sets the body's clock

Inside every person's brain is an accurate clock. This clock keeps all the various functions of one's body co-ordinated and moving to the same rhythm. The body clock is located deep in the centre of the brain, in a little group of cells known as the pineal gland. Within the pineal gland is a storehouse of the component serotonin, which is the chemical mainspring of the clock. Each day the serotonin is chemically converted to a related compound, melatonin; then the melatonin is converted right back to serotonin.

This whole cycle takes exactly 25 hours – and this is what forms the body's clock. This body clock cycles every 25 hours. However, when a person is exposed to a natural cycle of daylight and darkness, the pineal gland will automatically set itself to a 24-hour day. The 24-hour cycling of the body clock is important, as it adjusts one's body chemistry for sleeping and for waking. Every evening the body clock will set one's physiology for sleeping and after a while, it sets it for waking.

The body clock and body temperature

Every 24 hours, the body temperature cycles from high to low, varying by as much as one degree. When it is time to wake up and be active, the body temperature rises slightly. When it is time to fall asleep, the body temperature will dip slightly. To achieve the best sleep, the body thermostat is supposed to lower slightly at night, a timing that is co-ordinated by one's body clock.

The body clock and stress-fighting hormone

The following is obtained from a teach health website, in order to clarify the functioning of one's body clock and the stress-fighting hormone that it possesses.

“The body has a vital hormone called cortisol, which is the body's chief stress fighting hormone. When cortisol secretion is high, the body shifts to a self-protective mode. The body is then prepared for stress conditions, for example: hunger, trauma, and fighting and so forth. However, cortisol drops substantially in the evening, as one relaxes and prepares for sleep. As with body temperature, the ups and downs of your stress-fighting hormone must cycle properly during a 24-hour day for you to achieve a peaceful night's sleep and awake refreshed. Any disruption of your cortisol cycle will make a restful sleep very difficult” (Simon et al. 2001:4).

The body clock and sleep cycles

After falling asleep, one normally goes deeper and deeper into sleep, finally reaching a state of deep restorative sleep. Then sleep becomes lighter and lighter when one enters a dreaming sleep. One goes through this cycle about every 90 minutes. In the early part of the evening the cycle pauses a relatively long time in the deep restorative phase. As the evening progresses the amount of time spent in this phase will lessen. This cycle is regulated by the internal body clock and in order for one to feel rested, this sleep pattern must be cycling properly.

Stress destroys one's sleep

The body clock is essential for the proper harmony of one's body temperature, stress fighting hormone and sleep cycles. In order to fall asleep easily, sleep soundly and awake refreshed, the body clock must be functioning properly. Serotonin is the mainspring of the body clock. If stress causes serotonin to fail, the body clock will stop working and one will not be able to obtain a restful sleep no matter how hard one attempts to. Serotonin is usually the first to fail under stress; the first sign of stress will usually be the inability to obtain a restful sleep.

2.6.9.2 Noradrenalin

"When you are frightened, adrenalin is released into your blood stream by your adrenal glands. Your heart beats faster; blood flow is shunted away from your skin and intestines and towards your muscles. Perspiration appears on your palms and forehead. You are ready for *fight or flight*" (<http://www.teachhealth.com/chemmess.html> pp:5).

Adrenalin and Noradrenalin go hand in hand, as the functions they both possess have to do with energy. The teach health website also explains that noradrenalin has many important functions in the body's nervous system. The one that is more relevant to this dissertation is the role of Noradrenalin in setting one's energy levels. Proper functioning of Noradrenalin in the brain is essential for people to feel energised. Without enough brain Noradrenalin one would feel exhausted tired and without energy. People with Noradrenalin failure become progressively more and more lethargic, leading to not having the energy to do anything.

2.6.9.3 Dopamine

"A recent technological advance has led to the remarkable uncovering of natural morphine-like molecules that are made in each of our brains. Collectively, these substances are known as endorphins and they are responsible for regulating our

moment-to-moment awareness of pain. In the discovery for endorphins our bodies' naturally occurring mechanism for regulating pain has been found. It is likely that a *certain baseline secretion of endorphin occurs at all times in the body. Under certain conditions, this endorphin secretion may rise, making the person relatively insensitive to pain. Under other conditions, the endorphin levels may drop, making a person more sensitive than usual to pain. Individual variations of endorphin level would explain the observation that people may react with differing levels of perceived pain when suffering the same painful stimulus. Dopamine seems to be concentrated in areas of the brain immediately adjacent to where the major endorphin releasing mechanisms lie. When the dopamine function declines, the endorphin function also declines. Therefore, when too much stress causes failure of the dopamine function, it also causes loss of your body's natural painkiller. Dopamine also runs your body's pleasure centre. This is the area of your brain that allows you to enjoy life. When stress interferes with your dopamine function, the pleasure centre becomes inoperative. With severe dopamine/endorphin malfunction, life becomes painful and devoid of any pleasure*" (<http://www.teachhealth.com/chemmess.html> pp:5)

2.6.10 Why Stress should matter to the Employer

Businesses provide goods and services. If this is done effectively and efficiently it leads to customer satisfaction, greater profit and many other advantages for the company. However, the above-mentioned factors benefit only the company. Employers and their managers should be more concerned about the well being of their employees.

A stressed employee is not a happy, nor a very productive individual. Therefore looking after that employee's well being can benefit the business, as well as the employee.

"Work stress models explain psychological health (adjustment and maladjustment) as a function of the individual's ability to display effective or ineffective adaptive behaviour when internal or external stressors lead to physical or psychological stress ... Work stress may influence work outcomes in many ways and have many consequences for the individual, including physical disease, emotional reactions, psycho physiological symptoms, cognitive deficiencies, behavioural reactions and even psychological disorders" (Bergh & Theron. 2003:424).

Figure 2.3 gives a brief overview of causes and consequences of work stress. Under the topic of why stress should matter to the employee, the factors under work stressors in the following figure highlight factors that ought to be monitored and evaluated regularly in order to detect potential stress at an early stage and be in control of it, so that neither the employer nor employee suffers from stress, the effects of which in the long run are detrimental to both parties concerned. Figure 2.3, is on the next page.

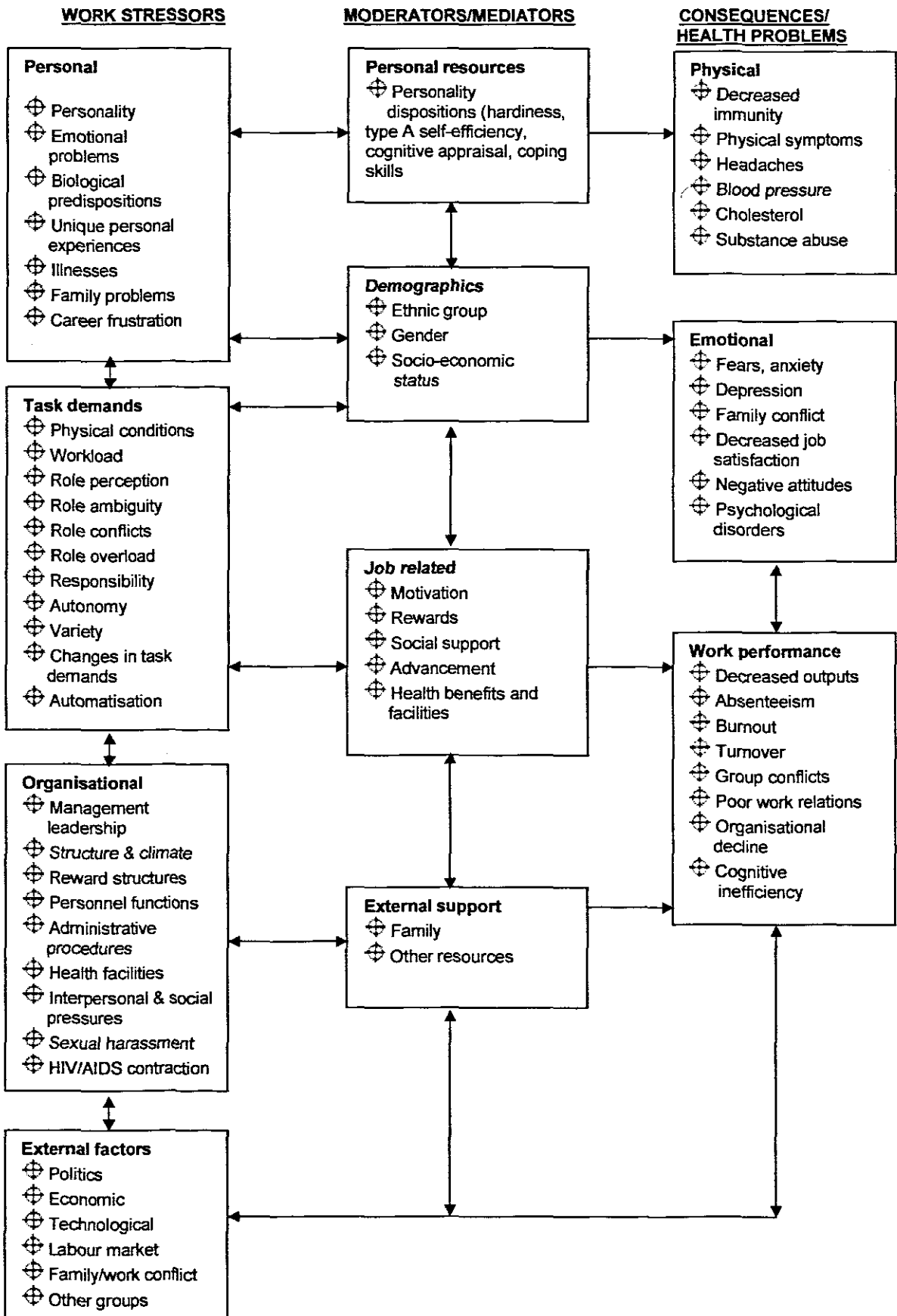
Figure: 2.2

Causes, process and consequences of work stress

Source: Bergh and Theron (2003:425).

STRESS MANAGEMENT MODULE FOR SHIFT WORKERS

COMPILED BY: ROMY LEIGH ANTHONY



WORK STRESSORS

Personal

- **Personality** - Each and every person is different from the next and so too are their personalities. For example: one individual may be a calm and subdued person and another's personality may include high degrees of anger, aggressiveness and hostility. The person with the more hostile personality will perceive a stressful situation in a different way to that of the more subdued person, as their personality is that of a more antagonistic nature. For that particular individual, stress levels will be rapidly increased as opposed to those levels experienced by a more tranquil individual. The effects of this type of personality will also create tension, strain and unnecessary conflict between work colleagues; making teamwork impossible. Also, the personality is what determines whether or not an individual has what it takes to execute a certain post. For example: if blue collar workers are electing a shop steward, the workers will nominate employees whom they feel are outspoken, with skills to raise the appropriate issues concerned; not an individual who is withdrawn and afraid of public speaking.
- **Emotional problems** - As earlier discussed, many people bring their emotional baggage to their place of work. Due to the fact that there is too much on the individual's mind, a lack of concentration will occur, which will result in errors and the individual or other employees being seriously injured. For example; a fork lift driver in a factory who has emotional problems. If concentration is not one hundred percent then an accident could be caused injuring not only the driver.
- **Biological predispositions** - As previously mentioned, due to the fact that each and every person is different, there are different types of personalities. While at one's place of work, personalities will either clash or bring out the best in people. Due to the nature of this dissertation, two types of personalities will be focused on. They are: Type A and Type B personality.

"A person who exhibits Type A behaviour is demanding, impatient, and overstriving and is therefore prone to distress. Type A behaviour has two main components. One is a tendency to try to accomplish too many things in too little time. This leads the Type A individual to be impatient and demanding. The other component is free-floating hostility. Because of this sense of urgency and hostility, these people are irritated by trivial things. On the job, people with type A behaviour are aggressive and hard working.

Off the job, they keep themselves preoccupied with all kinds of errands to run and things to do . . . Type A personalities frequently have cardiac diseases, such as heart attacks and strokes, at an early age. But not every hard-working and impatient individual is prone to severe stress disorder . . . Type A individuals recover as quickly from heart attacks as Type B individuals. The latter group is relaxed, patient, and usually nonhostile” (Dubrin. 1994:179).

- **Unique personal experiences** - Personal experiences to a large extent determine how mature or immature people have become. One’s maturity also plays a role with regards to how a person would deal with a particularly stressful situation. When faced with a stressful situation, a mature person will deal with the situation professionally and maturely, where as an immature person may not know how to deal with the situation. Maturity does not only come with age, it grows mainly from personal experiences. With regards to work, one’s maturity plays a major role as many obstacles arise in all professions and being mature enough to handle those obstacles suggests that one will be less afraid of confronting a stressful situation.
- **Illnesses** - There are various illnesses that may impede employees from performing to their full potential, due to their sickness or the medication they are on. For one, concentration may be hindered and the skill that the particular individual once possessed is now gradually diminishing. This will put strain on the individual, but also create stress for the individual’s manager and co-workers, as that role must now be filled.
- **Family problems** - As mentioned before, employees take work problems home and bring family problems to work. While at work, having too many problems on one’s mind, will result in a decrease in performance eventually. This puts unnecessary stress on the individual at work, as these worries are not work related. In addition, even at the same time at work a stressful situation may also be occurring. The individual may not know how to deal with this, as too much is happening all at the same time. Many employees are not equipped to leave family problems at home.
- **Career frustration** - This is stress put on an individual due to many factors relating to one’s job. For example, being in the same position for ten years with no training, nor with any development in order to move into a more challenging position one day.

This employee becomes frustrated and feels as though their work means nothing to the company. Many other factors also create career frustration; these will be discussed under task demands.

Task Demands

- **Physical conditions** – Physical conditions in this sense relate to the physical setting in one's work environment. **“Taking into account the human factor in designing the employee's workstation is often termed ergonomics. The relationship between the employees and their workstations is considered to include the machines used, lighting, noise, chairs and so on. All these factors can ultimately affect employee productivity”** (Carrell, Grobler, Elbert, Marx, Hatfield and van der Schyf.1997:122).

Various factors need to be considered when setting up workstations and conditions under which employees are to work. The reason for this is that should an employee not be able to endure a certain factor, then stress would eventually start to creep in due to the fact that the specific employee is exposed to the specific stressor daily.

- **Workload** – How an employee's workload is scheduled can create additional stress for that employee. For example, shift work, which involves rotating night and day schedules, disrupts biological rhythms and thus contributes to stress.
- **Role perception** –**“The person's own perception of their role may differ from the expectations of others. This implies that insufficient information is available for the adequate performance of the role”** (Mullins. 1999:474). Potential stress lies in the individual's perception of what is to be expected from him or her, due to the fact that he or she is now aware that others perceive that specific role differently; and this causes confusion.
- **Role ambiguity** - Role ambiguity occurs when there is a lack of clarity as to the precise requirements of the role and the person is unsure what to do. Role ambiguity may result from a lack of formally prescribed expectations. It is likely to arise in large, diverse groups or at times of constant change. Uncertainty often relates to such matters as the method of performing tasks, the extent of the person's authority and responsibility, standards of work, and the evaluation and appraisal of performance”(Mullins. 1999:474).

- **Role conflicts** – Role conflicts arise due to role differentiation not being clearly defined; expectations are therefore not clear for both the employee and the manager. *This will lead to two people performing an overlapping task. However, the problem that arises here is, the authority and the person who is actually responsible for this task is not known due to the uncertainty of the roles. Such confusion would later result in stress.*
- **Role overload** – “Role overload is when a person faces too many separate roles or too great a variety of expectations. The person is unable to satisfactorily meet all expectations and some must be neglected in order to satisfy others. This leads to a conflict of priority. Some writers distinguish between role overload and work overload. Role overload is seen in terms of the total role-set, and implies that the person has too many separate roles to handle. Where there are too many expectations of a single role – that is, a problem of quantity – this is work overload” (Mullins. 1999:474).
- **Responsibility** – This refers to the amount of accountability that comes along with certain tasks that an employee is required to do. An example would be a supervisor. Within a department a supervisor will be responsible for a certain number of people and should something go wrong, be it an accident with an employee or a machine failure, the supervisor would be questioned, as he/she was responsible for overseeing the optimum and effective running of that department. This creates a great deal of stress for many employees, as they are responsible for not only themselves, but for other employees as well and the running of the department.
- **Autonomy** – “The extent to which a job provides freedom, independence and discretion in planning the work and determining how to undertake it” (Mullins. 1999:644).
- **Variety** – This is the extent to which a job entails different activities and duties. While main functions of the job are performed, there are other duties that the incumbent may perform, which are slightly different from their normal duties. This leads to different skills and knowledge being acquired by the incumbent, which also helps with regards to training and development of the incumbent for the future. However, although some employees perceive variety as a form of development, others may perceive variety as an uncalled for stressful ingredient in their profession. The reason for this is that certain employees are not capable of performing a variety of tasks, nor do they possess the skills to do so.

They therefore fear this opportunity; and for some, even though this fear is subconscious, it is so severe that it creates stress.

- **Changes in task demands** – This includes all those factors relating to a person's job when going through a transformation. In other words, this is when many changes take place within an employee's job specification. These changes may be anything from a new computer programme being utilised to another task being added onto an employee's workload. Changes in task demands therefore, refer to any changes which occur, to which the employee must adapt.

Organisational

- **Management leadership** – This refers to the managerial style of an organisation's senior management and also the climate that they create for the rest of the organisation. In other words, the way in which the functions of leadership are carried out and of course the way in which management behaves towards the organisation. Should management behave in a highly authoritative way, having no interaction with the employees of the organisation and are only target and turnover orientated, then the employees of that organisation will feel as though management is not approachable. They would also fear management, which would in turn create a climate of tension and stress. Should management have an open-door policy and include input from employees and supervisors with regards to decisions which affect them; then employees would firstly feel as though they add value to the organisation and secondly that management is approachable.
- **Structure and climate** – “Structure is created by management to establish relationships between individuals and groups, to provide order and systems and to direct the efforts of the organisation into goal seeking activities. It is through the formal structure that people carry out their organisational activities in order to achieve aims and objectives”(Mullins. 1999:16). With regards to climate, management is responsible for creating a climate in which employees are enthused, stimulated and encouraged to work gladly in. The climate of an organisation is not something that all employees can see; it is something that is felt within the organisation. If this climate is not a healthy one, then naturally the employees would be working in a climate of fear and tension, emerging in stress.
- **Reward structures** – For many people, money is the main motivator. Every employee's remuneration package is a reward for the work that they do daily. “The objectives of rewards systems include the attraction, motivation and retention

of employees at all organisational levels. The accomplishment of these objectives forces management to consider a number of critical policy issues: **Should pay incentives reward individual or group behaviour? Should profits or reductions in operating costs be shared by employees? If so, how? Should employees be involved in the design and administration of the pay system? What is the most effective mix of pay and nonpay rewards to motivate performance? Answers to these questions will define a critical aspect of the employee-employer relationship**" (Carrell et al.1997:16). Rewards are therefore organisationally controlled.

- **Personnel functions** – “The personnel management function is centred on people’s needs while working in an organisation, and ways in which their work promotes or frustrates the fulfilment of these needs. The practice of modern personnel management is directed towards providing conditions under which people work willingly and effectively, and contribute to the success of the organisation. This involves concern for employee motivation and job satisfaction” (Mullins. 1999:658). As mentioned in the statement above, the personnel functions of any organisation should be fixed around employee needs; a lack of this would be detrimental to the organisation as it would create tension for the employees whose needs are not recognised and fulfilled.
- **Administrative procedures** – refer to those procedures, which must be carried out in accordance with rules that have already been established. Work must therefore be completed according to certain customs, behaviours and traditions that have been set by the company in the past.
- **Health facilities** – The promotion of health and safety within any organisation should be vitally important to any set of management within any organisation, especially those organisations operating in a manufacturing environment. Health facilities such as an occupational clinic should be provided to the employees working in a manufacturing environment for their health, well being and for their own protection. Such a facility would help the employees tremendously as they would now have a doctor to go to on site; also there is the added benefit that this type of facility may be free of charge. This alone takes much stress away from employees. Also, health facilities at organisations also deal with aids testing and awareness, TB awareness, diabetes, migraines and many other programmes helping employees to become more aware of symptoms that they may be experiencing due to stress and their life styles.

- **Sexual harassment** – A brief discussion of sexual harassment will be discussed under work stressors later in the literature review.
- **HIV/AIDS contraction** – Training should be given to all staff members with regards to the contraction of HIV/AIDS, as well as how to deal with people suffering from HIV/AIDS. A disease such as this causes tension for employees dealing with those suffering from it. Therefore, awareness programmes and free testing for all employees may assist them with regards to the knowledge that is required in order to minimise the likelihood of contracting HIV/AIDS.

External Factors

- **Politics** – As mentioned earlier, political threats and changes will create political uncertainties, which tend to create stress. Should a country have a stable political system in which change is implemented in an orderly manner, stress will not be created for individuals.
- **Technological** – Technology changes lead to technological uncertainty for many employees and employers. Most people are aware that of the many changes occurring world wide, technological change is constant. “Because new innovations can make an employee’s skills and experience obsolete in a very short time, computers, robotics, automation, and similar forms of technological innovation are a threat to many people and cause them stress” (Robbins, 2005:572).
- **Labour market** – “The labour market is, in terms of modern economic theory, assumed to function in the same manner as other markets, despite the fact that it differs from product and capital markets. Labour market theory is based on the law of supply and demand, but of greater importance to the labour relations specialists are the factors which cause shifts in supply and demand. The elasticity of demand and supply and the theory of marginal productivity should become familiar concepts. In particular our interest lies in the effect which collective bargaining and wage determinations may have on wage levels and in the results which discriminatory labour practices and labour mobility, or the lack of it, will have as regards both the overall composition of the labour market and the wage levels which are established for different groups” (Bendix.1992:456).

- **Family/work conflict** – As mentioned earlier, employees take work problems home and bring family problems to work. This creates unnecessary tension and stress both at home and at work. This is for the very reason that, an employee might take a work dilemma home and inadvertently take it out on their spouse. The same principle applies at the workplace.
- **Other groups** – refer to other factors which may interfere with the day-to-day functioning of the organisation as a whole in any aspect.

MODERATORS / MEDIATOR

Personal resources

- **Personality dispositions** – According to Dubrin (1994:11), a definition of personality is: “An individual’s way of behaving, feeling, and thinking”. Each and every individual is different due to the nature, character or even temperament of the type of personality that he or she may possess. The differences in personalities will determine what coping skills, self-confidence, self-esteem, temper, cognitive appraisal, ethics, conflict resolution style, values and beliefs any given individual possesses; and these and many more unmentioned factors are what determines how an individual will deal with stressors which emerge in one’s life. Either the individual has a strong personality by which he or she will handle the stress being experienced in a very proficient manner, so that the stress does not affect one after the incident has passed, or the individual does not know how to deal with stress. This in turn means that the stress being experienced could potentially harm the individual’s work life, home life, as well as mentally, physically and emotionally.

Demographics

- **Ethnic group** – There are various races, cultures, nations and tribes to which people belong. Each of the races and cultures, which exist, encompasses different values and beliefs. These are not values and beliefs that an individual is born with; but rather something that one learns and develops into, as growth occurs. These factors also determine how the individual deals with stress and whether or not it remains a factor in one’s life or passes with the incident.
- **Gender** – Gender deals with masculinity and femininity. With regards to many other subjects it has been proven that either man or woman was the stronger sex. However, with regards to stress many factors play a role in the outcome,

therefore it is not viable to analyse the stressful situation in terms of masculinity or femininity.

Job related

- **Motivation** – Motivation is used to spur people on. This is what sometimes helps employees remain rational and sensible through the tough times of tension, strain and stress which possibly will be experienced quite often at the workplace. All this requires is some drive, incentive, inspiration and enthusiasm for employees' from their supervisors and management.
- **Rewards** – Have previously been discussed under consequences at work.
- **Social support** – As mentioned before, social support is known to have a calming effect on employees. For this very reason, relationships with colleagues and supervisor are important for employees.
- **Advancement** – This refers to the growth and development of employees. Training should be offered in order to help improve and develop employees' current skills. Extra tasks should be allocated slowly in order to increase their workload and even the chance to further their education should be available, should they wish to do so. This helps employees' development of themselves and their upward mobility within the organisation.
- **Health benefits and facilities** – Having health benefits and facilities at one's place of work is an added bonus. This does not refer to the company paying a portion of one's medical aid. It refers to a medical clinic on site, a gym on the premises at discounted membership rates and even a day care centre. There are many companies who offer these benefits to their employees as an incentive and assistance. For example, the day care centre would help a single mother travelling to and from work on her own.

External Support

- **Family** – This deals with the support that an individual will get from their family while going through a stressful situation. Either an individual will have a family who is supportive and helpful and makes it easy to deal with the situation that has emerged

or the individual will be suffering through the whole ordeal alone, as there is no support or commitment from the family what so ever.

- **Other resources** – There are many other resources from which an individual will get their support. Anything, which may assist an individual with regards to dealing or coping with stress, would fall under this category. For example: interaction with friends, taking time out, going to church, having a job that is not demanding, going to gym to unwind and so forth.

CONSEQUENCES / HEALTH PROBLEMS

Physical

These are the physical symptoms which employee's start to display once suffering from stress. In most cases, the employee may not be able to see but will feel the symptoms. The symptoms being experienced will assist a doctor with regards to a diagnosis. However, it is important to understand that once the doctor has diagnosed an individual, it is not a disease; it is an illness – one which can be cured with either medication or help from a counsellor or doctor. Examples of these are:

- ⊕ Decreased immunity
- ⊕ Physical symptoms
- ⊕ Headaches
- ⊕ Blood pressure
- ⊕ Cholesterol
- ⊕ Substance abuse

Emotional

Emotional consequences refer to those symptoms which actually have such an effect on an individual, that they eventually impede behaviour. Emotional consequences may be cured with the help of a counsellor. Examples of these are:

- ⊕ Fears, anxiety
- ⊕ Depression
- ⊕ Family conflict
- ⊕ Decreased job satisfaction
- ⊕ Negative attitudes
- ⊕ Psychological disorders

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Work Performance

Stress has many negative effects on an organisation and the functioning thereof. For example, employees who are suffering from stress will soon start to experience job burnout, which will lead to continuous absenteeism, which will one day affect the company's turnover ratio. There may very well also be conflict within groups due to employees' absence, as a result of them battling with stress. Work performance issues will be discussed later in the chapter. For now, a few examples are:

- ⊕ Decreased outputs
- ⊕ Absenteeism
- ⊕ Burnout
- ⊕ Turnover
- ⊕ Group conflicts
- ⊕ Poor work relations
- ⊕ Organisational decline
- ⊕ Cognitive efficiency

2.6.11 Stress and Occupational Outcomes

"Stress is associated with impaired individual functioning in the workplace" (Warr, 2003:09). He goes on to explain that the negative effects of stress include:

- ⊕ Reduced efficiency
- ⊕ Decreased capacity to perform
- ⊕ Dampened initiative and reduced interest in working
- ⊕ Increased rigidity of thought
- ⊕ A lack of concern for the organisation and colleagues
- ⊕ A loss of responsibility

2.6.12 The Cost of Stress in the Workplace

Stress affects different people, at the same time, in different ways. However, if this is left untreated, the result could be chaos in the workplace. This chaos is often hidden in companies. If this is ignored it becomes costly for employers to eventually repair. If an employee feels under pressure at work, will it not affect him / her at home? Whether stress

originates from work or our personal lives, it will eventually affect us. The longer stress is ignored at work, the greater the impact. According to Towner (1998:10), it impacts the workplace in the following ways:

2.6.12.1 Sickness Absence

According to the Health and Safety's estimate in 1993, 40 per cent of sickness absence is stress related. It goes on to say that if stress is ignored, the effects worsen and the duration of the absence will be extended. The reason for this is that the specific employee who is under stress might need serious attention; and while at home or at work the individual might not be getting the help that they require in order to function normally again. This is why it is important for companies to investigate cases of extensive absence.

2.6.12.2 Reduced Effectiveness

Many employees are unaware of how to deal with the effect of stress on their health and functioning. Some employees will attempt to hide the stress they may be experiencing. These employees are actually at work everyday fulfilling their tasks or duties that have been assigned to them. However, due to the effects of stress on the individual, that person is not functioning at 100 per cent of his or her capabilities. Individuals therefore pitch up for work only to avoid being absent, but work wise they will produce very little. The above-mentioned aspect is one that has a negative effect on the organisation as well as the individual employee. The efficiency, effectiveness and the overall productivity of the organisation will be reduced. As for the individual, they are affected emotionally, physically and spiritually.

"Addressing the effects of stress at the earliest possible stage reduces the impact of ineffectiveness" (Towner. 1998:12).

2.6.12.3 Management Time

"One reason why they cannot be ignored is that management time is an expensive commodity" (Towner. 1998:12). Towner goes on to say that if an employee is absent from work, a manager has to address the needs of the organisation by ensuring that the role of that employee is fulfilled in some way. In order to achieve this, schedules, programmes and projects are disrupted. This calls for unanticipated plans being made promptly. Also, do not forget that the individual employee requires support. Towner repeats that management time is not only affected or jeopardised when an employee is absent. As mentioned before, if a stressed employee remains at work, he or she will be functioning below their capacity. This performance reduction is not always noticed immediately. In some instances, it might take an accident to notice this. If this occurs, then more of management's time is taken up, as they

then not only have to deal with the happenings, and the corrective steps of the accident, but they also need to support the individual employee who will need much attention in order to become effective again. Through all of this, managers are increasing their vulnerability to stress. This is because they are trying to give those individuals suffering from stress all the attention and support that they require, by rectifying errors that have occurred due to stress, changing work schedules when employees are absent, meeting deadlines, completing their own workload and much more. All of this will contribute to the pressures on themselves.

2.6.12.4 Effect on Other Employees

“Both the absence of employees or their ineffectiveness usually result in more work for their colleagues” (Towner. 1998:13). More work could lead to more pressure, some overtime or even leave which cannot be taken. Once again employees are faced with more pressure, leading to more stress. **“Employees, who are experiencing stress at work, may find that it affects their relationships with others. This is because the individual may become less sociable, moody or even aggressive”** (Towner. 1998:13). The individual may also feel that others are leaving them out. The factor that needs to be remembered here is that, if relationships in a team deteriorate, the effectiveness of the whole team will be reduced. This is not particularly fair, as pressure will be brought upon the whole team in order to perform. Other team members may resent the individual displaying stress, as his or her problem eventually affects the other employees.

2.6.12.5 Retention and Recruitment

Towner (1998:13) maintains that employees who are stressed and see no way of resolving a problem in the workplace may well seek another job. **“But employees are a valuable resource for the organisation. Training and developing employees is costly, but it is an investment in the organisation’s most expensive resource. It is of both benefit to the employee and the employer. Though some employers may feel that letting stressed employees go is the best solution, it is often a costly error. The employees take with them valuable experience which is difficult to replace. The cost of recruitment and its incumbent training programme far exceeds the cost of supporting one employee through a recovery from stress-related illness. There is no cheaper way of reducing the impact of stress in the workplace than taking earlier action”** (Towner. 1998: 13).

2.6.12.6 Accident and Errors

According to Towner (1998:13), when people are under excessive pressure, they lose their ability to concentrate. In some areas of work, this is likely to lead to an increase in errors and accidents. An occasional error is human. However, when an accident affects lives it becomes dangerous. For example, an accident caused by a stressed machine operator or driver could lead to expensive claims for compensation or at worse, death. Errors are avoidable, which in turn leads to fewer accidents occurring. As alluded to earlier action should be taken at an early stage in order to reduce costs, as well as to provide the individual employee with help when needed, rather than when it is too late.

2.6.13 What are Stressors at Work?

There are many factors in the workplace, which may cause employees to feel pressurised. According to Towner (1998:27) these factors include the following:

- ⊕ Buildings – The building in which the employees work in. Many questions need to be answered. A few of them are as follows: is the building always clean, are there too many stairs, does enough light come in, are offices too far from each other, is it too hot or too cold inside the building? The answers to these questions are vitally important as, acute stress may develop within many employees; this is due to the employees reaction to the situation.

- ⊕ Facilities – This refers to the services that the company may offer, for example; a canteen where the employees may enjoy a meal, a change room added onto the bathroom, security parking, a smoking room and so forth. The main question here is does everyone have access to all the facilities offered and what are the cost implications?

- ⊕ Hours of work – This refers to the normal hours worked by employees during the week. For example; nine-to-five, eight -to- four, does the person work shifts or do they work flexi-time (where they may come and go as they please, as long as their hours add up to forty hours in total for the entire week).

- ⊕ Overtime – both planned and unplanned – Are employees aware of when they will be working overtime? If employees are approached at the last minute and asked to work overtime, then the company should provide them with money so that they may purchase something to eat. Also employees are to be compensated accordingly for the overtime worked and they may not work more overtime than the law permits.

- ✦ Changes in the work environment – This refers to anything affecting the work environment of the employees. For example; Putting carpets into all the existing offices, changing the software on computers, changing the set-up on a production line, and much more. These changes may result in acute stress for some employees, as the changes may persist for an extended period of time and their immediate reaction to the change may not be favourable.

- ✦ Managers – This is a question of how managers manage the staff and more importantly, how they use their authority. Management styles will vary from one organisation to another. Some may have an open-door policy and others may not. What is important is that employees feel that management is approachable. The employees of an organisation must not fear management, as this will create stress and tension. Management should therefore also treat employees fairly, appreciate and respect them.

- ✦ Sexual Harassment – **“Legally, sexual harassment is defined as unwelcome advances or requests for sexual favours, and other verbal or physical conduct, whether overt or subtle, of a sexual nature. But there is great deal of disagreement about what specifically constitutes sexual harassment. Organisations have made considerable progress in the last few years toward limiting overt forms of sexual harassment, including unwanted physical touching, recurring requests for dates after a clear refusal, and threats that refusing a sexual proposition will result in losing one’s job. The problems today are likely to surface around the more subtle forms of sexual harassment-unwanted looks or comments; sexual artefacts, such as nude calendars, in the workplace; or misinterpretation of where the line between being friendly ends and harassment begins” (Robbins.2000:160).**

- ✦ Racism – Within the organisation as a whole. This creates unnecessary tension for those employees who have to tolerate this form of discrimination. In many instances, employees must work in a team and try to understand, as well as overcome the many diversities which will exist amongst them. Failing to appreciate, recognise and identify with each other will create conflict within that team and the organisation.

- ✦ Lack of interest – This would occur if the tasks that an employee is to complete everyday is not mentally challenging. This will lead to the employee feeling as though their work is uninteresting and tedious; leading to a lack of interest in their work.

- ✦ Lack of trust – When a person trusts another, then it is expected that the particular person would not take advantage of the other. Therefore trust brings about the chance of disappointment, as learning to put trust in other people is a very difficult aspect. For example: employees may feel that management is suffering from a lack of trust, as they do not involve staff in decisions and actions which will affect them. Employees are trusted enough to perform their daily duties and meet production targets, but they are not trusted enough with decisions affecting them. The above-mentioned example is how a lack of trust is brought about.

- ✦ Personality conflicts – Personality traits are what makes one person different from the next. In some instances, this may be to the team's advantage. This is due to the fact that everyone is different; and the balance of personalities may be the perfect ratio resulting in high-quality work being produced. Should people with the exact same type of personality be thrown into the same team for example, stubborn individuals, then the end result would be personality conflict. This is due to the fact that each employee is stubborn and will want their points and ideas to be used. People therefore, must understand that everyone is different and should have empathy for each other.

- ✦ Job description not clear – This will occur when there is a lack of clarity with regards to the responsibilities and tasks that an employee is to execute. The employee is therefore not sure what it is they should be doing.

- ✦ Conflicting roles – Should roles in the same department not be defined clearly, then a conflict of roles will occur. Jobs will start to overlap with each other and expectations from the manager and employee will therefore be unclear.

- ✦ Unclear lines of reporting – The reason for this is that employees may be unclear of the reporting structure within an organisation. It is to be made clear to employees who their supervisors, managers and senior management are. When there is proper communication within an organisation, then the correct lines of reporting will be known to all.

- ✦ Too many responsibilities – This is similar to role overload as the employee has too many functions to execute, which in turn means that the managers' expectations of that particular employee are slightly raised. The employee therefore has more work to do than time permits.

- ⊕ Work too repetitive – An example of this may be seen in a packer who packs groceries at a food store. The same action is being performed daily and no change occurs. This makes one's job monotonous, which in turn will lead to a lack of interest and boredom.

- ⊕ No involvement in decision-making – This is largely dependent on the management style being implemented within the organisation. In companies where employees opinions are excluded in decision-making, there is normally a lack of autonomy lower down the line.

- ⊕ Organisational attitudes towards absence and discipline – **“The structure of an organisation and its pattern of management can affect the implementation of control systems”** (Mullins. 1999:787). An organisation is to have policies and procedures in place with regards to absenteeism and discipline. These policies and procedures must be made clear and it is imperative that all employees understand them.

- ⊕ Lack of development opportunities – Training improves an employee's knowledge and skills; and is also a motivator, as the employee may one day benefit by progressing to another more challenging job, which is attached to an increase in pay, more job satisfaction and accomplishment. Training is an extremely important aspect for individual employees and a lack of it will lead to a lack of development opportunity.

- ⊕ Lack of support from manager – Management must try to create a climate in which employees feel that there is support. A supportive relationship is a key element of any organisation, as both parties can only benefit from this. A lack of support from management, will lead to a lack of trust being displayed by the employees towards management.

- ⊕ Workstations – This refers to the ergonomics of every employee's workstation. Certain factors may create acute stress in employees, due to the fact that the specific stressors which create tension for the individual are being confronted daily. These factors are : too much noise, the office being too cold or too hot, the chair at one's desk is too high and a person having to bend in order to see the computer, to name just a few.

- ⊕ Levels/quantity of work – This refers to the quantity of work that is to be executed by each employee daily. Does the employee have too little work to do or is there a role overload?

- ⊕ Shift work – This refers to those employees working shifts and whether or not they can cope with the pressures thereof.
- ⊕ Technology – Technology has been discussed in figure 2.1 under the heading of technological uncertainty.
- ⊕ Travelling problems – At some organisations, transport for employees is arranged and for that reason, employees do not have to stress over public transport; all they have to do is pay a portion of the travelling cost, as the organisation subsidises the employees. Although the transport is arranged, the route is pre-determined and those employees falling out of the route will get a travelling allowance, but will have to find their own way to work. This is what causes many problems for employees, as they are dependent on public transport or other people who have their own transport; which is not always reliable.
- ⊕ Bullying – This becomes a stressful situation mainly for employees who are not strong enough to stand up for themselves against someone at their place of work. This person does not have to be on the same level as the employee who is being bullied. Bullying in the workplace is exactly the same as being bullied at school. An example of bullying taking place amongst two employees who are on the same level, means that the employee who is doing all the bullying will take all the credit for a task completed well, compel the other employee to complete the majority of the work, blame the other employee when things go wrong, put the other employee down in front of the supervisor, etc. Bullying within the workplace is somewhat distressing, as one would think that people at this stage of their lives would have learnt how to shield themselves from people who thrive on putting others down and being the centre of attention within the workplace. For someone who is not confident, bullying will cause much stress.
- ⊕ Sexism – Sexism in the workplace is occurs irrespective of whether an employee is male or female. For instance; a manufacturing organisation has an opening for a sales manager and two suitable, equally qualified, internal candidates; a male and a female, apply. The female however, has more experience in the sales field as well as within the manufacturing environment. The management team of the particular organisation comprises only males, irrespective of their colour. The position is therefore offered to the male (as they feel that men know more about manufacturing than women do). Sexism therefore forces employees to develop animosity towards the organisation and the management team within, which could be classed as discrimination. This stressor is present in organisations functioning in the various industries.

- ⊕ **Lack of communication** – “All organisations regard effective communication as essential for survival. Without communication a business would not exist. Businesses are concerned with a wide range of communication activities. First of all, communication within the company has to be as effective as possible. This involves a wide range of communication activities to ensure good upward, downward and lateral or sideways communication”(Fielding.1997:4). Management must therefore understand the importance of a lack of communication, as it may result in many negative consequences, which may be detrimental to the organisation as a whole; even if something minor was not communicated, the effects could be enormously damaging. For this very reason, an open-door policy was introduced. This type of management style ensures that a lack of communication does not occur.
- ⊕ **Fear of redundancy** – Technology within certain manufacturing organisations results in an employee's job becoming redundant. For example; a new machine is brought into an assembly line, cutting down the employees' work load to such an extent that what previously took the employee the whole day to do, now takes them only half an hour. Their job would become redundant due to the fact that there is not enough work for that person. The restructuring of a company and technology would create the fear of redundancy, as an employee will fear losing his or her job.
- ⊕ **Fear of redeployment** – Technological changes, as well as restructuring within a company will leave an employee in a position that they were not originally in. This also creates fear in employees as they may now experience stress, due to the fact that they are unsure of whether they are capable of performing the tasks required.

“Managing employee stress in the workplace as a manager, is all about understanding people's stressors and taking action to reduce them” (Towner.1998:27).

2.6.14 Work Stress

“Occupational stress is one of the hottest topics in business today” (Schafer.1992: 192). He goes on to say that 14 percent of workers' compensation illness claims appear to be stress related and insurance benefits for stress average twice the amount for physical injury. An average of one million workers are absent on any given day primarily because of stress disorders worldwide. Should the stress be managed more effectively, and then fewer workers would be absent on any given day and the consequences that are placed on the organisation due to mismanaged stress would be trivial.

Table 2.3 lists the consequences of mismanaged stress. A discussion regarding the factors listed in the table will follow.

<u>DIRECT COSTS</u>	<u>INDIRECT COSTS</u>
PARTICIPATION & MEMBERSHIP <ul style="list-style-type: none"> ⊕ Absenteeism ⊕ Tardiness ⊕ Strikes & work stoppages ⊕ Turnover 	LOSS OF VITALITY <ul style="list-style-type: none"> ⊕ Low morale ⊕ Low motivation ⊕ Dissatisfaction
PERFORMANCE ON THE JOB <ul style="list-style-type: none"> ⊕ Quality of productivity ⊕ Quantity of productivity ⊕ Grievances ⊕ Accidents ⊕ Unscheduled machine downtime & repair ⊕ Material & supply over utilisation ⊕ Inventory shrinkages 	COMMUNICATION BREAKDOWNS <ul style="list-style-type: none"> ⊕ Decline in frequency of contact ⊕ Distortions of messages
COMPENSATION AWARDS	FAULTY DECISION-MAKING
	QUALITY OF WORK RELATIONS <ul style="list-style-type: none"> ⊕ Distrust ⊕ Disrespect ⊕ Animosity
	OPPORTUNITY COSTS

TABLE 2.3

Organisational Consequences of mismanaged stress

Source: Quick (1984:192)

DIRECT COSTS

Participation and Membership

- **Absenteeism** – It has already been established that due to employees suffering from stress, an organisation's absenteeism rate will increase. The organisation would also be impacted in the following ways. Firstly, should the stress be due to work related factors, then the organisation would be required to pay for the professional medical treatment that the employee would require. This could become extremely costly for the organisation. (This is why it is vitally important for organisations to be involved in employee wellness programmes so that when employees begin to transpire certain symptoms, help will be arranged; before the stress becomes worse, requiring more expensive medical treatment.) Secondly, absenteeism would result in a position becoming vacant. The employee who is now suffering from stress is not at work. The duties that the employee was to perform daily are now not being completed. Management therefore must place another person in that particular role, in order to fulfil those duties, so that the day-to-day functioning of the organisation does not suffer due to this. This could also become costly. Now that the employee is no longer at work, management will have to find another candidate who is just as capable of performing those specific duties. This means that the whole recruitment process will have to begin all over again.

Absenteeism does not only impact the company in the sense that the employee is not there, it can become dreadfully expensive for the organisation. This is why money should rather be invested into the appropriate employee wellness programmes, from which the employee will benefit, as they are any organisation's most valuable resource.

- **Tardiness** – Tardiness may lead to an employee displaying signs of lethargy, lateness, slowness or punctuality, or even all of these at the same time. For one, this would affect the employee's performance in that their performance would not be up to standard. In some cases, should performance not be up to standard, the employee would be issued with a warning. Should this occur in excess of a certain amount of times and all the valid warnings have been issued, the employee would eventually be dismissed. Another point, which should be given consideration, is the fact that, should an employee become lethargic and slow, that particular employee would be more accident-prone. This could be especially dangerous in a manufacturing environment, which makes use of heavy-duty machinery. Lethargy and slowness could cause an accident in which not only the employee could get hurt, but fellow colleagues might also be harmed; in extreme cases someone might lose his or her life.

- **Strikes and work stoppages** – According to Bendix (1992:243), the cause of strike action will include issues such as:

- ⊕ Wages and working conditions
- ⊕ Benefits
- ⊕ Training schemes
- ⊕ Retrenchment
- ⊕ Unfair treatment
- ⊕ Lack of safety precautions
- ⊕ Refusal by an employer to recognise a trade union
- ⊕ Lack of participative management

A few of the above-mentioned issues may cause acute stress for some employees. Bendix (1989:242) maintains four reasons as to why employees engage in strike action. For the purpose of this dissertation, only two reasons will be discussed. The first is to demonstrate general or particular dissatisfaction with management and secondly, to pressurise management into compromising on a particular issue. Therefore, mismanaged stress may result in strikes, due to the fact that employees are trying to voice their opinion by pressurising management into realising the importance of the effective and proper management of stress. Strikes are very expensive for three parties: employee, employer and the trade union. For the purpose of this dissertation, only the employee and employer effects of strikes will be focused on. With regards to employees, it could result in a loss of wages. The company may lose profits during the strike and in turn may lose their clientele, leading to the loss of their market position eventually. Work stoppages have similar effects as strikes and are undertaken for the same reasons as strikes; however they are always unexpected and unauthorised.

- **Turnover** – Turnover refers to the flow of employees out of an organisation and results from transfers, dismissals, retirement, resignations and of course death. “ **A certain amount of turnover is expected, unavoidable, and considered beneficial to the organisation...Thus, some turnover renews a stagnating organisation. But excessive turnover creates an unstable workforce and increases HR costs and organisational ineffectiveness. Turnover that hurts the organisation is known as dysfunctional turnover. The cost of turnover to South African**

industry is estimated to be several million rands a year. Examples include the following:

- ⊕ Increased recruitment, selection and placement costs
- ⊕ Increased T & D costs
- ⊕ Lower productivity and more accidents, scrappage and quality problems
- ⊕ Disruption in programmes and projects as managers and administrators leave”
(Carrell et al.1997:572).

Performance on the Job

- **Quality of productivity** – Mismanaged stress has a negative effect on the quality of productivity due to employees feeling lethargic and slow, a higher absenteeism rate forcing one employee to cover two employees daily tasks leading to a rushed job and of course a high turnover rate which leaves some positions vacant. The quality of production therefore decreases; this in turn has an immense negative effect on the organisation, as the work being produced is now substandard. This will harm the organisation.
- **Quantity of productivity** – That which applies to the quality of production, also applies to the quantity of production. Due to the same factors mentioned above, the quantity of work being produced will decrease, as a result of mismanaged stress.
- **Grievances** –“Formal grievances may be defined as a complaint, other than demands formulated by a collective body, which is related to the employees treatment or position within his daily working routine and which, because it may result in a dispute, warrants the formal attention of management” (Bendix. 1992:283). In other words, a grievance procedure is a means through which employees’ problems are brought to the attention of management; and management is therefore forced to take these grievances seriously.
- **Accidents** – Those employees suffering from stress would become more prone to causing accidents at work, due to the fact that their stress is not being managed accordingly. For example, the employee may be experiencing a lack of concentration or even more serious stress symptoms; however that person may not be aware of what stress symptoms are. These symptoms tend to interfere with the employees’ mental, physical and emotional conditions, which result in unintentional accidents. Accidents may well become quite costly for companies, as machinery may

be damaged requiring large sums of funds to repair; and employees could also get injured leading to medical costs as well.

- **Unscheduled machine downtime & repair** – In all manufacturing organisations, machines will constantly breakdown and necessitate repairs. Machines may also not be used due to the fact that they are due for a service, there is a part that needs oiling, there is a part missing, and much more. This is something that happens all the time and is not planned. Employees, supervisors and managers in a manufacturing organisation will not let a machine run, unless each part on that particular machine is functioning at one hundred percent (100%). The reason for this is that a machine not functioning as it should, may very well put someone's life at risk. Also, employees *who are suffering from stress, while operating machinery, may not be aware of a malfunction on the machine, whether it is major or not.* An oversight such as this may put the employee's life at risk, or even those around him/her. Should this occur, then the machine would require repair work, which could make the problem even more severe than it initially was should the employee have picked it up sooner. This means a particular machine would be standing still, unable to function. Also, should a machine operator be suffering form stress, he/she may be off work often, leaving the machine standing still. This affects the organisation in an immensely negative manner, as production has now been brought to a halt.

Compensation awards

In some organisations, in the various industries, employees will receive compensation for the following factors; to name just a few:

- Production targets reached
- The employee who has not been off work at all for the year (sick or leave)
- A wastage figure of below the forecasted amount
- A high quality assignment, which landed an extremely important client
- No accidents occurring on the job within the whole factory, for a period of one year

These compensation awards may be in the form of the following, to name a few:

- Time off from work
- A function that has been arranged for the whole department
- A quarterly production bonus paid out

- Leaving work even earlier on a Friday

Should employees be suffering from stress, then these awards would not be given. Although the upside to this is that the organisation would not have to hand out money and time off, the negative costs are far more perilous. This is due to the fact that the employees' performance would be hindered, which means that targets that have been set will not be reached. Employees will not be performing at their full potential, which directly affects the organisation in a negative way. The employees are also affected in a negative way, as they will no longer receive any incentive, in addition to the fact that they are now suffering from stress that is not being managed correctly.

INDIRECT COSTS

Loss of Vitality

- **Low morale** – Morale is a concept, which is exceptionally difficult to measure. There is no formula through which an organisation may determine the ratio. Morale is therefore, something, which is felt within the organisation's climate, as it is employees' attitudes, feelings, views and approaches towards their work, management and the company at which they are employed. Employees observe management to be mismanaging stress due to the fact that too many staff members are distressed. They therefore feel that management is not concerned with their health and well being and have a propensity to generate a negative attitude towards their work and management. This is what causes low morale, which in turn prompts employees to feel frustrated as well.
- **Low motivation** – As with morale, motivation too, does not have a formula to determine its ratio or effectiveness. Motivation is rather something that is given to employees. In other words, management will monitor employees' behaviour in order to determine "why do people do what they do"(Mullins, 1999:406), and what it is that they can do to change that behaviour in order to get them to work to the best of their ability.
- **Dissatisfaction** – Employees suffering from mismanaged stress will start to experience discontent, displeasure and frustration with regards to their work; which in turn affects their performance. Once again, the organisation is affected in a negative way. The only way to eliminate these feelings for the employees would be to assist them with the stress being experienced. This can only be achieved by offering employee wellness programmes, namely a stress management programme.

Communication Breakdowns

- **Decline in frequency of contact** – Due to mismanaged stress, a vast decrease in the frequency of contact will occur. For example, employees may be off from work more often than usual; however, they might not even call in to inform their superior. This is how a communication breakdown commences.

Faulty Decision-Making

Stress results in a lack of concentration amongst many other factors; which may lead employees and managers not to consider findings as they normally would, while making an extremely important decision. This means that the individual may not consider all factors while making a decision, thus leading to the incorrect decision being made.

Quality of Work Relations

Mismanaged stress will result in distrust and disrespect being displayed by employees on every level towards those managers, whom the employees consider to have the power to help them overcome the stress being experienced. Due to the fact that employees normally stand by each other, even those employees who are not experiencing stress will harvest these feelings towards management. This will create animosity, leading to a climate filled with hostility and bitterness.

Opportunity Costs

Due to mismanaged stress, employees may miss out on advancement and training opportunities. This in turn could lead to an additional amount of stress being experienced. For instance, an employee who has proved himself/herself worthy of a promotion, but has been experiencing stress which is not managed correctly will find that eventually the stress will start to interfere with the individual's performance. Management acknowledges that the employee's performance has been decreasing somewhat, but they are not aware of the reasons. In the long run, the employee is not offered the promotion. Management finds someone else to fill the position and the employee suffers with added stress.

The Kenecott Copper Corporation reduced sickness and accident cost by 75 percent when they introduced a stress management program (Egdahl & Walsh, 1980). The PA Medical Corporation reduced absenteeism by 14 percent by instituting a stress reduction program (Everly & Girdano, 1980). This therefore confirms that stress management is a good investment.

2.6.15 Sources of Work Stress

According to Schafer (1992:193), the sources of work stress include the following:

Work Load – Overload is one of the most important sources of work stress. Too much work that has to be completed in a short period of time results in the employee suffering from *quantitative overload*. If the problem is a lack of training or ability to do the job, then the employee is experiencing *qualitative overload*. How workload is scheduled can create additional stress. For example, shift work, which involves rotating night and day schedules, disrupts biological rhythms and thus contributes to stress. (As mentioned before)

Work Responsibilities - Stress will arise here when the employee's work responsibilities are poorly defined. Stress may also occur when one employee's duties conflict or are incompatible with another. Too much or too little responsibility can be another important source of work stress.

Work Environment – “A large number of environmental factors can make even the best job stressful, including lack of physical or financial resources, problems with co-workers, and uncomfortable work settings (too much or too little light, heat or cold, noise odours, pollution, crowding, lack of privacy, and even poor layout)” (Schafer.1992:195).

Organisational Retrenchment and Decline – As the world is so competitive out there today, some organisations opt to cut back in order to survive; even after this, not all of them survive. According to Schafer (1992:196), “The research in this area concludes that ten factors related to cutbacks can contribute to experienced stress and uncertainty:

1. The greater the size of budget cuts
2. The greater the extent to which cuts affect changes in goals, programmes or organisational survival
3. The higher the frequency of cuts
4. The less organisational slack and the fewer the opportunities for alternative funding
5. The fewer management assurances regarding job security or departmental survival
6. The more the cuts are selective rather than uniform
7. The less warning about impending cuts
8. The lower the information clarity regarding impending cuts
9. The less response time available between the mandate to cut and the actual cuts and
10. The longer the mandated duration of cuts

STRESS MANAGEMENT MODULE FOR SHIFT WORKERS

COMPILED BY: ROMY LEIGH ANTHONY

According to OSH (2003:9), unnecessary work-related stress can emerge from two types of factors:

- ⊕ Job context (how the workplace is organised)
- ⊕ Job content (what the job involves)

The following table summarises some of these factors, which can place unreasonable demands on people at work.

Work characteristic	Conditions possibly stressful to an employee
Organisational function and culture	<ul style="list-style-type: none"> ⊕ Rigid work practices-people unable to work out their own solutions to the day-to-day problems they encounter in the workplace ⊕ Poor communication within the workplace ⊕ A non-supportive work culture-concerns and requests are dismissed without consideration
Role in organisation	<ul style="list-style-type: none"> ⊕ Role or task ambiguity/uncertainty (for example, employee unsure about what they should be doing) ⊕ Role conflict from imprecise or conflicting job demands ⊕ Responsibility for people beyond the individual's capacity
Career development	<ul style="list-style-type: none"> ⊕ Career uncertainty or stagnation (where employer has no jobs with greater responsibility or content to offer) ⊕ Poor status or status incongruity (a mismatch between qualifications/ability and job demands) ⊕ Lack of rewards (status, self-esteem, recognition)
Decision latitude/control	<ul style="list-style-type: none"> ⊕ Little opportunity to participate in decision-making ⊕ Lack of control over the speed and scheduling of work
Relationships at work	<ul style="list-style-type: none"> ⊕ Physical isolation ⊕ No formal employee participation system ⊕ Poor relationships with supervisors and fellow workers ⊕ Interpersonal conflict and violence at work ⊕ A lack of social support at work
Life/relationships outside work	<ul style="list-style-type: none"> ⊕ Conflicting demands of work and home life ⊕ Dual career problems (for example, or juggling schedules with a work partner)

Table: 2.4

The context in which the work takes place

Source: OHS. 2003:10

STRESS MANAGEMENT MODULE FOR SHIFT WORKERS

COMPILED BY: ROMY LEIGH ANTHONY

<u>Work characteristic</u>	<u>Conditions possibly stressful to an employee</u>
Task design	<ul style="list-style-type: none">⊕ Lack of variety and/or short work cycles, fragmented or tedious work⊕ Under-utilisation of skill⊕ Constant customer contact
Workload or workplace	<ul style="list-style-type: none">⊕ Lack of control over work rate/pacing⊕ Work over-load or under-load⊕ High work rate or time pressure
Work schedule	<ul style="list-style-type: none">⊕ The disruption to body processes caused by changes in shift work patterns especially when these are badly designed⊕ Inflexible work schedules⊕ Unpredictable working hours or long or unsociable working hours
Work context	<ul style="list-style-type: none">⊕ Inherently hazardous⊕ No two-way communication on workplace issues

Table: 2.5**The content of the work****Source: OHS. 2003:11**

OHS (2003:12) goes on to say that extreme levels of these factors may produce a stress reaction in some people. Employers need to be enormously observant for signs of workplace stress and should it occur, they also should have systems in place in order to challenge and try to eliminate the stress. It must also be realised that the work itself is not the only factor that may result in the stress being experienced. Even though the work may be well organised, the person performing the job might not have the proper skills or personality required in that particular position. Increased pressures, demands and stress will arise in the workplace and in some cases the employer may not even have control over the happenings. However, what is important in a circumstance which the employer has no control over, is that employers are aware of the fact that they cannot shelter employees from such pressures and demands, nor can they eliminate the pressures immediately. They are only required to have systems in place, which will serve to help and guide employees in such circumstances.

2.7 SUMMARY

“Life has always been a challenge, however, in the past, when life was less complicated, lifestyle choices were equally simple. Our present changing society has introduced worldwide problems, which can also affect our daily life: economic stability, social unrest, and inequitable resources. It is sometimes assumed that stress management is primarily needed during an emergency. However, in today’s society, the use of stress management information can be applied to nearly all aspects of one’s life. There are few problems that are not better managed with clearer thinking, and a more relaxed, confident attitude” (Reed.1997:1).

Stress management itself is a very positive and valuable tool for any organisation to possess. It is not a very complex exercise and if applied in the correct manner, it will insert considerable advantages into the organisation. This is due to the fact that the organisation will be more involved and concerned with the aspect of employee health and well being, thus creating a healthy place of work and establishing good employment relations. However it does take commitment from both parties concerned, as it is a shared responsibility. Therefore it is vitally important that both parties communicate and work together, as they both want to attain the same goal. Even though stress management modules are perceived as benefiting largely the employees of an organisation, in the long run it benefits the managers administering the organisation, the organisation as a whole, as well as the continuity of the organisation. For these reasons, it is vital that all parties are equally committed and motivated to implement and keep the momentum of such modules alive within the organisation. Fair enough, all organisations are different due to their characteristics and features. This is what categorises them into the various different industries in which they function.

Another complex issue to bear in mind is that of shift work. Many people work shifts and stopping shift work is not an option for them, nor for the organisation. There are many reasons why people work shifts, for example, they have no education, employment is hard to find, among other reasons. Many organisations also depend on shift work due to the nature of the product they manufacture or because of the type of service that they provide; a 24-hour society. Therefore, shift work is here to stay. True, shift work, as well as the nature of the organisation, play a major role in the implementation of stress management within an organisation. However, with regards to preventing and reducing stress for shift workers, the exercise is not a costly one. One of the reasons for this is because stress and shift work have a relationship. In the beginning of the literature study shift work was discussed and later on stress was discussed. There were a few major factors that appeared in both the stress and shift section.

They included the following:

- ⊕ Social/Work or Family life
- ⊕ Eating habits
- ⊕ Cardiovascular problems
- ⊕ Women's problems
- ⊕ Age
- ⊕ Sleep disturbances
- ⊕ Concentration and memory
- ⊕ Gastrointestinal problems

If one is to look at these factors, it must be realised that their optimum functioning plays a very important role in people's lives, as they affect one's health. In the business sense, these factors would play a major role in an individual's performance at work, as it could hinder an individual from performing to their optimum standards. Also they could in time, even though unintentionally, harm their fellow employees and even themselves as they become more accident-prone. Stress stemming from shift work has negative consequences not only for the individual person suffering from it, but for the organisation as well. For the individual it could have negative health consequences, which cannot be repaired quickly. For the organisation it could mean thousands of rands; firstly to support the individual and secondly to find a replacement for the employee who is not able to perform his or her duties/tasks at work. Companies that refuse to take the issue of stress seriously will be saddled with consequences that are harmful, unfavourable and damaging for the company and its continued existence. Companies therefore need to be more involved with regards to improving people's resilience to stress. When tackling the issue of stress management within an organisation, there is one key factor that should always be remembered.

“A key factor underpinning a successful training intervention is a coherent framework. This may be in the form of a well being policy, which sets out what the organisation intends to do to manage stress and promote well being. The policy should define stress, specify the organisation's commitment to managing it, highlight how this will be achieved and outline responsibilities throughout the organisation”

(Shuttleworth.2004: 62).

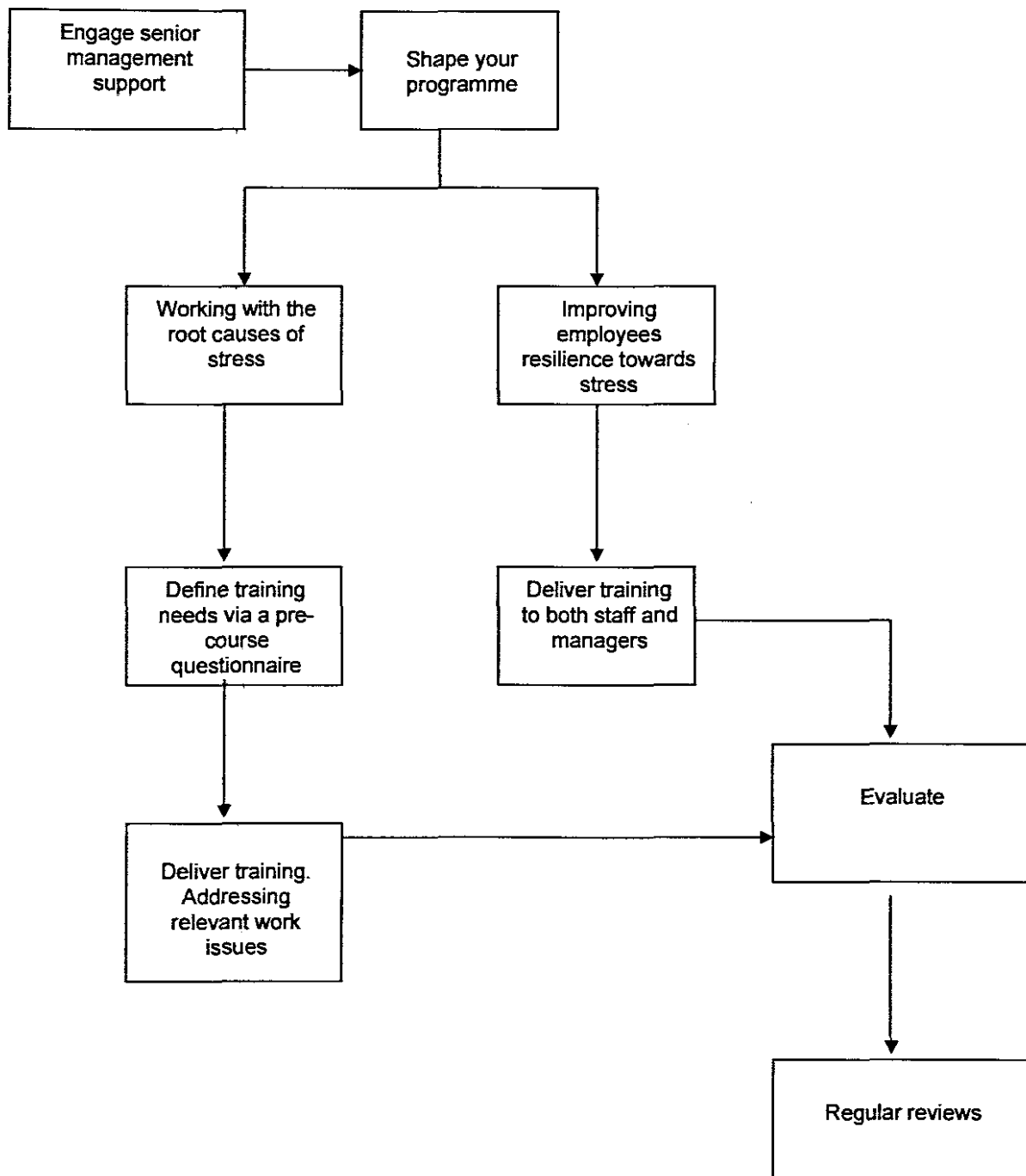


Figure: 2.6
Stress training flowchart
Shuttleworth (2004:62).

There are a few more factors to bear in mind when attempting to tackle the issue of stress. Below is a brief overview.

BE CLEAR ON WHAT YOU WANT TO ACHIEVE

“Have a clear definition of what you want to achieve. A stress audit is an important tool that enables the employer to identify the pressure points in an organisation, pinpointing areas that may be experiencing stress and understanding the underlying causes. It provides key information that the organisation can use to improve the performance and well being of its employees, and can form the basis of a subsequent training intervention” (A. Shuttleworth.2004: 62).

ENSURE THERE IS SENIOR MANAGEMENT BUY-IN

It goes without saying that employees like to see management getting actively involved in issues that are being addressed. Therefore it is very important to get senior management actively involved. This proves that management supports the process. Also the employee and employer both benefit from such a programme, therefore they must try to work together, as they both are striving to attain the same goal.

MAINTAIN MOMENTUM IN THE MODULE

The management of stress should not be a once off event; it should be an ongoing process. Regular sessions must be scheduled in order to ensure that the implementation of the stress management module is assisting employees to cope better with stress and the pressure there of.

MEASURE THE EFFECTIVENESS

It is vitally important that organisations that have implemented a stress management module take time out to measure the effectiveness of the programme. Only once this is done will it be known whether the programme is of any value and whether it has accomplished what it was designed to achieve. In this part of the process, employers may also identify certain aspects of the programme that may not be functioning, as they should and improve on these points. **“The ability to manage stress can be greatly enhanced by increased awareness of what stress is, its causes and consequences, and what can be done to cope with it more effectively. Possible benefits of effective stress management for the individual include improved mental and physical health, improved problem solving and decision making ability, and increased job satisfaction. The advantages to the organisation may be decreased medical costs, less absenteeism and turnover, better decision making, a better working climate, and increased productivity” (Bellingham and Cohen, 1987:175).**

2.8 CONCLUSION

Stress and shift work are two issues known to mankind, but the effects are not yet properly understood. This chapter has summarised the harmful effects of stress and shift work for employees, as well as the organisation. It has also stressed the importance of a stress management module with regards to the employer's contribution towards stress. However, with regards to the tackling the issue of stress, a great deal must also depend on the individual, due to the fact that their health and well being are at stake. Is it not true that we are largely responsible for our health? Therefore we too must play a role in stress prevention programmes.

"In conclusion, the ability to manage stress can be greatly enhanced by increased awareness of what stress is, its causes and consequences, and what can be done to cope with it more effectively. Possible benefits of effective stress management for the individual include improved mental and physical health, improved problem solving and decision making ability, and increased job satisfaction. The advantages to the organisation may be decreased medical costs, less absenteeism and turnover, better decision making, a better working climate, and increased productivity" (Bellingham and Cohen, 1987:175).

The following chapter will elucidate the research methods used for this study. It will also reveal the development of the stress management module designed from the questionnaires completed and will then advance to the implementation of the stress management module.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The aim of this research project was to develop, as well as implement a stress management module for shift workers. The stress management module was designed to help companies maintain a more healthy and productive workforce, benefiting both the employee and employer.

This stress management module once developed, was implemented in three companies situated in Cape Town. Even though the sizes, as well as the industries in which the companies function, differ, they all have one factor in common, which is shift work. The stress management module was to be developed and utilised in order to assist employees working shifts to cope better with stress and the pressures thereof. For this very reason it was imperative that all companies being used in this research project, possessed a workforce which comprised of at least a minimum of 30% shift workers. Samples were used from all three companies, which brings the total sample size to 404. However, before the stress management module was designed and implemented, a questionnaire was completed by the employees working shifts within the three companies in question.

3.2 METHODOLOGY

The methodology that was used will be clarified through the use of six phases. The phases are as follows:

3.2.1 Phase 1

Development of questionnaire.

3.2.2 Phase 2

The distribution of the questionnaire amongst the shift workers, within the three companies in question.

3.2.3 Phase 3

Conduct interviews to obtain clarity with regards to those questionnaires that were unclear to the researcher.

3.2.4 Phase 4

The development of a stress management module.

3.2.5 Phase 5

The implementation of the stress management module within a sample selected.

3.2.6 Phase 6

Re-test the questionnaire after the stress management module has been implemented.

Next, the questionnaires were analysed according to the following factors:

- Gender
- Marital status
- Number of children
- Age group
- Occupational category

The data that has been received from the above-mentioned factors, will be put into a more understandable format, so that an accurate conclusion may be drawn. The same will be applied to the information received from the sample in which the stress management module was used. After the researcher has re-tested the questionnaire on the sample, it will be made clear whether the module is effective. The researcher will now be able to compare the scores from before and after the stress management module has been implemented.

However, before the above-mentioned phases are discussed, as well as a brief overview of each company is provided, it is imperative to understand why the researcher opted to make use of questionnaires and interviews.

a.) Questionnaires

“The advantage is that respondents have time to think about the answers to questions in the questionnaire. Moreover, a large number of respondents distributed over a large geographical area can be reached. The disadvantage is that the researcher is not at hand to explain uncertainties, which may result in biased or distorted answers by the participant. Furthermore, using questionnaires could be quite costly, especially where a large number of respondents have to be reached in order to minimise the percentage error in the results obtained” (Brynard and Hanekom. 1997: 38-39). Another advantage of utilising questionnaires is that respondents may remain anonymous, if they so choose.

This implies that respondents may actually be honest when completing a questionnaire, as no one will know who they are.

Due to the above-mentioned disadvantage, it was very important that a structured questionnaire was used. This is due to the fact that a structured questionnaire allows no room for the respondents to formulate the response themselves; which minimises the need for the researcher having to be there to clarify or explain uncertainties. In a structured questionnaire respondents must select the answer that best applies to them, from a response scale. An example of a structured question is taken from Welman and Kruger (1999:173) and is as follows:

Indicate in the space to the left of each item how happy you are with each of the following aspects of your job using the response scale below:

- 5 = Very happy
- 4 = Happy
- 3 = Neutral, neither happy or unhappy
- 2 = Unhappy
- 1 = Very happy

- _____ 1. The work you do.
- _____ 2. Your supervisor.
- _____ 3. Your co-workers.
- _____ 4. The conditions in which you work.
- _____ 5. The employee cafeteria.
- _____ 6. Your work hours.

A structured questionnaire also takes less time to complete, as all the answers are already there. Another important factor that was taken into consideration with regards to the questionnaire was that of the literacy levels of the respondents. **"We should formulate the questions in terms of words and concepts with which we can expect the respondent to be familiar. The command of language of the group being investigated should therefore be taken into account. Because we obviously want to obtain accurate information from the respondents, it stands to reason that they should know exactly what is being asked of them. With this in mind technical terms should be avoided"** (Welman and Kruger.1999:174). For this very reason, the researcher therefore decided that the questionnaire would be translated into languages that could be understood by all. The questionnaire was made available in English and Afrikaans; and respondents were free to use whichever language they preferred.

Once the above-mentioned was understood, something extra was still required for the respondents. **"It is necessary to supply respondents with standardised instructions on how to complete the questionnaire and to explain what is expected from them"** (Brynard and Hanekom.1997:38).

b.) Interviews

"Probably the biggest advantage of personal interviews is that the interviewers are in complete control of the interview situation. If respondents are evasive, interviewers can attempt to gain their confidence. Moreover, they can ensure that the respondent's first response is recorded as well as any changes to it, that all questions are answered, and that someone else does not provide the responses on the respondent's behalf. The interviewer is in a position to notice and to clear up any misunderstanding (in the case of semi-structured interviews) on the part of the respondent, to explain any questions which may be unclear, and to follow up on incomplete and vague responses" (Welman and Kruger.1999:164). **"It is also possible to observe the behaviour of the interviewee or respondent. The disadvantage is that many persons may fear to commit themselves by telling the truth"** (Brynard and Hanekom.1997:38).

The interviews were therefore only held once all the questionnaires were received and only where the researcher required the respondent to clarify information or complete information, which had been omitted. This was considered critical for the researcher, as the information being collected had to be correct in order for it to be valid and reliable.

3.2.1 PHASE 1: DEVELOPMENT OF QUESTIONNAIRE

The researcher felt that medical expertise was required in order to develop a structured stress questionnaire and therefore consulted with the following people in the medical profession:

- Dr. J. G. Dippenaar
- Dr. G. Kew
- Sr. S. Kritzinger

However, after consulting the above-mentioned people, the researcher felt more comfortable with using an already existing questionnaire from a doctor who specialises in stress. The reason for this is that certain questions had to be asked in order to measure stress and also a cut-off point had to exist in order to categorise the respondents once their answers had been completed. By using a questionnaire from a more qualified source than the researcher, it

ensured that reliable information was obtained in order for the researcher to analyse the data collected so that the results may be interpreted into a more understandable format.

The questionnaire, which was distributed amongst the three companies being researched, comprised four pages. A copy of the questionnaire may be perused in Addendum 2, however a brief explanation of each page of the questionnaire follows:

PAGE 1

This was a letter attached to the questionnaire and addressed to the employees who would be completing the questionnaire. The letter elucidated the following:

- That the questionnaire was not for work purposes.
- The need for the questionnaire.
- That the questionnaire comprised of three tests and explained what each test was for.
- How much time employees had to complete the questionnaire, by when it had to be handed in and whom it had to be handed in to.
- What the answers to the questionnaire will be used for.

PAGE 2

This is a test called **About you**. It requires respondents to provide the researcher with their occupation and name. Respondents are aware that they may remain anonymous. Also, respondents are required to complete a few multiple choice questions, by ticking the block which best applies to them with regards to their biographical details, namely:

- Age
- Sex
- Marital Status
- Whether they have any children
- And if so, how many
- Occupation

PAGE 3

The first test is a test called **Rate yourself for stress**. This test used by the researcher, measures stress and was developed by the American stress psychologists Lyle H Miller and Alma Dell Smith of the University of Boston's Medical Centre. By completing this test, it will be clear as to how much stress a particular individual may be experiencing. The test lists 10 responses often made by people under pressure. Each response must be rated on a scale from 1 (not stressful) to 5 (very stressful). Respondents are asked to think back to the last six months with regards to the responses given and circle the option that they feel

represents the amount of stress they experienced at the time (under the past column). Respondents are then asked to circle the amount of stress that they expect to experience during the next six months (under the future column). Respondents were not informed of how the score would be calculated. This is due to the fact that the researcher felt that they would be more honest if they were not aware of the manner in which the scores were to be calculated. If the respondents knew what the cut-off point for stress was, then a few of them might ensure that the total of their answers would stay under that point. In order to calculate respondents' scores, the following calculation was made:

- Add up the past column
- Add up the future column
- Then add the past and future columns totals together

A score of under 30 indicates that the respondent does experience stress; however the level of stress, is very low and therefore not a problem for the respondent. A score of over 30 indicates a potential stress problem, while more than 53 calls for a planned programme to fight stress.

PAGE 4

This is a test called **Measure your resistance**. **“The physical and mental effects of stress are due not only to the amount of stress you experience, but also to how good your defences are and how well they enable you to cope with stressful situations”** (Anon-Readers Digest.1999: 33). This test measures how much your way of life supports you and bolsters resistance to stress. **“No one can avoid stress altogether, but some people may be better equipped to handle stress than others; for example, those who are able to communicate openly with friends and family seem to deal well with stress”** (Anon-Readers Digest.1999: 33).

The American stress psychologists Lyle H Miller and Alma Dell Smith of the University of Boston's Medical Centre also designed this test. In this test, respondents are given 20 statements and are required to rate them according to how often they apply. The rating scale ranges from 1 (almost always) to 5 (never). Once again the respondents are not aware of how their scores will be calculated. In order to arrive at one's total score, add up the score rated for each of the 20 statements. **“A score of 45 or less shows high resistance to stress and a healthy way of life; 45 – 55 indicates that you may be susceptible to the effects of stress and could benefit from adjusting certain aspects of your daily life; over 55 and stress could be a serious risk, calling for a reappraisal of your general way of life”** (Anon-Readers Digest.1999: 333).

3.2.2 PHASE 2: DISTRIBUTION OF THE QUESTIONNAIRE WITHIN THE THREE COMPANIES

Company A

Organisation A is one of the leaders in the retailing revolution. They develop innovative, cost-effective packaging solutions for fresh food producers, distributors and retailers. It is a national and international company. For the purpose of this study only the Cape Town branch will form part of the sample size. The staff compliment in the Cape Town branch is 470, however only 220 employees are wage earners. Only 180 from the above-mentioned number work shifts, which brings the sample size to 180. Before the distribution of the questionnaire is discussed; some basic information with regards to the shift workers must be understood.

<u>SHIFT</u>	<u>SHIFT TYPE – WHEN IT IS WORKED</u>
A	Day Shift
B	Afternoon Shift
C	Night Shift

Table: 3.1

Shift types at Company A

It must also be known that the shift rotation at Company A is as follows: One week of night shift (C-Shift), followed by one week of afternoon shift (B-Shift) and then one week of day shift (A-Shift).

<u>SHIFT</u>	<u>WEEKLY WORKING HOURS</u>	<u>WEEKEND WORKING HOURS</u>
A	07H00 – 15H00	OFF
B	15H00 – 23H00	07H00 – 19H00
C	23H00 – 07H00	19H00 – 07H00

Table: 3.2

Working Hours of Shifts at Company A

STRESS MANAGEMENT MODULE FOR SHIFT WORKERS

COMPILED BY: ROMY LEIGH ANTHONY

	<u>SHIFT WORKERS</u>	<u>NON-SHIFT WORKERS</u>	<u>TOTAL</u>
<u>WAGE EMPLOYEES</u>	180	40	220

Table: 3.3

Total Number of Wages Staff Breakdown at Company A

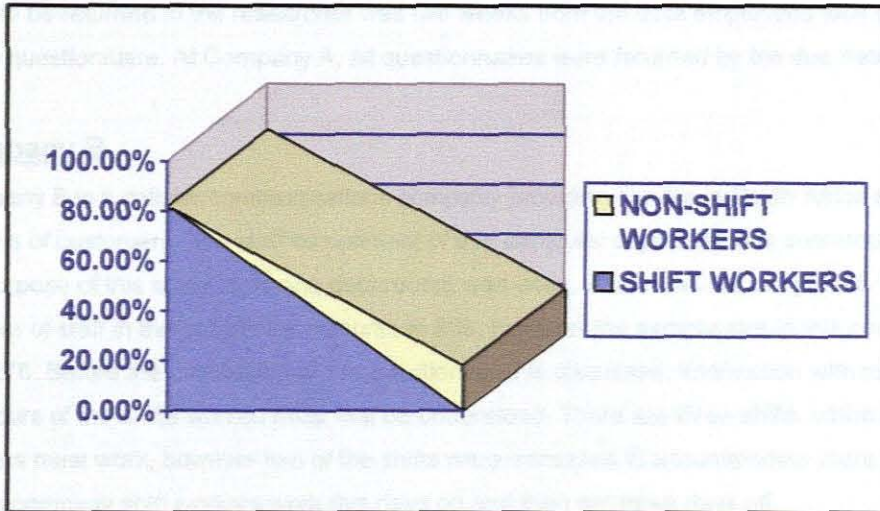


Figure: 3.1

Percentage Breakdown of Shift and Non-Shift Workers at Company A

Before the questionnaire was distributed among the shift workers in the company, the researcher felt that it was important to inform the correct people of what was to occur, in order for them to facilitate while the researcher was not available. For instance, those employees working night when the questionnaire was handed out would require someone to assist them with queries in the absence of the researcher. A meeting was therefore held with the supervisors of each shift, in order to inform them of why this research was being conducted, what would be done with the results and by when the questionnaires were to be completed. Each supervisor was also informed that should an employee require help with any part of the questionnaire and the researcher was not available, they should set up appointments for those employees with the researcher. The researcher also left a box at the company for those employees who had questions, but did not want their supervisors to know. Those employees could drop their names and telephone numbers into the box, which only the researcher had the key for. The researcher then went to Company A one morning and handed out the questionnaire personally to those employees working the day shift. The purpose of the study was explained to each employee, as well as the date by which the questionnaire was to be returned. Employees were also informed that neither their supervisors, nor managers would

be able to peruse their results. The researcher then remained at the Company for two reasons. The first was to answer any questions which employees had and the second was to hand out the questionnaires personally to the afternoon shift employees who were to start work at 15h00. The researcher stayed for a few more hours to answer any questions raised by the afternoon shift employees. The night shift supervisor was then given the set of questionnaires to hand out to the night shift employees. The date by which all questionnaires were to be returned to the researcher was two weeks from the date employees took delivery of the questionnaire. At Company A, all questionnaires were returned by the due date.

Company B

Company B is a cellular communications company providing service in South Africa to millions of customers. The staff compliment of this particular organisation is enormous, so for the purpose of this study, only one department was used, which was the call centre. The total number of staff in the call centre amounts to 808, however the sample size in this company was 178. Before the distribution of the questionnaire is discussed, information with regards to the hours of the shifts worked must first be understood. There are three shifts, which shift workers must work, however two of the shifts were increased to accommodate more people. In this company shift workers work five days on and then get three days off.

<u>EARLY SHIFTS</u>	<u>LATE SHIFTS</u>
06H00 – 14H30	13H00 – 21H30
06H30 – 15H00	13H30 – 22H00
07H00 – 15H30	14H00 – 22H30
07H30 – 16H00	14H30 – 23H00
08H00 – 16H30	15H00 – 23H30
08H30 – 17H00	15H30 – 24H00
09H00 – 17H30	
	GRAVE YARD SHIFT: 23H00 – 07H00

Table: 3.4

Working Hours of Shifts at Company B

	<u>SHIFT WORKERS</u>	<u>NON-SHIFT WORKERS</u>	<u>TOTAL</u>
<u>CALL CENTRE</u>	794	14	808

Table: 3.5

Total Number of Call Centre Staff Breakdown at Company B

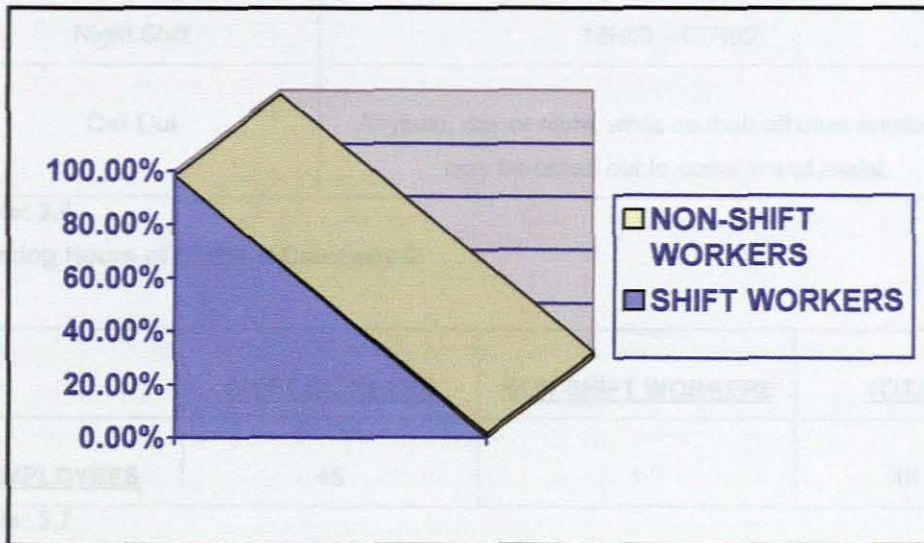


Figure: 3.2

Percentage Breakdown of Shift and Non-Shift Workers at Company B

The researcher worked through one of the call centre agents with regards to the distribution of the questionnaire at Company B. The call centre agent was given exactly the same information that the shift supervisors at Company A and was also given a box for the names and number of employees who had any questions. Due to the fact that the researcher had no contact with any of the respondents, the questionnaires were received only two weeks after the required date.

Company C

Company C is a security company who provides their service by hiring out their staff and equipment to: retail, industrial, corporate, banking, mining, warehousing and hotel and leisure industries. Companies outsource this type of service due to the fact that it is specialised. For this very reason, a type of company such as this would have an immense staff compliment. The researcher therefore opted to select a company who outsourced this service to take the

STRESS MANAGEMENT MODULE FOR SHIFT WORKERS

COMPILED BY: ROMY LEIGH ANTHONY

sample size from there. The sample size from this particular company was therefore only 46. Employees of Company C work three days of day shift, followed by three days of night shift and then they receive three days off.

<u>SHIFTS</u>	<u>TIMES OF SHIFTS WORKED</u>
Day Shift	07H00 – 18H00
Night Shift	18H00 – 07H00
Call Out	Anytime, day or night, while on their off days employees may be called out to come in and assist.

Table: 3.6
Working Hours of Shifts at Company C

	<u>SHIFT WORKERS</u>	<u>NON-SHIFT WORKERS</u>	<u>TOTAL</u>
<u>EMPLOYEES</u>	45	1	46

Table: 3.7
Total Number of Staff Breakdown at Company C

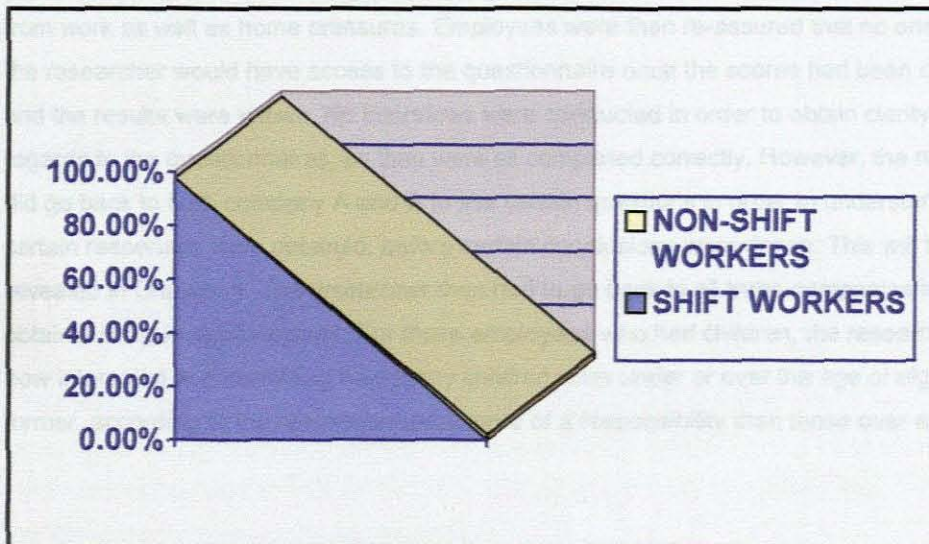


Figure: 3.3
Percentage Breakdown of Shift and Non-Shift Workers at Company C

The researcher made an appointment with the Security Manager and briefed him on all the relevant information. Due to the fact that the sample size was small, the researcher decided to hand out the questionnaires personally to the employees. It was decided that the questionnaires would be handed out late in the afternoon so that both shifts would be covered. Employees received their questionnaires; an explanation as to why the project was being done was given and they were also informed that their manager would not be able to get hold of their answers. The researcher waited a while to answer any questions, however none were asked. All questionnaires were received a week before the requested date.

3.2.3 PHASE 3: INTERVIEWS CONDUCTED TO OBTAIN CLARITY TO QUESTIONS LEFT UNANSWERED OR UNCLEAR

Company A and Company B called the researcher to collect the questionnaires once they had all been completed. All questions were completed correctly and none of the employees had any questions, which required the researcher to answer. Therefore, no interviews were conducted at the above-mentioned two companies.

Company A had a few names in the box of employees requesting to see the researcher again. However, once the researcher had spoken to all of the employees, it was evident that the employees only wanted to see the researcher to double-check that their supervisors would not have access to their answers. They feared that should the test show that they were under stress, their supervisors would accuse them of trying to blame only their work on the stress being experienced and not their family life. The researcher explained that they would not get into any trouble for answering the questionnaire honestly and that stress can result from work as well as home pressures. Employees were then re-assured that no one else but the researcher would have access to the questionnaire once the scores had been calculated and the results were known. No interviews were conducted in order to obtain clarity with regards to the questionnaires, as they were all completed correctly. However, the researcher did go back to both company A and B to ask certain questions in order to understand why certain responses were obtained, before certain conclusions were drawn. This will be revealed in Chapter 4. The researcher then had to go back to all three companies in order to obtain a more in depth answer. For those employees who had children, the researcher was now interested in determining how many children were under or over the age of eighteen. The former, according to the researcher were more of a responsibility than those over eighteen.

3.2.4 PHASE 4: THE DEVELOPMENT OF A STRESS MANAGEMENT MODULE

The researcher consulted many modules, which have been designed to assist employees who are dealing with stress. **“It is also necessary to bear in mind that the aim of stress management is not to eliminate stress totally. The good stress that gives you the edge when you need it is something you'll always want, it's the negative stress that has to be controlled. This can be approached in a number of ways. You can defend yourself from the stressors, stopping them from ever getting to you. You can counter the effects of stress physically, using exercise or drugs to counter the attack. Or you can resort to emotional and spiritual relief, bringing a calm to the inner self that results in less likelihood of developing a negative stress response”** (Clegg.2000:5).

This stress management module consists of exercises, which should be used to help individuals calm themselves in order to try and understand their responses to stress, as well as techniques or defences, which individuals can apply when the stress becomes too much. The exercises, which appear in the module, are taken from Clegg (2000:5), the Readers Digest (1992) and Makin and Lindley (1991). The first few pages of the stress management module explains to the readers what stress is and where it comes from. It then goes on to teach readers how to recognise the signs and gives some strategies, which may be used to cope with stress. The information contained in those pages is basic information about stress which readers must understand in order to eliminate the negative stress, which they may be experiencing. Next in the module is a test, which employees are to complete by selecting yes or no for each answer. There are six categories:

- Your environment
- Your personality
- Your body
- Your relationships
- Your job
- Your time management

This test allows the readers to see for themselves exactly where their stress lies, so that they may focus on those areas in particular. The rest of the module is made up of exercises, which the readers may use in order to calm themselves so that they may either deal with their stress or eliminate the negative stress completely.

Not all the tests have to be used; readers may choose only those exercises, which they feel more comfortable with. This is due to the fact that everyone is different and this module must accommodate these differences. Therefore, the module offers many different exercises, all of which do not require money or even much time. This stress management module may be reviewed in Addendum 3.

3.2.5 PHASE 5: THE IMPLEMENTATION OF THE STRESS MANAGEMENT MODULE

Once the stress management module had been compiled, a sample size was determined to test the module. Due to the fact that Company A was afraid of their supervisors reviewing their score, the researcher decided to test the stress management module on Company A. The sample size was 50 and was chosen by means of simple random sampling. **“In the simplest case of random sampling, each member of the population has the same chance of being included in the sample and each sample of a particular size has the same chance of being chosen”** (Welman and Kruger.1999:52).

The implementation of the stress management module within the sample size occurred as follows:

- The sample size of 50 was split into 5 groups of ten
- The 5 groups were chosen in no particular order
- The 5 sessions were held over a period of 1 week
- The researcher did not conduct the session
- Each person in each group was given a sheet of paper with the group members' names on it.
- Each person was to select a candidate who they felt should implement the stress management module.
- The researcher did this for the following 3 reasons:
 - Employees would partake more in the session, if someone they knew and trusted was helping them learn more about stress
 - If employees were on night shift then there would be someone to cover the shifts
 - The module is all about having fun, letting your hair down and helping each other. The researcher felt that the group would be more comfortable with each other and not an outsider
- Once the 5 group leaders were selected, the researcher held a session with them. In the session the following happened:

- The researcher implemented the entire module with the 5 group leaders so that they were also involved in all the exercises
- Once they had worked through the entire module, the researcher helped the group leaders with regards to how to the procedure when they implemented the stress module
- Group leaders were asked to explain each exercise to the rest of the group and let them all partake; as this was the only way the group members would determine which exercises they felt more comfortable with. Also, enough time was to be given to the group member, so that each exercise could be performed. Group leaders were also informed that they should encourage the group members to give any input they felt would help and most importantly to have fun
- It was also stressed that the group leaders needed to inform the group members to take the module home and to do the exercises should they feel stressed, as stress management is an ongoing process
- The group leaders and the researcher decided on the times the sessions were to be held. One session was to be held per day.

All sessions were completed in the chosen week and each group leader had reported that group members had had fun.

3.2.6 PHASE 6: RE-TEST OF THE QUESTIONNAIRE

One week after the implementation sessions were held, the researcher felt that it was time to re-test the questionnaire. The questionnaire was only re-tested on the 50 employees who were involved in the implementation of the stress management module. It was not re-tested immediately, as the results would not be accurate and valid. Had employees been tested straight after the implementation session, they would all still be in high spirits after their fun session of stress exercises. It was therefore imperative to get them all back into their normal routine. The questionnaires were then handed to the 50 employees from the sample size personally by the researcher. Remarkably, the questionnaires were returned on the same day.

3.3 CONCLUSION

The distribution of the questionnaires among the three companies followed the exact process and fortunately for the researcher there were no signs of resistance with regards to completing the questionnaires. This was all thanks to the supervisors and managers of each of the three companies, who informed their staff as to what would be happening in the next couple of weeks, as well as the reasons thereof. All three companies were also very eager to help the researcher and assisted where they could.

The researcher went back to all three companies for a second time, in order to obtain a more detailed answer with regards to the children and their ages. Even though this was a time consuming exercise and took months to complete, it aided the researcher in drawing a more valid and reliable conclusion with regards to the specific factor. Before this exercise had even begun the researcher felt that this factor may have been overlooked and a space for this answer should have been allocated on the questionnaire. However, this exercise gave the researcher another opportunity to interact with all the staff and gave the staff an opportunity to understand how important this research was. The researcher therefore capitalised on this shortcoming.

The processes, which followed after the questionnaire, even though lengthy, all went off smoothly assisting the researcher a great deal. Chapter 4 will reveal and analyse the results of the questionnaires into more understandable forms, which is required to assist the researcher in drawing accurate and reliable findings.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 INTRODUCTION

As discussed in Chapter 3, phase 2 dealt with the distribution of the questionnaire amongst the three companies in which this study was being conducted, which in turn brought about the completion of the questionnaire. As alluded to earlier, in this particular chapter the data obtained from the questionnaires will be analysed and transformed into a more understandable form. The reason for the data transformation is so that the end result may be more straightforward, understandable and evident for the researcher, which is imperative so that a reliable and valid conclusion may be drawn. The methods of illustration chosen by the researcher is that of graphs, charts and tables; as these diagrams once completed would assist the researcher immensely as he or she would now be able to view the results of each of the tests which are in the questionnaire. Another reason for the choice of methods of illustration is due to the fact that for two of the tests, three categories exist. Answers received from each test must be split up into three categories in order for the researcher to determine whether different shifts create different levels of stress. The answers will also be assessed according to the following headings:

- Age group
- Gender
- Marital status
- Children under/over 18 – If any
- Occupational level

Once the stress management module had been implemented, the researcher waited for a week to pass and then re-tested the exact same questionnaire. Once the data had been received, the answers were split up into three categories in the same way as the first time the data was analysed. The reason for the re-test was so that the results could be compared to the first set of answers received, in order for the researcher to evaluate whether employees stress levels were the same or had decreased or increased since the implementation of the stress management module.

The data received from the questionnaires will be analysed per company separately, however, each company's discussion will follow the same format.

Company A**4.2 The Three Categories**

The above-mentioned heading deals with and analyses the results of the test called **Rate yourself for stress**. Once the totals of each column were tallied, respondents' scores were identified. The categories were as follows:

- Under 30 – A low level of stress exists, which is not regarded as a problem.
- 30 and over – A potential stress problem.
- 53 and over – Calls for a worked-out programme to fight stress.

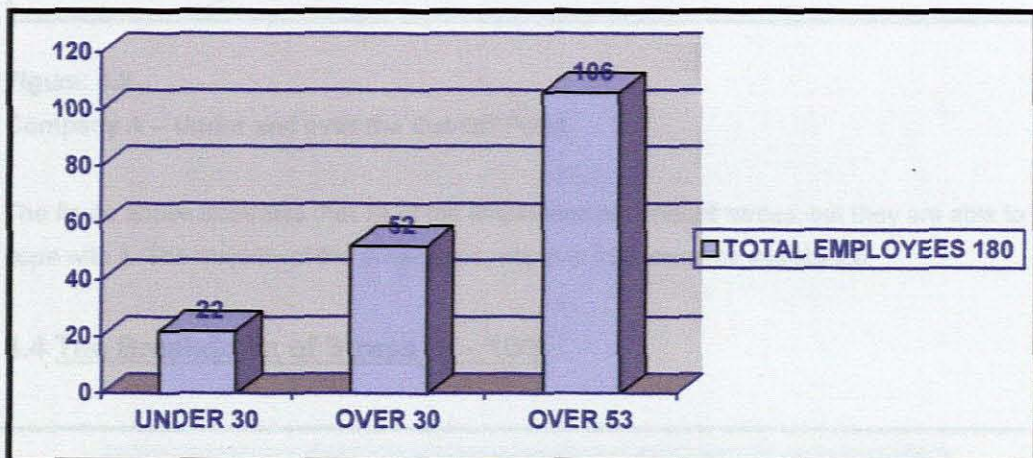


Figure: 4.1

Company A – Number per Category

The above-mentioned bar chart illustrates the breakdown with regards to the amount of stress being displayed by employees at Company A. In the category **under 30**, there were 22 employees, which is only 12.2%. This in turn means that only the minority of the sample size do experience stress. However, the amount of stress being experienced is such a diminutive amount that it is not seen as a dilemma. A total of 52 employees experience stress, yet handle it effectively; however this may lead to potential stress problems. This is a percentage of 28.8%. The total number of employees who require a worked-out programme to help them fight the stress is the highest at 106. This is a percentage of 59%. The majority of the employees at Company A therefore fall into the unsafe category, which declares that those employees are battling with stress and require assistance.

Company A – The Breakdown of Stress

4.3 Under and Over the Cut-Off Point (53)

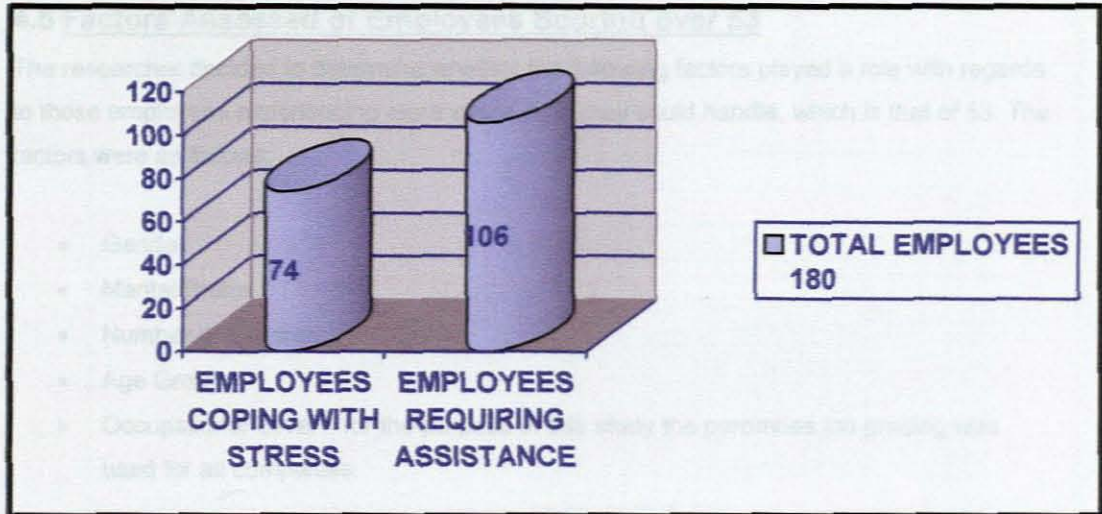


Figure: 4.2

Company A – Under and over the Cut-Off Point

The figure above illustrates that 74 of the employees experience stress, but they are able to cope with it. The majority of the employees, which is 106, requires assistance.

4.4 The Breakdown of Stress (1 – 100)

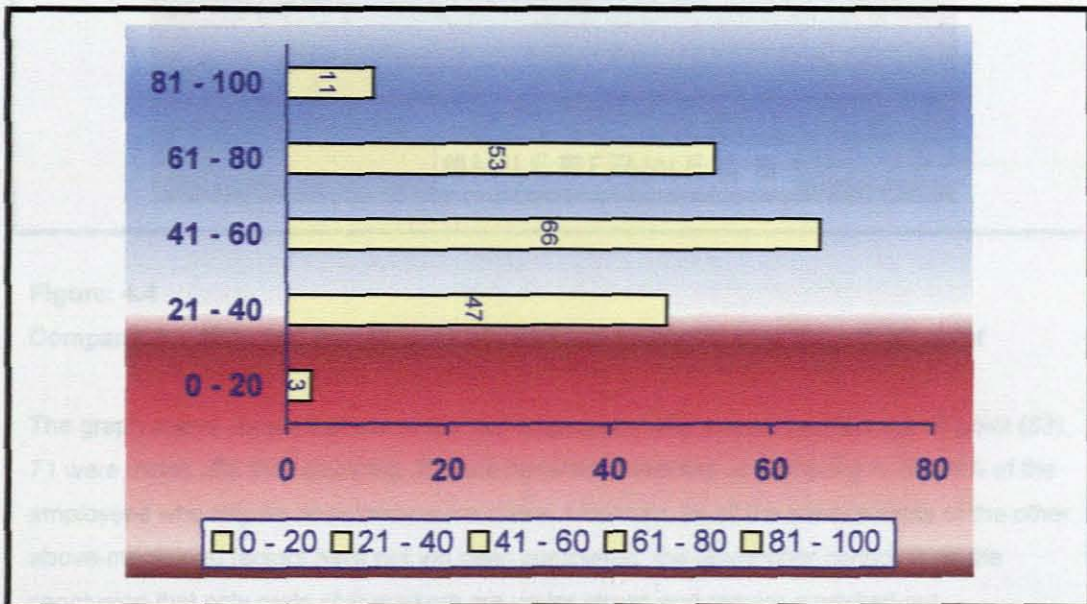


Figure: 4.3

Company A – The Breakdown of Stress

4.5 Factors Assessed of Employees Scoring over 53

The researcher decided to determine whether the following factors played a role with regards to those employees experiencing more stress than they could handle, which is that of 53. The factors were as follows:

- Gender
- Marital Status
- Number of Children
- Age Group
- Occupational Level – for the purpose of this study the peromnes job grading was used for all companies.

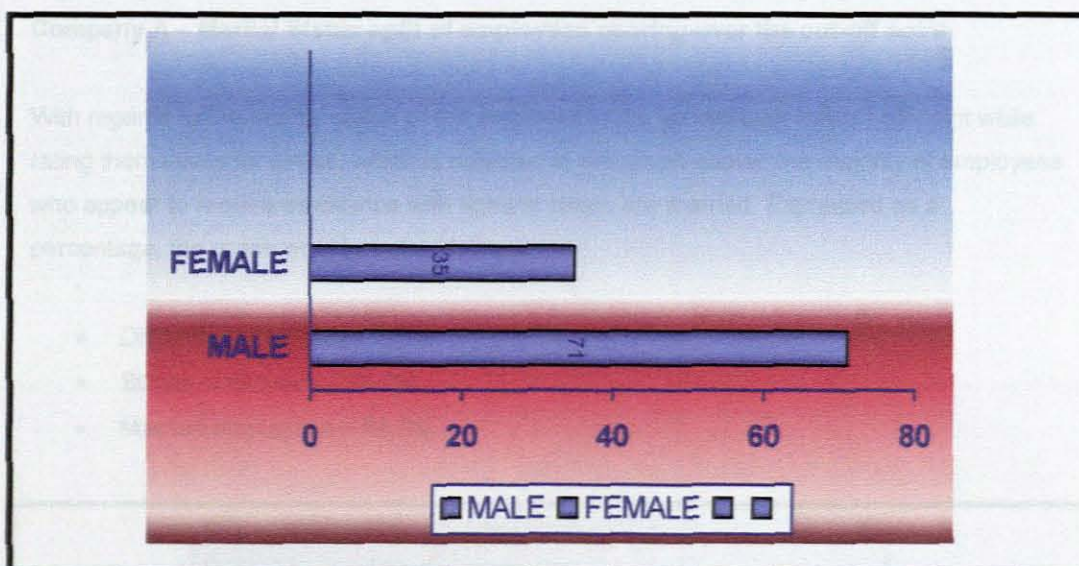


Figure: 4.4

Company A – Male and Female split of employees scoring over the cut-off point

The graph above shows that out of the 106 employees who scored over the cut-off point (53), 71 were males and the remaining 35 were females. Therefore at Company A, 66.98% of the employees who require assistance were males. However, as all the assessments of the other above-mentioned factors have not yet been completed, the researcher cannot draw the conclusion that only male shift workers are under stress and require a worked-out programme; as such an assumption would not be reliable, nor valid. A proper discussion will be held once all the factor responses have been illustrated per company.

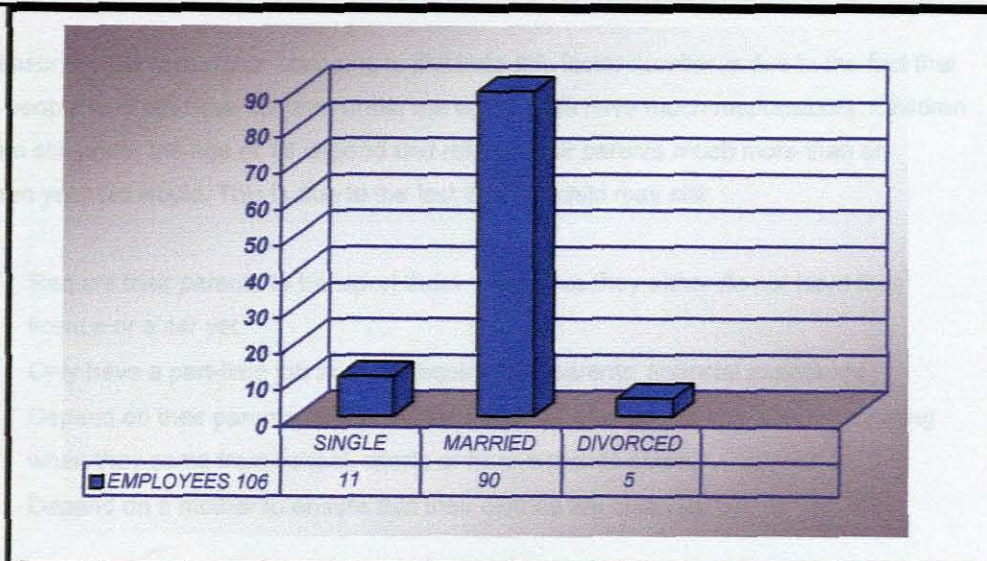


Figure: 4.5

Company A – Marital Status split of employees scoring over the cut-off point

With regards to the marital status of the employees who scored over the cut-off point while rating themselves for stress, which is reflected in the graph above; the majority of employees who appear to require assistance with fighting stress are married. Expressed as a percentage, the graph would read as follows:

- Divorced employees – 4.7%
- Single employees – 10.4%
- Married employees – 84.9%

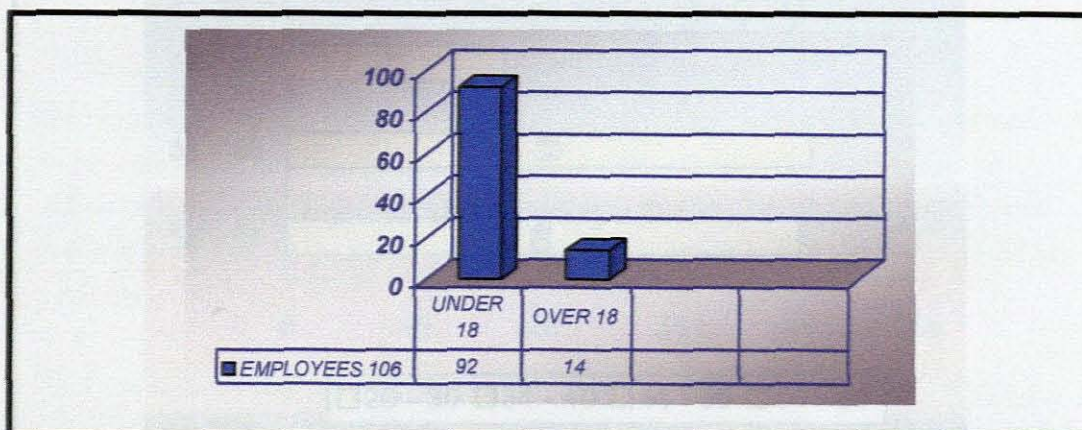


Figure: 4.6

Company A – Children under and over the age of 18

The reason for the researcher choosing to illustrate this factor number is due to the fact that those people who still have children under the age 18 still have much responsibility. Children who are still under the age of 18 depend and rely on their parents much more than an eighteen year old would. This is due to the fact that the child may still:

- Require their parents to transport them around, as they either do not have their licence or a car yet.
- Only have a part-time job and still require their parents' financial assistance.
- Depend on their parents to provide them with a home-cooked meal in the evening when they come from school, sports or from a friends place.
- Depend on a mother to ensure that their clothes are cleaned.

The above-mentioned are just a few examples of why a child under eighteen is more dependent on his or her parents. For these very reasons children under eighteen still stay at home with their parents and do not have a job. Also how many children fall pregnant while still in school? The responsibility of looking after the child, as well as the financial responsibility in many instances will become the grandparents' responsibility. Fair enough, this is life; however this still leaves this category of employees with younger children with more responsibility than those employees whose children have grown up already, can look after themselves and have maybe even moved out of the house.

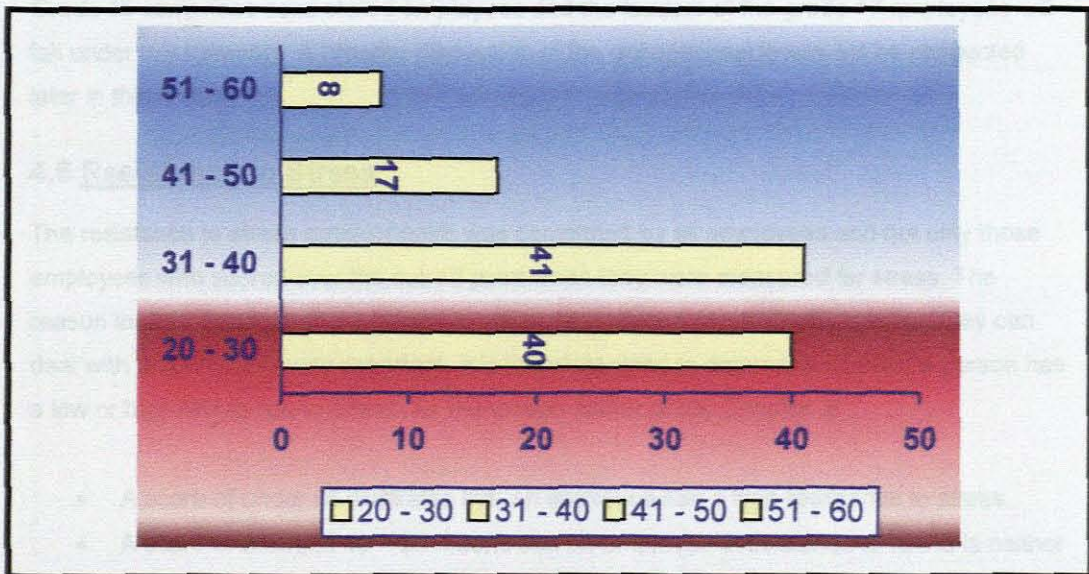


Figure: 4.7

Company A – Age Group split of employees scoring over the cut-off point

The graph above illustrates that the majority of the employees requiring assistance with regards to fighting stress are between the ages of 20 and 40. A more in-depth discussion will be given towards the end of the chapter.

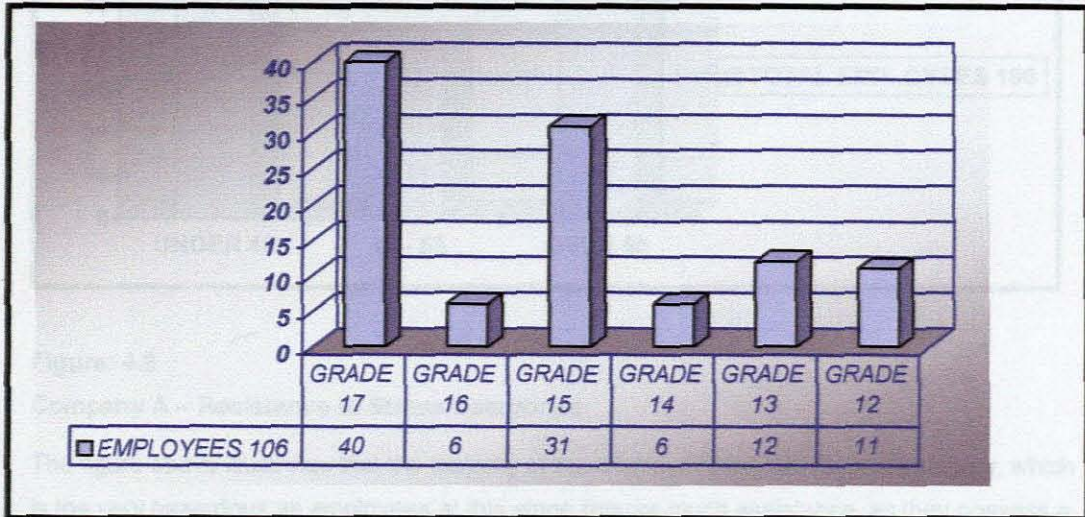


Figure: 4.8

Company A – Occupational level split of employees scoring over the cut-off point

Grade 17 and grade 15 are where most employees who require assistance with stress are situated with regards to their occupational level. Grade 17 is the lowest level and most of the employees' jobs are graded on that level, as no skill or experience is required for this level. Grade 15 comprises semi-skilled employees and the leaders of the grade 17 employees will fall under this category. A broader discussion of the occupational levels will be conducted later in this chapter.

4.6 Resistance to Stress

The resistance to stress questionnaire was completed by all employees and not only those employees who scored over the cut-off point when they were measured for stress. The reason for this is that even if a person does not experience much stress, whether they can deal with that stress is very important. It is therefore used to determine whether a person has a low or high resistance to stress. As mentioned earlier under Chapter 3:

- A score of under 45 illustrates that an employee has a high resistance to stress.
- A score of between 45 – 55 means that an employee's resistance to stress is neither high nor low, but should that employee adjust certain aspects of his or her life, then that person would only benefit from it.
- A score of over 55 illustrates that an employee could be at serious risk.

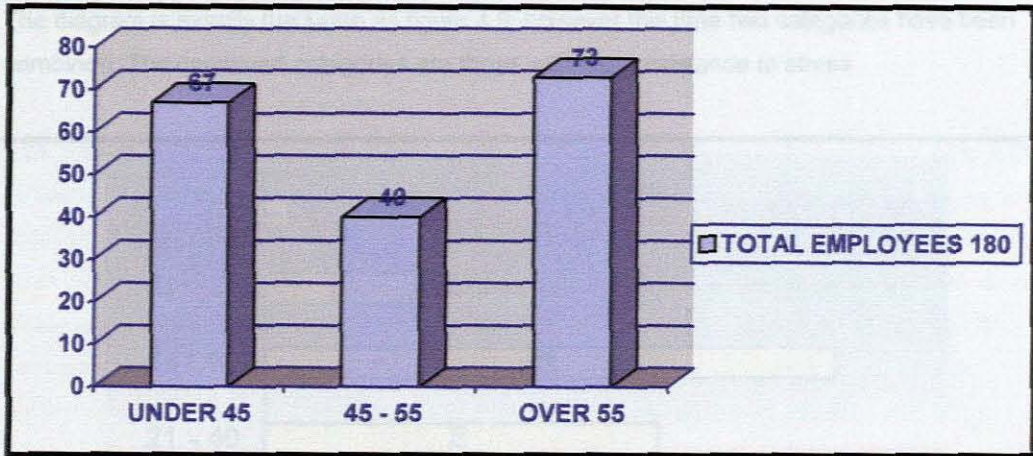


Figure: 4.9

Company A – Resistance to Stress Categories

The figure above illustrates that the majority of the employees fall into the last category, which is the very hazardous as employees at this stage require much assistance, as they possess a very low resistance to stress. A percentage of 37.2% is the amount of employees falling into the category of under 45, which illustrates a high resistance to stress and an amount of 22.2% was achieved by those employees who possess neither a high nor a low resistance but should consider adjusting certain aspects of their life. The majority of the employees, which is 40.6%, falls into the category of over which illustrates that these employees are at risk from stress as their resistance levels are low when it comes to stress.

4.7 Discussion of Company A

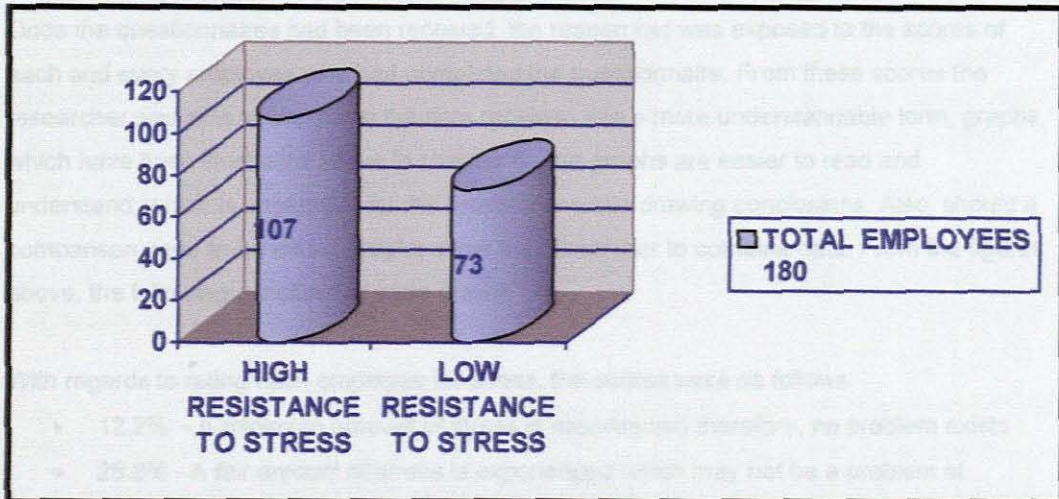


Figure: 4.10

Company A – Under and Over the Cut-Off Point (55 is the cut-off point)

The diagram is exactly the same as figure 4.9; however this time two categories have been combined. The combined categories are those with high resistance to stress.

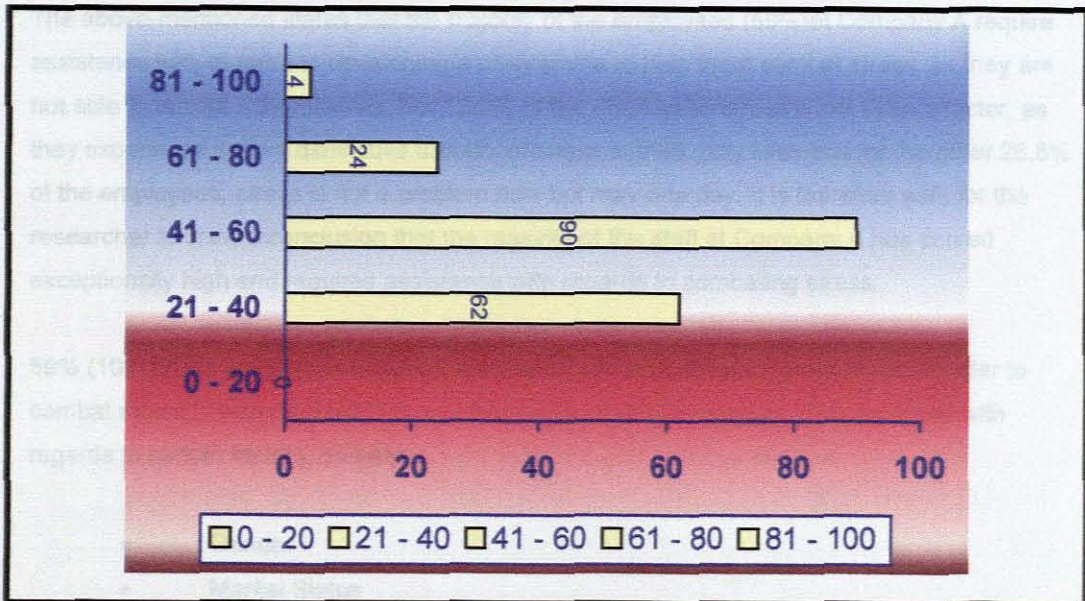


Figure: 4.11

Company A – The Breakdown of Resistance to Stress

The figure above illustrates a more detailed split of the amount of employees and what scores they have achieved when scoring themselves for their resistance with regards to stress.

4.7 Discussion of Company A

Once the questionnaires had been received, the researcher was exposed to the scores of each and every employee who had completed the questionnaire. From these scores the researcher was able to transform the data received into a more understandable form, graphs, which have been illustrated above in chapter 4. The graphs are easier to read and understand; which is imperative for the researcher while drawing conclusions. Also, should a comparison need to be made, graphs allow the researcher to combine data. From the figures above, the following conclusions were drawn.

With regards to rating each employee for stress, the scores were as follows:

- 12.2% - A minimum amount of stress is experienced therefore, no problem exists
- 28.8% - A fair amount of stress is experienced which may not be a problem at present, however there is the potential that the stress being experienced will develop into a problem

- 59% - Calls for a worked-out stress programme, as the employee requires assistance.

The above-mentioned states that the majority of the employees (59%) at Company A require assistance with regards to developing a programme to help them combat stress, as they are not able to handle it themselves. For 12.2% of the employees stress is not even a factor, as they experience such a diminutive amount of stress in their daily lives and for the other 28.8% of the employees, stress is not a problem now but may one day. It is therefore safe for the researcher to draw a conclusion that the majority of the staff at Company A has scored exceptionally high and requires assistance with regards to combating stress.

59% (106) of the employees required assistance and a worked-out programme in order to combat stress, it was decided that only that group of employees would be analysed with regards to certain factors, namely:

- Gender
- Marital Status
- Children (under and over the age of 18)
- Age Group
- Occupational Level

When the researcher focused on the gender it was realised that out of the 106 employees; 71 were male (66.98%) and 35 were female (33.02%). Before receiving this data, it was assumed by the researcher that the number of females would be larger than that of men. For this very reason the researcher went back to the company to ask a few questions, in order to understand why the number of males was higher than that of females; so that a reliable and valid conclusion could be drawn. The researcher was then told that due to the fact that the man of the house was working shifts, he was now more responsible for executing duties around the house. For example: if the wife worked the normal nine-to-five, then between the hours of 07h30 – 18h00 she would not be at home (time for travelling had been added onto her normal daily working hours).

Should the husband be working the same hours, he would be exempt from helping with many of the homely chores. Due to the fact that the husband is now on night shift, he is now at home during the day. The husband would get home after the wife and kids have already left the house. He would first have breakfast, then and maybe a nap.

He would then be asked to do a few of the following, as he is at home and the wife is not:

- Do the washing
- Hang the washing
- Make the beds
- Clean the kitchen
- Fix certain things that may be broken around the house
- Start supper
- Pick up the kids from school
- Get a few goodies at Pick 'n Pay
- Return the kids library books

The husband would probably only sleep properly once the wife is at home to take care of the children and also he may want to sleep later so that he is fresh for work. What the researcher is trying to do here is give the reader some insight into what the researcher has been told.

The males have declared that due to the fact that they work shifts, they are depended on a whole lot more with regards to errands and chores at home, not only from their spouse, partner or kids, but also by family members and friends. This therefore explains the reasoning as to why more men require a worked-out stress programme, than women at Company A.

The marital status of the 106 employees was as follows:

- 11 employees were single (10.38%)
- 90 employees were married (84.91%)
- 5 employees were divorced (4.71%)

Fair enough each and every person may be exposed to stress and may also have a lot of responsibilities. Also, a single parent may battle and experience more stress than a married person, as they have no one to rely on and turn to; the same may apply for a divorced individual. However, the results of the study, which was carried out at Company A, demonstrates that the majority of employees who fell into the category over the cut-off point were married employees. It may therefore be stated that at Company A the majority of the employees falling into the category of people acquiring assistance with regards to combating stress, were married.

For the purpose of this study, when it came to the factor of children; it was not just a case of whether the employee had children. For the purpose of the study it was more

imperative that the researcher knew, of those employees who had children how many had children under the age of eighteen and how many had children over the age of eighteen.

The reason for this is that children under the age of eighteen are still very dependent on their parents, even though they may not like to think so. Children over eighteen have their own licence; their own car or friends who have their own car; jobs should they not be studying full-time; do not need their parents to come home and prepare a cooked meal for them and much more. The results were as follows:

- 92 employees (86.79%) have children who are still under the age of 18
- 14 employees (13.21%) have children who are over the age of 18

The majority of the employees who fall into the category of over the cut-off point have children under the age of eighteen. This therefore means that having children under the age eighteen does put a certain amount of stress or strain on an individual, due to the fact that a child under the age of eighteen would require more attention than an eighteen year old or older child would. For the purpose of this study it is therefore safe to say that employees who still have children under the age of eighteen will experience more stress than those who have children over the age of eighteen.

With regards to the age groups, the results were as follows:

- 20 – 30: Employees amount to 40 (37.74%)
- 31 – 40: Employees amount to 41 (38.68%)
- 41 – 50: Employees amount to 17 (16.04%)
- 51 – 60: Employees amount to 8 (7.54%)

The results above show that the majority of the employees, who need assistance with stress, fall in the age group of 20 – 40. This in turn supports the children under and over eighteen factor. The reason for this is because generally by the time a person reaches the age of between 41 – 50, their children will start turning eighteen and even older. This eliminates the stress of having to still be there for one's child or children "twenty-four-seven". For this reason alone, between the ages of 41 – 60, employees start to experience less stress.

With regards to the occupational level at Company A, the results were as follows:

- Grade 17 – 40 employees (37.74%)
- Grade 16 – 6 employees (5.66%)
- Grade 15 – 31 employees (29.24%)
- Grade 14 – 6 employees (5.66%)
- Grade 13 – 12 employees (11.32%)
- Grade 12 – 11 employees (10.38%)

At Company A, the majority of the employees who seemed to be faced with more stress than they could handle, were grade 17 employees. As alluded to earlier, the peromnes job grading system was used for all positions at all companies being researched. Grade 17 was the lowest grade at Company A. Employees who have had no education, experience and require no skill in order to perform their daily tasks; fell in this grade. Of course, there was more than one occupation in this grade; which encompasses the lowest occupational levels. Grade 17 has 40 employees, as most of Company A's factory staff are unskilled and uneducated. The next grade with the most number of employees is grade 15. Senior operators/team leaders/heads of grade 17 fall in this grade. The reason for these grades having the most number of stressed out employees, is that they have the majority of the employees falling under them. The researcher feels that the occupational level on which an employee is, does not affect his or her stress levels. The reason for this statement is because Grade 17 and grade 15 employees do not have deadlines to work to, nor do they work in a pressurised environment. What may increase the stress being experienced in the ergonomics and physical conditions of their work environment; this is because these grades of employees work in a factory.

Finally, with regards to the employees' resistance to stress once again the majority 40.55% or 73 employees of the total sample of employees (180) has low resistance to stress and were at serious risk.

It has therefore been determined that Company A has a large number of employees who require assistance with regards to developing a programme to help them combat stress. The majority of these employees who require assistance are affected by one or more of these factors: they are males, married, with children under the age of eighteen and are between the ages of 20 –40 while their occupational level is grade 17 or 15.

Company B

The format that each company will follow, as well as the types of graphs and charts that will be used in Company B and C, are exactly the same as in Company A; the only detail which will change is the results.

4.8 The Three Categories

The above-mentioned heading deals with and analyses the results of the test called **Rate yourself for stress**. Once the totals of each column were tallied, respondents' scores were identified. The categories were as follows:

- Under 30 – A low level of stress exists, which is not regarded as a problem.
- 30 and over – A potential stress problem.
- 53 and over – Calls for a worked-out programme to fight stress.

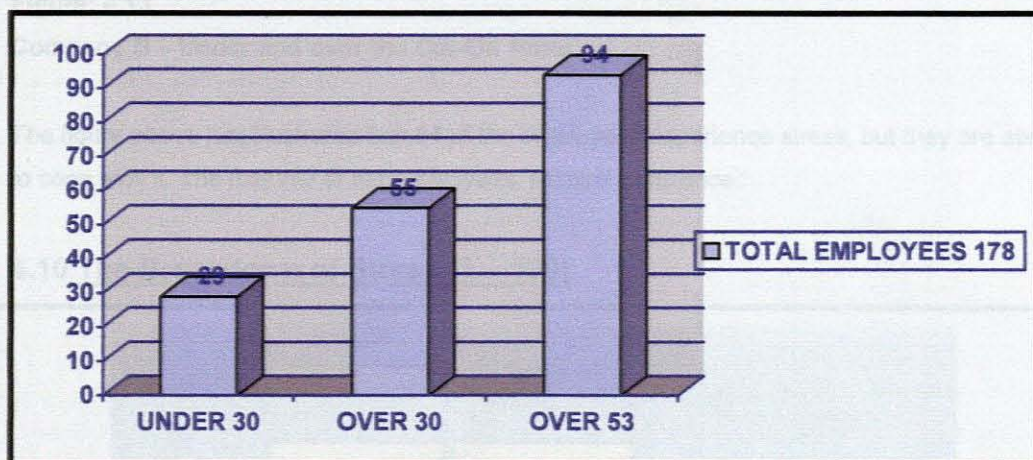


Figure: 4.12

Company B – Number per Category

The above-mentioned bar chart illustrates the breakdown with regards to the amount of stress being displayed by employees at Company B. The category under 30 has 29 employees, which is only 16.29%. This in turn means that only a minority of the sample size experiences stress however, the amount of stress being experienced is such a diminutive amount that it is not seen as a dilemma. A total of 55 employees experience stress, yet handle it effectively; however this may eventually lead to a potential stress problem. This is a percentage of 30.90%. The total number of employees who require a worked-out programme

to help them fight the stress is the highest at 94. This is a percentage of 52.81%. The majority of the employees at Company B therefore fall into the unsafe category, which declares that those employees are battling with stress and require assistance.

4.9 Under and Over the Cut-Off Point (53)

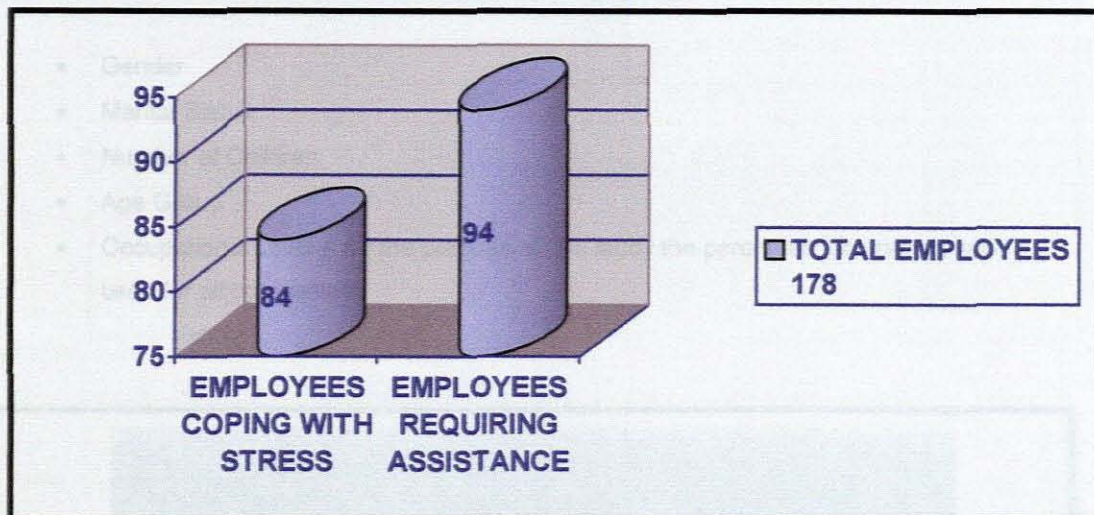


Figure: 4.13
Company B – Under and over the Cut-Off Point

The figure above just illustrates that 84 of the employees experience stress, but they are able to cope with it. The majority of the employees, require assistance.

4.10 The Breakdown of Stress (1 – 100)

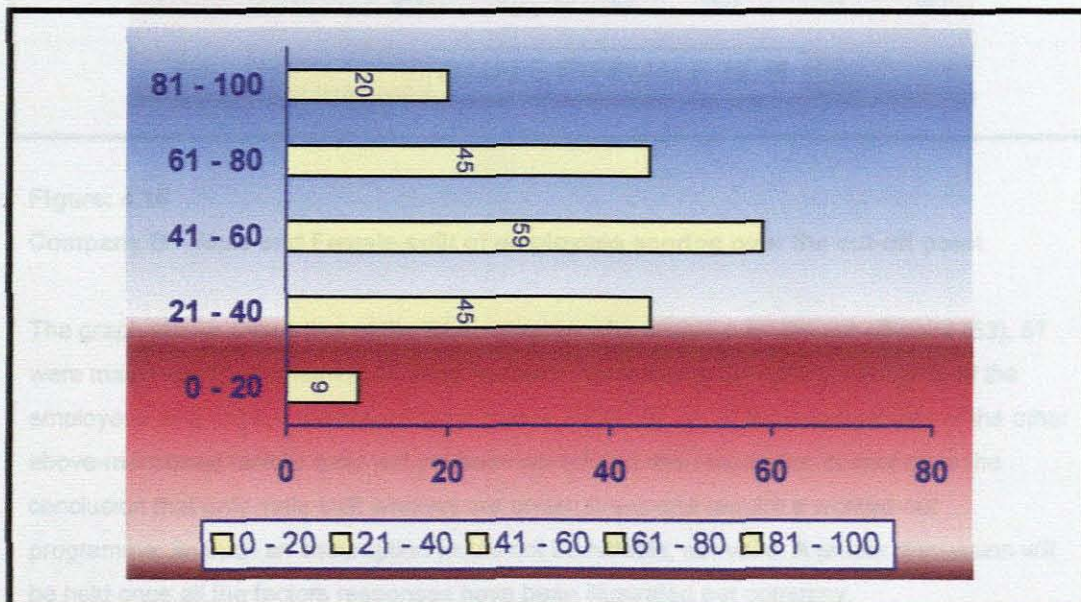


Figure: 4.14
Company B – The Breakdown of Stress

4.11 Factors Assessed of Employees Scoring over 53

The researcher decided to determine whether the following factors played a role with regards to those employees experiencing more stress than they could handle, which is 53. The factors were as follows:

- Gender
- Marital Status
- Number of Children
- Age Group
- Occupational Level – for the purpose of this study the peromnes job grading was used for all companies.

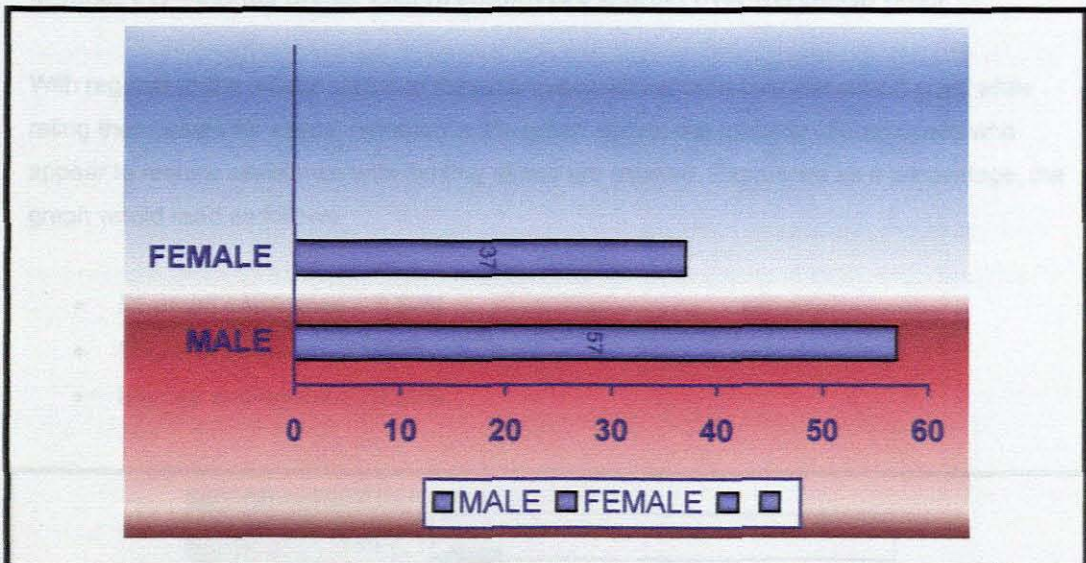


Figure: 4.15

Company B – Male and Female split of employees scoring over the cut-off point

The graph above shows that of the 94 employees who scored over the cut-off point (53), 57 were males and the remaining 37 were females. Therefore at Company B, 60.64% of the employees who require assistance were males. However, as all the assessments of the other above-mentioned factors have not yet been completed, the researcher cannot draw the conclusion that only male shift workers are under stress and require a worked-out programme; as such an assumption would not be reliable, nor valid. A proper discussion will be held once all the factors responses have been illustrated per company.

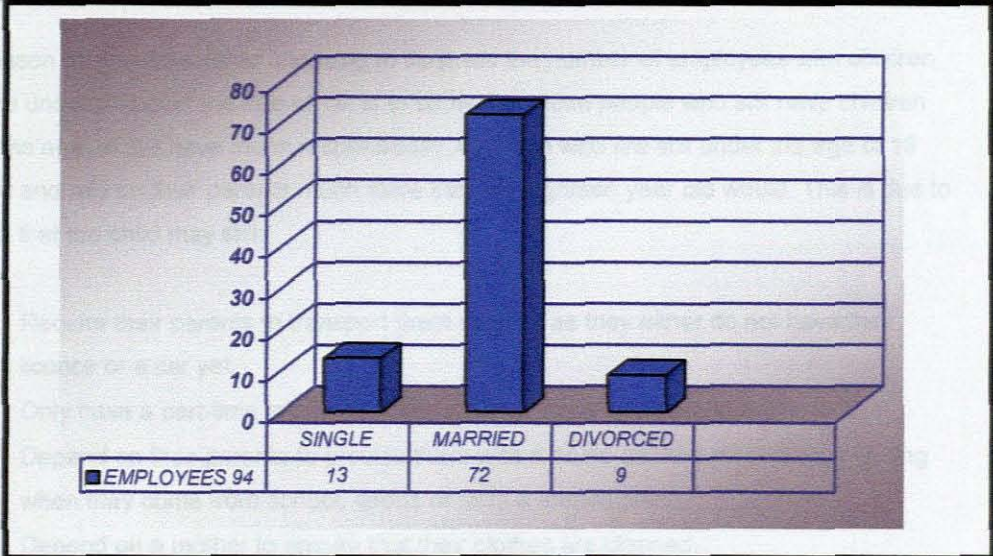


Figure: 4.16

Company B – Marital Status split of employees scoring over the cut-off point

With regards to the marital status of the employees who scored over the cut-off point while rating themselves for stress, reflected in the graph above; the majority of employees who appear to require assistance with fighting stress are married. Expressed as a percentage, the graph would read as follows:

- Divorced employees – 9.57%
- Single employees – 13.83%
- Married employees – 76.60%

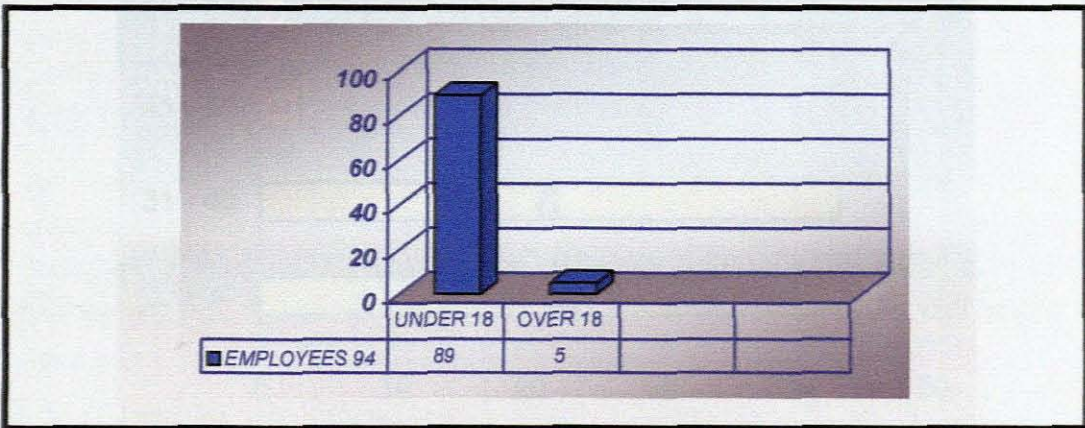


Figure: 4.17

Company B – Children under and over the age of 18

The reason for the researcher choosing to illustrate the number of employees with children, who are under and over the age of 18, is to show that those people who still have children under the age 18 still have much responsibility. Children who are still under the age of 18 depend and rely on their parents much more than an eighteen year old would. This is due to the fact that the child may still:

- Require their parents to transport them around, as they either do not have their licence or a car yet.
- Only have a part-time job and still require their parents' financial assistance.
- Depend on their parents to provide them with a home-cooked meal in the evening when they come from school, sports or from a friends place.
- Depend on a mother to ensure that their clothes are cleaned.

The above-mentioned are just a few examples of why a child under eighteen is more dependent on his or her parents. For these very reasons, children under eighteen are staying at home with their parents and do not have a job. Also, how many children fall pregnant while still in school? The responsibility of looking after the child, as well as the financial responsibility in many instances will become the grandparents' responsibility.

Fair enough, this is life; however this still leaves this category of employees with more responsibility than those employees whose children have grown up already, can look after themselves and have maybe even moved out of the house.

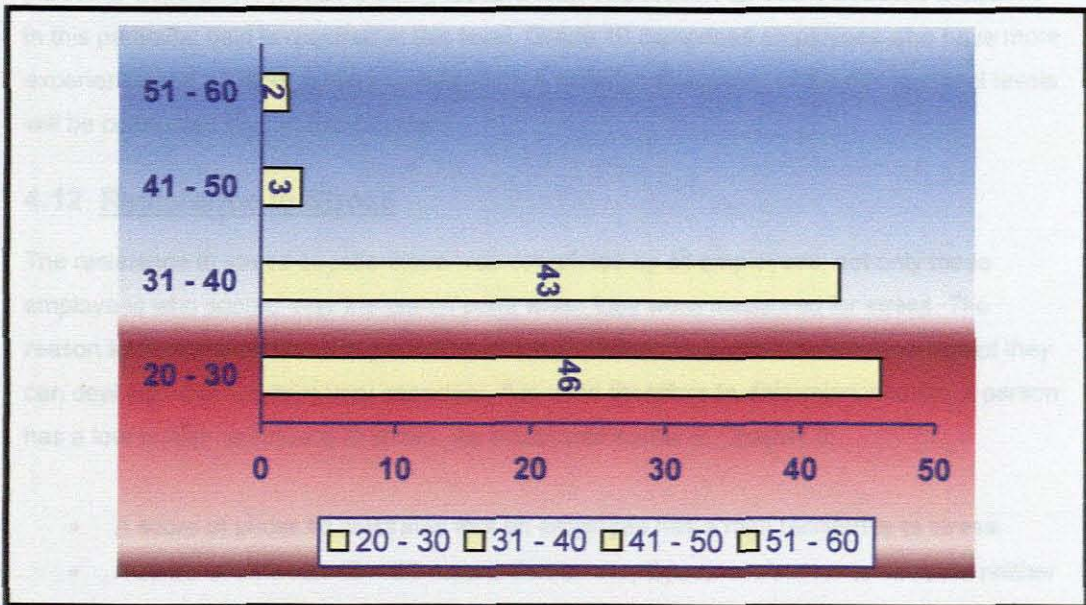


Figure: 4.18

Company B – Age Group split of employees scoring over the cut-off point

The graph above illustrates that the majority of the employees requiring assistance with regards to fighting stress are between the ages of 20 and 40. The total of the ages between 20 and 40, gives a percentage of 94.68%; the remainder belongs to employees between the ages of 41 and 60. A more in-depth discussion will be given towards the end of the chapter.

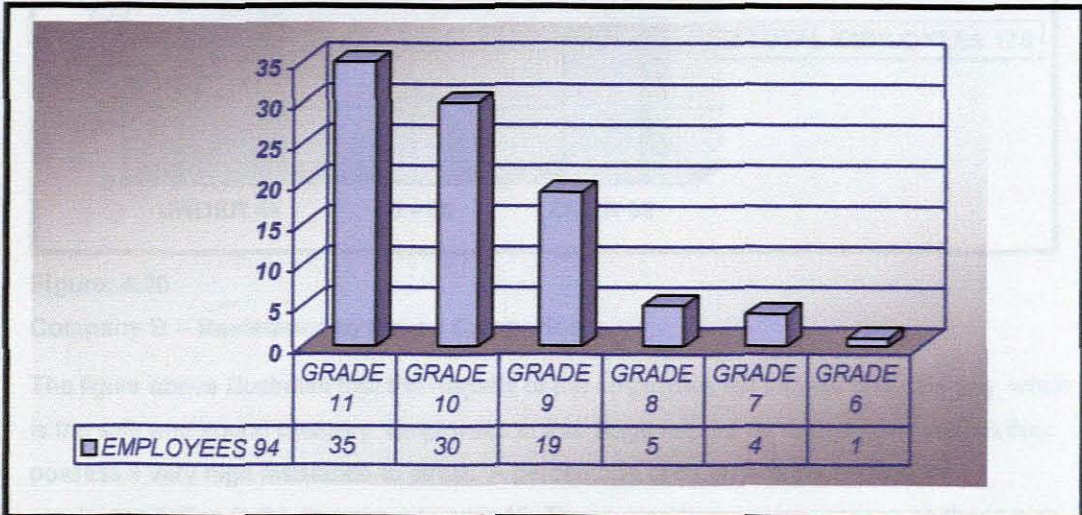


Figure: 4.19

Company B – Occupational level split of employees scoring over the cut-off point

Grade 11 and Grade 10 are where most employees who require assistance with stress are situated with regards to their occupational level. Grade 11 is the entry-level grade in the particular department (which is being researched). The reason for this is because a diploma in this particular field is required at this level. Grade 10 comprises employees who have more experience and a higher tertiary qualification. A broader discussion of the occupational levels will be conducted later in this chapter.

4.12 Resistance to Stress

The resistance to stress questionnaire was completed by all employees; not only those employees who scored over the cut-off point when they were measured for stress. The reason for this is that even if a person does not experience much stress, whether or not they can deal with that stress is very important. It is used therefore to determine whether a person has a low or high resistance to stress. As mentioned earlier in Chapter 3:

- A score of under 45 illustrates that an employee has a high resistance to stress.
- A score of between 45 – 55 means that an employees' resistance to stress is neither high nor low, but should that employee adjust certain aspects of his or her life, then that person would only benefit from it.
- A score of over 55 illustrates that an employee could be at serious risk.

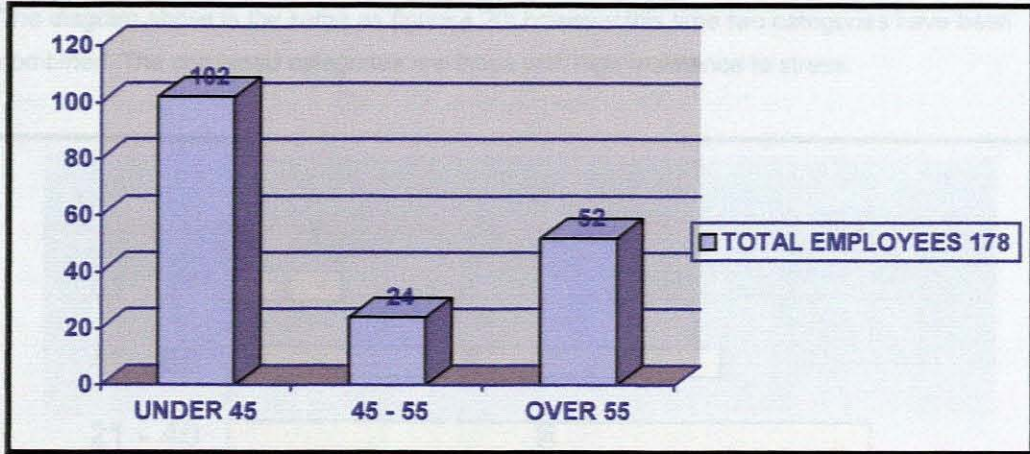


Figure: 4.20

Company B – Resistance to Stress Categories

The figure above illustrates that the majority of the employees fall into the first category, which is the safe and sound category. Employees at this stage require no assistance at all, as they possess a very high resistance to stress. A percentage of 57.30% is the number of employees falling in the category of under 45. Those employees, who possess neither a high nor low resistance but should consider adjusting certain aspects of their life, achieved an amount of 13.49%. The number of the employees, which is 29.21%, falls into the category of over 55, which illustrates that these employees are at serious risk from stress as their resistance levels are low when it comes to stress.

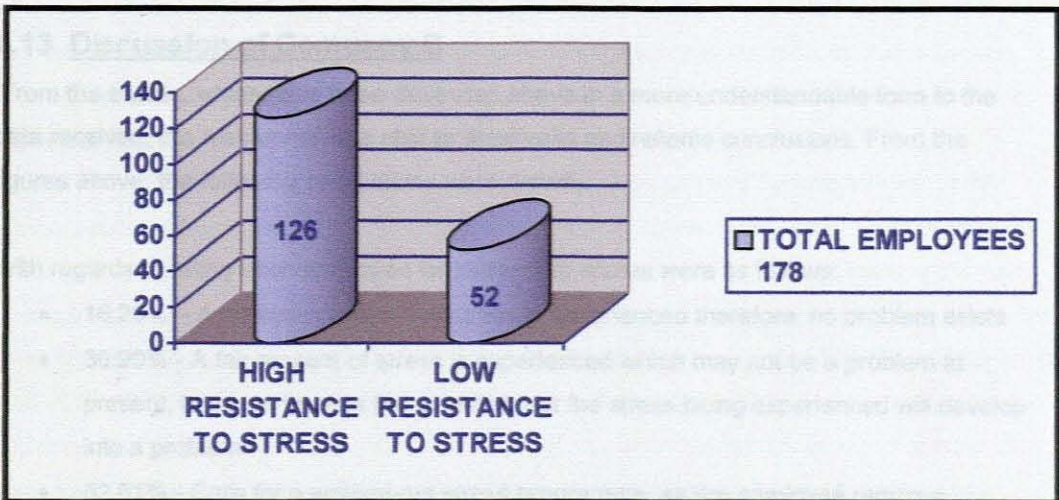


Figure: 4.21

Company B – Under and Over the Cut-Off Point (55 is the cut-off point)

The diagram above is the same as figure 4.20; however this time two categories have been combined. The combined categories are those with high resistance to stress.

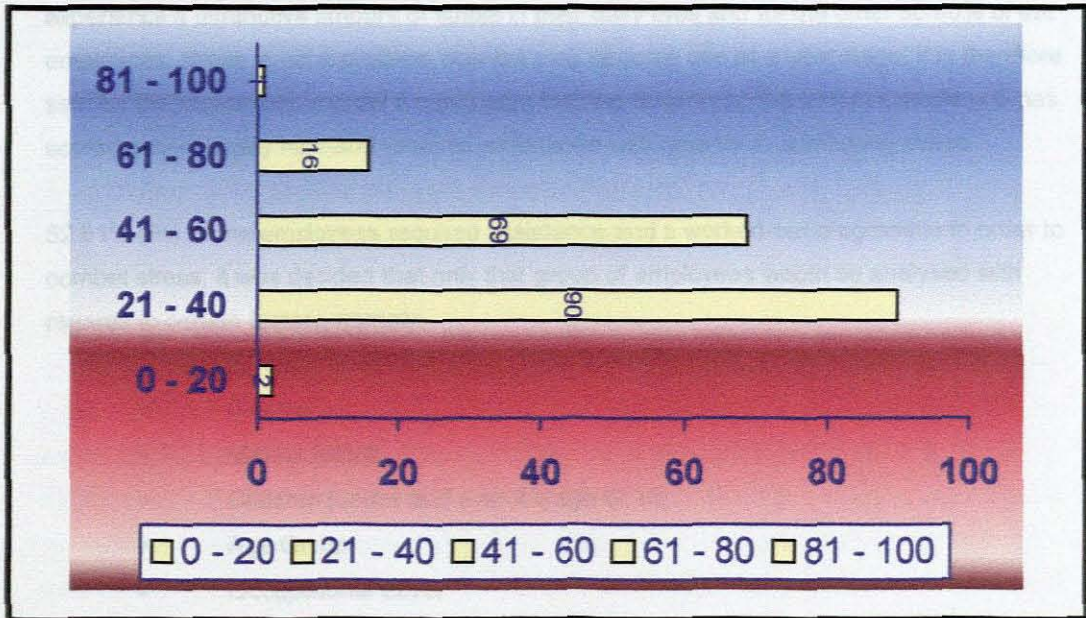


Figure: 4.22

Company B – The Breakdown of Resistance to Stress

The figure above illustrates a more detailed split of the number of employees and what scores they achieved when scoring themselves for their resistance to stress.

4.13 Discussion of Company B

From the scores, which have been illustrated above in a more understandable form to the data received, the researcher was able to draw valid and reliable conclusions. From the figures above, the following conclusions were drawn.

With regards to rating each employee for stress, the scores were as follows:

- 16.29% - A minimum amount of stress is experienced therefore, no problem exists
- 30.90% - A fair amount of stress is experienced which may not be a problem at present, however there is the potential that the stress being experienced will develop into a problem
- 52.81% - Calls for a worked-out stress programme, as the employee requires assistance.

This means that the majority of the employees (52.81%) at Company B requires assistance with regards to developing a programme to help them combat stress, as they are not able to handle it themselves. For 16.29% of the employees stress is not even a factor, as they experience a diminutive amount of stress in their daily lives and for the other 30.90% of the employees, stress is not a problem now but may become one at a later stage. It is therefore safe for the researcher to draw a conclusion that the majority of the staff at Company B has scored exceptionally high and requires assistance with regards to combating stress.

52.81% (94) of the employees required assistance and a worked-out programme in order to combat stress, it was decided that only that group of employees would be analysed with regards to certain factors, namely:

- Gender
- Marital Status
- Children (under and over the age of 18)
- Age Group
- Occupational Level

When the researcher focused on the gender it was clear that of the 94 employees; 57 were male (60.64%) and 37 were female (39.36%). Before receiving this data, it was assumed by the researcher that the number of females would be larger than that of men. The researcher at this stage realised that this was the same response received at Company A. For this very reason, the researcher once again, went back to the company to ask a few questions, in order to understand why the number of males was higher than that of females; so that a reliable and valid conclusion could be drawn. The researcher was then told that due to the fact that the man of the house was working shifts, he was now depended on more with regards to responsibilities around the house. For example: if the wife worked the normal nine-to-five, then between the hours of 07h30 – 18h00 she would not be at home (time for travelling has been added onto her normal daily working hours). Should the husband be working the same hours, he would be exempt from helping with many of the homely chores. Due to the fact that the husband is on night shift, he is now at home during the day. The husband would get home after the wife and kids have already left the house. Here is exactly the same scenario as in Company A; a pattern is being picked up. As this situation has already been discussed, the researcher therefore feels that it is safe to state the conclusion, rather than repeat what already has been said.

The males have declared that due to the fact that they work shifts, they are depended on a whole lot more with regards to errands and chores at home, not only by their spouse, partner or kids, but also by family members and friends. This therefore explains the reasoning as to why more men require a worked-out stress programme than women at Company B.

The marital status of the 94 employees was as follows:

- 13 employees were single (13.83%)
- 72 employees were married (76.60%)
- 9 employees were divorced (9.57%)

Fair enough each and every person may be exposed to stress and may also have a lot of responsibilities. Also, a single parent may battle and experience more stress than a married person, as they have no one to rely on and turn to; the same may apply for a divorced individual. However, the result of the study, which was carried out at Company B, demonstrates that the majority of employees who fell into the category over the cut-off point were married employees. It may therefore be stated that at Company B the majority of the employees falling into the category of people acquiring assistance with regards to combating stress, were married; which is exactly the same result at Company A.

For the purpose of this study, when it came to the factor of children; it was not just a case of whether the employee had children or not. For the purpose of the study it was more imperative that the researcher knew, of those employees who did have children; how many had children under the age of eighteen and how many had children over the age of eighteen.

The reason for this is that children under the age of eighteen are still very dependent on their parents, even though they may not like to think so; while children over eighteen tend to be less dependent on their parents. The results were as follows:

- 89 employees (94.68%) have children who are still under the age of 18
- 5 employees (5.32%) have children who are over the age of 18

The majority of the employees who fall into the category over the cut-off point have children under the age of eighteen. This therefore means that having children under the age eighteen does put a certain amount of stress or strain on an individual, due to the fact that a child under the age of eighteen would be more dependent on their parents than an eighteen year old would.

For the purpose of this study it is therefore safe to say that employees at Company B who still have children under the age of eighteen will experience more stress than those who have

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children over the age of eighteen. This, once again is the same conclusion as the one arrived at for Company A.

With regards to the age groups, the results were as follows:

- 20 – 30: Employees amount to 46 (48.94%)
- 31 – 40: Employees amount to 43 (45.74%)
- 41 – 50: Employees amount to 3 (3.19%)
- 51 – 60: Employees amount to 2 (2.13%)

The results above show that the majority of the employees, who need assistance with stress, fall in the age group of 20 – 40 years. This in turn supports the children under and over eighteen factor. The reason for the researcher saying this is because generally by the time a person reaches the age of between 41 – 50, his or her children will start turning eighteen and even older. This eliminates the stress of having to still be there for one's child or children "twenty-four-seven". For this reason alone, between the ages of 41 – 60, employees start to experience less stress. Once again, the exact same statement that was made for Company A is being made for Company B.

With regards to the occupational level at Company B, the results were as follows:

- Grade 11 – 35 employees (37.23%)
- Grade 10 – 30 employees (31.92%)
- Grade 9 – 19 employees (20.21%)
- Grade 8 – 5 employees (5.32%)
- Grade 7 – 4 employees (4.25%)
- Grade 6 – 1 employee (1.06%)

At Company B, the majority of the employees who seemed to be faced with more stress than they could handle, were Grade 11 employees. As stated earlier, the peromnes job grading system was used for all positions at all companies being researched. Grade 11 was the entry-level grade for the specific department being researched at Company B. A number of positions fell in this grade, each with a different salary; however, it was imperative that all candidates possessed a diploma from a tertiary institution in the particular field for which they were applying; even if they had no experience in that field of work. There are 35 employees falling in Grade 11.

The next grade with the most number of employees is Grade 10. Employees who have a degree or a higher qualification and experience would fall under this grade. These employees would generally be older than the employees falling under grade 11.

The reason why grade 11 and grade 10 have the most number of employees who are stressed out, is due to the fact that those two grades have the most number of people, as these grades are not highly pressured, target and driven grades.

Finally, with regards to the employees' resistance to stress; the majority of the employees fell in the under 45 category. This means that 102 employees (57.30%) have a high resistance to stress, supported by a healthy way of life. The minority of the employees, which is 24 (13.48%), have neither a high nor low resistance to stress, but adjusting certain aspects of their life should be considered. The remainder of the employees, which is 52 (29.21%), are at serious risk from stress, as they have passed the cut-off point.

It has therefore been determined that Company B has a large number of employees who require assistance with regards to developing a programme to help them combat stress. The majority of these employees who require assistance are affected by one or more of these factors: they are males, married, with children under the age of eighteen and are between the ages of 20 –40 while their occupational level is grade 11 or 10. The results received from Company B may not be the same numbers as in Company A as the sample sizes differ, but the same conclusion has been drawn, as the results obtained thus far all point in the same direction.

Company C

The same format that was used in Company A and B, as well as the types of graphs and charts that were used will now be used for Company C; the only detail which will change, is that of the results.

4.14 The Three Categories

The above-mentioned heading deals with and analyses the results of the test called **Rate yourself for stress**. Once the totals of each column were tallied up, respondents' scores were identified. The categories were as follows:

- Under 30 – A low level of stress exists, which is not regarded as a problem.
- 30 and over – A potential stress problem.
- 53 and over – Calls for a worked-out programme to fight stress.

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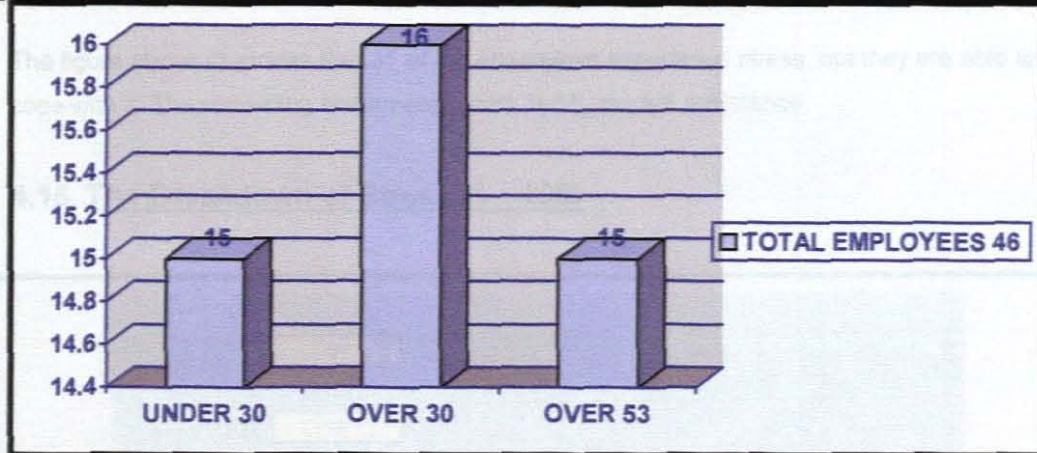


Figure: 4.23

Company C – Number per Category

The above-mentioned bar chart illustrates the breakdown with regards to the amount of stress being displayed by employees at Company C. The category of under 30 has 15 employees in it, which is only 32.61%. This in turn means that only one third of the sample size experience stress; however the amount of stress being experienced is such a diminutive amount that it is not seen as a dilemma. A total of 16 employees experience stress, yet handle it effectively; however this may eventually lead to a potential stress problem. This is a percentage of 34.78%. The total number of employees who require a worked-out programme to help them fight stress is 15. This is a percentage of 32.61%, which is exactly the same amount as those employees who experience a diminutive amount of stress. The majority of the employees at Company C therefore fall into the category, which declares that those employees may eventually be faced with a potential stress problem.

4.15 Under and Over the Cut-Off Point (53)

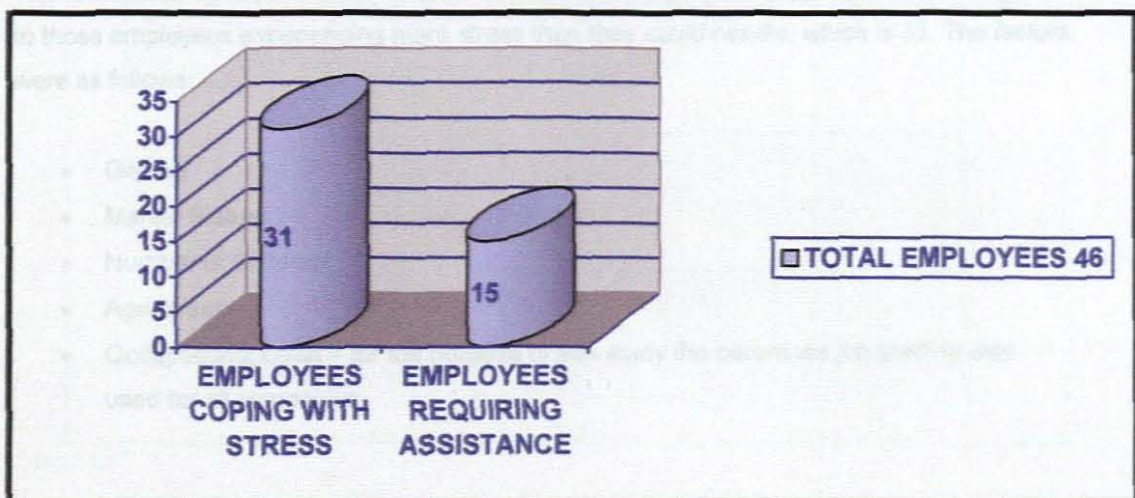


Figure: 4.24

Company C – Under and over the Cut-Off Point

The figure above illustrates that 31 of the employees experience stress, but they are able to cope with it. The remaining employees, which is 15, require assistance.

4.16 The Breakdown of Stress (1 – 100)

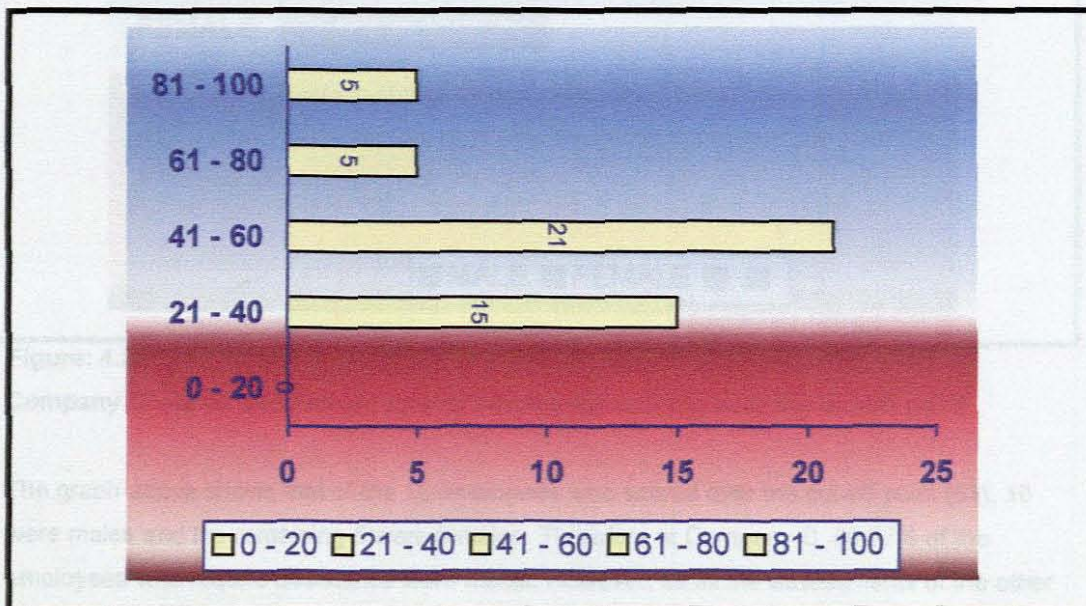


Figure: 4.25

Company C – The Breakdown of Stress

4.17 Factors Assessed of those Employees Scoring over 53

The researcher decided to determine whether the following factors played a role with regards to those employees experiencing more stress than they could handle, which is 53. The factors were as follows:

- Gender
- Marital Status
- Number of Children
- Age Group
- Occupational Level – for the purpose of this study the peromnes job grading was used for all companies.

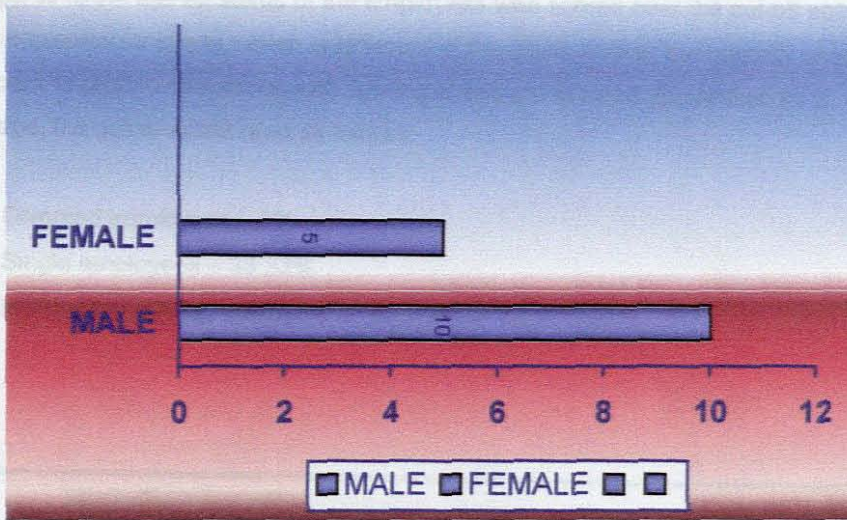


Figure: 4.26

Company C – Male and Female split of employees scoring over the cut-off point

The graph above shows that of the 15 employees who scored over the cut-off point (53), 10 were males and the remaining 5 were females. Therefore at Company C, 66.67% of the employees who require assistance were males. However, as all the assessments of the other above-mentioned factors have not yet been completed, the researcher cannot draw the conclusion that only male shift workers are under stress and require a worked-out programme; as such an assumption would not be reliable, nor valid. A proper discussion will be held once all the factors responses have been illustrated per company.

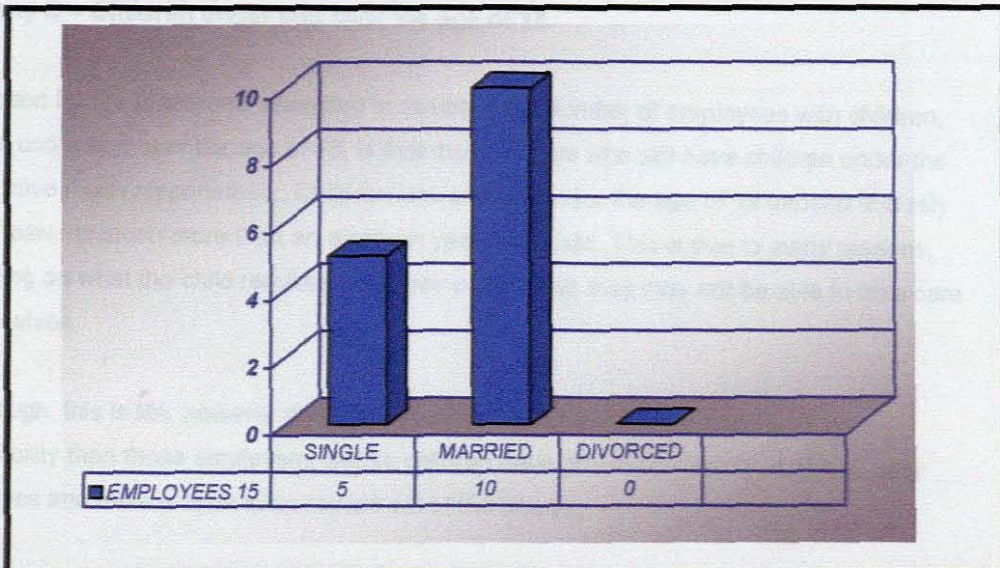


Figure: 4.27

Company C – Marital Status split of employees scoring over the cut-off point

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With regards to the marital status of the employees who scored over the cut-off point while rating themselves for stress, which is reflected in the graph above; the majority of employees who appear to require assistance with fighting stress are married. Expressed as a percentage, the graph would read as follows:

- Divorced employees – 0%
- Single employees – 33.33%
- Married employees – 66.67%

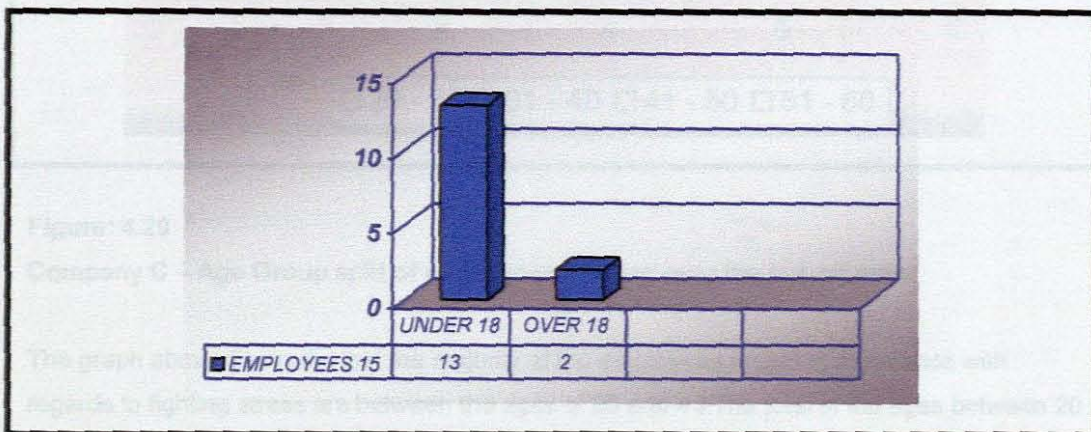


Figure: 4.28

Company C – Children under and over the age of 18

The reason for the researcher choosing to illustrate the number of employees with children, who are under and over the age of 18, is that those people who still have children under the age 18 have much responsibility. Children who are still under the age of 18 depend and rely on their parents much more than an eighteen year old would. This is due to many reasons, depending on what the child requires from their parents, as they may not be able to take care of themselves.

Fair enough, this is life; however this still leaves this category of employees with more responsibility than those employees whose children have grown up already, can look after themselves and have maybe even moved out of the house.

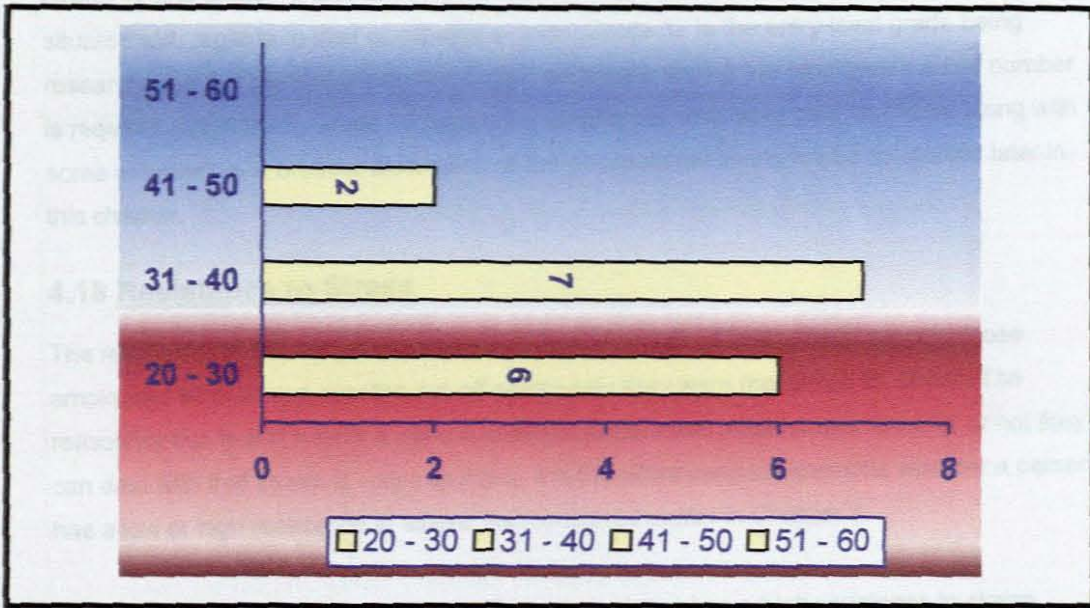


Figure: 4.29

Company C – Age Group split of employees scoring over the cut-off point

The graph above illustrates that the majority of the employees requiring assistance with regards to fighting stress are between the ages of 20 and 40. The total of the ages between 20 and 40, gives a percentage of 86.67%; the remainder belongs to employees between the ages of 41 and 60. A more in-depth discussion will be given towards the end of the chapter.

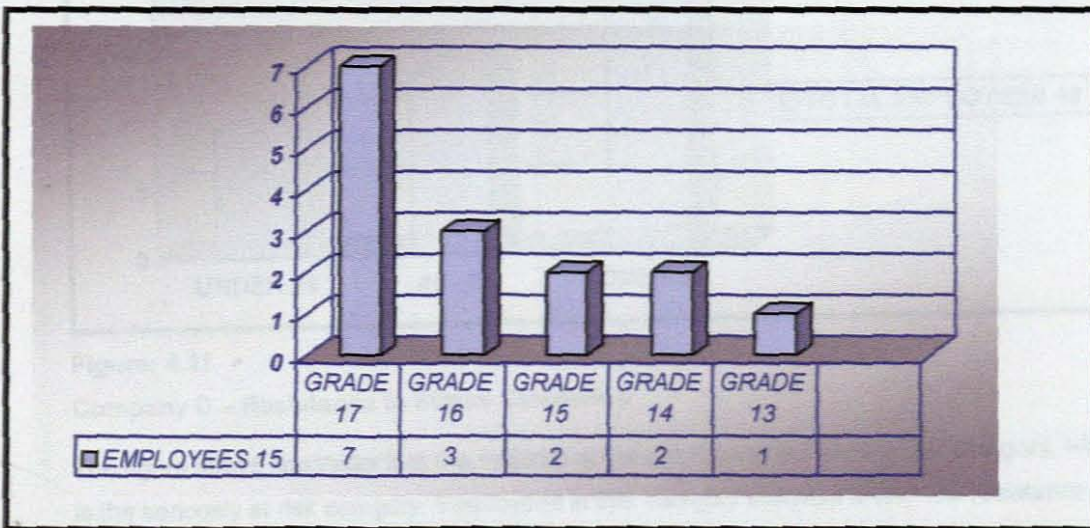


Figure: 4.30

Company C – Occupational level split of employees scoring over the cut-off point

Grade 17 and grade 16 are where most employees who require assistance with stress are situated with regards to their occupational level. Grade 17 is the entry-level grade being researched in this particular industry. Only a certificate stating the employee's serial number is required at this level. Grade 16 comprises employees who have their certificate along with some experience. A broader discussion of the occupational levels will be conducted later in this chapter.

4.18 Resistance to Stress

The resistance to stress questionnaire was completed by all employees; not only those employees who scored over the cut-off point when they were measured for stress. The reason for this is that even if a person does not experience much stress, whether or not they can deal with that stress is very important. It is therefore used to determine whether a person has a low or high resistance to stress. As mentioned earlier in Chapter 3:

- A score of under 45 illustrates that an employee has a high resistance to stress.
- A score of between 45 – 55 means that an employees' resistance to stress is neither high nor low, but should that employee adjust certain aspects of his or her life, then that person would only benefit from it.
- A score of over 55 illustrates that an employee could be at serious risk.

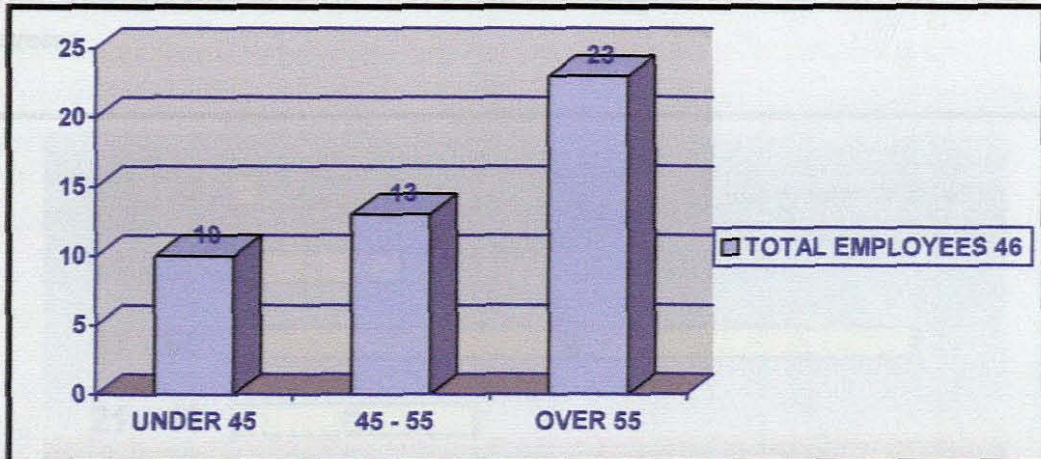


Figure: 4.31

Company C – Resistance to Stress Categories

The figure above illustrates that the majority of the employees fall into the last category, which is the seriously at risk category. Employees in this category possess a very low resistance with regards to stress. A percentage of 50% is the number of employees falling in the category of over 55. Those employees who possess neither a high nor low resistance but

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should consider adjusting certain aspects of their life achieved an amount of 28.26%. The number of the employees, which is 21.74%, falls into the category of under 45, which illustrates that these employees have a very high resistance to stress and a healthy life to support it.

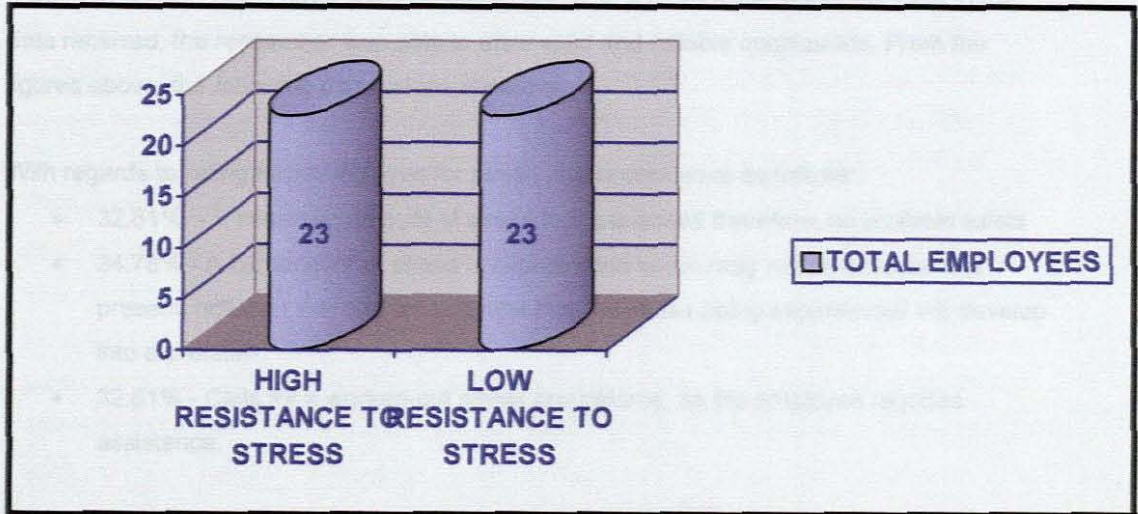


Figure: 4.32

Company C – Under and Over the Cut-Off Point (55 is the cut-off point)

The diagram above illustrates exactly the same as figure 4.32, however this time two categories have been combined. The combined categories are those with high resistance to stress.

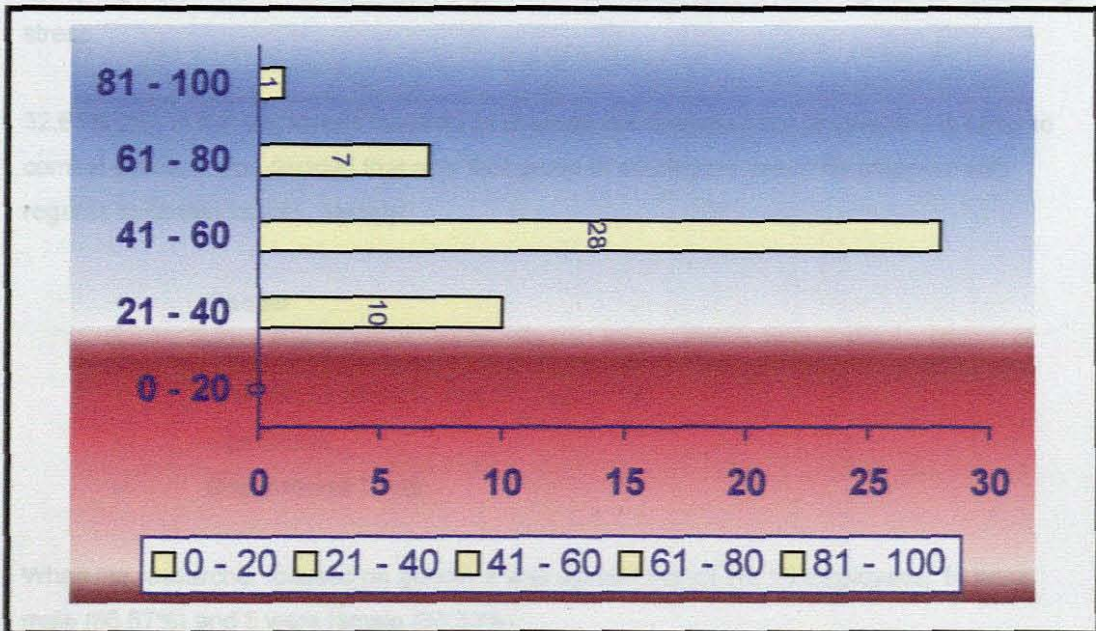


Figure: 4.33

Company C – The Breakdown of Resistance to Stress

The figure above illustrates a more detailed split of the number of employees and what scores they have achieved for their resistance to stress.

4.19 Discussion of Company C

From the scores, which have been illustrated above in a more understandable form to the data received, the researcher was able to draw valid and reliable conclusions. From the figures above, the following conclusions were drawn.

With regards to rating each employee for stress, the scores were as follows:

- 32.61% - A minimum amount of stress is experienced therefore, no problem exists
- 34.78% - A fair amount of stress is experienced which may not be a problem at present, however there is the potential that the stress being experienced will develop into a problem
- 32.61% - Calls for a worked-out stress programme, as the employee requires assistance.

The above-mentioned states that for the majority of the employees (34.781%) at Company C stress is not a problem but may become at a later stage. For 32.61% of the employees stress is not even a factor, as they experience such a diminutive amount of stress in their daily lives and for the other 32.61% of the employees, stress is a problem and the employees require assistance with regards to a worked-out programme to combat stress. It is therefore safe for the researcher to draw a conclusion and state that only one third of the employees at Company C has scored exceptionally high and requires assistance with regards to combating stress.

32.61% (15) of the employees required assistance and a worked-out programme in order to combat stress, it was decided that only that group of employees would be analysed with regards to certain factors, namely:

- Gender
- Marital Status
- Children (under and over the age of 18)
- Age Group
- Occupational Level

When the researcher focused on gender it was evident that of the 15 employees; 10 were male (66.67%) and 5 were female (33.33%).

imperative that the researcher knew, of those employees who had children; how many had children under the age of eighteen and how many had children over the age of eighteen. The reason for this is that children under the age of eighteen are still very dependent on their parents, even though they may not like to think so; while children over eighteen tend to be less dependent on their parents. The results were as follows:

- 13 employees (86.67%) have children who are still under the age of 18
- 2 employees (13.33%) have children who are over the age of 18

The majority of the employees who fall into the category over the cut-off point have children under the age of eighteen. This therefore means that having children under the age eighteen does put a certain amount of stress or strain on an individual, due to the fact that a child under the age of eighteen would be more dependent on their parents than an eighteen year old would. For the purpose of this study it is therefore safe to say that employees at Company C who still have children under the age of eighteen will experience more stress than those who have children over the age of eighteen. This, once again is the same conclusion as reached at Company A and B.

With regards to the age groups, the results were as follows:

- 20 – 30: Employees amount to 6 (40%)
- 31 – 40: Employees amount to 7 (46.67%)
- 41 – 50: Employees amount to 2 (13.33%)

The results above show that the majority of the employees, who need assistance with stress, fall in the age group of 20 – 40 years. This in turn supports the children under and over eighteen factor. The reason for the researcher saying this is because generally by the time a person reaches the age of between 41 – 50, their children will start turning eighteen and even older. This eliminates the stress of having to still be there for one's child or children "twenty-four-seven". For this reason alone, between the ages of 41 – 60, employees start to experience less stress. Once again, the exact same statement that was made for Company A and B is being made for Company C.

With regards to the occupational level at Company C, the results were as follows:

- Grade 17 – 7 employees (46.67%)
- Grade 16 – 3 employees (20%)
- Grade 15 – 2 employees (13.33%)

- Grade 14 – 2 employees (13.33%)
- Grade 13 – 1 employees (6.67%)

At Company C, the majority of the employees who seemed to be faced with more stress than they could handle, were grade 17 employees. As alluded to earlier, the peromnes job grading system was used for all positions at all companies being researched. Grade 17 was the entry-level grade for the specific industry being researched at Company C. A number of positions fall under this grade, each with a different salary dependent on the rank of the serial number on employees' certificates.

The reason why grade 17 has the most number of employees who are stressed out, is due to the fact that the grade has the most number of people falling under it.

Finally, with regards to the employees' resistance to stress; the majority of the employees fell under the over 55 category. This means that 23 employees (50%) have a low resistance to stress, which places these employees at serious risk. The minority of the employees, which is 10 (21.74%), has a very high resistance to stress and a healthy way of life to support it. The remainder of the employees, which is 13 (28.26%), have neither a high nor low resistance to stress, but adjusting certain aspects of their life should be considered.

It has therefore been determined that Company C has a large number of employees who require assistance with regards to developing a programme to help them combat stress. The majority of these employees who require assistance are affected by one or more of these factors: they are males, married, with children under the age of eighteen and are between the ages of 20 –40 while their occupational level is grade 17. The results received from Company C may not be the same numbers as in Company A or B as the sample sizes differ, but the same conclusion has been drawn, as the results obtained thus far all point in the same direction.

4.20 Re- Testing

The stress management module was implemented on a sample size of 50 employees, all from Company A. However, the researcher only re-tested two of the tests from the questionnaire one week later. The reason for this is because employees would have still been in high spirits straight after the implementation of the module; the researcher wanted the employees to be in the swing of their home and work life again. Also, the stress and resistance to stress tests were the most important tests of the questionnaire; which is why only these tests were re-done.

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As the module was implemented on ten employees at a time, the results will be illustrated in that order. First the levels of stress for all five groups will be illustrated and then the employees' resistance to stress. Employees will be numbered from 1 – 50 and their results will be displayed as before and after.

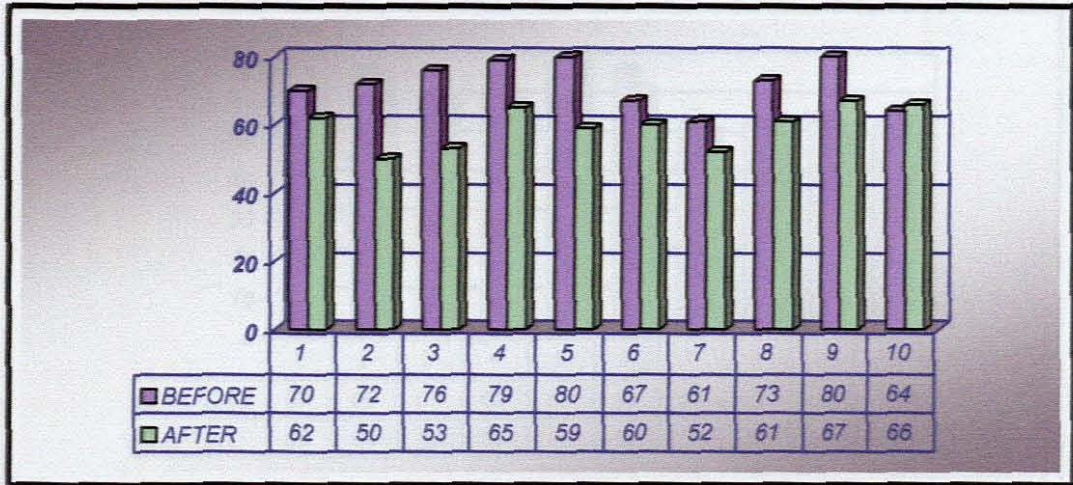


Figure: 4.34

Group 1 – Before and After Results of the Rate Yourself for Stress Test

The graph above illustrates that from the re-test:

- 9 of the employees stress levels being experienced have decreased; all the scores are not under the cut-off point, but they have come down
- 1 employee's score has increased to a higher stress level than before



Figure: 4.35

Group 2 – Before and After Results of the Rate Yourself for Stress Test

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The graph above illustrates that from the re-test:

- 4 of the employees' stress levels have decreased; all the scores are still over the cut-off point, but they have come down
- 3 employees' scores have increased to a higher stress level
- 3 employees scores have remained the same

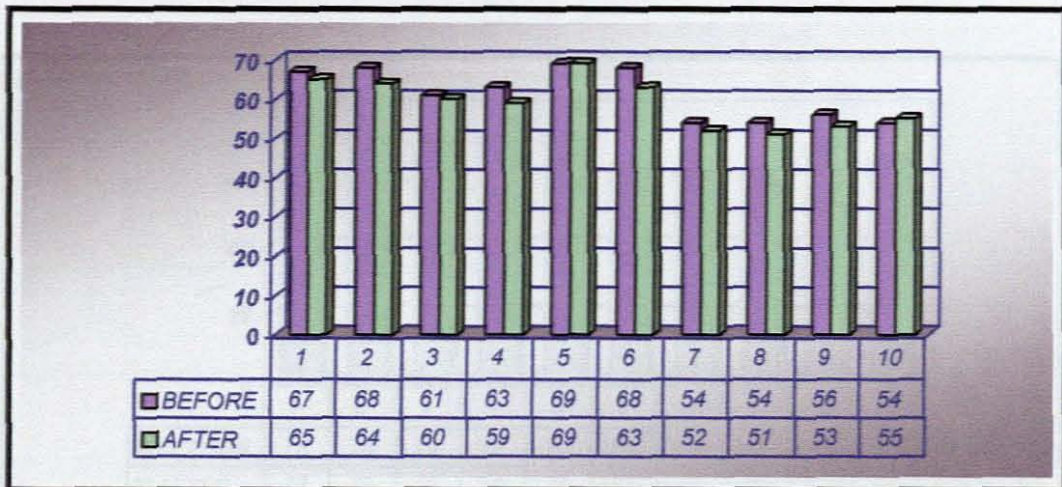


Figure: 4.36

Group 3 – Before and After Results of the Rate Yourself for Stress Test

The graph above illustrates that from the re-test:

- 8 of the employees' stress levels have decreased; all the scores are still over the cut-off point, but they have come down
- 1 employee's score has increased to a higher stress level
- 1 employee's score has remained the same

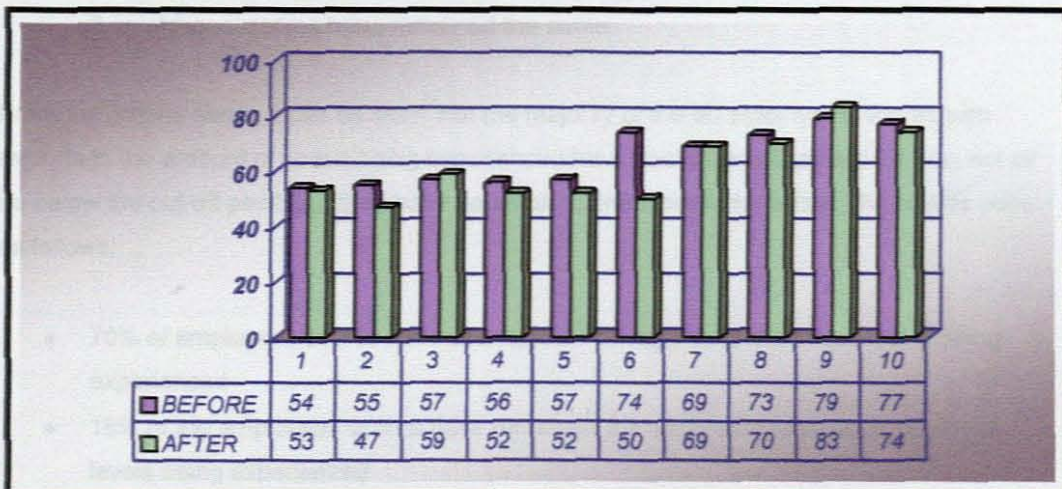


Figure: 4.37

Group 4 – Before and After Results of the Rate Yourself for Stress Test

The graph above illustrates that from the re-test:

- 7 of the employees' stress levels have decreased; all the scores are still over the cut-off point, but they have come down
- 2 employees' scores have increased to higher stress levels
- 1 employee's score has remained the same

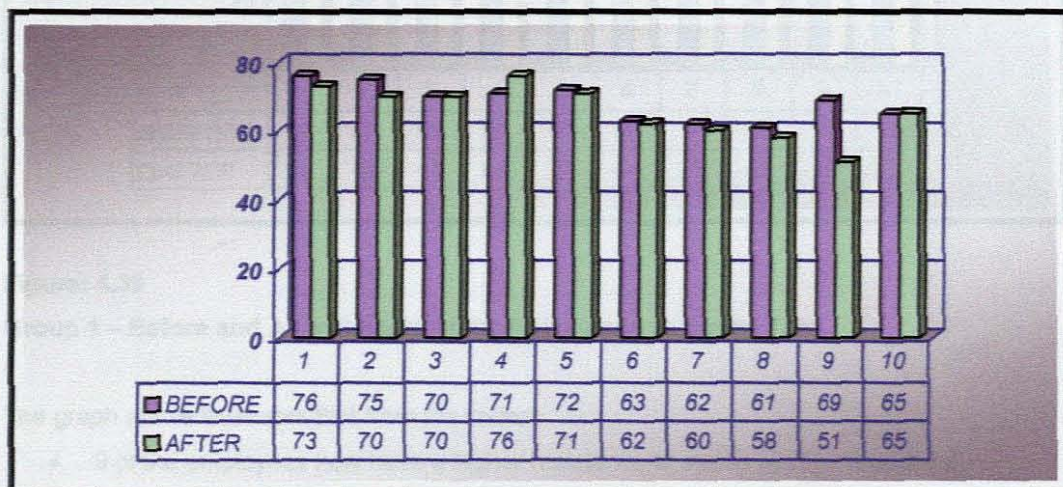


Figure: 4.38

Group 5 – Before and After Results of the Rate Yourself for Stress Test

The graph above illustrates that from the re-test:

- 7 of the employees stress levels have decreased; all the scores are still over the cut-off point, but they have come down
- 1 employee's score has increased to a higher stress level
- 2 employees' scores have remained the same

From the graphs above it can be seen that the majority of the 50 employees' scores with regards to the amount of stress being experienced have decreased. Their scores may not all be below the cut-off point, but they have decreased; dramatically for some. The results were as follows:

- 70% of employees scores have decreased with regards to the stress levels being experienced
- 16% of the employees scores have remained the same with regards to the stress levels being experienced
- 14% of the employees scores have increased with regards to the stress levels being experienced

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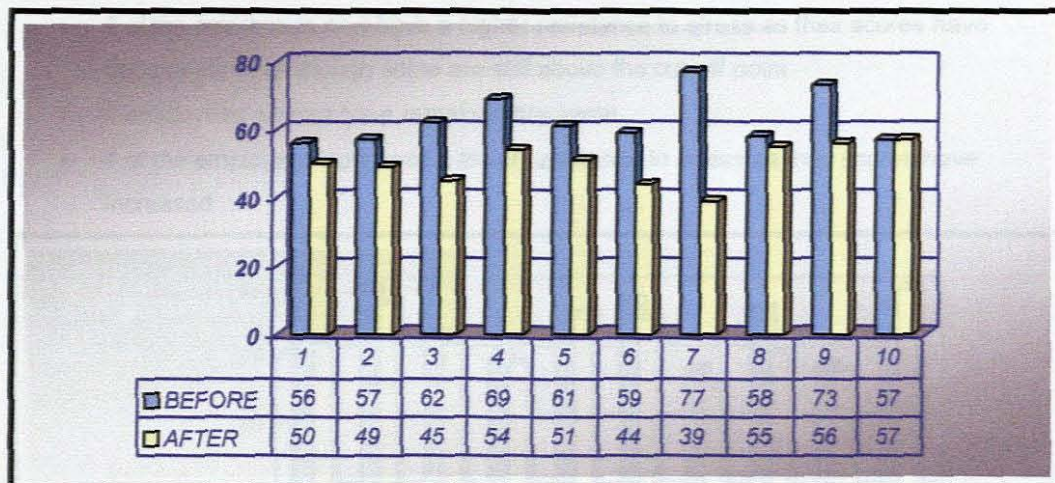


Figure: 4.39

Group 1 – Before and After Results of the Resistance to Stress Test

The graph above illustrates that from the re-test:

- 9 of the employees now have a higher resistance to stress as their scores have decreased; even though some are still above the cut-off point
- 1 employee's score has remained the same

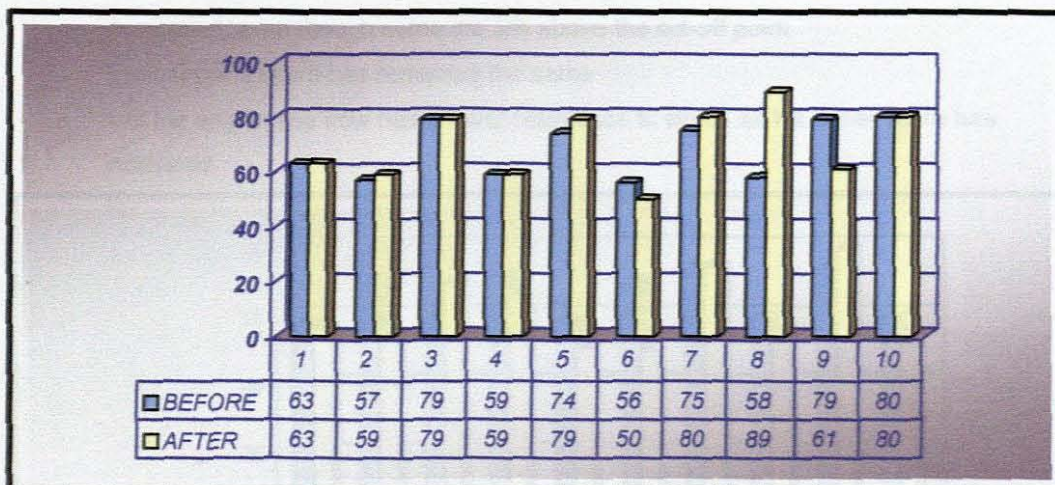


Figure: 4.40

Group 2 – Before and After Results of the Resistance to Stress Test

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The graph above illustrates that from the re-test:

- 2 of the employees now have a higher resistance to stress as their scores have decreased; even though some are still above the cut-off point
- 4 employees' scores have remained the same
- 4 of the employees now have a lower resistance to stress as their scores have increased

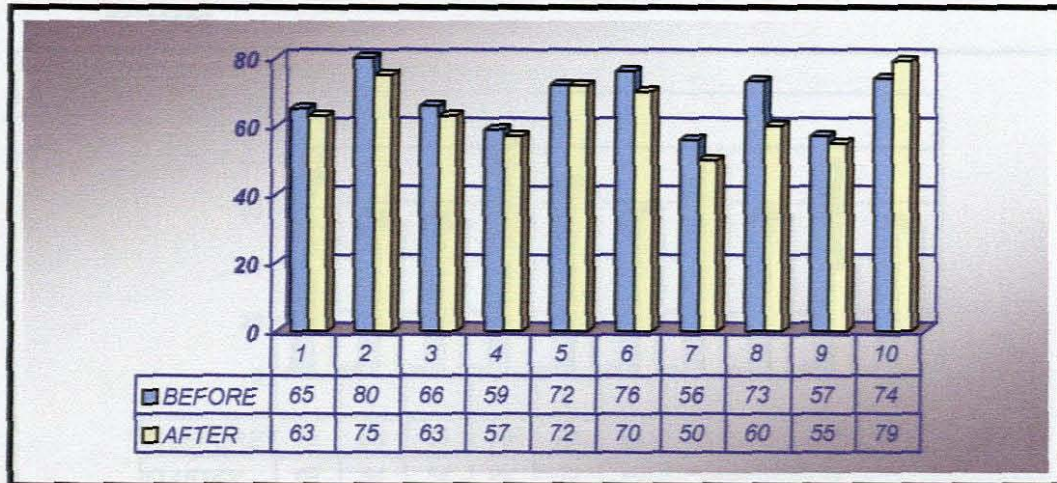


Figure: 4.41

Group 3 – Before and After Results of the Resistance to Stress Test

The graph above illustrates that from the re-test:

- 8 of the employees now have a higher resistance to stress as their scores have decreased; even though some are still above the cut-off point
- 1 employee's score has remained the same
- 1 of the employees now has a lower resistance to stress as his or her score has increased

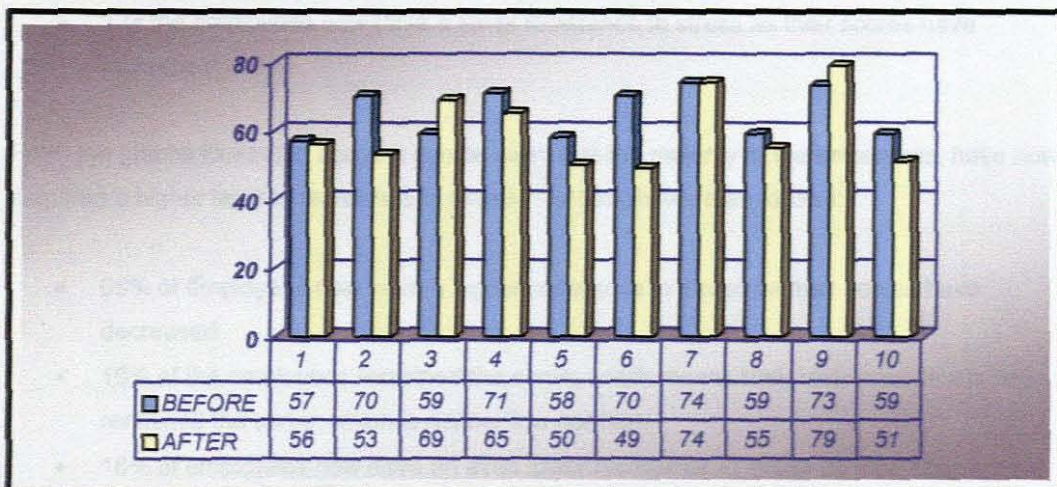


Figure: 4.42

Group 4 – Before and After Results of the Resistance to Stress Test

The graph above illustrates that from the re-test:

- 7 of the employees now have a higher resistance to stress as their scores have decreased; even though some are still above the cut-off point
- 1 employee's score has remained the same
- 2 of the employees now have a lower resistance to stress as their scores have increased

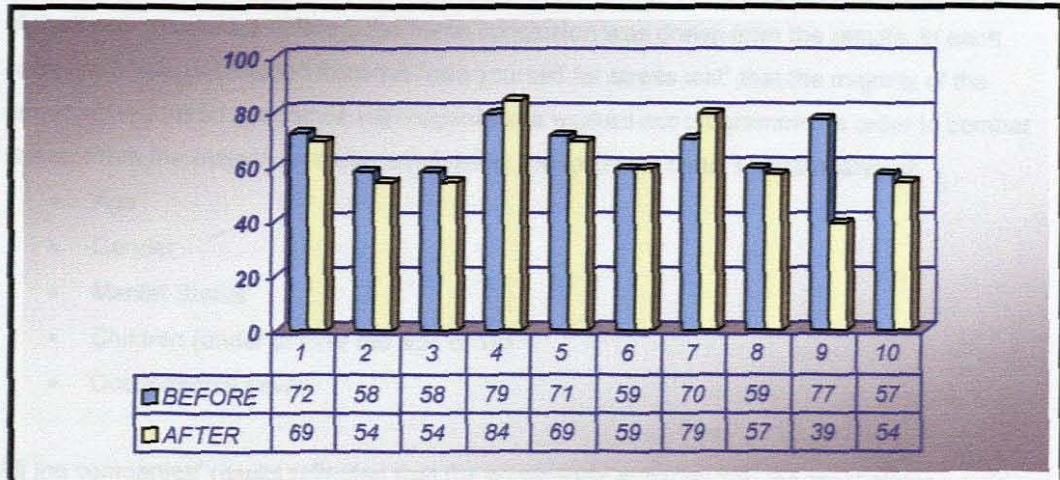


Figure: 4.43

Group 5 – Before and After Results of the Resistance to Stress Test

The graph above illustrates that from the re-test:

- 7 of the employees now have a higher resistance to stress as their scores have decreased; even though some are still above the cut-off point
- 1 employee's score has remained the same
- 2 of the employees now have a lower resistance to stress as their scores have increased

From the graphs illustrated above it can be seen that the majority of the employees, have now acquired a higher level of resistance to stress. The results were as follows:

- 66% of employees now have a higher resistance to stress as their scores have decreased
- 16% of the employees remained the same, which means their resistance levels have remained the same; which is neither low nor high
- 18% of employees now have an even lower resistance to stress as their scores have increased

4.21 GENERAL DISCUSSION

The main aim of this study was develop, as well as implement a stress management module; to help employees working shifts to cope better with the stress and pressures thereof. Also, the researcher wanted to establish whether different shifts created different levels of stress.

From the graphs above, the researcher discovered that even though the sample size at each of the three companies differed, the same conclusion was drawn from the results. In each company it was determined from the "rate yourself for stress test" that the majority of the employees required assistance with regards to a worked-out programme, in order to combat stress. From the majority of these employees, the following factors were analysed:

- Age
- Gender
- Marital Status
- Children (under or over the age of 18)
- Occupational Level

All the companies' results reflected that the employees experiencing the most stress would fall into one or more of the following categories:

- Male
- Married
- Children under the age of 18
- Between the ages of 20 – 40

With regards to the occupational level, it reflected that the majority of the employees fell in the lowest occupational level in each of the three companies. This in turn means that the occupational level of an employee does affect one with regards to the amount of stress being experienced.

With regards to the 50 employees who were re-tested after the implementation of the stress management module, the following was concluded:

- 70% of the employees showed a decrease in the amount of stress being experienced
- 66% of the employees showed that they now have a higher resistance to stress.

This sums up the end of Chapter 4. In Chapter 5 the researcher will provide recommendations based on the findings illustrated in Chapter 4.

CHAPTER 5: RECOMMENDATIONS

“Over the last hundred years work has changed dramatically, but not always for the better from the point of view of stress” (Capel and Gurnsey, 1987:34). In the chapter prior to this, the results of the study illustrated that irrespective of age, marital status, gender, number of children and occupational level, different people at different times will experience stress. Each and every individual is different in many ways. Therefore one individual may display stress symptoms after experiencing a stressful situation and the exact same situation might have no effect on another individual. All of mankind are very much aware that when a person experiences stress, it tends to come out in everything that the person does. In other words, the stress being experienced will affect that person's work, home life, relationships and many other aspects in the person's life.

Stress is experienced when people are no longer able to cope with all the pressures on them at a specific time. Stress is personal to each and every individual even though people have many stressors in common with others. People are affected mentally, physically and spiritually once stress is present, which if not dealt with properly can result in health deterioration.

For this very reason it is imperative that employers understand the importance of providing assistance with regards to stress management in the form of wellness programmes, for example, to employees at their place of work. Programmes such as these, if implemented correctly and maintained, will benefit both the employer and the employee. The researcher's recommendations therefore are the following:

5.1 Take Stress Seriously

“For companies that do not take the issue of stress seriously, the consequences can be far reaching” (Shuttleworth, 2004:61). It is fair to say that a large quantity of the responsibility with regards to stress does lie with the individual employee. However, this does not mean that employers should not take the issue of stress seriously. In most cases where employers do not take the issue of stress seriously, it is evident that management does not understand, nor have they received any training with regards to stress management. Also they may not understand their role or involvement within the stress management programme.

“Stress is a key issue facing many organisations yet, despite the increasing awareness of how it impacts on business, many companies are unsure of the best way to fulfil their duty of care towards their employees” (Shuttleworth, 2004:61). Therefore before management attempts to provide assistance to the employees of any organisation, the first step is to take the issue of stress seriously.

5.2 Whose Responsibility is it?

“Distributing appropriate responsibility for stress in the workplace is a difficult task, yet one that is being debated in the courts more and more often. Is it the responsibility of management to regulate the stress levels of the employees? While it is impossible to assign exact responsibility for stress, it is both meaningful and important to understand how individual and management are responsible for the stress factor in a given organisation. In the absence of that understanding, employers and employees tend to blame each other for creating stress or not coping effectively with it” (Bellingham and Cohen, 1987:166).

As mentioned before, a large amount of the responsibility with regards to dealing with stress does lie with the individual employee. However, when employers implement stress management programmes, they do take on some of the responsibility. By implementing programmes such as these, employers take responsibility for, to name but a few:

- Initiating a stress management programme
- Supporting employees through this programme
- Assisting employees who require more help than the average stressed employee
- Keeping certain issues confidential
- Providing doctors for certain consultations
- Keeping the momentum of the stress management programme going

If one was to look at the responsibility towards stress from the employee's side, the first key responsibility would be that of admitting and realising that one may not be coping very well with stress alone. Many responsibilities could be listed for both the employee and the employer, but one significant factor must always be remembered. Any programme to combat stress in the workplace is a joint effort. The reason for the joint responsibility is not so that the parties blame each other, but rather so that they can work together to achieve one common goal which benefits all.

5.3 Develop an Understanding

“One reason why many interventions fall short may be because little attempt has been made to find out what managers understand by stress and the extent to which they think that their organisation has a responsibility to address stress-related problems. Little is also known about what actions organisations actually take, how effective they are believed to be, and what managers would do, if they were responsible for stress management interventions in their organisation” (Dewe and O’Driscoll, 2002:143-144).

“Before we can address the issues of stress in the work place, we need to develop an understanding of what it is, and how it affects people both personally and in the workplace. It will then become very clear that it is not an issue that should be ignored either for the personal good of an employee or for the good of the organisation” (Towner.1998: 24). In order for managers of any organisation to implement a stress management programme, support employees or even get involved, it is imperative that they understand what stress is, where it comes from and why it exists. It would not be possible for managers to provide employees with assistance for something which they know nothing about nor the reasons for eliminating this specific problem.

“The importance of theory rests on its ability to provide managers with a framework for thinking about stress and organisational functioning in different ways. It forces managers to confront their understanding of the term stress” (Dewe and O’driscoll, 2002:162).

5.4 Management Training

Employee training with regards to stress management programmes are conducted in less detail than management training. The reason for employees not receiving detailed training before they attend a stress management programme, is due to the fact that employees and management receive different training, as their personal outcomes are different. Employees will receive more benefits from being involved or part of the stress management programme rather than attending a workshop/seminar and walking away with only a certificate. When employees are involved in a stress management programme, their stress levels are measured, their resistance to stress is measured, they learn about stress, how to deal with the stress which they are currently experiencing. Employees also leave with tools for future use and the assurance that their employer does care about their health and well being.

“For a stress prevention programme to stand much chance of success, a top down intervention is usually necessary, whereby senior managers are trained prior to their staff receiving training. Not only does this help them to recognise employee stress, they are in a better position to intervene at an organisational level instead of only offering an employee assistance programme service such as counselling. Also, employees are likely to take the stress management or prevention programme more seriously if the managers have attended relevant courses before them” (Palmer, 2003:139).

Another very important reason why management requires training, is because, although both the employee and employer want to learn to deal with, cope with and reduce stress; management has additional aims/objectives, which target the needs of management. According to Palmer (2003:139), these objectives are as follows:

- Understand legal issues associated with work-related stress
- Learn how to undertake a risk assessment
- Develop coaching for performance skills
- Become knowledgeable about the company's stress referral system
- Develop a group action plan to prevent stress

Training for management therefore is very important as it helps managers understand:

- Their role in stress management programmes
- Their responsibility in stress management programmes
- The importance of providing employees with a stress management programme
- Their objectives with regards to a stress management programme

5.5 Developing Communication and Listening Skills

“Communication is the key to managing stress, and yet many of us have had no training in developing effective communication skills. Such training can be beneficial not only when dealing with employees experiencing stress but in every facet of our personal and business lives” (Towner. 1998: 43). Being able to communicate effectively avoids misinterpretation and also saves time. One thing that needs to be removed is barriers otherwise communication would be meaningless.

“These barriers take many forms: language, culture, personality, behaviour, emotional state, dress, role, expectations of each other, relative power” (Towner.1998: 44). The barriers mentioned above must be considered and remembered during communication, to avoid breaking the communication process. Another very important skill which must be developed, is listening. It is essential to remember that listening does not only mean that one person gives another the chance to tell their story; but is also about encouraging the person telling the story. **“However, good listening skills are vital in any interaction between people and are intended to enhance the communication process”** (Towner, 1998:46). The development of communication and listening skills are therefore imperative for management, as employees will more freely confide in or discuss underlying issues which play a role in the stress which the employee may be experiencing. This also means that the employee will start to trust the manager more; which in turn will lead to the manager learning to treat each employee’s situation as confidential.

5.6 Consider the Key Areas where Stress Occurs

“Before looking at the detailed checklist, it is useful to consider the key areas where stress occurs, and to think about actions that can be taken to improve the effectiveness of every employee at work” (Towner, 1998:70). He then goes on to state that the key areas are:

- The culture of the organisation
- The environment in which people work
- People
- The job itself
- Opportunities for development
- The management of change

Individual managers may not always be able to influence each and every one of the above-mentioned factors, however they may be able to at least have some influence over their part of the organisation. Should all managers work together on this issue, then stress may begin to decrease in these key areas. Here is an example of the culture of an organisation: should employees of a particular department complain that there is a lack of communication, as well as a lack of consultation; then the manager of that particular department needs to opt for a solution which will not only resolve the problem, but will also make the staff feel valued. The manager should then try to hold regular departmental meetings in which staff are given the opportunity to present new ideas and suggestions with regards to work. Not only should the staff be allowed to comment on certain issues, but management should also welcome their ideas and use those, which may improve the environment in which employees work, or the processes, which are used at work.

Each and every one of the above-mentioned six key areas will differ from organisation to organisation; stress may occur continuously in one key area within one organisation and may not even be a factor in the exact same key area within another organisation. It is important that management understands that any issues arising, which may alter smooth functioning within any one of the key areas, must be dealt with immediately so that it does not impact on the next key area. Many employees displaying stress symptoms have been unhappy, confused, unsatisfied, undervalued and much more, due to an incident, which occurred continuously within one of the key areas. Therefore dealing with potentially damaging issues at an early stage is crucial or else the employee and employer may both suffer.

5.7 Why Stress Should Matter to the Employer

“Employers and their managers may also be caring people who want the best for their staff and who are concerned about their staff’s well being within or outside the workplace. They will be aware that a stressed employee is not a happy, productive person, and they know that looking after their employees well being is good for business...Being thought of as a good employer is good for business. The public who buy the products or use the service look more favourably on organisations which appear to care...Being a good employer is also good for business. Employees who feel that management cares, who benefit from the facilities or the policies or procedures which are designed to enhance their ability to work effectively, will be more committed, more motivated, and thus more effective (because they are more productive and efficient) than those who feel they are treated in a cavalier fashion by an employer who doesn’t care” (Towner, 1998.9-10).

Employers should always consider the above-mentioned statements. Stress does not only affect the employee who is suffering from it, but has an impact on the day to day functioning or responsibilities of that one individual, who will eventually affect other employees in that very same department. This will then affect the department's productivity and finally impact negatively on the organisation. Stress has a ripple effect, which is why employers must understand why stress should matter to them.

5.8 Participation

Participation basically refers to discussions held between the employer and employee. Participation gives employees a feeling of belonging. Employers must therefore encourage employees to participate in substantive areas of the stress management programme. This ensures a greater sense of commitment from both parties. The main aim of a stress management module is to assist employees with regards to stress, as they may not be coping by themselves, in order to maintain production/service standards of the organisation. A stress management module serves to benefit both the employee and employer; therefore participation is extremely crucial, as employers require employees' input with regards to decisions which directly affect them. Employers should therefore hold regular monthly or quarterly feedback meetings. In these meeting employees should be able to comment on the programme and also given a chance to give any ideas/suggestions, which they feel may benefit the programme.

5.9 What Every Manager Can Do

“Getting great performance from employees depends on how we translate what we know about the connection between stress, health, and productivity into management systems that not only keep people from getting sick, but help them stay well and work well. One such management system is called PERKS, an acronym created from a set of five skills and support tools that both managers and employees can use to minimise unnecessary manager/subordinate stress and maximise performance” (Bellingham and Cohen,1987:42).

Participation – People do better when they participate in the decisions that affect them.

Environment – People do better when the environment offers them opportunities and choices to perform well

Recognition – People do better when performance and progress are recognised.

Knowledge – People do better when they know that what they do is important.

Style – People do better when the management style fits their level of skill and commitment.

5.10 SUMMARY

A stress management module would be ineffective if:

- Both the employee and employer do not take the issue of stress seriously.
- Both parties are not aware of their responsibilities.
- An understanding is not developed.
- Both parties do not receive the training required prior to the stress management programme.
- Communication skills are not developed.
- The key areas are not considered.
- Employers do not understand why stress should matter.
- There is no participation.

Stress management programmes are not easy to implement and even more complex to maintain or keep going. There are many phases in the process and each phase must be completed correctly. The duration of this entire process is dependent on the type of stress management module chosen or developed, as well as the number of times which feedback and counselling sessions will be held.

The implementation as well as the entire process may very well be extremely time-consuming and multifaceted in the beginning, but once the programme is in full swing it can but only benefit both the employee and employer leading to an even healthier working environment and organisation.

CHAPTER 6: CONCLUSION

The aim of this study was to develop, as well as implement a stress management module. The stress management module was aimed at helping companies maintain a more healthy and productive workplace, benefiting both the employer and employee. The phases of the research methodology included:

Phase 1

Development of questionnaire.

Phase 2

The distribution of the questionnaire amongst the shift workers, within the three companies in question.

Phase 3

Interviews were conducted to obtain clarity with regards to those questionnaires that were unclear to the researcher.

Phase 4

The development of a stress management module.

Phase 5

The implementation of the stress management module within a sample selected.

3.2.6 Phase 6

The questionnaire was re-tested on the same sample size on which the stress management module had been implemented.

The first phase in which the questionnaire was developed or determined was extremely vital in this research process, as this questionnaire assisted the researcher in determining the stress levels experienced and the resistance to stress, of the employees at the company being researched. From the data that was received from the questionnaire, the researcher was also able to categorise the answers received according to the following factors:

- Age
- Gender

- Marital Status
- Children (over and under the age of 18)
- Occupational Level

The reason for this was so that the researcher could determine which of the above-mentioned factors played more of a role with regards to increasing the stress levels which employees were experiencing.

The second phase, in which the distribution of the questionnaire occurred, goes hand in hand with the first phase. The questionnaire was distributed to employees at three different organisations, functioning in different industries with only one factor in common: shift work.

Phase Three, in which the researcher conducted interviews, was a means by which clarity could be obtained to those questions which were not completed or answers which were not understood by the researcher. Clarity was a necessity, as the researcher had to understand the answers received and be sure of all information obtained. The reason for this is that reliable and valid conclusions could not be drawn if the researcher was not clear on the data.

A stress management module was designed in the next phase. This module was made up of various short exercises, which were used to assist people to relax and de-stress (should they be experiencing stress). Not all the exercises were to be completed by the employees; as employees had the option of selecting the exercises, which they felt comfortable with. Also included in this module was a brief explanation of what stress is, how to recognise the signs and a few coping strategies.

In Phase Five the stress management module was implemented in Company A on a sample size of 50 employees. The reason for this was so that the researcher could have more control over the sample size as it was smaller, as well as focus solely on those 50 employees during the implementation phase. It was the contention of the researcher that the small sample size would be more involved and willing to participate, should the instructor be someone that the employees felt they can trust with confidential information. Also, seeing as this was the first time that a stress management module was implemented within the company in question, the researcher felt that the instructor should be someone that all the employees knew, which meant that they would not be shy and withdrawn and hold back information. The researcher wanted the employees to feel comfortable and excited to participate.

The researcher with the help of one of the supervisors at Company A, chose five employees who were popular, friendly and respected. All of these employees accepted the responsibility of implementing the stress management module with the groups to which they were assigned. The researcher then implemented the stress management module with the five chosen employees. These employees were then put into a session in which the researcher explained in no uncertain terms:

- What a stress management module is
- What the purpose of implementing a stress management is
- How each exercise is to be conducted
- How long the session should be
- Ways to get more involvement from the class

Each of the five instructors were then assigned to five groups each with ten employees. The sessions were then held in which the stress management module was implemented.

One week after the stress management module was implemented, the same questionnaire was re-tested to detect whether employees' stress levels had decreased or if their resistance to stress had increased.

Staff are an integral part of any organisation. Therefore investing time and money into a stress management module for them would definitely benefit both the employee and employer, contributing positively to the efficiency and effectiveness of the organisation. A stress management module aims at assisting employees cope better with stress and the pressures thereof. This in turn aids organisations in creating and maintaining a more healthy and productive workforce; which also improves the culture of an organisation. **“Wellness may be defined as the state of being free of illness, injury and disease but there in lies the sting. People live on the continuum between optimum health at one end and near death at the other. This is a reality of life. One’s place on this continuum may vary from day to day and circumstance to circumstance. The employees’ current state of wellness will impact on their capacity to carry out work”**(Browne, 2005:25).

Attempting to prevent and reduce stress is a costly and time consuming exercise and more than that, it is an exercise which needs to be conducted on a continuous basis. Also, counselling sessions and even doctor visits may take place in between. Another item, which needs to be conducted continuously, is review meetings.

A meeting should be held between management and the employees in which they have a feedback session with regards to the stress management programme and discuss whether they feel that it has started to benefit all parties concerned. In this meeting both the employees and employers should give their honest input with regards to the programme itself and state whether they have any suggestions or recommendations for improvements. In this meeting all staff, be it a manager or a cleaner, are equal. Making all employees feel as though they have a right to be there and that their opinions count will make them feel as though management affirms their involvement and ideas. The only way a stress management programme will be truly effective at the end, is if both parties concerned are involved from the beginning. To re-iterate, the organisation as a whole can only benefit.

Another benefit to be gained out of a stress management programme is the following: **“Such programmes have proved that valuable, skilled employees who experience problems can be helped. Once they have dealt with their problems, those employees often provide many more productive years of service. In fact, employees may be particularly grateful to employers who have lent them assistance during a time of personal or financial crisis”** (Carrell, Grobler, Elbert, Marx, Hatfield and Van der Schyf, 1997:427).

For many organisations a stress management module is urgently required, but does not exist within the company. When something, which has never existed before, is to be implemented within an organisation, employees believe it to be a change. Employees, before understanding what is to be implemented and why, will perceive this change to be negative. It is not so much the change that alarms them, but rather the fact that something is going to be different; and this is what may have a dramatic impact on the attitudes of staff. It is for this fundamental reason that management obtains input and involvement from the staff with regards to issues, which directly affect them. If employees are informed about the significance of this programme and its advantages, through consultation and involvement, where their opinions valued in the process right from the start, then they would not fear the implementation of a stress management module. They would accept and appreciate it, as management is now investing time and money into something that would benefit the staff.

The key to any successful stress management module is communication and understanding. If understanding is not achieved before the implementation, then the benefits will not be obtained. This in turn leads to communication, on a regular basis, as that is the only way that both parties concerned will understand, appreciate and value the importance of the programme.

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ADDENDUM 1

GLOSSARY

Adaptation to the environment	Adjusting to situational demands
Ageing	Chronological increase in years
Aggressive	A style of relating that includes being hostile, insensitive, angry or abusive
Anxiety	Generalised feelings of fear and apprehension that usually result from a perceived threat. Feelings of uneasiness and tension usually accompany anxiety
Burnout	A state of exhaustion stemming long-term stress
Catecholamines	Hormones produced by the adrenal medulla, including adrenaline and nor adrenaline
Concentration	Focusing attention and energy on accomplishing a task or goal
Control	Regulation of behaviour
Consciousness	Thoughts and feeling a person is aware of
Coping	Using internal and external resources to handle life demands effectively
Complexity	Many different factors influencing a whole
Development	Continuous process of human advancement and change
Distress	Negative stress
Ergonomics	The study of the relationship between the physical working environment and the human body
Emotion	Any strong agitation of the feelings triggered by experiencing love, hate, fear, joy, and the like

Environment	Surroundings which influence behaviour
Eustress	Positive stress
Fatigue	Extreme tiredness
Feeling	Any emotional state or disposition, such as happiness or sadness
Human Behaviour	Human actions and responses
Human Relations	The art and practice of using systematic knowledge about human behaviour to achieve organisational and/or personal objectives
Influence	Affecting others and their behaviour
Insomnia	Difficulty sleeping
Job Burnout	A condition of emotional, mental and physical exhaustion, along with cynicism toward work, in response to long-term job stressors
Job design	The structure of the job content
Measurement	Assigning numerical values to responses
Minimising	Diminishing the value or importance of something to less than it actually is
Organisational culture	Behaviours and attributes which characterise organisations
Organisational stressors	Conditions in an organisation with a potential to result in distress among those who work there
Participation	The state of partaking in something
Physical	Relating to the body
Resilience	The ability to withstand pressure and emerge stronger for it

Social support	An interpersonal transaction involving sharing love, empathy or even information
Strain	The adverse effects of stress on an individual's mind, body and actions
Stress	The mental and physical condition that results from a perceived threat or demand that cannot be dealt with readily
Stressor	The external or internal force that brings about the stress
Tension	A feeling of internal uneasiness that is usually associated with stress or an unsatisfied need
Variables	Human characteristics which vary and can be allocated different numerical values
Wellness	A formal approach to preventive health care
Wellness Program	A formal program to help employees stay well and avoid illness
Work station design	The layout of the physical workplace

ADDENDUM 2

DATE: 22ND JUNE 2004

TO: ALL EMPLOYEES

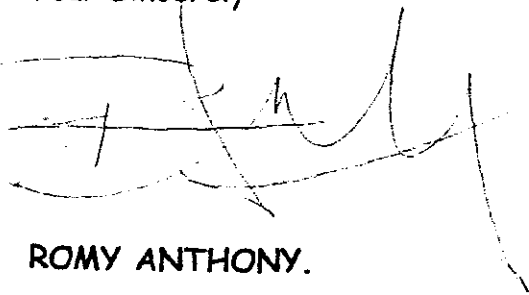
Attached to this letter is a set of questionnaires. These questionnaires serve to measure an individuals stress levels, as well as their resistance to stress. The reason for these questionnaires being distributed and asked to be completed: is because the topic of stress levels within shift workers is being researched for the development of a stress management module.

The first questionnaire covers questions about you, the individual. Please note that you may omit your name and remain anonymous. The second questionnaire refers to responses made by people under pressure. The third and final questionnaire refers to an individual's resistance to stress.

Please complete the questionnaires and return them to your supervisor or manager within no later than two weeks time. Once these questionnaires have been received, they will be analysed and used in order to develop a stress management module for shift workers.

Thank you all for your time and understanding.

Your Sincerely

A handwritten signature in black ink, appearing to read 'ROMY ANTHONY', written over a horizontal line. The signature is stylized and somewhat cursive.

ROMY ANTHONY.

TEST 1:

About you

1. Name

2. Age (Tick the bracket in which you fall)

20 - 30

30 - 40

40 - 50

50 - 60

3. Male

Female

4. What is your marital status?

5. What is your occupation?

6. Do you have any children? If yes, please state how many.

YES
NO

TEST 2:

Rate yourself for stress

The list below gives ten responses often made by people under pressure. Each response can be rated for stress from 1 (not stressful) to 5 (very stressful). If you can remember responding in any of these ways in the last six months, circle the number under the "past" column that represents the amount of stress you experienced at the time. Under the "future" column, circle numbers to represent the amount of stress you expect to experience from responses that may occur during the next six months.

<u>RESPONSE</u>	<u>PAST</u>	<u>FUTURE</u>
1. Depression	1 2 3 4 5	1 2 3 4 5
2. Frustration	1 2 3 4 5	1 2 3 4 5
3. Guilt	1 2 3 4 5	1 2 3 4 5
4. Anxiety or panic	1 2 3 4 5	1 2 3 4 5
5. Desperation/hopelessness	1 2 3 4 5	1 2 3 4 5
6. Feeling out of control	1 2 3 4 5	1 2 3 4 5
7. Self-consciousness	1 2 3 4 5	1 2 3 4 5
8. Irritation and anger	1 2 3 4 5	1 2 3 4 5
9. Restlessness	1 2 3 4 5	1 2 3 4 5
10. Feeling trapped/helpless	1 2 3 4 5	1 2 3 4 5

TEST 3: **Measure your resistance**

This test measures how much your way of life supports you and bolsters resistance to stress. Rate yourself for each of the 20 items on the scale from 1 (almost always) to 5 (never) according to how often they apply.

How much of the time are these statements true for you?	Almost always	Most times	Some times	Rarely	Never
1. My health is good (including eyesight,teeth)	1	2	3	4	5
2. My income meets my basic expenses	1	2	3	4	5
3. I am the right weight for my build & height	1	2	3	4	5
4. I give and receive affection regularly	1	2	3	4	5
5. I express my feelings when angry or worried	1	2	3	4	5
6. I have fewer than 3 caffeine-containing drinks (coffee, cocoa or cola) a day	1	2	3	4	5
7. I take part in regular social activities	1	2	3	4	5
8. I eat at least 1 full, well-balanced meal a day	1	2	3	4	5
9. I do something just for pleasure at least once a week	1	2	3	4	5
10. There is at least 1 relative within 80km of home on whom I can rely	1	2	3	4	5
11. I have sometime alone during the day	1	2	3	4	5
12. I get 7 or 8 hours sleep at least 4 nights a week	1	2	3	4	5
13. My religious beliefs give me strength	1	2	3	4	5
14. I exercise hard enough to work up a sweat at least twice a week	1	2	3	4	5
15. I have a network of friends & acquaintances	1	2	3	4	5
16. I discuss problems such as housework & money with other members of the household	1	2	3	4	5
17. I have at least one friend I can talk to about personal affairs	1	2	3	4	5
18. I smoke no more than 10 cigarettes a day	1	2	3	4	5
19. I organise my time well	1	2	3	4	5
20. I have fewer than 5 alcoholic drinks a week	1	2	3	4	5

ADDENDUM 3

STRESS

MANAGEMENT

MODULE

FOR

SHIFT WORKERS

STRESS

MANAGEMENT

MODULE

FOR

SHIFT WORKERS

BACKGROUND

What is stress?

Recognising the signs

Coping with stress

EXERCISES

How stressed are you?

Stress mapping

Keeping a stress diary

Stress prescription

Breathe

Short relaxation

A balanced lifestyle

Stress workout

Laugh

Touchy-smelly

Mentor mine

Medicinal reading

Play

Sleep

Going solo

Support

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Going solo

Support

PLEASE NOTE

This stress management module is to be used to reduce some or even all the stress, which is being experienced at this time. This module has been designed in such a way, that anyone will be able to relieve himself or herself from stress without the help of someone else.

Brian Clegg designed the exercises that are contained in this module. These exercises do not require money or much time to be conducted. They may be conducted at home, at work or at any other place desired. This therefore means that should stress be experienced, any individual would be able to perform these exercises on him or herself.

Please bear in mind that not everyone is the same. What works for one person, might not necessarily work for another. Individuals are therefore urged to select the exercises that they feel comfortable with; those, which they feel, could help them in any way.

WHAT IS STRESS

"Stress is the impact of a demand on a human being. The source can be external or internal. The demand can be positive or negative. Arguably there is no life at all without stress." Clegg (2000:3)

WHERE STRESS COMES FROM

According to Brian Clegg (2000:9) if you think through a typical day, you can see a set of classical stress inducers:

- A blaring noise from your alarm clock wakes you up
 - You are tired because you stayed up too late last night
 - You are worried about your promotion interview this afternoon
 - Your children demand your attention when you are in a hurry to get ready for work
 - You are late
 - Peak hour traffic makes you later still
 - Bad drivers cut you up and slow you down
 - The computer isn't working properly again
- ... and so on.

Stressors therefore attack all people from all sides, as well as from inside of people.

RECOGNISING THE SIGNS

Physical (physiological and behavioural)

- Bite your nails
- Clench your fists
- Drum your fingers
- Grind your teeth
- Hunch your shoulders
- Pick at your skin
- Tap your feet
- Play with or pull out your hair
- Fatigue
- Weight changes
- Headaches
- Cold sweaty hands
- Disturbed sleep
- Lack of energy

Cognitive (thoughts)

- Anxious thoughts
- Impatience
- Restlessness
- Forgetfulness
- Lack of concentration
- Worrying about things
- Difficulty processing information
- Negative self-statements

Emotionally (feelings)

- Increased irritability or anger
- Anxiety or feelings of panic
- Fear
- Tearfulness
- Increased interpersonal conflicts
- Loss of interest in things that used to give you pleasure

COPING WITH STRESS

Coping resources can broadly be divided into cognitive and physical coping strategies. Some of these coping strategies will suit some people and not others. The key is to have a range of resources that can be applied, depending upon the situation and the individual. Furthermore, it is important to have strategies one is comfortable using.

Cognitive Coping Strategies

These refer to ways of dealing with stress using our minds.

- Reframing - focus on the good not the bad; think in terms of 'wants' instead of 'shoulds'. For example, when you need to complete something - use 'I want to', instead of 'I have to'. Relate thinking to your goal.
- Challenging negative thinking - stopping the negative thoughts we may have about a situation or ourselves. Examples of negative thoughts include expecting failure, putting yourself down, feelings of inadequacy - a thought such as "Everyone else seems to understand this except me."

In order to gain control of negative thoughts or worries, you must first become aware of them. Try replacing them with positive affirmations.

- Positive self-talk - using positive language and statements to ourselves. These are referred to as positive affirmations; and are useful for building confidence and challenging negative thoughts. For example: "I can understand this". These work best when they are realistic and tailored to your needs and goals.
- Count to ten - this allows you time to gain control and perhaps rethink the situation or come up with a better coping strategy.
- Cost-benefit analysis - Is it helping me to get things done when I think this way?

- Keeping perspective - when under stress it is easy to lose perspective. Some questions to ask yourself: Is this really a problem? Is this a problem anyone else has had? Can I priorities the problems? Does it really matter? "Look on the bright side of life!" - Cultivate optimism.
- Reducing uncertainty - seek any information or clarification you may require to reduce uncertainty. Situations that are difficult to classify, have multiple meanings and can create stress.
- Using imagery/visualisation - imagine yourself in a pleasant or successful situation to help reduce stress. One way to use imagery is as a relaxation tool; try to remember the pleasure of an experience you've once had or a place you've been. The more senses you involve in the image the more realistic, therefore the more powerful.

Visualisation can also be used as a rehearsal strategy for an anticipated stressful event. For example; work your way through the event in your mind, picturing the audiences reaction and visualise yourself overcoming any potential pitfalls.

- Smell the roses - Live life to the fullest. You don't always have to follow the same pattern over and over. For example: Take a different route to work, try a different flavour of ice-cream. We are all prone to repeating even the simplest of things. Vary your experiences.

Behavioural Coping Strategies

These refer to ways of dealing with stress by doing something or taking action to reduce the stress experienced.

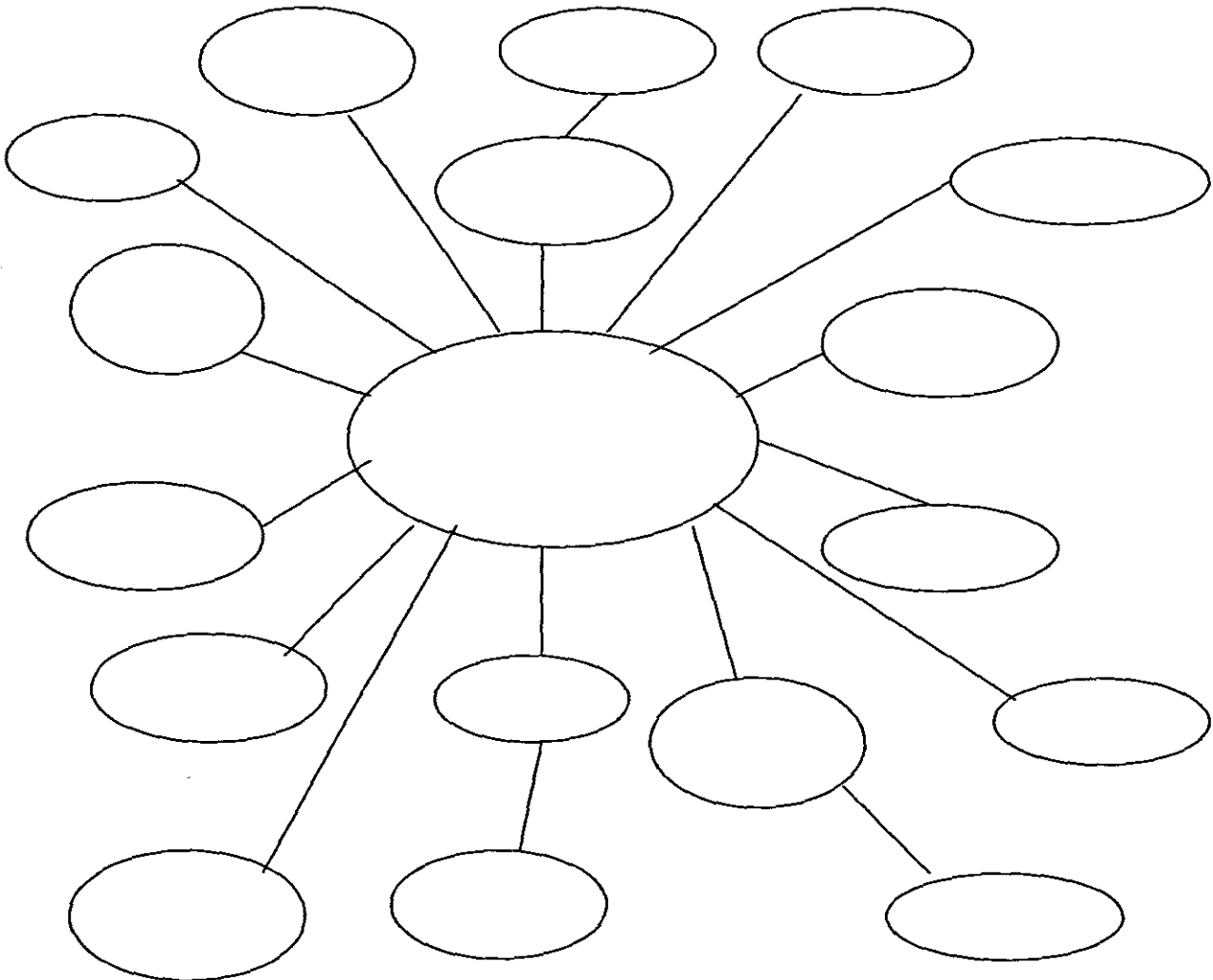
- Physical exercises - aerobic exercise is the most beneficial for reducing stress. It releases chemicals in the brain that aid concentration. For some people, even a short walk is sufficient to relieve stress.
- Relaxation - simple relaxation such as dropping the head forward and rolling it gently from side to side or simply stretching. There are also tapes and books available on this topic.
- Breathing - from simple deep breaths to more complex breathing exercises related to relaxation and meditation.
- Smile and laugh - gives us energy and helps us to lighten the load; relaxes muscles in the face.
- Time management - specific strategies such as clarifying priorities, setting goals, evaluating how time is spent, developing an action plan, overcoming procrastination and organising time. These help us to cope with the numerous demands placed upon us, often a source of stress.
- Social support/friends - encourage the development and nurturing of relationships.
- Seek help - to help us cope with unmanageable stress. Use the supports that are available to you. For example: a health centre that you may have at work.

HOW STRESSED ARE YOU

	<u>YES</u>	<u>NO</u>
<p><u>Your environment</u></p> <ol style="list-style-type: none"> 1. Is your living space small, cramped or lacking privacy? 2. Do you have noisy neighbours? 3. Does the winter get you down? 4. Do you work or live near a busy road? 5. Do you find it hard to relax at home? 		
<p><u>Your personality</u></p> <ol style="list-style-type: none"> 1. Do you feel you have more faults than good points? 2. Do you get worked up when faced with a difficult situation? 3. Do you find it hard to relax? 4. Do you feel you must be best at everything? 5. Do you lose your temper easily? 		
<p><u>Your body</u></p> <ol style="list-style-type: none"> 1. Do you often eat quickly or while you are doing other things? 2. Do you regularly eat convenience foods? 3. Do you smoke or drink? 4. Do you neglect your body? 5. Do you often fall prey to colds and other infections? 		
<p><u>Your relationships</u></p> <ol style="list-style-type: none"> 1. Do you feel you never have enough time for yourself? 		

<p>2. Are you going through relationship problems?</p> <p>3. Do you feel you see enough of your friends?</p> <p>4. Do you feel that your life lacks affection?</p> <p>5. Do you often give up things you want to do because of your friends or family?</p>		
<p><u>Your job</u></p> <p>1. Do you regularly work overtime or through your lunch break?</p> <p>2. Do you feel your abilities are not fully appreciated at work?</p> <p>3. Do you feel you are required to do many things at once?</p> <p>4. Does your job involve constant deadlines at work?</p> <p>5. Do you work in a noisy, stuffy or smelly atmosphere?</p>	<u>YES</u>	<u>NO</u>
<p><u>Your time management</u></p> <p>1. Do you often run out of time when you are trying to do something?</p> <p>2. Do you often forget appointments or deadlines?</p> <p>3. Do you always feel in a hurry?</p> <p>4. Do you always travel to work in peak hour traffic?</p> <p>5. Do you spend most of your time with other people?</p>	<u>YES</u>	<u>NO</u>

STRESS MAPPING



A stress map enables us to view the sources of stress in our lives. The circle box represents yourself and the other circles therefore represent other people with whom you are in contact. The other circles can also represent objects, incidents, or anything else you may be able to think of if you so wish.

Once you have completed that, number the circles from 1 - 10, so that you can see where the highest levels of stress lie.

KEEPING A STRESS DIARY

One good way to learn about your stress levels is to keep a stress diary. This is a very effective way by which you can learn what brings on stress, as well as what levels of stress you can deal with.

In this diary you:

Write down how you feel throughout the day. Make a note of good, as well as stressful events. Also, jot down why you think certain situations were more stressful than others.

STRESS PRESCRIPTION

Identify stressful situations or demands. These may be academic, personal, family or job related.

Why do you think it is stressful? What are your thoughts, feelings and behaviours?

What can you do about changing these situations/demands?

Are you able to think about them/appraise them differently?

What resources do you have to cope with the demand/ stressor?

Do you need other ways of coping?

What might you try?

BREATHE

For those days when you feel irritable, uptight, anxious or nervous ...

1. Let your breath go (Don't breathe in first).
2. Take in a slow, gentle breath. Breathe through your nose.
3. Hold it for a second or two (count to four).
4. Let it go, slowly with a leisurely sigh of relief out your mouth.
5. Make sure your teeth are not clenched together.
6. Repeat four times.

This exercise forces your shoulders down and it relaxes the abdomen; both areas where tension gathers. It also gives you a short break to think positive thoughts and get back in control.

SHORT RELAXATION

This exercise is very useful when you don't have much time available or are somewhere you can't lie down.

Make sure you are sitting comfortably and close your eyes.

Sit upright and rest your hands on your thighs. Let your feet rest on the floor.

Gently breath out! Slowly breathe in and gently breathe out again. Do this slowly several times, starting to let the tension ease. Continue gentle breathing.

Now focus on your body parts. First your feet - tense all the muscles in your feet, curling your toes. Now let your toes, feet and ankles relax. Feel the tension draining away into the floor.

Next your legs - tense all the muscles in your legs, pressing your legs against the chair. Then relax, letting your legs loose, allowing the tension to drain down your legs, through your feet and into the floor.

Now your back and your spine. Tense your shoulders and back muscles. Press into the chair. Relax, letting the tension drain slowly down your spine, down your legs, into your feet and into the floor.

Remember to continue breathing gently. You are slowly getting more relaxed. Let your stomach muscles relax as you breathe.

Focus on your hands and arms. Tense all the muscles, curling your hands and fingers in your lap. Now slowly let the tension drain down your arms, through your hands into your thighs, down your legs, down your feet and into the floor.

Finally the neck and head. Tighten your facial muscles; locate the tension in your neck. Relax now and allow the tension to drain down your back, down your legs, into your feet and into the floor.

Check to see if your muscles are relaxed. Your breathing is still gentle and even. Enjoy the feeling of relaxation for a few minutes.

When ready gently shake your body and open your eyes.

A BALANCED LIFESTYLE

1. Calculate the number of hours you spend with your family.
2. Calculate the number of hours you spend socialising (including coffee breaks).
3. Calculate the number of hour you spend exercising.
4. Calculate the number of hours you spend doing paid work.

Now go back and calculate the same items, this time using the number of hours you would *ideally* like to spend on each item.

If you think there is an imbalance between what is ideal for a balanced lifestyle and what you actually do, then consider the following questions:

- What needs to change in your lifestyle?
- What might be the difficulties in changing?
- What help might you need to make these changes?

STRESS WORKOUT

Regular exercise is not just good for your health. It is an essential part of a stress-reduction programme, as it's about planning. Most people, who suddenly decide to take exercise, don't keep it up. Try the following:

1. **Self-motivation.** Find a driving reason to exercise. Make sure it is at the forefront of your mind when you decide how to use your time.
2. **Choose something you enjoy.** This may seem self-evident, but many people choose a form of exercise that's trendy (the gym) or that's career boosting (golf). Find something you really enjoy.
3. **Add value.** Get together with friends and make it a social event, or choose an activity where you can wear a Walkman and listen to music, speech radio, book-tapes, learn a language or many other activities.

Your activity should be aerobic, maximising use of the body. Some typical choices are: walking in a forest, jogging, cycling, swimming and so forth.

Exercise reduces physical tension and brings down levels of stress chemicals. It builds up the body, helps general fitness and ability to cope. The physical control of stress is the foundation on which everything else is built.

LAUGH

According to Brian Clegg (2000:39), Stress can get into a feedback loop. The more stressed you are, the more unhappy you become. This unhappiness then results in further stress. A fundamental requirement is to break out of that loop, and a very powerful tool for managing this is laughter.

Do not note down everything that makes you laugh, this activity needs to be uncontrolled hilarity. It could be certain books, cartoon strips, films, comedians, television programmes or even just an evening out with your friends. When you feel down, turn to one of these laughter elements to make you laugh.

TOUCHY-SMELLY

There is no doubt that a massage from a professional has always been seen as a way of soothing stress. This is because it helps the blood flow and relaxes tightened muscles.

Although aromatherapy and a massage work very well together, these two relaxation therapies may be performed separately. This is because aromatherapy does not require massage. Just breathing in the appropriate essence or perhaps taking an appropriate scented warm (but not hot) bath can be effective on its own.

There is an essence of pure relaxation about massage; and aromatherapy for some makes it even more effective. If you are having trouble relieving stress, especially with associated physical tenseness, it is well worth trying either or both.

MENTOR MINE

There is a lot one can do alone to manage stress, but sometimes you need a hand. This does not mean a therapist - just having someone to talk through you problems and aspirations with is immensely valuable.

First spend five minutes thinking about your life, at work and at home. Jot down the most significant things that take up your time, your energy and you worrying. Then think through you contacts. An ideal mentor is:

- Absolutely trustworthy - you want to be able to discuss confidential matters.
- Someone you know well... but not a close friend.
- Someone who is good at listening.
- Someone you have regular contact with.

Don't approach your choice and say "I want you to be my mentor", just start to get together with them infrequently but regularly and chat about concerns you.

To be effective, you will need regular chats with your mentor. Don't try to make it formal. The whole point of a mentoring session is that it can cover anything and everything. Note, by the way, you have an unwritten obligation to act as a mentor too; there's someone out there who needs you to listen to them.

MEDICINAL READING

Under the right circumstances, reading books is very calming. This is not a prescription to deal with peak stress. If you are extremely worried about something or bursting for action, you will not be able to get into a book. Books are ideal for when little things in life wear you down.

There are many reasons for reading. Stress management is only one component. Sometimes, perhaps standing up on a crowded commuter train, reading passes the time without really doing anything about stress. However, just because this technique is only applicable to the everyday accumulation of small stresses, does not mean that it is trivial.

PLAY

Play is a technique that eases stress very naturally. It's sad that we lose a lot of our ability to play as we grow up, when we need it in this respect more than ever. Find some form of play in which you can totally lose yourself. It might be playing PC games, board games, play station games or silly party games. It could even be conjuring up a fantasy world on the train, trying not to step on the cracks in the pavement or even saying hello to everyone you walk pass, whether you know them or not. Just play.

Such play can be undertaken at any time of the day and can last a few minutes or hours. The great thing about play is not only are you putting aside all your everyday stressors, but also the activity you are involved in is deliberately not important. It doesn't matter what happens, it is just play.

Some find it difficult to see how playing a computer game fits in with this picture. The right sort of game is an excellent candidate. It has to be something you enjoy and most importantly for a single player. This is why this is a very different technique to sport, which is valuable as physical exercise, but can provide stress of it's own because the outcome is more important.

We should indulge in play more often. It is a great stress reliever!

SLEEP

You only have to speak to someone who has had a baby for the first time to realise how stressful going without sleep can be. Insufficient sleep is a sure-fire remedy for stress.

This exercise is to spend a little while thinking about your sleeping pattern and what you can do about it. If you have regular variations in sleep patterns of more than about an hour a day, you are likely to suffer. It's one thing to prescribe sleep, but it's another to get it.

There are mental and physical techniques to help. Make sure you aren't trying to remember something as you go to sleep. If something you need to do the next day is bothering you, jot it down, even if it means getting out of bed. Don't try to go to sleep straight after a passionate discussion - wind down first. If something is going round and round in your head, sit up and pin it down, don't try to force sleep on yourself. When you lie down, use a calming, tranquil mental image to help you drift into sleep. Some people find a warm, non-stimulating drink helps. Also try a warm bath, followed by getting straight into a warm bed.

Sleep deprivation piles stress on stress until you are almost driven mad. If you aim for the sleep you need to feel well, rather than the sleep you can get away with, you are going to underpin all your other efforts in managing stress.

GOING SOLO

We are sometimes so obsessed with socialisation - being together with our friends, family, spouse and children - that we forget the benefits of a little time alone. Take some time out of your day to spend totally on your own. Do what you find relaxing. The important thing is to be alone.

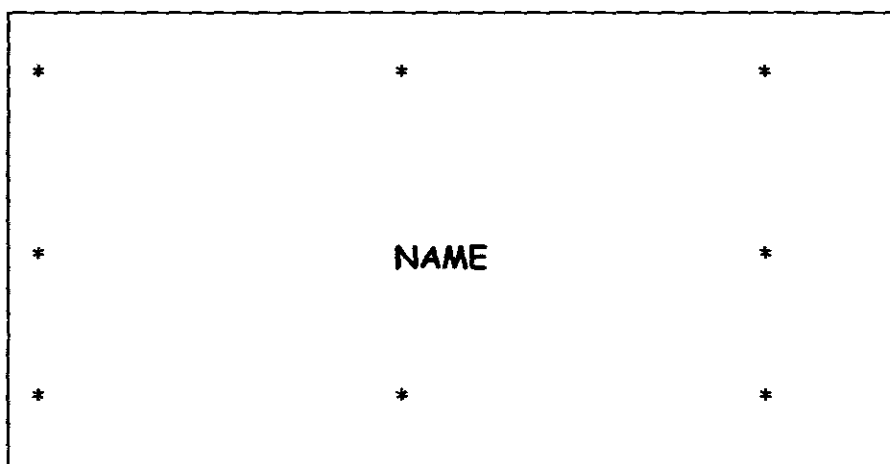
By being alone for a little while you can sometimes achieve a peace that is difficult to achieve under normal circumstances.

SUPPORT

Stress management is simply about ways and means of supporting yourself. We all have and use a great variety of supports. The best copers among us tend to have more supports than others and make more active use of these supports. A support can be virtually anything. It could be a friend, a technique (such as a method of time management) or a way of behaving (such as assertiveness). The only requirement of a support is that you use it and find it helpful.

You can get a clear picture of the supports you use by drawing a support map. Simply start by writing your name in the centre of a blank piece of paper, then note round your name all the supports you could use.

YOUR SUPPORT MAP



* Is where you fill in your supports.

Draw lines linking yourself to those supports you actually use on a fairly regular basis. If it helps to make the map clearer, draw thick lines to the supports you use the most and the dotted lines to supports you turn to only occasionally.

Your support map can only help you to identify any supports on which you rely too much and any you might use more. To make the most of your support map, draw up an action plan for how you will build up one of your under-used supports.

ADDENDUM 4

Date	February 2006	Survey	NATIONAL REMUNERATION GUIDE	Page
New Code	102402	Title	SECURITY GUARD I	56
Old Code(s)		Section	ADMINISTRATION SERVICES	

Carries out routine patrol work and/or gate control duties to assist in the protection of the organisation's premises and the checking of personnel and goods in and out of the organisation. Limited education and training required.
Reports to: Senior Guard or Security Officer.

TOTAL NUMBER OF INCUMBENTS		651	% REC	NATIONAL PER MONTH						
PAY ITEM	INC PER ITEM	651		PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
				10	25	50	75	90		
BASIC & BENEFITS	Basic Salary	566	100	2614	3267	3551	4207	5048	3621	3711
	Annual Bonus (13th cheque)	464	82	269	283	308	370	444	302	350
	Other Cash Allowances									
	Healthcare - Company contribution	345	61	638	672	769	876	1051	469	481
	Retirement - Company contribution	555	98	294	367	399	479	575	413	423
	Transport Benefit									
	Housing Benefits	119	21	472	590	641	769	923	142	144
Other Benefits	130	23	252	265	288	346	415	79	98	
GUARANTEED PACKAGE	Total of Basic & Benefits	566	86							
	Package Only (T.C.O.E.)	85	14	4325	4755	4981	6143	7320	5038	5221
VARIABLE PAY	Sales Commission									
	Short Term Incentives	234	36	282	297	313	376	451	139	142
	Grand Total Package	651	100	4574	5036	5373	6453	7887	5178	5363

GEOGRAPHIC	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)		INDUSTRY SECTOR	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	3785	102	5378	103	Agriculture, Fishing and Forestry	3080	83	4490	86
Durban, PMB and Environs	3525	95	4856	93	Construction	2969	80	4229	81
East Rand	3897	105	5691	109	Electronic and Information Technology	3563	96	4908	94
Eastern Cape	3303	89	4699	90	Finance, Insurance, Business Services	4045	109	5482	105
Free State	3191	86	4647	89	Mining and Quarrying	3377	91	5064	97
JHB Northern Metro	4119	111	5639	108	Mfr: Fast Moving Consumer Goods	3488	94	5117	98
Johannesburg	3971	107	5900	113	Mfr: Other Chemicals and Allied	3711	100	5430	104
Limpopo Province	3340	90	4803	92	Mfr: Paper, Printing and Wood	3748	101	5325	102
Midrand	3822	103	5482	105	Mfr: Pharmaceuticals	3451	93	5012	96
Mpumalanga	3785	102	5273	101	Mfr: Primary Metals	3785	102	5378	103
North West Province	3266	88	4490	86	Mfr: Vehicles, Parts, Heavy Transport	3600	97	5169	99
Northern Cape	3377	91	4594	88	Other Manufacturing	3822	103	5273	101
Other Kwazulu-Natal	3451	93	4751	91	Professional Services	3229	87	4803	92
Pretoria	3859	104	5221	100	Retail Trade and Allied Services	3154	85	4386	84
Vaal Triangle	3748	101	5325	102	Semi-Government/Public Institutions	3934	106	5586	107
West Rand	3711	100	5169	99	Transport, Storage, Communication	3859	104	5221	100
Western Cape	3525	95	5064	97	Wholesale Distributive Trade	3303	89	4542	87

JOB GRADE LEVEL

PER	TASK	PAT	SKAN	OTH	OTH	N OF SAMPLE	PERCENTILES					BASIC (CO.WEIGHTED)		PERCENTILES					GUARANTEED (CO.WEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
19	1	A1				17	2490	2981	3377	3723	4194	3415	92	3616	4328	4903	5406	6090	4959	95
17	2	A2				33	2725	3262	3696	4078	4594	3637	98	3957	4736	5366	5921	6670	5273	101
16	3	A3				14	2982	3569	4045	4458	5022	3971	107	4330	5183	5872	6480	7300	5690	109

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New Code	102403	Title	SECURITY GUARD II	57
Old Code(s)		Section	ADMINISTRATION SERVICES	

Responsible for routine patrol work and/or gate duties and for directing the activities of subordinate guards. At least 3 years' related experience.
Reports to: Chief Security Officer.

TOTAL NUMBER OF INCUMBENTS		B51	% REC	NATIONAL PER MONTH						INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
PAY ITEM		INC PER ITEM		PERCENTILES							
				10	25	50	75	90			
BASIC & BENEFITS	Basic Salary	470	100	4467	4702	5111	6302	6932	5051	5039	
	Annual Bonus (13th cheque)	465	99	338	356	413	465	538	404	441	
	Other Cash Allowances										
	Healthcare - Company contribution	446	95	1003	1056	1219	1463	1609	1001	995	
	Retirement - Company contribution	457	97	508	535	582	698	838	612	610	
	Transport Benefit										
	Housing Benefits	226	48	413	516	591	638	700	263	300	
Other Benefits	244	52	206	257	279	301	335	127	184		
GUARANTEED PACKAGE	Total of Basic & Benefits	470	72								
	Package Only (T.C.O.E.)	181	28	6781	7135	7747	9266	11003	7499	7611	
VARIABLE PAY	Sales Commission										
	Short Term Incentives	273	42	432	455	495	595	714	219	222	
	Grand Total Package	651	100	7118	7625	8365	9724	11893	7718	7833	

GEOGRAPHIC	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)		INDUSTRY SECTOR	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	5241	104	7763	102	Agriculture, Fishing and Forestry	4334	86	6317	83
Durban, PMB and Environs	4938	98	7535	99	Construction	4283	85	6622	87
East Rand	5493	109	8448	111	Electronic and Information Technology	5543	110	8144	107
Eastern Cape	4787	95	7154	94	Finance, Insurance, Business Services	4686	93	7383	97
Free State	4888	97	7002	92	Mining and Quarrying	4989	99	6850	90
JHB Northern Metro	5392	107	8296	109	Mnf: Fast Moving Consumer Goods	4636	92	7307	96
Johannesburg	5341	106	7839	103	Mnf: Other Chemicals and Allied	5795	115	8296	109
Limpopo Province	4737	94	6926	91	Mnf: Paper, Printing and Wood	5089	101	7535	99
Midrand	5291	105	8144	107	Mnf: Pharmaceuticals	5946	118	8524	112
Mpumalanga	4989	99	7230	95	Mnf: Primary Metals	4737	94	7002	92
North West Province	4686	93	6850	90	Mnf: Vehicles, Parts, Heavy Transport	5442	108	7915	104
Northern Cape	4585	91	7078	93	Other Manufacturing	5190	103	7611	100
Other Kwazulu-Natal	5140	102	7611	100	Professional Services	5241	104	7687	101
Pretoria	5190	103	7915	104	Retail Trade and Allied Services	4837	96	6926	91
Vaal Triangle	5241	104	8068	106	Semi-Government/Public Institutions	5140	102	7992	105
West Rand	4787	95	7307	96	Transport, Storage, Communication	5493	109	8372	110
Western Cape	4737	94	6926	91	Wholesale Distributive Trade	4787	95	7459	98

JOB GRADE LEVEL

PER	TASK	PAT	SKAN	OTH	OTH	% OF SAMPLE	PERCENTILES					BASIC (COLWEIGHTED)		PERCENTILES					GUARANTEED (COLWEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
15	4	B1				37	3799	4547	5152	5680	6268	5089	101	5681	6800	7705	8348	9212	7611	100
14	5	B2				15	4076	4977	5638	6216	6882	5493	109	6217	7441	8432	8941	9856	8372	110

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New Code	102406	Title	SECURITY OFFICER II	59
Old Code(s)		Section	ADMINISTRATION SERVICES	

Directs the activities of security guards. Ensures that all routine duties and procedures are carried out, and that guards comply with standing rules and regulations. Required to deal in the first instance with any emergency situation that may arise prior to the arrival of superiors and makes the necessary decisions. At least 3 years' security experience.
Reports to: Chief Security Officer.

TOTAL NUMBER OF INCUMBENTS		817	% REC	NATIONAL PER MONTH							INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
PAY ITEM		INC PER ITEM		PERCENTILES								
				10	25	50	75	90				
BASIC & BENEFITS	Basic Salary	554	100	5702	7127	7747	8927	9815	7485	7671		
	Annual Bonus (13th cheque)	548	99	476	595	686	741	871	700	793		
	Other Cash Allowances											
	Healthcare - Company contribution	526	95	974	1150	1303	1553	1708	1228	1291		
	Retirement - Company contribution	548	99	782	871	983	1140	1281	986	1009		
	Transport Benefit											
	Housing Benefits	249	45	900	947	1109	1198	1436	525	620		
Other Benefits	382	69	477	502	528	634	761	412	426			
GUARANTEED PACKAGE	Total of Basic & Benefits	554	67									
	Package Only (T.C.O.E.)	263	33	10413	11097	12215	14345	16783	11409	11794		
VARIABLE PAY	Sales Commission											
	Short Term Incentives	425	52	570	624	678	814	977	336	325		
	Grand Total Package	817	100	10843	11527	13085	15041	18026	11745	12119		

GEOGRAPHIC	BASIC (COL WEIGHTED)		GUARANTEED PACKAGE (COL WEIGHTED)		INDUSTRY SECTOR	BASIC (COL WEIGHTED)		GUARANTEED PACKAGE (COL WEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	7978	104	11794	100	Agriculture, Fishing and Forestry	6904	90	10379	88
Durban, PMB and Environs	7748	101	11558	98	Construction	8592	112	12620	107
East Rand	7901	103	12266	104	Electronic and Information Technology	8285	108	12030	102
Eastern Cape	7211	94	11204	95	Finance, Insurance, Business Services	7671	100	12384	105
Free State	7134	93	10733	91	Mining and Quarrying	7287	95	11558	98
JHB Northern Metro	8592	112	13563	115	Mnf: Fast Moving Consumer Goods	8898	116	12973	110
Johannesburg	8208	107	12855	109	Mnf: Other Chemicals and Allied	8285	108	12502	106
Limpopo Province	6904	90	10497	89	Mnf: Paper, Printing and Wood	7134	93	10497	89
Midrand	8055	105	12030	102	Mnf: Pharmaceuticals	8822	115	13327	113
Mpumalanga	7057	92	10968	93	Mnf: Primary Metals	7978	104	11322	96
North West Province	6981	91	10850	92	Mnf: Vehicles, Parts, Heavy Transport	7518	98	12148	103
Northern Cape	7287	95	11322	96	Other Manufacturing	7441	97	10968	93
Other Kwazulu-Natal	6827	89	10615	90	Professional Services	7901	103	12266	104
Pretoria	7824	102	11912	101	Retail Trade and Allied Services	7364	96	11676	99
Vaal Triangle	7671	100	12148	103	Semi-Government/Public Institutions	6981	91	10025	85
West Rand	7364	96	11676	99	Transport, Storage, Communication	7594	99	11086	94
Western Cape	7594	99	11440	97	Wholesale Distributive Trade	8055	105	11912	101

JOB GRADE/LEVEL

PER	TASK	PAT	SKAN	QTR	QTR	% OF SAMPLE	PERCENTILES					BASIC (COL WEIGHTED)		PERCENTILES					GUARANTEED (COL WEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
12	7	B4				19	5386	6443	7300	7740	8534	7211	94	8273	9902	11208	12368	13933	10968	93
11	8	B5				31	6068	7051	7989	8471	9534	7761	101	9547	11428	12935	13715	15356	11676	99
11	9	C1				13	6640	7716	8743	9271	10220	8361	109	10762	12506	14156	15010	16564	12619	107

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New Code	103110	Title	CALL CENTRE OPERATOR I	6
Old Code(s)		Section	SALES AND MARKETING	

Responsible for the provision of product information and advice to external and internal customers. Maintains relationships and portrays the professional image of the organisation. Requires a sound knowledge of systems and computer skills.
Reports to: Call Centre Supervisor/Manager.

TOTAL NUMBER OF INCUMBENTS		1175	% REC	NATIONAL PER MONTH						INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
PAY ITEM		INC PER ITEM		PERCENTILES							
				10	25	50	75	90			
BASIC & BENEFITS	Basic Salary	787	100	5158	6447	7429	8023	8825	7582	7763	
	Annual Bonus (13th cheque)	748	95	499	624	678	732	805	661	668	
	Other Cash Allowances										
	Healthcare - Company contribution	658	84	908	1135	1234	1389	1726	939	954	
	Retirement - Company contribution	748	95	691	727	857	996	1195	857	897	
	Transport Benefit										
	Housing Benefits	323	41	243	287	312	337	371	94	96	
	Other Benefits	197	25	341	359	390	468	562	108	95	
GUARANTEED PACKAGE	Total of Basic & Benefits	787	66	8711	9472	10264	11456	12317	10309	10542	
	Package Only (T.C.O.E.)	388	34								
VARIABLE PAY	Sales Commission	164	14	342	397	432	518	622	79	76	
	Short Term Incentives	640	54	428	535	581	701	771	375	426	
	Grand Total Package	1175	100	9330	9821	11277	12179	14214	10763	11044	

GEOGRAPHIC	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)		INDUSTRY SECTOR	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	7996	103	10964	104	Agriculture, Fishing and Forestry	7996	103	10542	100
Durban, PMB and Environs	7918	102	10847	101	Construction	8695	112	12123	115
East Rand	8229	106	10437	99	Electronic and Information Technology	7064	91	10015	95
Eastern Cape	7297	94	9699	92	Finance, Insurance, Business Services	7530	97	10437	99
Free State	7375	95	10226	97	Mining and Quarrying	7220	93	9909	94
JHB Northern Metro	8772	113	12229	116	Mnf: Fast Moving Consumer Goods	8384	108	11069	105
Johannesburg	8539	110	11280	107	Mnf: Other Chemicals and Allied	8772	113	11385	108
Limpopo Province	7142	92	9593	91	Mnf: Paper, Printing and Wood	7297	94	10226	97
Midrand	8151	105	10753	102	Mnf: Pharmaceuticals	8927	115	12545	119
Mpumalanga	7452	96	10331	98	Mnf: Primary Metals	7375	95	9699	92
North West Province	7220	93	9909	94	Mnf: Vehicles, Parts, Heavy Transport	7685	99	10964	104
Northern Cape	6831	88	9488	90	Other Manufacturing	8539	110	11280	107
Other Kwazulu-Natal	7064	91	9804	93	Professional Services	8151	105	10753	102
Pretoria	7685	99	10542	100	Retail Trade and Allied Services	7452	96	9804	93
Vaal Triangle	8074	104	11175	106	Semi-Government/Public Institutions	7763	100	10331	98
West Rand	6987	90	10015	95	Transport, Storage, Communication	7142	92	10120	96
Western Cape	7841	101	10120	96	Wholesale Distributive Trade	7608	98	10647	101

JOB GRADE/LEVEL																				
PER	TASK	PAT	SKAN	OTH	OTH	SIZE SAMPLE	PERCENTILES					BASIC (COLWEIGHTED)		PERCENTILES					GUARANTEED (COLWEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
12	7	B4				17	5500	6429	7284	8030	9046	7366	95	7148	8556	9694	10697	12051	9804	93
11	8	B5				33	5878	7036	7971	8452	9319	7826	101	7823	9364	10609	11696	13176	10436	99

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New Code	103118	Title	CALL CENTRE SUPERVISOR	9
Old Code(s)		Section	SALES AND MARKETING	

Supervises a group of call centre operators. Ensures that all operators are product trained and that adequate output is being maintained in order to provide excellent customer service. Deals with queries and advises subordinates. May have a degree or be qualified by considerable experience. Sound knowledge of company products.
Reports to: Call Centre Manager

TOTAL NUMBER OF INCUMBENTS		262		NATIONAL PER MONTH						
PAY ITEM		INC PER ITEM	% REC	PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
				10	25	50	75	90		
BASIC & BENEFITS	Basic Salary	96	100	9174	9657	11007	12443	15234	11256	11335
	Annual Bonus (13th cheque)	90	94	779	820	891	1068	1180	899	891
	Other Cash Allowances									
	Healthcare - Company contribution	85	89	986	1089	1233	1480	1760	1103	1181
	Retirement - Company contribution	88	92	945	995	1183	1436	1723	1142	1083
	Transport Benefit	52	54	3025	3184	3461	4153	4984	2145	2245
	Housing Benefits	26	27	636	795	878	948	1043	198	182
Other Benefits	29	30	409	431	468	562	674	164	168	
GUARANTEED PACKAGE	Total of Basic & Benefits	96	36							
	Package Only (T.C.O.E.)	166	64	15046	16256	17670	20023	24549	17121	17302
VARIABLE PAY	Sales Commission									
	Short Term Incentives	192	73	852	897	975	1170	1404	722	693
	Grand Total Package	262	100	16130	17440	18923	21529	26342	17843	17995

GEOGRAPHIC	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)		INDUSTRY SECTOR	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)	
	AMOUNT	CR	AMOUNT	CR		AMOUNT	CR	AMOUNT	CR
Cape Town and Environs	11562	102	17475	101	Agriculture, Fishing and Forestry	11222	99	16783	97
Durban, PMB and Environs	10995	97	16437	95	Construction	9975	88	15572	90
East Rand	11675	103	18513	107	Electronic and Information Technology	12469	110	18340	106
Eastern Cape	10655	94	15918	92	Finance, Insurance, Business Services	11448	101	16956	98
Free State	9861	87	15399	89	Mining and Quarrying	10315	91	15399	89
JHB Northern Metro	12242	108	19205	111	Mnf: Fast Moving Consumer Goods	10202	90	16097	93
Johannesburg	12015	106	17994	104	Mnf: Other Chemicals and Allied	12128	107	19378	112
Limpopo Province	10428	92	16610	96	Mnf: Paper, Printing and Wood	11902	105	17821	103
Midrand	12128	107	18167	105	Mnf: Pharmaceuticals	10995	97	17475	101
Mpumalanga	10768	95	16956	98	Mnf: Primary Metals	11562	102	18686	108
North West Province	10542	93	15572	90	Mnf: Vehicles, Parts, Heavy Transport	12242	108	18167	105
Northern Cape	10202	90	15745	91	Other Manufacturing	12695	112	17994	104
Other Kwazulu-Natal	11222	99	16783	97	Professional Services	10542	93	16610	96
Pretoria	11788	104	18340	106	Retail Trade and Allied Services	12355	109	17302	100
Vaal Triangle	11108	98	17302	100	Semi-Government/Public Institutions	10768	95	17129	99
West Rand	10882	96	16264	94	Transport, Storage, Communication	10088	89	15745	91
Western Cape	11902	105	17648	102	Wholesale Distributive Trade	11335	100	17648	102

JOB GRADE/LEVEL																				
PER	TASK	PAT	SKAN	OTH	OTH	NOE SAMPLE	PERCENTILES					BASIC (COLWEIGHTED)		PERCENTILES					GUARANTEED (COLWEIGHTED)	
							10	25	50	75	90	AMOUNT	CR	10	25	50	75	90	AMOUNT	CR
9	11	C3				9	7953	9242	10655	11298	12457	10776	95	11882	14222	16113	17780	20030	15917	92
8	12	C4				39	9080	10551	11660	12528	14170	11562	102	13003	15564	17633	18697	21063	17475	101

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New Code	103120	Title	CUSTOMER SERVICE OFFICER I																	
Old Code(s)		Section	SALES AND MARKETING																	
Provides a customer advisory service. Co-ordinates and handles all customer queries and complaints, ensuring customer satisfaction and retention. Records the necessary information and passes the report to the relevant departments. Has less than 3 years' experience. A minimum of Grade 12. Reports to: Customer Service Manager.																				
TOTAL NUMBER OF INCUMBENTS		9524	NATIONAL PER MONTH																	
PAY ITEM	INC PER ITEM	% REC	PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPARY WEIGHTED AVERAGE											
			10	25	50	75	90													
BASIC & BENEFITS	Basic Salary	8757	100	6216	7770	8446	9122	10026	8573	8827										
	Annual Bonus (13th cheque)	8669	99	499	624	697	753	828	642	564										
	Other Cash Allowances																			
	Healthcare - Company contribution	6860	78	907	955	1038	1155	1386	839	1020										
	Retirement - Company contribution	8669	99	844	888	965	1158	1390	1006	892										
	Transport Benefit	350	4	3179	3974	4320	5134	6162	168	211										
	Housing Benefits	2989	34	319	372	404	485	582	142	137										
Other Benefits	963	11	358	377	410	492	590	61	71											
GUARANTEED PACKAGE	Total of Basic & Benefits	8757	91	9677	10461	11173	13094	15307	11449	11741										
	Package Only (T.C.O.E.)	767	9																	
VARIABLE PAY	Sales Commission	762	8	945	995	1082	1298	1558	103	103										
	Short Term Incentives	7510	79	490	612	665	806	969	549	534										
	Grand Total Package	9524	100	11274	11870	13113	14772	17501	12101	12378										
GEOGRAPHIC	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)		INDUSTRY SECTOR	BASIC (COLWEIGHTED)		GUARANTEED PACKAGE (COLWEIGHTED)												
	AMOUNT	CF	AMOUNT	CF		AMOUNT	CF	AMOUNT	CF											
Cape Town and Environs	9092	103	12211	104	Agriculture, Fishing and Forestry	9092	103	11741	100											
Durban, PMB and Environs	9004	102	11856	101	Construction	9886	112	13502	115											
East Rand	9357	106	11624	99	Electronic and Information Technology	8033	91	11154	95											
Eastern Cape	8297	94	10802	92	Finance, Insurance, Business Services	8562	97	11824	99											
Free State	8386	95	11389	97	Mining and Quarrying	8209	93	11037	94											
JHB Northern Metro	9975	113	13620	116	Mnf: Fast Moving Consumer Goods	9533	108	12328	105											
Johannesburg	9710	110	12563	107	Mnf: Other Chemicals and Allied	9975	113	12680	108											
Limpopo Province	8121	92	10634	91	Mnf: Paper, Printing and Wood	8297	94	11389	97											
Midrand	9268	105	11976	102	Mnf: Pharmaceuticals	10151	115	13972	119											
Mpumalanga	8474	96	11506	98	Mnf: Primary Metals	8386	95	10802	92											
North West Province	8209	93	11037	94	Mnf: Vehicles, Parts, Heavy Transport	8739	99	12211	104											
Northern Cape	7768	88	10567	90	Other Manufacturing	9710	110	12563	107											
Other Kwazulu-Natal	8033	91	10919	93	Professional Services	9268	105	11976	102											
Portofino	8739	99	11741	100	Retail Trade and Allied Services	8474	96	10919	93											
Vaal Triangle	9180	104	12445	106	Semi-Government/Public Institutions	8827	100	11506	98											
West Rand	7944	90	11154	95	Transport, Storage, Communication	8121	92	11271	96											
Western Cape	8915	101	11271	96	Wholesale Distributive Trade	8650	98	11858	101											
JOB GRADE LEVEL																				
PER	TASK	PAT	SKAN	OTR	OTH	% OF SAMPLE	PERCENTILES					BASIC (COLWEIGHTED)		PERCENTILES					GUARANTEED (COLWEIGHTED)	
							10	25	50	75	90	AMOUNT	CF	10	25	50	75	90	AMOUNT	CF
11	8	B5				13	6178	7395	8379	9237	10406	8474	96	8132	9734	11028	12158	13697	11153	95
11	9	C1				33	6761	8093	9170	10109	11388	9004	102	8900	10653	12069	13318	15004	11623	99
10	10	C2				14	7380	8857	10035	11062	12462	9798	111	9740	11658	13208	14561	16404	12445	106

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New Code	103123	Title	CUSTOMER SERVICE MANAGER	14
Old Code(s)		Section	SALES AND MARKETING	

Ensures customer service by meeting customer service levels and objectives specified by the company. Continuously assesses and innovatively revises systems and processes. A relevant degree with more than 5 years' related experience. Manages customer service officers.
Reports to: Sales Manager

TOTAL NUMBER OF INCUMBENTS		389	%	NATIONAL PER MONTH						
PAY ITEM	INC PER ITEM	REC		PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
				10	25	50	75	90		
BASIC & BENEFITS	Basic Salary	353	100	16275	18445	20049	23908	28300	20136	19789
	Annual Bonus (13th cheque)	339	96	1377	1543	1700	2064	2433	1692	1670
	Other Cash Allowances									
	Healthcare - Company contribution	297	84	1583	1666	1811	2153	2584	1552	1440
	Retirement - Company contribution	349	99	1688	1963	2195	2371	2889	2150	2214
	Transport Benefit	279	79	4772	5965	6484	7427	8912	5118	5149
	Housing Benefits	102	29	790	832	904	1085	1300	288	342
	Other Benefits	78	22	590	621	675	810	972	176	187
GUARANTEED PACKAGE	Total of Basic & Benefits	353	90							
	Package Only (T.C.O.E.)	36	10	26501	29241	30748	37351	43302	31120	30848
VARIABLE PAY	Sales Commission	31	8	1114	1393	1514	1817	2180	127	138
	Short Term Incentives	284	73	1587	1670	1815	2178	2614	1603	1600
	Grand Total Package	389	100	28628	31844	34586	40963	47817	32850	32586

GEOGRAPHIC	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)		INDUSTRY SECTOR	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	20185	102	31156	101	Agriculture, Fishing and Forestry	19591	99	29923	97
Durban, PiMB and Environs	19195	97	29306	95	Construction	17414	88	27763	90
East Rand	20383	103	33007	107	Electronic and Information Technology	21768	110	32699	106
Eastern Cape	18602	94	28380	92	Finance, Insurance, Business Services	19987	101	30231	98
Free State	17216	87	27455	89	Mining and Quarrying	18008	91	27455	89
JHB Northern Metro	21372	108	34241	111	Mnf: Fast Moving Consumer Goods	17810	90	28689	93
Johannesburg	20976	106	32082	104	Mnf: Other Chemicals and Allied	21174	107	34550	112
Limpopo Province	18206	92	29614	96	Mnf: Paper, Printing and Wood	20778	105	31773	103
Midrand	21174	107	32390	105	Mnf: Pharmaceuticals	19195	97	31156	101
Mpumalanga	18600	95	30231	98	Mnf: Primary Metals	20185	102	33316	108
North West Province	18404	93	27763	90	Mnf: Vehicles, Parts, Heavy Transport	21372	108	32390	105
Northern Cape	17810	90	28072	91	Other Manufacturing	22164	112	32082	104
Other Kwazulu-Natal	19591	99	29923	97	Professional Services	18404	93	29614	96
Pretoria	20581	104	32699	106	Retail Trade and Allied Services	21570	109	30848	100
Vaal Triangle	19393	98	30848	100	Semi-Government/Public Institutions	18800	95	30540	99
West Rand	18997	96	28997	94	Transport, Storage, Communication	17612	89	28072	91
Western Cape	20778	105	31465	102	Wholesale Distributive Trade	19789	100	31465	102

JOB GRADE LEVEL																				
PER	TASK	PAT	SCAN	OTH	OTH	% OF SAMPLE	PERCENTILES					BASIC (CO.WEIGHTED)		PERCENTILES					GUARANTEED (CO.WEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
7	13	C5				32	14474	17325	19628	21639	24378	19850	100	22717	27192	30807	33963	38262	31156	101
7	14	D1				15	15839	18959	21480	23680	26132	21226	107	24489	29758	33714	37168	41872	33315	108

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New Code	109310	Title	PACKER	17
Old Code(s)		Section	LOGISTICS	

Packs finished goods into the appropriate cartons, boxes, etc., either against product specification or against customer orders. Responsible for ensuring that the correct packaging is used, the appropriate documentation is included, and that the cartons and boxes are properly secured. Works under direct supervision. Has the ability to read and write.
Reports to: Warehouse Supervisor.

TOTAL NUMBER OF INCUMBENTS		628	NATIONAL PER MONTH								
PAY ITEM	INC PER ITEM	% REC	PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE		
			10	25	50	75	90				
BASIC & BENEFITS	Basic Salary	574	100	3806	4006	4354	4858	5344	4309	4330	
	Annual Bonus (13th cheque)	528	92	360	379	412	445	534	405	387	
	Other Cash Allowances										
	Healthcare - Company contribution	270	47	728	766	833	1000	1200	440	451	
	Retirement - Company contribution	563	98	397	455	504	544	595	510	434	
	Transport Benefit										
	Housing Benefits										
Other Benefits	75	13	528	572	622	715	859	82	65		
GUARANTEED PACKAGE	Total of Basic & Benefits	574	91								
	Package Only (T.C.O.E)	54	9	4899	5300	5645	6613	7763	5756	5677	
VARIABLE PAY	Sales Commission										
	Short Term Incentives	132	21	385	405	474	569	683	112	141	
	Grand Total Package	628	100	5161	5600	6210	7196	8573	5868	5818	

GEOGRAPHIC	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)		INDUSTRY SECTOR	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	4460	103	5677	100	Agriculture, Fishing and Forestry	4070	94	5223	92
Durban, PMB and Environs	4200	97	5223	92	Construction	4200	97	5393	95
East Rand	4720	109	6074	107	Electronic and Information Technology	4027	93	5450	96
Eastern Cape	3984	92	5336	94	Finance, Insurance, Business Services	4157	96	5336	94
Free State	4027	93	5166	91	Mining and Quarrying	3854	89	5166	91
HB Northern Metro	4850	112	5961	105	Mnf. Fast Moving Consumer Goods	4893	113	6188	109
Johannesburg	4590	106	6131	108	Mnf. Other Chemicals and Allied	4633	107	5961	105
Limpopo Province	4114	95	5563	98	Mnf. Paper, Printing and Wood	4373	101	5847	103
Midrand	4676	108	6245	110	Mnf. Pharmaceuticals	4980	115	6358	112
Mpumalanga	4503	104	6018	106	Mnf. Primary Metals	4243	98	5280	93
North West Province	3810	88	5109	90	Mnf. Vehicles, Parts, Heavy Transport	4287	99	5791	102
Northern Cape	4070	94	5507	97	Other Manufacturing	4114	95	5336	94
Other Kwazulu-Natal	4417	102	5620	99	Professional Services	4417	102	5904	104
Pretoria	4373	101	5904	104	Retail Trade and Allied Services	3940	91	5507	97
Vaal Triangle	4330	100	5734	101	Semi-Government/Public Institutions	4460	103	6018	106
West Rand	3940	91	5280	93	Transport, Storage, Communication	4330	100	5563	98
Western Cape	4287	99	5791	102	Wholesale Distributive Trade	4547	105	6074	107

JOB GRADE/LEVEL																				
PER	TASK	PAT	SKAN	OTH	OTH	S OF SAMPLE	PERCENTILES					BASIC (CO.WEIGHTED)		PERCENTILES					GUARANTEED (CO.WEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
19	1	A1				8	3038	3636	4120	4542	5117	4070	94	3849	4607	5220	5755	6483	5279	93
17	2	A2				30	3324	3979	4509	4976	5606	4330	100	4212	5042	5713	6058	6678	5790	102
16	3	A3				15	3638	4355	4934	5439	6127	4547	105	4609	5517	6252	6891	7763	6187	109

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New Code	108610	Title	OPERATOR: UNSKILLED	77
Old Code(s)		Section	MANUFACTURING/OPERATIONS	

Performs essentially repetitive tasks which require an elementary appreciation of the procedures involved. Decisions between certain lines of action are clearly defined e.g. equipment to be used. Examples include machine minders, artisan assistants, production line assemblers and simple component checkers. At least Grade 6. Able to count and has elementary reading and writing ability. Reports to: Line Supervisor.

TOTAL NUMBER OF INCUMBENTS:			2368	NATIONAL PER MONTH						
PAY ITEM	INC PER ITEM	% REC	PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE	
			10	25	50	75	90			
BASIC & BENEFITS	Basic Salary	1866	100	3467	3649	4171	4712	5791	4223	4288
	Annual Bonus (13th cheque)	1829	98	305	321	364	393	450	369	453
	Other Cash Allowances									
	Healthcare - Company contribution	933	50	757	797	919	1039	1247	456	525
	Retirement - Company contribution	1818	97	399	499	549	632	758	535	487
	Transport Benefit									
	Housing Benefits	429	23	314	393	441	529	635	110	130
	Other Benefits	280	15	188	198	227	258	310	34	30
GUARANTEED PACKAGE	Total of Basic & Benefits	1866	78							
	Package Only (T.C.O.E)	502	22	4923	5319	5690	6785	8239	5751	5938
VARIABLE PAY	Sales Commission									
	Short Term Incentives	663	28	302	318	346	415	498	97	103
	Grand Total Package	2368	100	5301	5731	6126	7180	8868	5848	6041

GEOGRAPHIC	BASIC (COL.WEIGHTED)		GUARANTEED PACKAGE (COL.WEIGHTED)		INDUSTRY SECTOR	BASIC (COL.WEIGHTED)		GUARANTEED PACKAGE (COL.WEIGHTED)	
	AMOUNT	C/R	AMOUNT	C/R		AMOUNT	C/R	AMOUNT	C/R
Cape Town and Environs	4545	106	5997	101	Agriculture, Fishing and Forestry	3688	86	5285	89
Durban, PMB and Environs	4245	99	5819	98	Construction	3859	90	5522	93
East Rand	4717	110	6413	108	Electronic and Information Technology	3773	88	5700	96
Eastern Cape	3902	91	5522	93	Finance, Insurance, Business Services	3988	93	5582	94
Free State	4031	94	5641	95	Mining and Quarrying	3816	89	5344	90
JHB Northern Metro	4502	105	6472	109	Mnf: Fast Moving Consumer Goods	4888	114	6888	116
Johannesburg	4417	103	6294	106	Mnf: Other Chemicals and Allied	5017	117	6769	114
Limpopo Province	4074	95	5463	92	Mnf: Paper, Printing and Wood	4331	101	5760	97
Midrand	4631	108	6057	102	Mnf: Pharmaceuticals	4717	110	6413	108
Mpumalanga	4374	102	6235	105	Mnf: Primary Metals	4545	106	6176	104
North West Province	4159	97	5582	94	Mnf: Vehicles, Parts, Heavy Transport	4074	95	5463	92
Northern Cape	3988	93	5760	97	Other Manufacturing	4202	98	6116	103
Other Kwazulu-Natal	4202	98	5700	96	Professional Services	4288	100	6057	102
Pretoria	4288	100	6116	103	Retail Trade and Allied Services	4159	97	5819	98
Vaal Triangle	4460	104	6354	107	Semi-Government/Public Institutions	4374	102	6235	105
West Rand	3816	89	5404	91	Transport, Storage, Communication	4116	96	5641	95
Western Cape	4331	101	6176	104	Wholesale Distributive Trade	4417	103	5997	101

JOB GRADE/LEVEL																				
PER	TASK	PAT	SKAR	OTH	OTH	% OF SAMPLE	PERCENTILES					BASIC (COL.WEIGHTED)		PERCENTILES					GUARANTEED (COL.WEIGHTED)	
							10	25	50	75	90	AMOUNT	C/R	10	25	50	75	90	AMOUNT	C/R
18	1	A1				12	2936	3514	3982	4394	4950	4027	94	4026	4819	5460	6019	6781	5522	93
17	2	A2				33	3213	3846	4358	4705	5292	4330	101	4406	5274	5975	6593	7427	5938	100
16	3	A3				15	3516	4209	4769	5057	5574	4633	108	4822	5772	6539	6934	7644	6294	106

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New Code	108614	Title	OPERATOR: SKILLED (NOT AN ARTISAN)	79
Old Code(s)		Section	MANUFACTURING/OPERATIONS	

Performs a number of complex tasks requiring thorough training and experience and the use of sophisticated equipment. May oversee a number of lower level workers using related equipment. Grade 10 with several years' related industrial experience.
Reports to: Line Supervisor.

TOTAL NUMBER OF INCUMBENTS		9034	% REC	NATIONAL PER MONTH						
PAY ITEM		INC PER ITEM		PERCENTILES					INCUMBENT WEIGHTED AVERAGE	COMPANY WEIGHTED AVERAGE
			10	25	50	75	90			
BASIC & BENEFITS	Basic Salary	8111	100	5051	5317	5914	6387	7510	6000	6046
	Annual Bonus (13th cheque)	7949	98	417	439	477	576	691	477	558
	Other Cash Allowances									
	Healthcare - Company contribution	7138	88	988	1040	1130	1374	1649	993	990
	Retirement - Company contribution	8030	99	565	595	647	777	932	659	672
	Transport Benefit									
	Housing Benefits	3163	39	468	491	534	641	769	238	203
Other Benefits	1622	20	295	350	397	429	480	74	79	
GUARANTEED PACKAGE	Total of Basic & Benefits	8111	89	7018	7756	8224	9768	11668	8458	8565
	Package Only (T.C.O.E.)	923	11							
VARIABLE PAY	Sales Commission									
	Short Term Incentives	6414	71	432	455	495	594	713	372	370
	Grand Total Package	9034	100	7559	8348	8849	10269	12567	8830	8935

GEOGRAPHIC	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)		INDUSTRY SECTOR	BASIC (CO.WEIGHTED)		GUARANTEED PACKAGE (CO.WEIGHTED)	
	AMOUNT	CR	AMOUNT	CR		AMOUNT	CR	AMOUNT	CR
Cape Town and Environs	6288	104	8736	102	Agriculture, Fishing and Forestry	5139	85	7537	88
Durban, PMB and Environs	5986	99	8222	96	Construction	5260	87	7623	89
East Rand	6530	108	8993	105	Electronic and Information Technology	6167	102	8051	94
Eastern Cape	6046	100	8479	99	Finance, Insurance, Business Services	5623	93	8565	100
Free State	5804	96	8565	100	Mining and Quarrying	5804	96	7880	92
JHB Northern Metro	6409	106	9250	108	Mnf: Fast Moving Consumer Goods	6348	105	8736	102
Johannesburg	8469	107	9079	106	Mnf: Other Chemicals and Allied	5562	92	8222	96
Limpopo Province	5744	95	8394	98	Mnf: Paper, Printing and Wood	6832	113	10021	117
Midrand	5865	97	8137	95	Mnf: Pharmaceuticals	6651	110	9850	115
Mpumalanga	5925	98	8651	101	Mnf: Primary Metals	5441	90	8137	95
North West Province	5320	88	7709	90	Mnf: Vehicles, Parts, Heavy Transport	5744	95	7965	93
Northern Cape	5502	91	7880	92	Other Manufacturing	6469	107	8822	103
Other Kwazulu-Natal	6348	105	8822	103	Professional Services	6590	109	9165	107
Pretoria	6106	101	8908	104	Retail Trade and Allied Services	5683	94	8479	99
Vaal Triangle	6227	103	8993	105	Semi-Government/Public Institutions	6288	104	9079	106
West Rand	5623	93	7794	91	Transport, Storage, Communication	7074	117	9507	111
Western Cape	5683	94	8308	97	Wholesale Distributive Trade	5986	99	8308	97

JOB GRADE/LEVEL

PER	TASK	PAY	SKAW	OTR	OTH	% OF SAMPLE	PERCENTILES					BASIC (CO.WEIGHTED)		PERCENTILES					GUARANTEED (CO.WEIGHTED)	
							10	25	50	75	90	AMOUNT	CR	10	25	50	75	90	AMOUNT	CR
14	5	B2				12	4150	4967	5566	6093	6724	5629	93	5808	6952	7876	8351	9208	7965	93
13	6	B3				34	4630	5380	6091	6523	7198	6026	100	6355	7607	8619	9139	10076	8650	101
12	7	B4				12	4968	5947	6666	7268	8021	6468	107	7060	8204	9432	10001	11028	9335	109

Grade 17	a.	Tea maker	102150
	b.	Cleaner	102300
	c.	Grinder	108610
	d.	Packer	109310
	e.	Workshop Assistant	N/A
	f.	Order Picker	109312
	g.	Stores Assistant	109300
	h.	Truck Assistant	N/A
Grade 16	a.	Q.C. Inspector	108500
Grade 15	a.	Head Packer	N/A
	b.	Operator (Semi Skilled)	108612
	c.	Forklift Driver	108750
	d.	L.M.V. Driver	109108
Grade 14	a.	Artisans Assistant	108100
	b.	H.M.V. Driver	109110
	c.	Stock Control Clerk	109360
Grade 13	a.	Senior Operator (Skilled)	108614
	b.	E H M V Driver	109112
	c.	Dispatch / Receiving Clerk	109430
Grade 12	a.	Storeman	109302
	b.	Process Controller	108622
	c.	Artisan (Unqualified)	108102
	d.	Purchasing Clerk	109200
	e.	Stock Controller	109362