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THE PSYCHOSOCIAL WORK ENVIRONMENT OF PARAMEDICS IN THE CITY OF TSHWANE

Mantai Lillian Zuma



WITS
UNIVERSITY

A research report submitted to
the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg,
in partial fulfilment of the requirements for the degree
of
Masters of Science in Nursing

Johannesburg, 2022

DECLARATION

I, Mantai Zuma, declare that the research report is my own unaided work. It is being submitted for the degree of Master of Science (in Nursing) at the University of the Witwatersrand, Johannesburg. This report has not been submitted before for any other degree or examination at any other university.



Signed at Johannesburg,

On this 17th day of June 2022

Protocol Number: M200541

DEDICATION

Above all I want to thank my God for His Blessings and Grace.

This research study is dedicated with love to:

- My husband Nhlanhla and our two daughters Ayanda and Snenhlanhla, for their understanding and support.

- My Siblings Alice and Koeni, my nieces Hilda and Mpho also friends who supported me and helped me to turn this manuscript into a finished product.

- My late father, and three late siblings who would have been happy to see me achieve this.

- Most importantly my late mother Madineo whom I recently lost, for being the pillar of my strength and always praying for me. I wish she was around to see the product. Heaven is for real I hope you are rejoicing with me up there

ACKNOWLEDGEMENTS

I am proud to have been provided with the opportunity to complete this research report with the support of many individuals.

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- Additionally, I would like to thank the team of Hercules clinic for their support and encouragement, thank you very much.
- I would like to thank the City of Tshwane Municipality for granting me permission to do research in the three Emergency departments, and the EMS directors of the selected EMS departments for granting me permission to conduct this study in their stations.
- I would like to thank the paramedics for their support and for taking part in my study. This was always appreciated; and they were an amazing research group.

ABSTRACT

Background: Emergency medical services (EMS) are an occupational field in which its professionals deal with trauma and medical emergencies daily. Staff working at the emergency departments are mostly exposed to work related hazards including psychosocial risk factors. The medical emergency professionals work irregular hours, their work environment is unstructured, they often travel at high speed and frequently exposed to traumatic incidents.

Purpose: The purpose of this study was to describe the psychosocial work environment of paramedics in the City of Tshwane.

Setting: The setting for this study was in the City of Tshwane paramedic's stations: Rosslyn, Bosman and Phillip Nell Park Emergency Medical Services Departments, South Africa.

Methods: A cross-sectional survey design was used for this study. using a self-administered questionnaire, the Copenhagen Psychosocial Questionnaire II (COPSOQ II) to collect data.

Data analysis: Data was scored according to the Copenhagen Psychosocial Questionnaire scoring system. Statistical analyses included descriptive statistics such as the mean, mode median and standard deviation. The open -ended comment section was analyzed using quantitative content analysis. Stata for Windows English Version 15 was used to analyse the data, while assistance from a statistician from the University of the Witwatersrand Post-Graduate Research Support Services was utilized.

Results: A total of 117 Paramedics were recruited and 90 (77%) participants responded in the study. A total of 12 (10%) questionnaires were rejected due to being incomplete. Finally, 78(67%) questionnaires were analysed. From the study 34 (44%) were females, and 44 (56%) were males and the mean age of the participants was 30 to 39 years. High risk factors were unpredictability, lack of appreciation and recognition, justice and respect in the workplace. Lack of leadership quality, lack of work-life balance, burnout and stress were the major issues of poor psychosocial health among paramedics working in the selected three emergency medical services departments in City of Tshwane (COT). In the past 12 months bullying was rated as the most unsuitable behaviour 28 (35.8%) followed by threats of violence 24 (30.7%), real acts of violence 5 (6.4%) and undesired sexual attention 3 (3.8%) in that order.

Conclusion: The results of the study emphasised the requirement for an Occupational Health Programme for paramedics working in emergency medical services departments where they are exposed to psychosocial hazards.

***Key words*: psychosocial work environment, paramedics, and emergency medical services**

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LIST OF ABBREVIATIONS

AEA	Ambulance Emergency Attendant
BMI	Body Mass Index
CCTs	Critical Care Transfers
CIS	Critical Incident Stress
COT	City of Tshwane municipality
COPSOQ II	Copenhagen Psychosocial Questionnaire II
DENOSA	Democratic Nurses Association of South Africa
EAP	Employee Assistant Program
ECG	Electrocardiography
EMS	Emergency medical services'
ESD	Emergency Services Department
HIRA	Hazard identification risk assessment
HPCSA	Health Professionals Council of South Africa
ILO	International Labour Organization
IV	Intravenous
NCD	Non-Communicable Diseases
NRCWE	National centre for the working environment
OH	Occupational Health
OHNP	Occupational Health Nurse Practitioner
OHSA	Occupational Health and Safety Act (Act No 85 of 1993)
OHRA	Occupational Health Risk Assessment
PHC	Primary health care services
PPE's	Personal Protective Equipment
PTSD	Post-Traumatic Stress Disorder
RSA	Republic of South Africa
SANC	South African Nursing Council
SAQA	South African Qualification Authority
SAPS	South African Police service
SAQA	South African Qualification Authority
SASOHN	South African Society of Occupational Health Nursing Practitioners
RSA	Republic of South Africa
WHO	World Health Organization
WHP	Work Health Promotion
WV	Workplace Violence

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Chapter One provides an overview of the study, which includes the background, motivation for the investigation, problem statement, goal, and objectives. The research question and the study's significance are discussed in this chapter. Brief information about the research methods and design are given, as well as the clarification of concepts and an overview of the entire study.

1.2 BACKGROUND

Emergency medical services (EMS) are an occupational field in which its professionals deal with trauma and medical emergencies daily (DeDiego, Applied, and Moret, 2017) and (Erasmus and Fourie, 2008). However, not much has been published on the psychosocial work environment of these professionals. They are exposed to diverse physical and psychosocial work-related hazards. Medical emergency professionals work irregular hours, their work environment is unstructured, they often travel at high speed, and they are frequently exposed to traumatic incidents (Galeano, 2019) (Erasmus and Fourie, 2008).

The psychosocial hazards and risks may include workload, abusive or demanding patients, and seriously ill/injured patients(Emergency Care News, 2015). The Work Trauma Foundation in South Africa studied emergency medical services professionals, technical assistants, and hospital staff and found that EMS safety issues and physical and verbal abuse are key stressors in their professions (Reinecke, 2017).

Emergency medical professionals usually have to make quick decisions on how to assist a victim or an injured person, and this happens without reassurance or support because they are the first professionals to arrive on site (Fjeldheim *et al.*, 2014a). Due to this, they often do not have enough time to prepare themselves mentally when confronted with an emergency situation, so it is important to note that because emergency medical professionals

make quick decisions regarding the health of victims, they may feel like they did not do enough, or that they could have handled the situation differently when they are in a calm environment again, which leads to additional stress (Fjeldheim *et al.*, 2014a).

Paramedics are a group of people who face a unique set of obstacles, particularly because their work is so unpredictable (Sofianopoulos *et al.*, 2011a). In the pre-hospital setting, paramedics must execute a variety of functions on demand. Furthermore, Sofianopoulos *et al*. (2011a) state that, based on the emotional, psychological, and physical demands laid on paramedics, it is critical that they have adequate recovery time, as well as the restorative rest and sleep they need to perform tasks methodically, confidently, and responsibly, ensuring patient and personal safety (Sofianopoulos *et al.*, 2011a).

Emergency Medical Services (EMS) at the City of Tshwane Municipality consists of paramedics who are responsible for providing pre-hospital emergency care and transporting the sick and injured. During a financial year, an average of seventy thousand emergency medical calls are attended to (COT) (City of Tshwane, 2015).

According to the World Health Organization (WHO) 2010, the psychosocial work environment comprises the corporate culture, beliefs, values, attitudes and daily activities in the workplace that may affect employees' mental and physical health (WHO, 2010). Psychosocial hazards can include poor work organization, harassment, poor management style and bullying (WHO, 2010). Due to their involvement in life-or-death circumstances as well as patient exposure to infectious diseases, emergency medical care employees are subjected to tremendous emotional demands (Moya, Carrasco and Hoz, 2017a).

Exposure to psychosocial risk factors may affect the quality of care that EMS professionals provide to patients, and the nature of their work may also affect their physical or mental well-being (Moya, Carrasco and Hoz, 2017a). In addition, Moya, Carrasco and Hoz, 2017a state that mentally, these workers may have post-traumatic stress disorder, anxiety, and depression. Anecdotal evidence in South Africa shows that there are incidences where paramedics receive false calls only to be hijacked at gun point.

The World Health Organization (WHO) and International Labour Organization’s (ILO) healthy workplace model (2010) emphasizes the importance that should be given to the

hazards and risks emanating from the psychosocial work environment. The healthy workplace model (2010) describes a healthy workplace as an environment where workers and managers work together to promote workers' health, well-being and safety while ensuring sustainability (WHO, 2010).

Occupational Health and Safety Act (OHSA) (Act 85 of 1993) governs the health and safety of persons at work in South Africa (Republic of South Africa, 1993). As per the OHSA, all employers must identify workplace hazards and assess the magnitude of the dangers to employees' health and safety. Acutt and Hattingh (2016) believe that the Act is mainly preventative, as it describes the measures that should be taken to prevent accidents and diseases. The employer has the responsibility to maintain a working environment that is safe and free of threats to the employees' health and safety (Acutt and Hattingh, 2016).

The National Health Amended Act (Act 12 of 2013) provides a framework for a uniform healthcare system that complies with the requirements of the constitution and with all legislations related to health care services (Republic of South Africa, 2013). EMS professionals work under stress, and they are protected by the OHSA (Acutt and Hattingh, 2016). Therefore, the study should be done among paramedics in the city of Tshwane regarding their psychosocial experiences at work.

1.3 PROBLEM STATEMENT

Studies have identified paramedic work as one of the most stressful works among other emergency service workers (Sofianopoulos, Williams and Archer, 2012) and (Drewitz-Chesney, 2012).In South Africa, this is compounded by the violence in society at large(Drewitz-Chesney, 2012). Paramedics are exposed to experiencing traumatic events in the context of their work (Oginska-Bulik and Kobylarczyk, 2015). Studies have been conducted nationally and internationally, focusing mainly on paramedics' stress, burnout and coping strategies. An insufficient number of studies have investigated the physical health status of emergency medical workers, including paramedics, in South Africa despite the increased prospects of non-communicable diseases associated with their occupation (Mthombeni, Coopoo and Noorbhai, 2020). Naude and Rothman conducted a study (2003) it involved some paramedics from the city of Tshwane. It was done from a psychological perspective. However, the researcher found no study that concentrated on the psychosocial

work environment as a whole and was conducted from an OHN perspective. The problem that inspired this study is that little is known regarding the psychosocial work environment of paramedics in Tshwane.

1.4 PURPOSE OF THE STUDY

The purpose of this study was to describe the psychosocial work environment of paramedics working in the City of Tshwane.

1.5 OBJECTIVES OF THE STUDY

The objective was to describe the psychosocial work environment of paramedics in the City of Tshwane municipality.

1.6 RESEARCH QUESTION

How do paramedics describe their psychosocial work environment?

1.7 MOTIVATION AND RATIONALE

As an Occupational Health nursing student practising with paramedics, this study is motivated by the researcher's interests in the psychosocial work environment. Occupational health nursing practitioners (OHNPs) need to do a Hazard Identification Risk Assessment (HIRA) to develop, implement and evaluate an Occupational Health (OH) and Workplace Health Promotion (WHP) programme based on the HIRA. Furthermore, paramedics are the first line of care in attending to patients in accidents and other medical conditions, exposing them to harmful and traumatic experiences. Therefore, they need to practice in a physically and psychosocially safe and healthy work environment to prevent high turnover and absenteeism.

1.8 SIGNIFICANCE OF THE STUDY

The study was motivated based on the fact that little is known regarding the psychological work environment of paramedics in the City of Tshwane.

1.8.1 Research

The study might contribute to the body of knowledge of OHN, OH, human resources management and industrial psychology. It may create awareness of the importance of workplace psychosocial hazards and serve as part of HIRA into psychosocial health of paramedics for the City of Tshwane Occupational Health Services as the basis for an integrated occupational and workplace health promotion programme.

1.8.2 Occupational Health Nursing

It may potentially contribute to the development of occupational health policies and procedures that will promote the psychosocial work environment of paramedics. In terms of education and training, it may be used to find solutions for the psychosocial hazards and risks faced by EMS professionals. Since there is no specific study in the city of Tshwane which focuses on paramedics, the findings may possibly add to the existing literature.

1.9 RESEARCH DESIGN AND METHOD

The methodology is a quantitative, cross-sectional survey design which uses a self-administered questionnaire. A detailed discussion of the research design and then the methodology is explained in the third chapter. The third chapter provides a full discussion of the research concept and procedure.

1.10 CLARIFICATION OF CONCEPTS

Psychosocial work environment: It pertains to interpersonal and social interactions that influence behaviour and development in the workplace (Jacobs *et al.*, 2013). In this study, the psychosocial work environment refers to interpersonal and social interaction that influences workplace behaviour and development.

Paramedic: In terms of the Health Professions Act, a person registered as a paramedic with the Health Professionals Council of South Africa (HPCSA) (Republic of South Africa, 2003). In this study, paramedics will refer to a trained paramedic registered with HPCSA, including the driver, regardless of their training level.

Risk: A measure of the likelihood that a particular hazard may occur and its probable frequency (Acutt and Hattingh, 2016). In this study, risks are viewed as all those factors in the psychosocial work environment of paramedics which may harm their psychosocial health. This includes shift work, making a quick decision in life-threatening situations, exposure to clinical incidents involving fatalities, and failed / unsuccessful resuscitation outcomes.

Hazards: The Occupational Health and Safety Act (Act 85 of 1993) defines a hazard as a source of or exposure to danger (Republic of South Arica, 1993). For this study, hazards are described as high work demands, staff shortage leading to burnout and increased absenteeism which may cause stress-related issues to those staff members at work.

Psychosocial hazards: Psychosocial hazards include poor work organization, management style, bullying, and harassment (WHO, 2010). In this study, psychosocial hazards are all the negative factors and incidences that negatively affect a person's psychological state.

Occupational health: The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations by preventing departures from health, controlling risks and adaptation of work to people and people to their jobs (WHO) (Michell *et al*., 2011).

1.11 OVERVIEW OF RESEARCH REPORT

The following chapters make up the research report:
Chapter One- Outline of the Study.
Chapter Two- Literature Review.
Chapter Three- Research Methods.
Chapter Four- Study Results and Discussion.
Chapter Five- concludes with Study limitations and conclusion.

1.12 SUMMARY

Chapter one gave an overview of the study. Emergency Medical Services (EMS) is an occupational field where its professionals deal with trauma and medical emergencies daily.

However, not much has been published on the psychosocial work environment of these professionals, where they are exposed to diverse physical and psychosocial work-related hazards.

This study was motivated by the researcher's interest as an Occupational Health nursing student in the psychosocial work environment and practising in association with paramedics. The focus of this research was to explore paramedics' psychosocial working environment in the City of Tshwane municipality and answer the following research question: *How do paramedics describe their psychosocial work environment?*

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

A literature review is an essential overview of research on a specific topic frequently prepared to contextualize a research problem or summarize existing evidence (Polit and Beck, 2017). The goal of conducting a literature review is to learn the most current and applicable data regarding a specific phenomenon (Gray, Grove and Sutherland, 2016). Also, an extensive literature review was undertaken to expand the researcher's knowledge and understanding of the topic and increase her ability to conduct the study.

In this study, the researcher included literature from 2010 to 2020, using keywords such as: paramedics, stress, health and safety, psychosocial work environment, psychosocial hazards, and workplace violence. Literature was searched using Google Scholar, PubMed, Science Direct and Ebscohost search engines which redirected the researcher to other search engines and scientific journals, including the Acts.

2.2 THE PSYCHOSOCIAL WORK ENVIRONMENT

The psychosocial work environment encompasses company values, culture, attitudes, daily work activities and beliefs which influence employees' mental and physical health. (WHO, 2010). Furthermore, this refers to aspects of work & design and management, including work demands, availability of organizational support, rewards, and interpersonal relationships in the workplace (Leka, Jain and Lerouge, 2017).

Psychosocial risks such as poor work organization, organizational culture, command and control, management style, lack of support for work-life balance, and fear of loss can all exist within the psychosocial work environment (WHO, 2010).

- **Poor work organization:** This includes numerous issues such as difficulties with work demands, time constraints, decision latitudes, rewards, and recognition (WHO, 2010).

- **Organizational culture:** is a set of underlying assumptions and beliefs held by the organization's employees, then developed and passed down to overcome external adaptation and internal integration problems (Paais and Pattiruhu, 2020). There are four well-known organisational culture types: Clan, Adhocracy, Hierarchy and Market. In the Clan culture, the focus is on flexibility and the internal environment, characterized by a friendly workplace where people share personal and professional experiences having this denomination due to the similarity with a family-type organization in which the leader assumes the figure of a mentor (Maswani, Syah and Anindita, 2019).

  Furthermore, Maswani, Syah and Anindita (2019) report that Hierarchy culture is characterized by the focus on the internal environment and by its emphasis on measurement, documentation, record keeping and communication control. Moreover, Adhocracy culture aims at the external environment and flexibility; organizations can promote adaptability, flexibility and creativity in situations of uncertainty, ambiguity and information overload. Market culture is characterized by control and its direction to the external environment (Maswani, Syah and Anindita, 2019). Organizational culture may include gender discrimination, discrimination based on HIV status, intolerance for ethnic or religious diversity, and a lack of support for healthy lifestyles (WHO, 2010).

- **Command and control management style:** Lack of consultation, negotiation, two-way communication, constructive feedback, and respectful performance management (WHO, 2010). Lack of support between co-workers and/or superiors, poor communication and the enormous pressure on private relationships caused by service demands also negatively impact health (Moya, Carrasco and Hoz, 2017b).

- **Lack of support for work-life balance:** Work-life imbalance transpires when an individual cannot meet both their work and family commitments due to long hours, high work intensity and/or pressure. Balancing one's work and personal lives adds to an employee's existing stress, especially when domestic and social support is lacking or in the case of single-parent households (Observatory, 2013)

- **Fear of loss:** The fear of losing one's job puts a severe emotional strain on the employees in the healthcare and service industries (Observatory, 2013).

2.3 OCCUPATIONAL HEALTH HAZARDS AND WORK DEMANDS FOR PARAMEDICS

Paramedics play a major role in the pre-hospital phase, daily dealing with trauma and medical emergencies. Ambulance personnel need to provide medical assistance in critical situations where those in need of help are at risk of dying if care is not given swiftly and appropriately. In addition, ambulance personnel will often face situations in which relatives are afraid of losing their loved ones, or other bystanders will be watching them while they carry out their work. All of this contributes to the inherently stressful nature of their job (Hansen *et al.*, 2012).

Paramedics' occupational health hazards and work demands are described in terms of car accidents, homicide, suicide, fires, exposure to infectious diseases and blood-borne infections, severe temperatures, back injuries, assaults, hazardous materials exposure, and sleep deprivation are all occupational hazards that paramedics face (Khashaba *et al.*, 2014). A statistically significant relationship has also been shown between high levels of stress and illness-related absenteeism (Volmink, 2014).

While paramedic work can be unpredictable, the following demands can be expected when performing work-related tasks: standing or walking, sitting, lifting and carrying, bending, crouching/kneeling, climbing, reaching, pushing/pulling, and handling or grasping in a work environment that may follow a rotating schedule. (Ramey *et al.*, 2019). In the literature, those stresses and their impact on fatigue progress have not been clearly measured. These hazards show that the health and safety of paramedics' work environment is risky, and they may contract diseases or injury at any given time. Paramedics work with people who are badly injured or dying; as a result, they are exposed to human agony and suffering. They must make immediate assessments and deliver help in order to save lives, frequently without support or reassurance (Fjeldheim *et al.*, 2014b).

A study conducted by Sofianopoulos *et al*, (2012) on the effects of shift work on sleep among paramedics, they reported that shift work could harm health and well-being on multiple

levels, both physiologically and psychologically, by affecting aspects of one's professional and private life, (Sofianopoulos, Williams and Archer, 2012). Paramedics are faced with a variety of issues in their work environment, being the first medical professionals to arrive at horrible accident scenes, violent attacks, transporting and stabilizing very sick patients, often travelling at high speeds to reach patients in time, as well as working in bad weather (Stein and Sibanda, 2016).

The demanding manual tasks that paramedics routinely perform range from loading and unloading stretchers, lifting and carrying patients to carrying out cardiopulmonary resuscitation for lengthy periods and this is coupled with the requirement to undertake clinical decision-making in complex, often uncontrolled social environments on a rotating shift work schedule (MacQuarrie *et al.*, 2018).

With this vital role that they play, their scope of practice is briefly outlined/ indicated below:

- Basic Ambulance Assistant: responsible for basic patient management and Assistant to Ambulance Emergency Attendant (AEA).
- Ambulance Emergency Attendant: Insertion of Intravenous (IV), fluid administration, basic medication administration, electrocardiography (ECG) and defibrillation.
- Critical Care Assistant: Drug administration, external cardiac pacing, cardioversion, advanced IV access, and advanced airway management.
- Those with a National Diploma in Emergency Medical Care: drug administration, external cardiac pacing, cardioversion, advanced IV access and advanced airway management.
- Those with a bachelor’s degree in Technology Emergency Medical Care: Greater scope of practice regarding drugs and emergency procedures.

Regardless of the training they have received, all the above-mentioned categories are paramedics; therefore, they all fall under the study population. The training they receive involves only operational work; it does not include psychosocial preparedness.

2.4 EFFECTS OF BEING EXPOSED TO PSYCHOSOCIAL HAZARDS AMONGST PARAMEDICS

Psychosocial hazards impact the most on the mental well-being of health care professionals, including paramedics (Okeafor and Alamina, 2018). Cocker and Joss (2016) wrote that health care professionals who are exposed to these psychosocial hazards are at higher risk of developing mental health issues such as stress, depression, anxiety, burnout and fatigue. Exposure to traumatized clients can harm a health care provider's mental, physical, and emotional well-being (Cocker and Joss, 2016). Furthermore, the unpleasant experiences of health care professionals impact their families, the individuals they care for, and their organizations (Cocker and Joss, 2016). Nikoli and Višnji (2020) discovered stressors in the current work environment, such as abuse of authority, duty misuse, intimidation, and gender inequality. It is important to note that the literature on psychosocial hazards among paramedics is limited. Most of it presented here relates to all categories such as nurses, doctors, fire fighters, police, and paramedics involved in the emergency section of health care.

2.4.1 Physical and Psychosocial Health Effects Experienced by Paramedics

2.4.1.1 Physical effects

A literature review of the physical health status of emergency care providers in South Africa by Mthombeni, Coopoo and Noorbhai (2020) revealed that a substantial number of emergency care practitioners presented with cardiovascular and other Non-Communicable Diseases (NCD) risk factors such as hypertension, obesity, high waist circumference, elevated fasting blood glucose, and abnormal levels of total cholesterol. This can be attributed to the nature of their occupation, such as working irregular shifts leading to sleep deprivation, being exposed to psychological trauma leading to posttraumatic stress disorders, poor nutrition during shifts, and/or lack of exercise (Mthombeni, Coopoo and Noorbhai, 2020)

Compared to other occupations, paramedics have higher injury rates, resulting in higher rates of sick time and worker's compensation claims (Ramey *et al.*, 2019). Paramedics also show symptoms of ill health, such as cardiovascular illness with a higher frequency of

hypertension, low physical activity rates, and high Body Mass Index (BMI) (Ramey *et al.*, 2019). Paramedics are involved in driving and lifting patients in their daily duties; this exposes them to hazards in the physical environment (WHO, 2010).

For instance, mobile hazards like driving in bad weather at high speed, ergonomic hazards which occur while performing duties such as lifting patients involving awkward postures, and chemical hazards which emanate from rescuing patients from burning cars or houses inhaling the smoke (WHO, 2010). According to Volmink (2014), work-related stress is related to various health consequences, including cardiovascular diseases such as hypertension, coronary heart disease, and type 2 diabetes mellitus.

Psychosocial effects refer to elements that individuals and organizations see as crucial in either contributing to mental health and well-being or raising the likelihood of acquiring problems such as anxiety Post-Traumatic Stress Disorders (PTSD), and depression (Lawn *et al.*, 2020). These psychosocial effects are outlined below.

2.4.1.2 Psychosocial effects

2.4.1.2.1 Conflicts and offensive behaviour

The study conducted in Emergency Medical Service (EMS) by Nikoli and Visnji, (2020), in Serbia, examines the presence of mobbing and violence at work and their influence on the work ability of EMS medical doctors using COPSOQII. The study indicated that 12.7% of doctors from EMS were exposed to unwanted sexual attention, 48.1% were exposed many times to threats of violence, and 45.6% were exposed to threats by subordinates, but more often by patients and their relatives (Nikoli and Višnji, 2020).

2.4.1.2.2 Workplace Violence

Workplace violence is defined as violence, most commonly in the form of physical abuse or threats that endangers the health and safety of employees. Moreover, it consists of four dimensions: mobbing, stalking, harassment and ostracism (Rasool *et al.*, 2020). Rasool further goes on to say that one source of workplace stress is workplace violence. Pushing, kicking, punching, grabbing, or any other type of physical aggression is considered physical

violence, whereas verbal violence includes emotional abuse, annoying behaviour, and aggression (Pourshaikhian *et al.*, 2016). Furthermore, Pourshaikhian *et al* (2016) conducted a thorough literature analysis on workplace violence against medical services professionals and discovered that sexual violence is sporadic.

According to statistics, 70-80 percent of nurses, doctors, public service workers and emergency medical personnel will be subjected to one or more acts of violence each year; (Pourshaikhian *et al.*, 2016). The study conducted by Maguire (2018), on workplace violence against ambulance officers concluded that ambulance officers are the most vulnerable to workplace violence in Australia and that the rate of violence against EMS employees has been increasing. The number of criminal incidents against ambulance crews in Queensland, Australia, increased from 205 in 2012–2013 to 381 in the 2015–2016 fiscal year (Maguire, 2018).

Based on the preceding discussion, it is clear that Workplace Violence (WV) decreases job satisfaction and organizational commitment. Furthermore, WV fosters high levels of anxiety, depression, job burnout, and employee turnover (Rasool *et al.*, 2020).

2.4.2 Health and Well-being

The natural surroundings of a paramedic's work, as well as organizational and occupational issues such as workload, work demands, shift work, inadequate debriefing, the hierarchical nature of supervision, and a lack of recognition, have been shown to have a negative impact on ambulance personnel's well-being (Lawn *et al.*, 2020).

2.4.2.1 Work-related stress

Exposure to potentially traumatic stressors is an integral part of the job for emergency services personnel. Work-related stress is a sequence of issues that have their early stages in one’s actual environment and settle with the individual’s response (Fernandez *et al.*, 2017). Frontline ambulance personnel have a high rate of sickness absence - more so than other healthcare workers - and research indicates that this is caused by stress, anxiety and depression (Mildenhall, 2012).

Traumatic stressors, or critical incidents, are those in which personnel are exposed to death or life-threatening injury (Volmink, 2014). Consequently, exposure to occupational stressors can manifest in many ways in the paramedic (Volmink, 2014). In the pre-hospital setting, paramedics must perform a range of functions on demand. Paramedics regularly have to handle a number of medical and social issues while operating in tough and complex clinical settings, which makes these responsibilities stressful (Sofianopoulos, Williams and Archer, 2012).

Additionally, in a study regarding post-traumatic stress disorders (PTSD) among paramedics, the literature suggests that paramedics are often exposed to traumatic events in their workplaces. Also, adequate responses to these events are often lacking due to the culture of the work environment, which includes suppressing emotions, so paramedics are susceptible to PTSD and its gripping effects (Drewitz-Chesney, 2012). Skogstad *et al*. (2013) conducted a study among several professionals, including paramedics, where the study aimed to conduct an in-depth review of existing research on occupational groups at particular risk of developing work-related PTSD. These authors reported that professionals such as police officers, firefighters and paramedics often experience incidents which satisfy the stressor criterion for the PTSD diagnosis (Skogstad *et al.*, 2013).

Lack of social support, unacceptable organizational conditions, and individual factors have been associated with more PTSD. It can be observed when a paramedic suffers from persistent stress (Skogstad *et al.*, 2013). In their study, Hansen *et al*. (2012) looked at physiological and psychosocial work environment characteristics and their relationship to health outcomes among Danish ambulance staff. They revealed that PTSD symptoms were found among 15-20% of ambulance personnel, which was 4 to 10 times higher than among the general population, and far above what is seen in other occupational groups exposed to sudden serious psychological hazards (Hansen *et al.*, 2012).

Paramedics in South Africa are leaving to find work in international countries due to factors such as better working conditions, physical security, and economic considerations (Stassen, Van Nugteren and Stein, 2013). Extensive empirical research evidence shows that when workers are satisfied, organizations experience reduced absenteeism, high productivity and low turnover (Chux, Charles and Wilfred, 2012).

2.4.2.2 Fatigue and Burnout

This state of exhaustion affects both the mind and the body and causes an individual to be unable to function at their usual level of abilities (Sofianopoulos *et al.*, 2011a). This state may be caused by different issues such as lack of restorative sleep, sleep disturbance, shift work, occupational stress or a poor work-life balance (Sofianopoulos *et al.*, 2011a). Emergency pre-hospital care is provided by paramedics, who are a valuable community resource. Paramedics usually work shift schedules that require planning for long periods. Individuals who work shifts must work when they are biologically and environmentally inclined to sleep and vice versa. This mismatch can cause significant fatigue, which has been linked to production impairments and poor health outcomes in paramedic populations and in more general operational settings (Sofianopoulos *et al.*, 2011b).

Three critical reasons for exhaustion have been repeatedly identified in the literature, according to Sofianopoulos *et al*. (2011b): (i) sleep-wake history, (ii) circadian factors, and (iii) task-related factors. Reduced sleep and prolonged wake time are linked to exhaustion in terms of sleep/wake history. Circadian rhythms govern various functions of the body on a 24.2-hour cycle, including the ability to initiate and maintain sleep. Finally, fatigue is linked to a variety of task-related characteristics, including workload and duration on task. Fatigue among paramedics impacts operational performance and patient and public safety (Sofianopoulos *et al.*, 2011b).

Compassion fatigue is a type of stress caused by exposure to a traumatized person. It has been defined as the fusion of posttraumatic stress and accumulated burnout, a condition of physical and mental fatigue brought on by a diminished ability to cope with one's daily surroundings (Cocker and Joss, 2016). According to Cocker and Joss (2016), professionals regularly exposed to the traumatic experiences of the people they serve, such as healthcare, emergency and community service workers, are most vulnerable to developing compassion fatigue. Furthermore, Compassion fatigue is characterized by exhaustion, rage, and irritability, negative coping behaviours such as alcohol and drug abuse, a diminished ability to feel sympathy and empathy, a diminished sense of enjoyment or satisfaction with work, increased absenteeism, and a diminished ability to make decisions and care for clients (Cocker and Joss, 2016).

Burnout is a psychological syndrome involving emotional exhaustion, feelings of helplessness, depersonalization, negative attitudes towards work and life, and reduced personal accomplishment (Dubale *et al.*, 2019). Additionally, a systematic review of burnout among healthcare providers in sub-Saharan Africa - a study done by Dubale *et al.* (2019) concluded that burnout is common among physicians, nurses, and other healthcare providers in sub-Saharan Africa with prevalence estimates ranging from 40 to 80%.

The prevalence of burnout among paramedics varies but is generally relatively high compared to other health care professionals (Stein and Sibanda, 2016). Due to enormous workloads and high demands for treatment, emergency department personnel are susceptible to burnout (Moukarzel *et al.*, 2019). In a study of burnout syndrome among emergency department staff by Moukarzel *et al*. (2019), results revealed that significant burnout was reported by 34.6% of respondents and was mainly associated with job strain and low mental component scores (Moukarzel *et al.*, 2019). Individuals suffering from occupational burnout have been shown to have changes in the brain, including a decrease in grey matter volume in the anterior cingulate, caudate, and putamen. Furthermore, occupational burnout has been linked to a decreased ability to downregulate emotional stressors, altered limbic network functioning, and changes in subcortical volume(Dubale *et al.*, 2019).

2.4.2.3 Work-life balance

Work-life balance entails balancing the workplace stresses with the expectations from family, friends and personal life (Shivakumar and Pujar, 2016). The study conducted by Anderson (2019), aimed at investigating the impacts of paramedics' work on the family system, revealed that several shift characteristics contribute to work-family conflicts, child-rearing conflicts, and difficulties maintaining a social life (Anderson, 2019). A study by Sofianopaulos aimed at exploring physical fatigue, sleep and depression in paramedics indicated that responses related to work-life balance matters included family and study commitments, such as trying too much and not adequately preparing self for night shifts (Sofianopoulos *et al.*, 2011b).

Prolonged travel was also associated with significant fatigue (Sofianopoulos *et al.*, 2011b). Paramedics are expected to be available 24 hours, in operation for long hours, and respond

to all life-threatening situations (Sofianopoulos, Williams and Archer, 2012). Working at odd hours impacts an employee's ability to take care of her health, as she is regularly juggling to ensure a balance between the care they give to their patients and themselves and their families (Shivakumar and Pujar, 2016).

A study done by Hatam *et al*. (2016), with the objective to determine the relationship between family-work or work-family conflicts, organizational commitment, and turnover intention among 400 nurses and paramedical staff at hospitals affiliated with the Shiraz University of Medical Sciences yielded the following results: Mean scores of work-family conflicts and desertion intention were 2.6 and 2.77 respectively; the family-work conflict was significantly higher in married participants, and an opposite relationship was seen between organisational commitment and turnover intentions (Hatam *et al*., 2016).

2.5 PSYCHOSOCIAL HAZARDS/RISKS PREVENTION AND MANAGEMENT

Due to the apparent nature of work done by paramedics, it is difficult to reduce exposure to psychosocial work environment characteristics like unpredictability and high emotional demands. To counterbalance these factors' potentially damaging effects, ensure the availability of favourable workplace support structures that impact organizational trust, social support and organizational justice, which may operate as protective buffers against mental health issues (Hansen *et al.*, 2012).

2.5.1 The Healthy Workplace Model

The researcher approached this study from an occupational health nursing perspective. The Healthy Workplace Model is concerned with making the workplace healthy and safe, sustaining it by instilling health-promoting practices and promoting health and well-being (WHO, 2010). Consequently, the World Health Organisation (WHO) and the International Labour Organization (ILO), Workplace Model (2010) are discussed in this section.

A healthy workplace model is one in which employees and supervisors work together to maintain an upgrading process that defends and promotes all workers' safety, health and well-being, and the workplace's long-term viability (WHO, 2010). The objectives of a healthy workplace model are:

- Developing and implementing health-related policy instruments.
- To ensure and enhance occupational health and safety.
- Increasing the availability and quality of occupational health services
- To provide and disseminate evidence for use in decision-making and practice
- Incorporating employee health into other policies.

The WHO goes further by asking a question regarding a healthy workplace model and answering the question. The question is as follows "Why develop a healthy workplace initiative?" Their answer is: "It is the right thing to do- business ethics; It is the smart thing to do- business case; and It is the legal thing to do- legal case" (WHO, 2010). Figure 2.1 depicts the WHO healthy workplace model's avenues of influence, procedure, and fundamental principles.

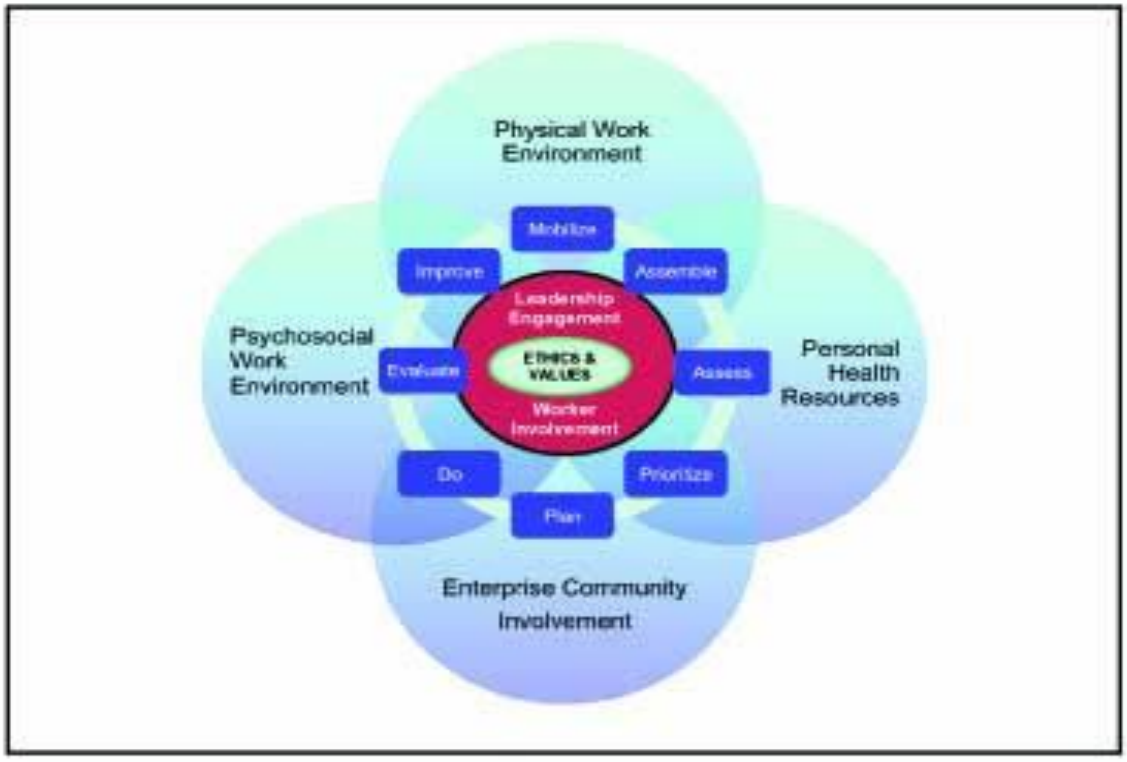


Figure 2.1: WHO/ILO Healthy Workplace Model (World Health Organisation, 2010)

The main principles essential in the Healthy Workplace model are ethics, values, worker involvement, and leadership engagement. According to the healthy workplace model, there

are four key areas to be mobilized in a healthy workplace initiative. To generate a healthy workplace, employers should consider this influence of channels which are the physically demanding work environment, the social and psychological work environment, individual health resources, and community enterprise involvement. These avenues are described briefly:

- In the workplace, the physical working conditions include machinery, the framework, furniture, air, goods, materials, chemicals and manufacturing methods. These problems may impact workers' physical safety and health, as well as their mental health and well-being (WHO, 2010).

- Individual health supplies include health care information, resources, services, flexibility, opportunities, and a generally supportive work environment as well as an organization that supports workers in their attempts to enhance or sustain a healthy personal lifestyle, as well as monitor and support their physical and mental health (WHO, 2010).

- Community participation mentions the events a business may take part in and the skills and resources it could contribute to support the community in which it works in terms of its physical and social well-being (WHO, 2010).

- The psychosocial work environment refers to interpersonal and social interactions that influence workplace behaviour and development (Jacobs *et al*., 2013). In this study, the researcher will describe the psychosocial work environment of paramedics.

Considering the components of this model as explained above, the entire study is based on the psychosocial work environment of paramedics. The application of the psychosocial work environment is depicted in the literature review discussion of the occupational health risk assessment, workplace health promotion, wellness or employee assistance programme and workplace innovation. The application of this model is also seen in the results and discussion section of the study in chapter 4.

2.5.2 The Occupational Health Risks Assessment (OHRA)

A risk-based occupational health program should be built on the foundation of a risk assessment. The occupational health practitioner's responsibility in the development of occupational health risk assessment (OHRA) is to collect information regarding the employees and their work environment. To enable the occupational health practitioner to do OHRA, the first step is to do a situational analysis by gathering all evidence regarding health and safety. After identifying the hazards, the second step will be how to manage the risks or eliminate the hazard if possible (Acutt and Hattingh, 2016). After identifying the dangers via interviews or surveys, the risks may be avoided by resolving those concerns highlighted, following the WHO's Model of Healthy Workplaces for Action (WHO, 2010). To solve the identified hazards, a chain of command for controls, including source controls, would be implemented, including source elimination or modification, reallocating efforts to minimize workloads, removing managers or reequipping them in leadership and communication abilities, and as well as enforcing a zero-tolerance policy for workplace discrimination and harassment (WHO, 2010). To reduce the risks, you need to enable freedom to attend to work-life conflicts; focus on providing supervisory and co-worker assistance (both resources and psychological support); authorize flexibility in the workplace and scheduling, and offer prompt, honest and open communication. Workers can be protected by raising awareness and offering training in areas such as dispute resolution and harassment prevention (WHO, 2010). For example, psychosocial issues should be included in existing annual or periodic medical surveillance as outlined by OHS Act.

2.5.3 Workplace Health Promotion

The World Health Organization (WHO) emphasizes the work environment for employees as a priority setting for health and well-being promotion, including providing a physically and psychologically safe and healthy work environment (WHO, 2010). Concerning working conditions, a work climate which includes good communication, trust, social support and a feeling of belonging to the group – can act as a protective factor for health and well-being, helping to reduce the probability of burnout (Moya, Carrasco and Hoz, 2017b). Supervising these dangers to create a safe and healthy work environment will benefit the employee's health and productivity, which will, in turn, have a favourable impact on the workplace and output (Acutt and Hattingh, 2016). By implementing a workplace health promotion and

employee wellness programme, occupational health management ensures a healthy and safe working environment. An important way of promoting health is encouraging or supporting conditions that favour health; the occupational health nurse often plays a role in advocating for employees (Michell, 2011).

Workplace health promotion is the combined efforts of employers, employees and society to improve the health and well-being of workers (Andersen *et al.*, 2015). Additionally, this entails programmes to encourage individual behaviour change and reduce workplace stressors that have "take-home" adverse effects on health behaviours (Andersen *et al.*, 2015). Working with paramedics and occupational health nurses, one may make evidence-based recommendations to management, such as training paramedics in critical incident stress (CIS) debriefing or conducting PTSD screenings of co-workers at other ambulance stations (Drewitz-Chesney, 2012).

Baseline periodic medical surveillance and medical examinations are part of a workplace health promotion (WHP) program, as are personal advice about conditions discovered during routine examinations, education about health risks and how to protect oneself from them, accident prevention, safe working procedures, and workplace inspections (Acutt and Hattingh, 2016).

A study conducted in 71 South African organizations by Milner *et al*. (2015) aimed at developing and testing a model of leadership support for WHP and employee well-being outcomes revealed encouraging findings on the effectiveness of workplace health promotion (WHP) programs from both an individual and an organizational health perspective (Milner *et al.*, 2015). They found that perceptions of the company's commitment to health promotion played a fundamental role in employee wellbeing outcomes. Furthermore, their findings also illustrated how important it is for leaders to demonstrate their commitment to employee health by ensuring that their workplace policies and procedures are acted upon (Milner *et al.*, 2015).

Moreover, a study conducted by Chang, Ericsson and Dellve (2020) in Sweden with the purpose to identify outcomes of a WHP program for managers. This study's objective was to investigate the impact the program had on health-oriented leadership, improvement in work, and employee well-being. The results showed that health-oriented leadership,

improvement in work, work satisfaction and vitality were increased at workplaces that actively implemented WHP (Chang, Eriksson and Dellve, 2020).

2.5.4 Wellness/ Employee Assistant Programme

When employees are faced with heavier workloads, unusual working hours, or personal circumstances and pressures that make their jobs stressful or prevent them from being productive, they may need to attend an Employee Assistance Programme (EAP). Managers need to learn to realise when employees/paramedics face physical, emotional, social, spiritual and intellectual lack of wellness, and then refer the employee to a health practitioner or an employee assistance programme (Acutt and Hattingh, 2016). The benefits of EAP are far-reaching for the employee, his/her family, the community, and the workplace as a whole since the programme increases production and decreases absenteeism and accidents. It also improves workplace morale (Acutt and Hattingh, 2016).

2.5.5 Workplace Innovation

Workplace innovations are social both in their ends of a quality working life, well-being, and development of talents together with organizational performance and in their means of employee participation and empowerment (Eeckelaert *et al*., 2012)**.** Social innovation of work and employment is a prerequisite to achieving the objectives of innovative, sustainable and inclusive growth (Pot *et al.*, 2020). This strategy relates well with the paramedics' milieu because they are commonly subjected to intense incidents and, on average, document more health issues than employees in comparable professions and the general public (Skogstad *et al.*, 2013).

Furthermore, lack of social support, unacceptable organizational conditions at work, and individual factors have been associated with more PTSD symptoms among ambulance workers. Social innovation at work or 'workplace innovation' is the process through which "win-win" approaches to work organisation are formulated, which are suitable for the sustainable competitiveness of the enterprise and good for the well-being of employees (Pot *et al.*, 2020).

According to Eeckelaert (2012), workplace innovation can be defined as strategy-induced and participatory adopted changes in an organisation's practice of managing, organising, and deploying human and non-human resources, which lead to improved organisational performance and improved quality of working life. Workplace innovation does not cover the whole range of OHS topics and performance, but it includes low-stress risks, high job autonomy, lower physical workload, continuous development of competencies, and better labour relations (Eeckelaert, *et al*., 2012)**.** Social support means that they are loved, cared for, respected, and valued, which can result in meaningful interactions with family members or others. This way, it can alleviate stress-related psychological and emotional factors caused by stress (Choi and Yun, 2019).

2.6 EDUCATION AND TRAINING OF PARAMEDICS IN SOUTH AFRICA

According to the South African Qualification Authority (SAQA), the advanced life support paramedic training programme was designed to produce individuals who would be able to provide emergency care services at an advanced pre-hospital level (Govender *et al*, 2012). A recipient of an Advanced Life Support certificate must subsequently register with the statutory council to be eligible to practice in South Africa (Govender *et al*, 2012). Paramedics are registered with the Health Professions Council of South Africa (HPCSA) and are thereby subject to the regulations, the scope of practice, as well as disciplinary structures of the council. Ambulance workers previously received little formal education (Sobuwa *et al*, 2019).

However, as ambulances became increasingly well-equipped and regulations changed, their education level also changed. Basic Ambulance Assistant and Critical Care Assistant pre-hospital emergency care short course training was ended in February 2018 by the South African Minister of Health of that time, Dr Aaron Motsoaledi (Sobuwa *et al*, 2019).

Considering the training to become a paramedic, Venter, (2017) revealed that in South Africa, paramedics do not have additional training to undertake the specialised transfers such as those of critically ill patients due to their limited scope of administering specific medication. To do this, they must have an emergency medical practitioner on board who is licensed to administer scheduled drugs. Furthermore, although the current scope of practice of paramedics in South Africa is extensive, it does not account specifically for critical care

patients (Venter *et al.*, 2017). Regardless of these inconsistencies, all paramedics are expected to transfer critical care patients, often for prolonged periods (Venter *et al.*, 2017).

2.7 LEGAL FRAMEWORK IN OCCUPATIONAL HEALTH

In South Africa, occupational health is governed by labour law and occupational health legislation, including the paramedics' work environment. For this study, the following relevant acts which address occupational health and safety in South Africa are going to be discussed:

- ***Occupational Health and Safety Act as amended (Act 85 of 1993)***: According to this Act as amended (OHS Act 85 of 1993), the employer has a duty to provide a workplace that is as far as reasonably practicable safe and without risk to the health of employees or other persons that might be affected by the activities of the employer (Republic of South Africa, 1993). This legislation compels employers to produce a healthy and safe environment for employees.

- ***The Basic Condition of Employment Act (Act 75 of 1997)***: This Act sets minimum conditions of employment which can be modified by means of discussions amongst the employer and the employee unions (Republic of South Africa, 2003). The Act makes provision for a meal break after five hours of work and addresses night work, maternity leave and more (Republic of South Africa, 1997).

- ***Labour Relations Act (Act 66 of 1995)*** applies to all employers, workers, trade unions and employees' organisations. As amended, the Labour Relations Act (Act 66 of 1995) aims to provide a statutory framework for regulating relationships between trade unions and the employers of people who belong to employer organizations (Republic of South Africa,1995).

- ***Employment Equity Act (Act 55 of 1998):*** As amended by Act 47 of 2013, this Act relevant to all employers and employees, protects workers and people looking for work from unfair discrimination by making sure that affirmative action is implemented for workers or job seekers to be able to access employment, training,

promotion and equitable remuneration (Republic of South Africa,1998). When this is in place in the work environment of paramedics, some psychosocial issues may be alleviated as their financial stress may be less.

- ***Skills Development Act (Act 97 of 1998)*:** The Act provides for employment services which will promote employees' active participation in the labour market and training programmes, which will result in registered qualifications signifying work readiness, and which will respond to the needs of the labour market (Republic of South Africa,1998). The Act is relevant to the paramedic's milieu as the shortage of skilled paramedics strains those available, creating unnecessary stress, burnout, and fatigue. Therefore, I believe if lower categories of paramedics are well motivated and offered the opportunity to improve their skills, their psychosocial problems will be better managed.

These legislations play a critical role in the work environment. For employers to manage work-related issues and ensure that the workplace is healthy and safe, they must abide by legal rules. Employers are legally obligated to provide a healthy and safe working environment for their employees (Michell, 2011). Occupational health and safety practitioners have a duty to be well informed about the legislation applicable to the workplace and work environment in which they practice (Acutt and Hatting, 2016). All legislation relevant to employees and their work must be integrated further into work-related health services in order to build an occupational health program.

South Africa is a constitutional democracy, implying that the Republic of South Africa's constitution of 1996 is the supreme authority in all legislative matters (Michell, 2011). Every individual has the right to live in an environment that is safe for his or her health and well-being (SA Constitution). The South African Constitution of 1996 covers the Bill of Rights. The Bill of Rights stipulates, amongst others, that every citizen in South Africa has the right to make choices to follow any trade, occupation or profession with accountability to abide by all recommendations of their professions and whatever other legislation regulates their practice (Acutt & Hattingh 2016).

2.8 SUMMARY

A review of literature on the psychosocial work environment of paramedics has indicated an increased risk of work-related health problems among paramedics. Occupational demands like psychological and physical hazards may lead to work-life balance issues. The nature of the hazards and risks paramedics are exposed to are mentally and physically demanding and can lead to stress, post-traumatic stress disorder, depression, and negative social lives. The impact of legislation on the work environment was described. The relationship between psychosocial hazards and physical health was identified, and the influence of psychosocial hazards on paramedics' health and well-being was discussed. The management of occupational health risks, with a focus on paramedics' psychosocial work environment, was underlined. The research methodology and design will be explained in the following chapter.

CHAPTER THREE

RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This chapter describes the research design and methods, including the study setting, population, sampling methods and data collection instruments. Furthermore, the procedure used for data collection and analysis are outlined with a detailed description of the ethical integrity.

3.2 RESEARCH DESIGN

A cross-sectional survey design was used for this research. Polit and Beck (2017) state that a research design is a set plan to obtain answers for the question being studied, as it sets a blueprint for dealing with challenges and strategies to obtain research evidence. A cross-sectional design includes gathering data at one point in time (Polit and Beck, 2017).

A cross-sectional survey is a study done at a specified time, at the same time with the same respondents (Brink, Van der Walt and Van Rensburg, 2018). This design was chosen because it has the advantage of a relatively rapid time of data collection (Burns and Grove, 2012). In addition, the main advantage of cross-sectional designs is that they are economical and easy to manage (Polit and Beck, 2017).

3.3 RESEARCH METHODS

A cross-sectional survey design using a self-administered questionnaire, the COPSOQII, to collect data. A survey method describes a technique of data collection in which questionnaires are used to gather data about an identified population (Gray, Grove and Sutherland, 2016). The impetus for this survey is that the self-administered questionnaire is an essential and suitable collection method to collect data on phenomena which cannot be directly observed. It was used in this study because it has the advantage of being cost-effective, and only a minimal infrastructure is necessary to collect data in a short period of

time (Gray, Grove and Sutherland, 2016). However, it can be limited to gathering superficial information, as the respondents respond only to specific questions without explaining their answers further, mostly questions which require brief responses such as yes/no, always/ sometimes/ never (Polit and Beck, 2017).

3.4 RESEARCH SETTING

The research study was conducted in the City of Tshwane Municipality Emergency Department. The emergency services department is operating and offering its services to all seven regions with 105 wards in the City of Tshwane. For this study's purpose, three busier stations, i.e., Bosman, Phillip Nell, and Rosslyn stations, were chosen. The City of Tshwane municipality has approximately seven hundred and twenty EMS professionals.

The professionals form a disaster management team which consists of a medical practitioner, professional nurse, fire fighters, paramedics, metro police, forensic, and South African Police who act as first responders only in extreme cases. However, this study focuses only on paramedics who attend day-to-day incidents when called out by the public and the Primary Health Care (PHC) services to transport patients to the hospital. There are 25 emergency stations and seven regions. The total number of paramedics in all stations are 310. This excludes other personnel in the City of Tshwane's emergency department, such as the firefighters.

3.5 POPULATION

The population consists of all individuals or objects with common defining characteristics (Polit and Beck, 2017). In this study, the population refers to all paramedics working in the City of Tshwane. The population consisted of paramedics working in three stations serving the Tshwane community. Purposive sampling was used in the selection of the three stations Each station had 39 paramedics. Purposive sampling was used in the selection of the paramedical stations. The paramedics who work in shifts are divided into three shift timeslots, and each shift has emergency medical care practitioners x 13 per shift. The total number of paramedics in the selected stations was N=117.

3.6 SAMPLE, SAMPLE SIZE, AND SAMPLING METHOD

A sample is a division of the population (Polit and Beck, 2017). The sample size of all N=117 EMS professionals was used as the sampling method for this study, and consecutive sampling was used. A consecutive sampling approach refers to selecting a subset of the population to represent the entire population (Brink, van der Walt and van Rensburg, 2018).

3.7 DATA COLLECTION INSTRUMENT

A self-administered questionnaire is formalized, so respondents respond to the same questions in the same order and manner (Brink, van der Walt and van Rensburg, 2018). The Copenhagen Psychosocial Questionnaire, COPSOQ II medium version in English was used. The National Centre developed the COPSOQII questionnaire for the Working Environment (NRCWE) in Denmark (Online at http://arbejdsmiljoforskning.dk).

The questionnaire consists of closed-ended questions which take about 15 to 20 minutes to complete. It also has space for comments at the end of the questionnaire. A biographic data section with age, gender and years of experience asked was included on the questionnaire. The questionnaire is divided into seven categories, each with 23 dimensions and 44 questions. The domains and dimensions are listed in the table below.

Table 3.1 Domains and Dimensions of the COPSOQII Questionnaire

DOMAINS X7	**DIMENSIONS X23**	**QUESTIONS X 44 Examples**
Demands at Work	Quantitative work demands	Do you get behind with your work?
	Work pace	Is it necessary to keep working at a high pace?
	Emotional work demands	Does your work put you in emotionally disturbing situations?
Work Organization and Job Contents	Influence on work	Do you have a large degree of influence concerning your work?
	New skill development	Does your work require you to take the initiative?
	Meaningful work	Is your work meaningful?
	Commitment to workplace	Do you feel that your place of work is of great importance to you

Interpersonal Relations and Leadership	Predictability	Do you receive all the information you need in order to do your work well?
	Appreciation & Recognition	Are you treated fairly at your workplace?
	Role clarity	Does your work have clear objectives?
	Leadership quality	To what extent would you say that your immediate supervisor is good at work planning?
	Social Support from Superiors.	How often do you get help and support from your nearest supervisor?
Work Individual Interface	Job Satisfaction	How pleased are you with your job as a whole, everything taken into consideration?
	Work/family Conflict	Do you feel that your work drains so much of your energy that it has a negative effect on your private life?
	Management/worker Trust	Can you trust the information that comes from the management?
	Justice& Respect	Is the work distributed fairly?
Health and Well-being	Self-rated Health	In general, would you say your health is: excellent, very good, good, fair or poor?
	Burnout	How often have you felt worn out?
	Stress	How often have you been stressed?
Offensive Behaviour	Sexual Harassment Threats of Violence Physical Violence Bullying	Have you been exposed to undesired sexual attention/threats or of violence/physical violence/bullying at your workplace during the last 12 months? If yes, from whom? Colleagues, supervisor, subordinates or clients?

Arbejdmilj0 Instituttet, 2011

3.8 VALIDITY AND RELIABILITY OF THE INSTRUMENT

An instrument's validity is determined by whether it measures what it claims to measure and if it does so consistently. The degree of consistency with which a test assesses an attribute is the test's reliability (Polit and Beck, 2017).

To ensure validity and reliability, the COPSOQ was tested, and the Cronbach alpha ranged from 0.75 to 0.85 (Arbejdsmiljoforskning. dk, 2011). Correlation and factor analysis were used to confirm the construct validity. During the development of the original tool, the criterion validity was tested (Arbejdsmiljoforskning. dk, 2011). To add validity, the COPSOQ has been used by Masters' degree and Doctoral students at the University of the Witwatersrand (Volmink, 2014; Van Rensburg,2015).

3.8.1 Pre-testing of the Data Collection Instrument

A pre-test is usually conducted by including a few people who meet the inclusion criteria but will not be included in the sample. It is a small-scale study (Brink, van der Walt and van Rensburg, 2018). It will also help the researcher establish the time it takes to complete the questionnaire and adjust where needed. The COPSOQ was pre-tested on five (5) respondents in the current study area, but they will not be participating in the main study. After the pre-test was done, there was no adjustment needed.

3.9 DATA COLLECTION PROCESS

3.9.1 The Recruitment Procedure and Data Collection Process

The researcher had:

- A meeting with the EMS head of department, operational managers of respective stations, and paramedics to explain the study and gain their support
- All aspects of the study were explained, and a participants' information letter was handed out; it was emphasized that in case of stress experienced during or after the questionnaire, participating paramedics would contact a selected counsellor for counselling through the researcher.
- Handed out the questionnaires.
- Provided sealed boxes for each unit for completed questionnaires.
- Data were collected in the participants' natural settings
- Data was collected over six weeks in 2020 after ethical clearance was obtained from the University of Witwatersrand and City of Tshwane EMS Management.

3.10 CHALLENGES WITH DATA COLLECTION

For South Africa, 2020 was a challenging year, and the government implemented a series of measures to limit the spread of the Covid 19 virus. The country was placed on national lockdown from 27 March. The country was under level 1 Lockdown regulation when the researcher collected the data. However, in December, the country moved to level 3 lockdown. This level meant restrictions on many activities, including workplaces, so it was a bit difficult to access government departments. This could have a bearing on why other paramedics in the emergency department did not participate. In December, the second wave hit the country, and some paramedics were in quarantine, others in isolation. Also, it was the festive season when many people went on annual leave.

3.11 DATA ANALYSIS

Raw data from the completed questionnaires were transferred onto Microsoft Excel sheets. Data was scored according to the COPSOQ scoring system. Each question was given a score, which was then combined together to form the dimension score (National Research Centre for the Working Environment- Denmark, 2007). Stata for Windows English Version 15 was used to analyse the data, while assistance from a statistician from the University of the Witwatersrand Post-Graduate Research Support Services was utilized. The quantitative component of the questionnaire (sections 1 and 2) was analysed using descriptive statistics (mean, mode, median and standard deviation). Descriptive statistics are a strategy which employs measures such as percentages, frequencies, means, ranges and standard deviations (Brink, van der Walt and van Rensburg, 2018).

While the qualitative component (section 3), which consisted of open-ended questions, was analyzed using qualitative content analysis. Qualitative content analysis is a method designed to identify and interpret meaning in recorded forms of communication by isolating small pieces of the data that represent salient concepts and then applying or creating a framework to organize the pieces in a way that can be used to describe or explain a phenomenon (Kleinhenksel *et al,* 2020). Furthermore, this type of analysis is preferred because it enables the researcher to develop a deeper understanding of a particular phenomenon by providing structure to a large amount of textual data through a systematic

process of interpretation (Kleinhenksel *et al*, 2020). Results were presented in tables and bar charts.

In terms of data analysis, Table 3.2 demonstrates the interpretation and scoring system of the COPSOQ II questionnaire. A colour-coded system was used below. Green represents- Good, YELLOW- caution and RED- Danger

Table 3.2 Scoring system for COPSOQ II (Arbejdmilj0 Instituttet, 2011)

Quantitative Work Demands	0	1	2	3	4	5	6	7	8
Workplace	0	1	2	3	4	5	6	7	8
Emotional Work Demands	0	1	2	3	4	5	6	7	8
Influence on Work	0	1	2	3	4	5	6	7	8
New Skill D	0	1	2	3	4	5	6	7	8
Meaningful Work	0	1	2	3	4	5	6	7	8
Commitment to the Workplace	0	1	2	3	4	5	6	7	8
Predictability	0	1	2	3	4	5	6	7	8
Appreciation & Recognition	0	1	2	3	4	5	6	7	8
Role Clarity	0	1	2	3	4	5	6	7	8
Leadership Quality	0	1	2	3	4	5	6	7	8
Social Support from Superiors	0	1	2	3	4	5	6	7	8
Job Satisfaction			0	1	2	3			
Work/family Conflict		0	1	2	3	4	5	6	
Management/ Worker Trust	0	1	2	3	4	5	6	7	8
Justice & Respect	0	1	2	3	4	5	6	7	8
Self-rated Health			0	1	2	3	4		
Burnout	0	1	2	3	4	5	6	7	8
Stress	0	1	2	3	4	5	6	7	8

For the context of this current research, RED was considered high risk, YELLOW was considered medium risk, and GREEN was considered low risk. High risk is considered dangerous, and immediate action must be taken to correct the situation to a bearable level. Medium risk needs to be treated with caution by identifying gaps in time to make plans for

reducing eminent risks by putting measures in place—arrangements to ensure that controls are also adhered to need to be made. Lastly, low risks should be maintained as they are acceptable and do not need additional controls.

3.12 ETHICAL CONSIDERATIONS

Ethics is a set of moral values concerned with the extent to which research processes adhere to legal, professional and social obligations. (Polit and Beck, 2017). This study will be based on the ethical standards for nursing researchers of the Democratic Nurses Association of South Africa (DENOSA) (Brink, 2006).

The study took place once ethical clearance was approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand. The School of Therapeutic Sciences' Post Graduate Research Committee granted authority to perform the investigation as stated in Annexure1. Permission was sought from the director of the EMS Department, the operational manager of the City of Tshwane municipality, and the research department before carrying out the study.

No permission was required to use the COPSOQ II medium version, as is indicated on the website. The consent form and information leaflet were given to the respondents. Confidentiality and anonymity were ensured to protect the respondents' identity, dignity and privacy by not including their names and/or addresses on the questionnaire and during the research report but only codes. Moreover, the findings of the study are kept in the nursing department, where only the researcher and the supervisor have access.

The beneficent principle: the researcher ensured the respondents' well-being, as they had the right to be protected from pain and injury, whether physiological, psychological, emotional, economic, social, or legal. The results of this study may have the potential to benefit the well-being of the paramedics.

The principle of justice: Throughout the investigation, the researcher ensured that the respondents were treated fairly and equally. If any respondents refused to participate or withdrew from the study, there was no victimization or loss of rewards. Emotional support was offered to the respondents in case completing the questionnaire would raise stress levels

or activate traumatic memories. Dr. N.G Nkosi-Mafutha at Witwatersrand University was identified to be contacted.

3.13 SUMMARY

This chapter focused on the research design and methodology. A cross-sectional survey design was used, and this design included gathering data at one point in time, which gives the advantage of being economical and easy to manage. A survey method was used for this study, and a self-administered questionnaire, the COPSOQ II, was used to collect data.
The population was based on paramedics in the City of Tshwane. All paramedics from the three selected stations were included, meaning that total sampling was used. Data analysis, validity, and reliability of the COPSOQ II were discussed, as well as the ethical considerations of the study. The next chapter, chapter 4, will describe the research findings and discussion.

CHAPTER FOUR

RESEARCH RESULTS AND DISCUSSION

4.1 Introduction

This chapter will detail the main results of the study. The respondent's socio-demographic data is defined, and the quantitative data acquired from the questionnaires are presented using tables. Themes and subthemes will be used to characterize the responses to the open-ended questions.

4.2 Response Rate

The total number of paramedics expected to participate was N=117. Out of this number, 90 (77%) paramedics responded by completing the questionnaire. A total of 12 (10%) questionnaires were rejected due to not being completed fully. Finally, 78 completed questionnaires were analysed, which resulted in a response rate of 67%.

4.3 Research Results

The following are the findings of this current study:

- The respondents' socio-demographic profile (section one of the COPSOQII questionnaire), which includes information such as age and gender
- The seven domains under section two entail answers to 19 questions.
- The answers to an open-ended question which constitutes the final section of COPSOQll

4.3.1 Section One: Socio-demographic Profile

In this section of the questionnaire, the paramedics answered questions concerning their demographic data. Table 4.1 shows the socio-demographic profiles of the respondents.
Table 4.1 indicates that most of the respondents, 34 (44%), were in the age category of 30-39 years of age, followed by the 40-49 age group with 31(40%). Age group 50-59 had few

respondents. i.e., 7(9%), and the minimum respondents with only 1 (1%) were in the age group 60+. All 78 respondents were paramedics practising at the Emergency Services Department (ESD). Most of the paramedics were males 44 (56%) and 34 (44%) were females.

Table 4.1 Socio-demographic Profile of the Paramedics (N=78)

Variable	Frequency (n)	Percentage
Department		
ESD	78	100%
Position		
Paramedics	78	100%
Gender		
Male	44	56%
Female	34	44%
Age category(years)		
<30	5	6%
30-39	34	44%
40-49	31	40%
50-59	7	9%
60+	1	1%

4.3.2 Section Two: COPSOQ II Scores

In this section of the questionnaire, questions about seven domains were answered, which are as follows: demands at work, work organization, job content, interpersonal relationships and leadership at work, work/individual interface, values at the workplace level, health and wellbeing, and the offensive behaviour domain.

The results are presented in Table 4.2 below, and the scores obtained from the COPSOQII questionnaires are colour coded. The COPSOQII scoring system was used to round off the scores. The colour used: Green indicates good, yellow represents medium, and red suggests

poor (Arbejdsmilj0 Instituttet, 2011). Green represents a minimal risk, yellow represents medium danger, and red represents a high risk in this study.

Red indicates high risk, which is considered as not acceptable, and upgrading of controls is essential to reduce the risk to an acceptable level.

Yellow indicates medium risk. Attention should be given to minimizing the risk and controls put in place. Preparations must be made to make sure the controls are sustained.

Green indicates low risk and is regarded as satisfactory. Extra controls are not necessary; however, the ones in place should be sustained.

Table 4.2 indicates that high-risk factors which need immediate attention include: predictability, appreciation and recognition, justice and respect.

Yellow areas which need attention (medium risk) include supervisory social support, leadership qualities, work/family conflict, stress, and burnout are all factors to consider.

The following are the regions that were deemed to be good (low risk): quantitative work demands, work pace, emotional work demands, influence on work, development of new skills, meaningful work, commitment to the workplace, role clarity, job satisfaction, management/worker trust and self-rated health.

Table 4.2 Results obtained from 1 - 19 dimensions of COPSOQII

MEASURING	DOMAINS	QUESTION NUMBER	PSYCHOSOCIAL DIMENSIONS OF COPSOQII	TOTAL SCORE	MEAN SCORE	STANDARD DEVIATION	COPSOQII ROUNDING
WORKPLACE	Demands at work	1	Quantitative work demands	306	3.92	1.03	3
		2	Work pace	195	2.5	1,08	3
		3	Emotional work demands	231	2.96	1.01	3
	Work organization and job content	4	Influence on work	384	4.92	0.27	5
		5	New skills development	287	3.67	2.7	4
		6	Meaningful work	386	4.15	0.27	6
		7	Commitment to workplace	146	1.87	0.84	5
	Interpersonal relationships and Leadership.(work environment	8	Predictability	199	2.55	1.18	3
		9	Appreciation & recognition	234	3	1.15	3
		10	Role clarity	313	4.01	1.01	6
		11	Leadership qualities	212	2.72	1.12	4
		12	Social support from Superiors.	304	3.89	1.17	4
WORK/ INDIVIDUAL	Work/ Individual Interface	13	Job satisfaction	172	2.21	0.80	2
		14	Work/family Conflict	211	2.71	1.07	3
	Values at workplace level	15	Management/worker Trust	202	2.6	1.05	5
		16	Justice& respect	239	3.06	1.04	3
Individual Outcome	Health & Well-being	17	Self-rated health	213	2.73	0.99	3
		18	Burnout	234	3	0.88	3
		19	Stress	252	3.23	0.82	3

Questions 20-23 related to the Offensive Behavior Domain

Questions 20 to 23 cover the offensive behaviour area, which includes sexual harassment, threats of violence, actual violence, and bullying. Respondents were required to state whether they had been exposed to any of these four aspects in the previous 12 months, at what level, and by whom. **Table 4.3** shows the results for these last four questions.

Table 4.3 reveals that a total of n=3(3.8%) respondents reported being exposed to sexual harassment monthly by clients/patients, subordinates and colleagues, while n=75 (96.15%) had never been exposed to sexual harassment. Paramedics who had been exposed to threats of violence numbered as n=24(30.7%), whereas n=5(6.4%) reported having been exposed to real acts of physical violence.

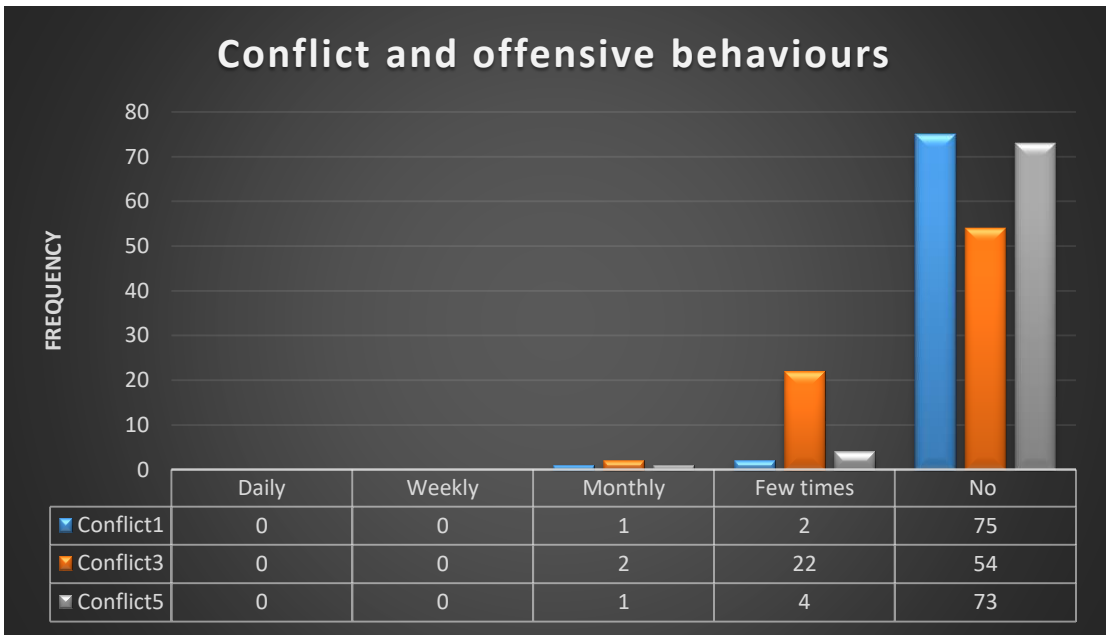
Table 4.3 further reveals that n=28 (35.8%) of the respondents had been exposed to bullying in the workplace, and most perpetrators were clients.

Table 4.3 frequency of offensive behaviour, perpetrated by whom N=78

	HOW OFTEN?					BY WHOM											
Dimensions	**No**	**Yes, few times**	**Yes daily**	**Yes weekly**	**Yes Monthly**	**Colleagues**	**Managers**	**Subordinates**	**Clients**	**Col+ CL**	**Col + Man**	**Col+ Man+Cl**	**Man+ Cl**	**Man+ Sub Cl**	**Col+ Man**	**Sub+ Cl**	**Total =78**
20. Sexual Harassment	n=75 96.15%	2	0	0	1	1	0	1	1	0	0	0	0	0	0	0	n=3 3.8%
21. Threats of violence	n=54 69.2%	22	0	0	2	2	4	1	16	0	0	0	0	0	0	0	n=24 30.7%
22. Physical violence	n=73 93.58%	4	0	0	1	0	0	0	6	0	0	0	0	0	0	0	n=5 6.4%
23. Bullying	n=50 64.1%	23	2	0	3	9	4	0	14	1	0	0	2	0	1	2	n=28 35.8%

Key: Col = Colleagues**; Man** = Managers; **Sub** = **S**ubordinates**; Cl-** Clients

Results of conflict and offensive behaviour are further illustrated in figures 4.1, 4.1.1, 4.1.2 and 4.1.3. Workplace violence is seen as an important psychosocial hazard and risk.



Key: **Conflict 1-** exposure to undesired sexual attention in the workplace

Conflict 3- exposure to threats of violence at the workplace

Conflict 5- exposure to physical violence in the workplace

Figure 4.1: Conflict and Offensive Behaviour

Most responses to the conflict questions showed that there had been no undesired sexual attention with n=75 (96.15%), n=54 (69.2%) had not been exposed to threads of violence, and n= 73(93.5%) were never exposed to physical violence, in the past 12 months. However, n=3 (3.8%) was exposed to undesired sexual attention, and n=24 (30.7%) was exposed to threats of violence. Furthermore, respondents exposed to bullying were n=28 (35.8%), followed by physical violence n=5 (6.4%).

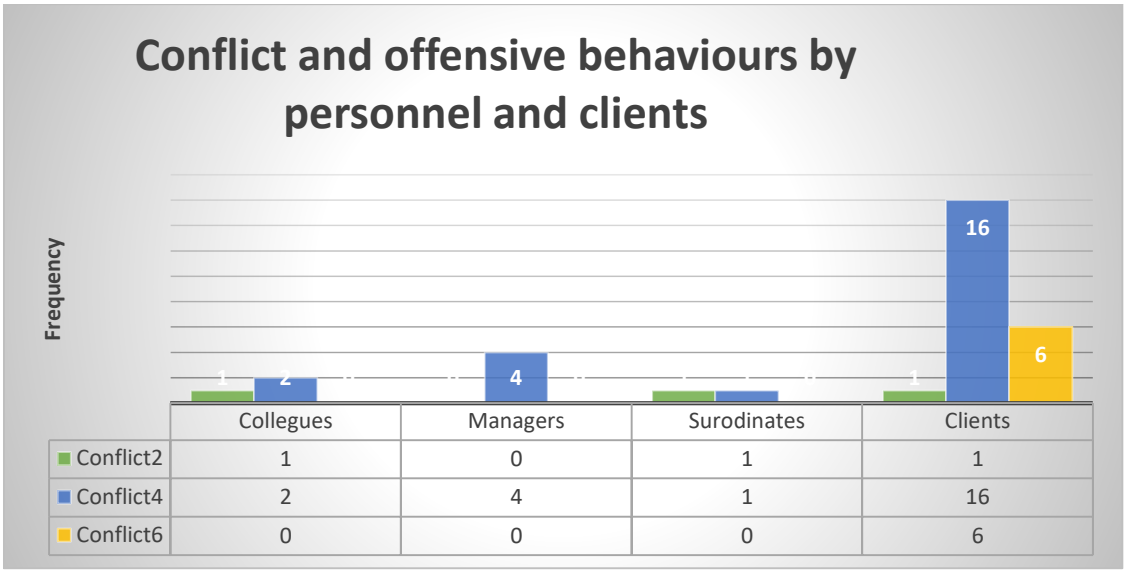


Figure 4.1.1: Conflicts and offensive behaviours by personnel and clients

In response to the question of exposure to threats of violence in figure 4.1.1, n=16 (20.5%) responses show that threats of violence came from clients, while only n= 4 (5.1%) responses showed that managers were imposing threats.

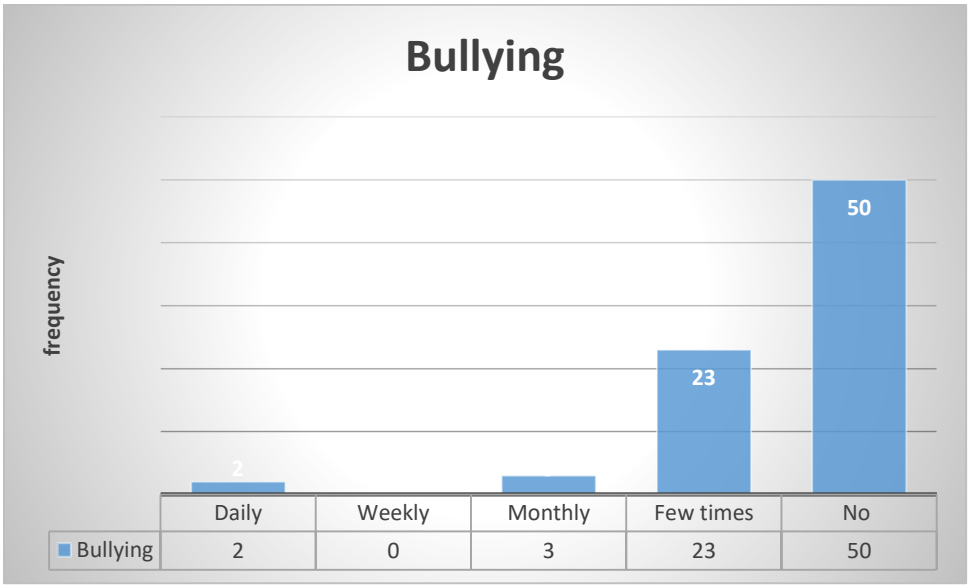


Figure 4.1.2 Bullying

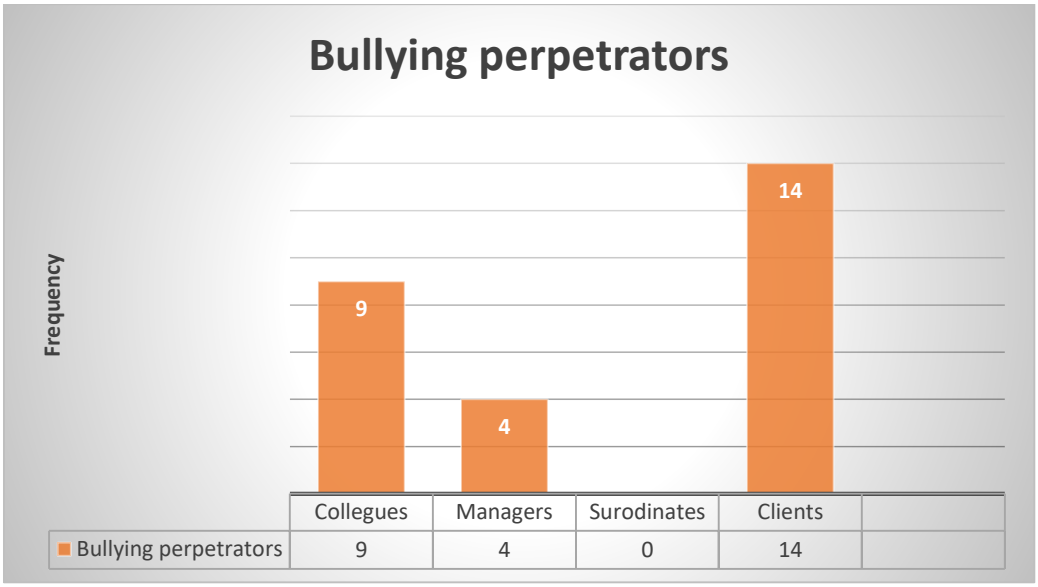


Figure 4.1.3 Bullying Perpetrators

Figure 4.1.3 above indicates that most bullying perpetrators were clients n=14 (17.9%) followed by colleagues n= 9 (11.5%), and only a few had been managers at n= 4 (5.1%). Figure 4.1.3 further reveals that subordinates never bullied anyone, as they rated n=0 (0%) in this category.

4.3.3 Section Three: Results of Open-ended Section

In this section, respondents were given a chance to express their feelings in general regarding their psychosocial work environment. Their responses were grouped according to categories, whereby themes were identified and then labelled with codes. Open-ended questions were replied to by 17 (21.7%) respondents. Through data analysis, seven main themes with several subcategories were discovered.

The themes and categories of the study will be presented below in table 4.4.

Table 4.4 Themes and categories of open-ended section

Theme	**Category**
1. Support	• Not enough time with family. • No staff support from management. • Managers are not approachable. • Emotions are not supported
2. Coping Mechanisms	• Disregarding traumatic incidents • Triggered by small issues.
3. Resources	• Neither enough personnel protective equipment nor enough personnel. • Shortage of vehicles/staff causing delays. • Insufficient resources.
4. Fatigue	• Most ambulance personnel perform more than one job function • Overly tired/Exhaustion • Shortage of staff results in being overworked.
5. Counseling needs	• Need for counselling. • No basic interaction. • Traumatized by the community, counselling will help. • Need for sessions to talk.
6. Lack of growth	• No serious bursaries and no study leave. • Need in-service training.
7. Harassment	• Bad treatment from the public is traumatic • Public rude and inconsiderate.

4.3.3.1 Theme 1: Support

The respondents expressed a lack of time to spend with family by saying, *"We can't have enough time with our families".* Others indicated that management does not care about their well-being by saying, *"I feel that our management does not care about the wellbeing of their*

employees. They are ignorant. Whenever a problem arises, they just sweep it under the carpet".

Respondents saw a lack of support from management as non-caring behaviour: *"The management hardly supports employees, especially if you are not a supervisor. It feels like they do not care about us. They are not handling problems in a fair way. The work environment is stressful as it is and emotionally demanding".* Furthermore, in terms of emotions not being supported, another respondent also said, *"Our emotions are not supported, there is no counselling, and no one from management ever asks how we are coping".*

Moreover, being unapproachable as a manager was perceived by respondents as a lack of support, *"Managers are unapproachable even if one is going through a crisis, you cannot make prior arrangements, so you end up taking sick leave".*

4.3.3.2 Theme 2: Coping Mechanisms

The theme of coping had two subcategories, i.e., forgetting about traumatic incidents and being triggered by small issues. Respondents explained,

"*The work is very psychosocially demanding and requires one to be on top of the game and be able to discard traumatic incidents that we are faced with on a daily basis."*

"*Our work has affected me in the way that even sometimes I end up sharing horrific or kinds of patients that I came across with my wife as there is not enough support from work. They wait for one to break down before basic interaction. Sometimes we get some attitudes problems where you are just triggered by small issues and react from that."*

4.3.3.3 Theme 3: Resources

This theme is presented with three subcategories which are as follows: Not enough personnel protective equipment and not enough personnel, the shortage of vehicles or staff causing delays and not being provided with enough resources. The respondents expressed themselves as follows,

"*Please provide us with enough personnel protective equipment and enough personnel to carry the job."*

"Also, shortage of vehicles/ staff is causing delays to get to patients in time hence unhappy patients causing stress to us."

"The management should also provide enough resources, e.g. enough ambulances in order to take care of the community and complete our work. Most ambulances used are old and now and then broken."

4.3.3.4 Theme 4: Fatigue

The respondents expressed their feelings of fatigue as follows:

"Yes, due to too much hours we work per months that exceed more than normal regulations, we are exhausted we can't be innovative"

"Most of the ambulance personnel perform more than one job function and rotating between ambulance driving."

"We are overly tired and demotivated most of the time, and we need more recognition."

"Most of our colleagues were infected with Covid and had to be in quarantine which left us to overwork trying to cover all calls."

4.3.3.5 Theme 5: Counselling Needs

In this study, respondents expressed a need for counselling as follows:

"We came across different types of things, sad things, horrible things where sometimes you need to declare your colleague. So, we need counselling".

"Yes, we need counselling because sometimes you have to attend to your colleagues while they are sick and even lose their life in front of your eyes/hands.

"*Seeing people badly injured, some dying or dead it makes me feel sad. I wish that there can be sessions at work where we talk about all these things that happen in the line of duty."*

4.3.3.6 Theme 6: Lack of growth opportunities

Lack of growth had three sub-categories which are: no serious bursaries nor study leave, and no in-service training. Respondents expressed their views as follows:

"*There is no serious bursaries to develop us, and we have to pay for ourselves for education, no study leave to upskill ourselves. There is favouritism, and the system kills us,*

discrimination when it comes to getting fair opportunities for a new experience and so on and on."

"*There is too much favouritism, chances of growth are scarce you see people with lower experience and qualifications getting high posts whereas you also applied for the post advertised, it feels like whenever one is shortlisted for a job interview you are just accompanying others or it is for the statistical purpose I don't know."*

"Please provide us with in-service training."

4.3.3.7 Theme 7: Harassment

There are many forms of harassment, and in this study, respondents explained harassment as follows:

"*Public don't treat us well, and sometimes when we arrive to the patient, they give us wrong information. While you can see the story is untrue and sometimes, they are swearing at us"*

"*We have to attend to traumatizing situations when going to the call; Sometimes, the community will traumatize you, so counselling will help."*

"*The public are sometimes rude and inconsiderate, and they expect the ambulance to arrive immediately to collect a patient, forgetting factors on the road to patients."*

4.4 DISCUSSION OF THE MAIN RESULTS

4.4.1 Section One: Socio-democratic

This study demonstrated that the majority of respondents were between the ages of 30 and 39. The age group of the current study corresponds to a study conducted in Saudi Arabia by Alshammari, Jennings and Williams (2019). Their study aimed to statistically test the professional profiles of EMS providers against the Saudi Paramedic Competency Scale model factors, and the majority were aged between 29-39 years. Regarding gender, most respondents were males, with a response rate of 56%. Also, similar to the study by Alshammari, Jennings and Williams (2019), males, with a response rate of 93.4%, were the majority, which might confirm that being a paramedic is a male-dominated profession.

4.4.2 Section Two: COPSOQ II Questionnaire

The sections below describe the results from the COPSOQ II questionnaire.

4.4.2.1 High-risk dimensions which need immediate attention

Based on the results, the high-risk dimensions that needed immediate attention were predictability, leadership qualities, justice, and respect.

4.4.2.1.1 Predictability

Predictability is the degree to which employees receive information about changes and plans that concern them (Pejtersen, Bjorner and Hasle, 2010). The work of a paramedic is unpredictable because, in some cases, when receiving a call-out, before entering the scene, the ambulance crew has to delay their entry into an area of known danger in order to wait for support from the South African Police service (SAPS), and also for them to withdraw from any scene where their personal safety becomes compromised (Emergency Care News, 2015).

A paramedic's job is to deliver or coordinate out-of-hospital or pre-hospital emergency medical care to people in their communities (Lawn *et al.*, 2020). There seems to be little literature with regards to emergency medical services to support predictability. Anecdotal evidence of the demand for emergency services has indicated some unpredictability due to their work environment. Paramedics often have little idea of what to expect once they receive a call out. This may be due to a lack of communication between a call taker and a dispatcher. For instance, if a receptionist does not take the correct address from a caller, those attending the call may get lost and cause unnecessary delays in getting the patient to a hospital. In the current study, the results indicated that the paramedic's work environment was unpredictable. This was supported by Boland *et al* (2019) and Almutairi, Ali and Mahalli (2020), who note that Emergency responders work in an unpredictable environment.

The uncontrolled and unpredictable work environment may play a key role in the development of work-related stress (Boland *et al.*, 2019). Boland *et al*. (2019) indicated that Emergency responders are routinely exposed to high levels of emotional and physical stress

due to providing acute care in the uncontrolled pre-hospital setting. EMS professionals may be exposed to emotionally traumatic incidents while serving on duty (Almutairi, Ali and Mahalli, 2020). Due to a lack of predictability, paramedics go to the scene mentally unprepared for the danger or level of disaster they may find. This can lead to emotional trauma, as outlined by Almutairi, Ali and Mahalli (2020).

4.4.2.2 Leadership qualities

The ability to influence others' attitudes, beliefs, attitudes, and emotions is what leadership is defined as (Ghorbanian, Bahadori and Nejati, 2012). Furthermore, leadership effectiveness is defined as how effective the leaders are at carrying out the leadership role in a healthcare organization (Azar and Sarabi Asiabar, 2015).

Robust and reliable leadership positively affects workers' psychological health and well-being, such as lower anxiety, depression, and stress (ILO, 2020). Leadership effectiveness should ensure that a great and functional management system is in place, one that incorporates multiple occupational health service aspects such as reducing exposure to physiological and psychosocial hazards. Because a manager's leadership style often determines how much power or influence people have, it's logical to believe that a 'transformational style' of leadership, as opposed to an 'authoritarian style,' might have an impact on safety results. (WHO, 2010). Transformational leadership can be defined as a process in which leaders and followers promote each other to a higher level of ethics and motivation, and this includes the provision of motives and incentives by the leader to attract the support of followers (Ghorbanian, Bahadori and Nejati, 2012).

This is supported by Schuh, Zhang and Tian (2012) in their study, which tested the effects of transformational leadership on moral and authoritarian leadership behaviours. The results of their study revealed that a transformational leader’s behaviours related positively to employees in the role and extra-role efforts. However, authoritarian leadership behaviour is related negatively to employees in the role and extra-role efforts. Contrary to Schuh, Zhang and Tian (2012), results in the current study show that paramedics were not satisfied with the quality of leadership from their managers or supervisors. According to the current study, leadership qualities need to be addressed.

4.4.2.3 Justice and Respect

Justice concerns the fair treatment of employees, for example, where employees are respectful and considerate in their interactions with one another, as well as with customers, clients and the public (WHO, 2010). In the current study, respondents indicated that they were not treated fairly in their workplace. For fairness to occur at work, there should be good communication between management and subordinates (ILO, 2020). Open communication facilitates collaboration and worker participation. Workers engaged in and informed about current situations and important decisions play an active role in detecting and effectively solving problems (ILO, 2020).

4.5 MEDIUM RISK DIMENSION THAT NEEDS ATTENTION

The medium-risk dimension consists of the social support from supervisors, appreciation and recognition, work/family conflicts, burnout and stress, as discussed below.

4.5.1 Social Support from Supervisors

The questions asked in this domain were:
To what extent is the immediate supervisor –ensuring that each paramedic has good career development possibilities, placing a high value on job happiness, and being good at work planning and conflict resolution. Literature confirms that supervisor support substantially increases employee job satisfaction (Qureshi *et al.*, 2019). Furthermore, the same authors describe supervisor support as the supervisor's behaviour in helping their employees demonstrate their skills, knowledge, and attitudes (Qureshi *et al.*, 2019). According to Bhatti *et al*. (2013), a supervisor plays an important role in training effectiveness. Providing work-related feedback also would be a form of supervisor support.

This is because feedback is seen as part of supervisor support, whereby the supervisor identifies which skills their employees need to be improved, encourages them to join the training program, and helps them to apply the learned skills upon completing their job (Qureshi *et al.*, 2019). According to the ILO (2020), social support, in particular, is a valuable resource for coping with stress and lowering the negative impacts of stress on health outcomes. (ILO, 2020). Additionally, ILO (2020) reports that social support includes a range

of mechanisms, such as practical help and assistance, encouragement, appreciation, comfort, emotional support, information to help problem-solving, and advice.

4.5.2 Appreciation and Recognition

Appreciation and recognition establish a work atmosphere where employees' achievements are properly acknowledged and appreciated fairly and promptly (WHO, 2010). Appreciation helps build and maintain social bonds, promoting effective collaboration and teamwork (Fagley and Adler, 2012). In a study conducted among Iranian emergency medical personnel to explore their job satisfaction level, EMS personnel reported being dissatisfied with the level of appreciation and recognition they receive from their employers (Khatiban *et al.*, 2014). Their study corresponds with the current study, where the participants were not satisfied in terms of appreciation and recognition.

4.5.3 Work/family Conflicts

This area is focused on work-life balance, which recognizes the importance of balancing work, family, and personal obligations (WHO, 2010). Furthermore, workers who report high levels of work-family conflict experience up to 12 times as much burnout and two to three times as much depression compared to workers with better work-life balance (WHO, 2010). In the present study, most paramedics reported that their work sometimes conflicted with their private life. Similarly, Iwu (2013) reported that paramedics spend inordinate amounts of time at work; either at hospitals or sites of accidents, resulting in estranged relationships between them and their families (Iwu, 2013).

Mwita and Nzira (2016) believe that to maintain a work-life balance, there has to be a balance between work and lifestyle. It is about finding the right balance between one‘s work and life and feeling comfortable with both work and private life (Mwita and Nzira, 2016). Because the emergency department is open 24 hours a day, paramedics frequently work shifts that require them to work long hours. Individuals must work when they are physically and environmentally predisposed to sleep, and vice versa, in shift work (Sofianopoulos *et al.*, 2011b).

From the OHNP point of view, it is important to get proper rest and to balance work and private life. Many employees are stressed out due to a lack of family-friendly policies, flexible schedules, job design, and parental leave, which is lowering their job performance and productivity and causing broken homes (Mwita and Nzira, 2016). Work-life balance requires creating and nurturing a supportive and healthy work environment, which allows employees to maintain a balance between their work and personal responsibilities, which in turn leads to improved employee loyalty and productivity (Shivakumar and Pujar, 2016).

4.5.4 Burnout

Burnout is a syndrome described as severe emotional exhaustion, depersonalization, and diminished feelings of personal accomplishment, with poor work adaptation owing to prolonged occupational stress (Almutairi and Azza, 2020). Emotional exhaustion occurs when the worker feels emotionally empty and exhausted by having to deal with overwhelming demands. Depersonalization is when the worker becomes insensitive to users of the service or the work being carried out by treating them or addressing them in a cynical and dehumanized way (Moya, Carrasco and Hoz, 2017b)**.**

In their health-care jobs, paramedics deal with a variety of challenges, such as patients with inadequate health literacy, palliative care, family violence, poor patient housing conditions, and alcohol and drug misuse scenarios. Furthermore, these can have a negative impact on paramedics' mental health, leading to burnout and stress (Williams *et al.*, 2017).

Almost half of the participants were sometimes exposed to burnout, and a small percentage of the participants were always exposed to burnout in the present study. The study's results in Saudi Arabia aimed to determine burnout levels among emergency medical services (EMS) professionals and the coping strategies they use to alleviate burnout. EMS professionals perceived high levels of emotional exhaustion and depersonalization and low levels of personal achievement (Almutairi and Azza, 2020). In a study conducted among emergency medical technicians in the Tehran Disaster and at the emergency medical management centre in Iran to investigate job stress and job burnout based on a personality trait, the results revealed that the highest frequency and severity among job burnout dimensions were related to depersonalization and lack of personal accomplishment respectively (Bahadori *et al.*, 2019).

According to a study conducted in Poland on the determinants of occupational burnout among employees in EMS, the average score for occupational burnout was 131.0 points (SD ± 31.47) (Leszczyński *et al.*, 2019). This study was similar to the current study as the respondents in both studies were exposed to burnout.

4.5.5 Stress

Stress refers to the result of the dynamic interaction between individual and environment when individuals perceive an incongruence between their physical or psychological capacities and environmental demands (Stathopoulou *et al.*, 2011). Furthermore, workplace stress is characterized as a scenario in which employees are confronted with demands to meet that they are unable to meet, causing success to be out of reach and, as a result, their minds to become imbalanced (Rasool *et al.*, 2020).

The World Health Organization (WHO) emphasizes the place of work as a priority setting for health and wellness promotion, including the provision of a physically and psychologically healthy and safe work environment (Andersen *et al.*, 2015) (WHO, 2010). Paramedics constantly face chronic stressors, such as having to deal with an injury, mutilation and even death. Furthermore, paramedics have the highest rate of post-traumatic stress disorder (PTSD) among emergency service workers, higher than police or firefighters (Drewitz-Chesney, 2012). Moreover, Drewitz-Chesney (2012) reports that PTSD can be damaging to the paramedics' personal and family lives, as well as to their careers.

The current study's results indicate that the respondents' health status was affected because only a fraction of the participants indicated that their health was excellent. The nature of the ambulance job, the frequently uncontrollable and unexpected circumstances, the daily experience of trauma, and the accumulated nature of that trauma all have a part in the development and effect of mental anguish and psychological harm (Lawn *et al.*, 2020). Furthermore, occupational issues such as stress, work demands, shift work, limited amount of time for debriefing, hierarchical supervision, and lack of acknowledgment have all been found to impact ambulance personnel's well-being (Lawn *et al.*, 2020).

4.6 CONFLICT AND OFFENSIVE BEHAVIOUR DOMAIN

In terms of conflict and offensive behaviour, the current study revealed that participants experienced sexual and physical violence and threats of violence and bullying. This is happening despite the fact that the Occupational Health and Safety Act (Act 85 of 1993), as modified (OHSA) in South Africa, can be considered mostly preventive. It lays forth all of the precautions that should be followed to avoid accidents and infections. (Acutt and Hattingh, 2016).

To note violent experiences in the workplace is not unique to the current study or in South Africa. Rafeea *et al*. (2017) explored the workplace violence incidents at the emergency service department (ESD) of Bahrain hospital. In their study, they included 100 staff members who identified the type of violence which had been experienced by workers in the past 12 months as verbal abuse, which was experienced by 78% of the participants. Followed by physical abuse (11%) and then sexual abuse (3%). Many cases of violence against ED workers occurred during night shifts (53%), while physical abuse was reported to occur during all the shifts (Rafeea *et al.*, 2017).

Khatiban *et al.*, (2014) reported that in their study on job satisfaction among Iranian emergency medical service personnel, including paramedics, verbal and physical violence between personnel and their supervisors, patients and patients' caregivers were perceived as at a low to moderate level.

Maguire (2018) in Australia conducted a study describing specific violence risks among paramedics and focused on related injuries. According to their findings, major injuries occurred among paramedics between 2001 and 2014. The study found that the total number of violence-related cases grew from 5 to 40 per year, that the number of instances of injury secondary to assault tripled from 10 to 30, and that the rate of cases by call volume doubled from 6 to 12 per year. In addition, the value of these accidents in 2013–2014 was estimated to be around AUD$250 000. Moreover, for every individual occurrence of workplace bullying and/or job-related harassment, the median duration away from work was 9.6 weeks.

Furthermore, in the same study, Maguire (2018) reports that the most often experienced type of violence among the workers in the past 12 months was verbal abuse, which was

experienced by 78% of the participants. This was followed first by physical abuse (11%) and then by sexual abuse (3%). This study corresponds with the outcomes of the current study, where the paramedics reported that the most often experienced form of violence experienced was verbal abuse, in terms of bullying (17. 9%) and threats of violence (17.16%). Then followed physical violence (3.12%) and finally sexual abuse (1.56%).

4.7 SECTION 3: DISCUSSION OF OPEN-ENDED SECTION

In this section, respondents were given a chance to express their feelings in general regarding their psychosocial work environment. Their responses were grouped according to categories, whereby themes were identified and labelled with codes. Through data analysis, seven main themes were discovered and outlined as follows: support, coping mechanisms, resources, fatigue, counselling needs, lack of growth and harassment.

Theme 1: support

Support is defined as a set of processes that include practical assistance, motivation, gratitude, comfort, emotional security, problem-solving information, counsel, and so on. Sources of social support are co-workers, supervisors, managers, family members and friends (ILO, 2020). Moreover, in relation to the theme of support, managers being unapproachable was perceived by respondents as a lack of support.

Based on the participant's view of support, it is clear that the psychosocial work environment has to be prioritised, and managers need to pay attention to how they treat their individual staff members. Even if the workplace has an employee assistance programme (EAP) in place and they might think they have everything under control, how managers allocate staff members' duties ends up denying their staff members time with a support system such as family. This is viewed as a non-supportive working environment by the employees.

Minnie, Goodman, and Wallis (2015) performed a study in Cape Town Metropole with 189 emergency medical services employees with the goal of learning more about the experiences and coping techniques utilized by EMS personnel after being exposed to everyday or routine

traumatic incidents. The study indicated that 40% of respondents relied on their family members as their most significant support source, 31% on colleagues, and 20% on friends. According to (Minnie, Goodman and Wallis, 2015). Emotional support for paramedics is critical due to the scope of their work, as mentioned by the respondents. EMS personnel relied on their colleagues for emotional support and debriefed each other after a traumatic incident to help counteract the psychological effects they experienced.

Theme 2: coping mechanisms

Coping is a process by which individuals manage to combat the threat and demands placed on them through cognitive and behavioural efforts to master, decrease, or endure both internal and external demands of a stressful event (Ogińska-Bulik and Kobylarczyk, 2015). According to the participants' opinions in the present study, they must manage how to cope independently, as the employer offers no initial coping strategies. Respondents used avoidance as a coping mechanism by disregarding the traumatic event they witnessed. They also used an informal way of coping by sharing with family members when they got home. Choi and Yun (2019), state that some paramedics may even resort to unhealthy coping strategies such as drugs, cigarettes and alcohol, which may affect their quality of life even after retirement (Choi and Yun, 2019).

Due to the nature of a paramedic's work demands, they are exposed to emotional incidents and very traumatic incidents. An initial coping strategy offered by employers would help in minimising employee breakdown (Choi and Yun, 2019). Minnie, Goodman and Wallis (2015) conducted a study in the Cape Town Metropole among 189 Emergency medical services personnel with the objective of investigating the experiences and coping mechanisms used by emergency medical services (EMS) personnel following exposure to daily or routine traumatic events.

This study indicated that EMS personnel commonly use emotion-focused coping mechanisms which are not effective in long-term coping. 63% of respondents used emotion-focused coping, 28% used a problem-focused method, 5% used mental disengagement and 3% used denial, while 0.6% used alcohol and drugs (Minnie, Goodman and Wallis, 2015). The coping mechanisms used by participants in the research done by Minnie, Goodman and Wallis (2015) were similar to those used by participants in the current study.

A study was done on firefighters, who are also emergency service professionals, by Stepka-Tykwinska *et al*, (2019) among 163 officers in Poland indicated that firefighters with riskier attitudes were found to display greater flexibility in coping in terms of having a wider repertoire and variability in the applied strategies. In the case of officers with the shortest service period (< 9 years), the lower level of empathy was associated with higher variability of coping strategies, while in officers with the longest service period (> 14 years), the level of variation in coping strategies correlated positively with the level of empathy (Stępka-Tykwińska *et al.*, 2019).

Psychosocial risks and work-related stress are associated with unhealthy coping behaviours, including heavy alcohol consumption, increased cigarette smoking, poor eating habits, less frequent physical exercise and irregular sleep patterns and all these actions may affect both mental health and physical health and lead to a negative impact on job performance (ILO, 2020).

Theme 3: resources

A lack of resources is associated with delays in care which may lead to complications and mortalities. In the current study, respondents reported a lack of resources, making it difficult for paramedics to execute their responsibilities to a required standard due to staff shortages or material to work with. Literature supports that South Africa (SA) has a well-described shortage of critical care resources and specialists, often necessitating interfacility transfer to meet the needs of patients requiring further care (Venter *et al.*, 2017).

The shortage of staff in the demanding work environment of paramedics may lead to work overload, causing fatigue, burnout, stress, and high staff absenteeism. Furthermore, anecdotal evidence reports that the shortage of ambulances in SA may lead to delayed arrival to accident scenes or where the ambulance is needed. Such delays may cause unnecessary loss of life. Clients also become rude due to frustration caused by delays in arriving for rescue. In a study conducted in SA by Manyisa and van Aswegen (2017), their objective was to describe the working conditions in public hospitals. They discovered that many facilities reported that their equipment was old and in poor working order and that maintaining and replacing such equipment was difficult (Manyisa and van Aswegen, 2017).

Terms of a lack of personal protective equipment (PPEs) expose paramedics to the risk of contracting biological infectious diseases, for example, airborne and blood-borne pathogens. The risks associated with COVID-19 also exacerbate the existing vulnerabilities of EMS professionals (ILO, 2020). Paramedics are usually the first health care professionals to come into contact with patients before they are diagnosed, so they should be well protected in terms of PPEs to avoid the stress and unnecessary exposure to biological infections. Lack of PPEs can escalate anxiety among workers. The fear of infection can be minimised if suitable measures are taken, and employees are well informed and trained (ILO, 2020).

Theme 4: fatigue

Fatigue is exhaustion that affects both the mind and the body, and it occurs when a person is unable to perform at their typical level of ability (Sofianopoulos *et al.*, 2011a). Many factors lead to paramedics being fatigued, for example, their operational hours, work demands and staff shortages. The concern regarding fatigue amongst these respondents shows that there are no measures taken to address fatigue at their workplace. Due to the lack of rules for fatigue risk assessment in the EMS environment, managers of EMS staff are not effectively trained to address fatigue in the workplace (Patterson *et al.*, 2018).

Paramedics are expected to work 24 hours, and in order to achieve that, they work long shifts. Working shifts cause sleep disturbance which disrupts normal patterns of sleep and circadian rhythms and contributes to fatigue (Patterson *et al.*, 2018). A study conducted in Australia which recruited 60 paramedics by Sofianopoulos *et.al*. (2011), with the purpose to investigate the impact of shift work on physical fatigue, sleep, and psychological factors, among paramedics in Australia, yielded following results: 88% of paramedics reported having experienced fatigue in the last 6 months and believed that it had affected their performance at work.

Theme 5: counseling needs

Based on the respondent's indication for the need of counselling, an impression that the employer is not doing enough to support employees is made. It all takes us back to the work environment of paramedics which is unstructured and which leaves them not knowing what is waiting for them at the accident scene, hence not being able to prepare psychologically.

Counselling and formal debriefing sessions for employees, who are constantly exposed to traumatic events at work, assist in minimising severe long-term psychological effects (Britton, Dunham and White,2019).

A study conducted in South Africa among three sectors which are believed to be working in high risk occupations namely mining, police and emergency medical services, by Van Zyl *et al* (2020), with the purpose to explore the experiences of the respondents in order to complete a framework that could help support and improve the productivity and wellbeing of employees affected by work-related trauma, the results showed that effective strategies considered by respondents to manage psychological trauma include multiple counselling sessions, face to face counselling, regaining control and receiving support (Van Zyl *et al.*, 2020).

Theme 6: lack of growth opportunities

Growth and development in the work environment takes place when employees receive encouragement and support in the development of their interpersonal, emotional and job skills (WHO, 2010). Lack of professional growth may be seen as a stressor to employees, and employees who do not grow professionally might be demoralized. The respondents in this study reported to be experiencing a lack of growth. When employees are not updated with new information it may also lead to adverse events.

Previously published work has reported high rates of adverse events when transfers of critically ill patients/ critical care transfers (CCTs) are undertaken by pre-hospital providers who lack advanced skills and training (Venter *et al.*, 2017). Additionally, in professions such as nursing, causes of nurses exiting from the public sector stem from the desire for more professional development opportunities, the need for better wage compensation, better working conditions, better supplies of drugs and better equipment (Manyisa and van Aswegen, 2017).

Theme 7: harassment

Harassment is defined as humiliation and terrorization of one individual by another in the workplace (Rasool *et al.*, 2020). Moreover, harassment is one of the four dimensions of

workplace violence (Rasool *et al.*, 2020). In terms of this study, participant is concerned with harassment caused by supervisors, colleagues and patients as well as by the patient's family members. Violence and harassment can have a negative impact on both physical and mental health, as well as raise stress levels (ILO, 2020).

In a study conducted in Australia, Sweden and the United States by Bigham *et al* (2014) with the goal of describing and exploring paramedics exposed to violence in the ground ambulance setting, there were a total of 1,884 paramedic's respondents and but only 1,676 responded (89%). In the past 12 months (75%) reported experiencing violence. Verbal assault was recorded as the far more common type of violence (67%), preceded by intimidation (41%), physical assault (26%), sexual harassment (14%), and sexual assault (3%). The most common perpetrators of violence were identified as patients (Bigham *et al.*, 2014).

4.8 SUMMARY

This chapter presented the study results in the form of tables, bar charts and descriptive statistics. The socio-demographic profile was presented and described by statistical data using means, percentages and standard deviation. The socio- demographic results indicated that most respondents were males (56%) working in ESD, followed by females (44%). All respondents were paramedics 78(100%) and the largest age group was between 30-39 years (44%).

Section two of the questionnaire (COPSOQII) included seven dimensions out of these dimensions, the six dimensions included questions 1-19. The dimensions which were rated as high risk and needed immediate attention were the following: predictability, appreciation and recognition, leadership qualities as well as justice and respect. The dimensions which needed attention were: social support from supervisors, work/family conflicts, burnout and stress., Quantitative work demands, emotional work demands, work pace, new skill development, meaningful work, influence on work, commitment to workplace role clarity, job satisfaction, management/worker trust, self- rated health were all regarded as good.

Domain number seven was offensive behaviour including (questions 20-23 of COPSOQII). 28 (35.8%) respondents indicated being exposed to bullying and the perpetrators of bullying

were identified as both clients (17.9%) and colleagues (11.5%). Threats of violence were experienced by (30.7%) and the instigators of threats of violence were identified as clients (20.5%). Physical violence was experienced by few respondents (6.4%) as well as undesired sexual attention (3.8%).

The open-ended question answers were analysed using quantitative content analysis, and themes were identified. Seven themes were identified, namely: lack of support, coping mechanisms, resources, fatigue, counselling needs, lack of professional growth and harassment. Respondents reported that there was lack of support from management, they felt they were not appreciated. Furthermore, respondents reported exposure to psychosocial effects such as stress and emotional demands which resulted in them having trouble with coping. Also, the shortage of staff left them with fatigue. The respondents reported that they were exposed to harassment as the public gave them bad treatment and that the public was rude and inconsiderate. The research recommendations and limitations will be discussed in chapter 5.

CHAPTER FIVE

SUMMARY, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The previous chapter presented findings and interpretations on the psychosocial work environment of paramedics in the City of Tshwane. In this chapter, the summary of the study, a report on the limitations, and recommendations are provided. The chapter ends with a conclusion. The description of the psychosocial work environment of paramedics working in the City of Tshwane, regarding the psychosocial hazards that affect them, was essential to this study.

The following were the study's purpose and objectives:
The focus of this research was to investigate paramedics' psychosocial work environment in the City of Tshwane. The purpose was to describe the paramedics' psychosocial work environment in the City of Tshwane.

5.2 SUMMARY OF THE STUDY

The study's summary is examined in light of the study's goal, which was to explain overall psychosocial work environment for paramedics in the City of Tshwane municipality. This was done by using the COPSOQII medium questionnaire. A cross-sectional survey study was performed. Data collection took place between November and December 2020 amongst paramedics in the emergency services department in City of Tshwane municipality. 117 paramedics were expected to participate, however, only 78 paramedics participated in the study.

5.2.1 The Results:

Section one: Socio-demographic

Chapter 4.3.1 revealed those respondents were all paramedics working for emergency medical services. In terms of gender, there were more males than females. The largest age group rate was between 31-39 years old (44%).

Section two: COPSOQ II

The psychosocial work environment of paramedics in the City of Tshwane was described as a work environment in which paramedics were exposed to a high-risk dimension (RED), which needed immediate attention.

The aspects indicated as high-risk dimension (RED) were as follows predictability, appreciation and recognition, justice and respect. The areas mentioned above needed immediate attention.

The next dimensions under (YELLOW) which are: leadership skills, work/family conflict, social support from supervisors, burnout, and stress were all areas that needed to be addressed.

Quantitative work demands, emotional work demands, work pace, influence on work, meaningful work, new skill development, dedication to workplace, role clarity, job satisfaction, management/worker trust, and self-assessed health were among the dimensions that were regarded as good (GREEN).

Conflict and offensive behavior

The questions 20-23 related to offensive behaviour domain of COPSOQ II in chapter 4. The conflict and offensive behaviour domain were described as physical violence, threats of violence, sexual harassment and bullying. The paramedics indicated being regularly exposed to threats of violence and bullying, however, sexual harassment and real acts of physical violence were not common. The most common perpetrators of bullying and threats of violence were clients.

Section three: COPSOQ II

This covered the open-ended remarks, whereby the respondents wrote about the psychosocial effects they were facing at work. The respondent's comments were grouped into the following themes: support, coping mechanisms, resources, fatigue, counselling needs, lack of professional growth, and harassment. The paramedics indicated that the above-mentioned aspects were not attended to.

5.3 LIMITATIONS

The study was restricted to paramedics working in the City of Tshwane municipality at Rosslyn, Bosman, and Phillip Nell stations only. The results cannot be generalised to include other paramedics from other stations within the COT municipality, other municipalities, and private or provincial sectors.

The questionnaire used was long COPSOQ II, and this might have caused some paramedics not to complete it or not to participate. The data collection took place during the festive season when most employees take their annual leave, and this could also have had an impact on why more paramedics did not participate.

5.4 RECOMMENDATIONS

The recommendations are made based on the results from this study with regard to paramedics, occupational health nursing education and practice, EMS management and Nursing research. To avoid PTSD, occupational health nurse practitioners, in collaboration with management and paramedics, can create a sustainable and supportive work environment that initiates change from within the trauma membrane of paramedics' workplaces (Drewitz-Chesney, 2012).

5.4.1 Recommendations for Paramedics in the City of Tshwane (COT)

Paramedics' work environment is known to be unstructured or unpredictable in terms of them not knowing what to expect when receiving an emergency call out. This does not give them time to prepare psychologically, and it can be a stressor. As the stressor is in the work

environment, it is clear that stress cannot be removed completely because it is a daily issue. In order to create a healthy psychosocial work environment for paramedics the following suggestions could be added:

- To establish a support group for paramedics.
- The acceptance of emotional expression and the creation of a supportive environment should become part of this culture (Drewitz-Chesney, 2012).Talking to their colleagues after an incident as a form of immediate debriefing, instead of avoiding the issue, is recommended.
- To maintain a healthy work-life balance. This could be done by some practices aimed at reducing the work-life conflicts.
- Attending workshops on stress management, so as to improve their knowledge of stress in general, should help them to be able to identify stressors and manage stress more effectively.
- To attend counselling sessions with EAP, when necessary.

5.4.2 Recommendations for the COT Occupational Health Department and EMS Management

5.4.2.1 Management

It is the employer's responsibility to provide a healthy and safe working environment, according to the Occupational Health and Safety Act, No. 85 of 1993, as amended. Management should then attend to these following issues:

- Providing a workplace-related violence policy and taking additional measures to stop cycles of bullying.
- Motivating management to employ more paramedics to reduce staff shortages, so as to reduce burnout.
- Advocating for a more positive practice environment and an integrated occupational health and workplace health promotion programme.
- Supporting physical, social and psychological needs of paramedics as well as a work-life balance.

5.4.2.2. Occupational Health Nurse Practitioners

An evaluation should be done to identify risks, conduct a risk assessment, and promote safety at all levels in order to comply with the appropriate regulations. A medical surveillance plan, according to the Occupational Health and Safety Act, No 85 of 1993, has both a preventative and a promotional goal in safeguarding and restoring an employee's health (Republic of South Africa, 1993a Section 12 (2). The initial steps toward ensuring a healthy and safe work environment for paramedics have been taken by investigating the psychosocial work environment in this study.

The lack of attention to the psychosocial wellbeing of employees needs to be attended to by the occupational health nurse practitioner. Occupational health nurse practitioners could collaborate with paramedics to present substantial proof recommendations and suggestions to management, such as paramedics being trained in debriefing methods or paramedics conducting PTSD screening of co-workers at other ambulance stations (Drewitz-Chesney, 2012).

For occupational health nurse practitioners, the results of the study reveal that there is a need to attend to psychosocial issues with regard to health and safety of paramedics by:

- Implementing compulsory counselling sessions within the medical surveillance plan, so as to identify psychosocial issues early.
- Offering debriefing and counselling sessions with a professional like a psychologist after traumatic events, on a weekly basis, for members of ESDs who may need it.
- Advocate for a more positive practice environment and an integrated program to promote workplace health and occupational health. Nurse practitioners who specialize in occupational health have the obligation to advocate for the health and safety of workers in the workplace (Acutt and Hattingh, 2016).
- Offer workshops on stress management.
- Encourage paramedics to make use of available support structures. Dedication and commitment to establishing and maintaining health and safety, and an organizational culture that is caring and conducive to promoting the health and well-being of health care professionals, will go a long way toward decreasing the stress levels of paramedics.

- Making use of the WHO/ILO Workplace Model (2010) to enhance the work/life balance and provide a more positive practice environment for paramedics.
- By normalizing the expressing of emotions and promoting the sharing of reactions to events, occupational health nurse practitioners can aid paramedics in developing healthy coping methods.

5.4.3 Further Research

- Similar research needs to be conducted in other municipalities, as the current study concentrated on the psychosocial work environment specifically of paramedics practising the City of Tshwane municipality. With this small population of COT, the results cannot be generalized.
- Research on the effects of post-traumatic stress disorders amongst paramedics need to be conducted as well.

5.5 CONCLUSION

Paramedics described their psychosocial work environment as a workplace in which they were exposed to high demands of unpredictability, low appreciation and recognition, and insufficient justice and respect. Furthermore, paramedics described their psychosocial work environment as one which lacked leadership qualities, social support from supervisors, and it caused work/family conflict. In addition, burnout and stress were experienced. These stressors require attention from an occupational health nurse's practitioner's perspective.
The paramedics rated good dimensions of their psychosocial work environment mostly as quantitative work demands, work pace, the acquisition of new skills, meaningful work, workplace commitment and influence on work, role clarity, job satisfaction, self- rated health and management/worker trust.

Moreover, the paramedics were exposed to conflict and offensive behaviour from either management, clients, or colleagues. This dimension covered sexual harassment, threats of violence, physical violence, and bullying. The respondents reported being exposed mostly to threats of violence and bullying of which common perpetrators were clients. The acts of sexual harassment and physical violence were not common.

In addition, with the analysis of the open-ended question, it was identified that managers were not supportive. The respondents felt that mangers were not taking much responsibility in terms of support as might be expected from them. There was a lack/ shortage of resources which led to poor coping skills and fatigue. Even if they have someone to talk to about their stressors, some paramedics claim that no one seems to do something about it, so they needed counselling, which was not offered. Lack of professional growth and harassment in the workplace were also mentioned. The above-mentioned aspects needed attention as it appears that the psychosocial support of paramedics working in the three emergency stations was insufficient. This research will add to the body of knowledge concerning the psychosocial work environment of paramedics, as the study results will yield an alertness regarding the psychosocial work hazards paramedics are exposed to.

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LIST OF ANNEXURES

Annexure 1: Title approval

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3 Wits, 2050

Tel: 02711 7172076

Reference: Mrs Sandra Benn
E-mail: sandra.benn@wits.ac.za

14 August 2020
Person No: 1912948
TAA

Mrs ML Zuma
6789 Strawberg Street
Villa Lantana Estate
Amandasig
0182
South Africa

Dear Mrs Mantai Zuma

Master of Science in Nursing: Change of title of research

I am pleased to inform you that the following change in the title of your Research Report for the degree of **Master of Science in Nursing** has been approved:

From:

To: **The psychosocial work environment of paramedics in city of Tshwane**

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences

Annexure: 2 ethical clearance

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

Office of the Deputy Vice-Chancellor (Research & Post Graduate Affairs)

TO: Ms M Zuma
School of Therapeutic Sciences
Department of Nursing Education
Medical School
University

E-mail: mantai.zuma/Bgmail.com

CC: Supervisor: Ms A Huiskamp <Agnes.Huiskamp@wits.ac.za>
and <HREC-Medical.ResearchOffice@wits.ac.za>

FROM: Iain Burns
Human Research Ethics Committee (Medical)
Tel: 011 717 1252

E-mail: Iain.Burns@wits.ac.za

DATE: 2020/09/22

REF: *R14/49*

PROTOCOL NO: M200541 *(This is your ethics application study reference number. Please quote this reference number in all correspondence relating to this study)*

PROJECT TITLE: *The psychosocial work enviroment of paramedics in the City of Tshwane*

Please find attached the Clearance Certificate for the above project. I hope it goes well and that an article in a recognized publication comes out of it. This will reflect well on your professional standing and contribute to the Government funding of the University.

MSWorks2000/Iain0007/Clearscan.mps

UNIVERSITY OF THE WITWATERSRAND

R14/49 Ms M Zuma

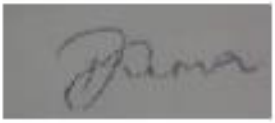
HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M200541

NAME: (Principal Investigator)	Ms M Zuma
DEPARTMENT:	School of Therapeutic Sciences Department of Nursing Education Medical School University
PROJECT TITLE:	The psychosocial work environment of paramedics in the City of Tshwane
DATE CONSIDERED:	2020/05/29
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Ms A Hulsk
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2020

This clearance certificate is valid for 5 years from the date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and ONE COPY returned to the Research Office Secretary on the 3rd Floor, Philip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to submit details to the Committee. I agree to submit a yearly progress report. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in May and will therefore reports and re-certification will be due early in the month of May each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).



Principal Investigator Signature

23 / 09 / 2020
Date

Annexure: 3 Permission letter to the Director of Tshwane EMS

6789 Strawberry Street
Villa Lantana Estate
Amandasig
0182

The Director
City of Tshwane Metro Municipality
EMS department
Sammy marks building
Pretoria
SOUTH AFRICA

PERMISSION TO CONDUCT A STUDY IN CITY OF TSHWANE MUNICIPALITY

Dear Mr. P. Govender

My name is Mantai Lillian Zuma and I am a master's degree student in occupational health nursing at the University of the Witwatersrand. To complete my masters (coursework) degree I need to do a study.

I am interested in doing a study on psychosocial work environment of paramedics in The City of Tshwane which is the topic of my research.

I hereby ask for your permission to do the study among paramedics in City of Tshwane Municipality. Data will be collected by means of a questionnaire.

The research proposal is attached for your perusal and information.

For the purpose of the proposal, the name of the department will not appear, however will appear in the final research report which will be submitted for examination in the university.

Thank you for your time and consideration in this regard.

Yours faithfully

MANTAI ZUMA: Student Number: 1912948

Annexure: 4 Approval letter from City of Tshwane

CITY OF TSHWANE
IGNITING EXCELLENCE

City Strategy and Organizational Performance

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My ref: **Research Permission/ Zuma**
Contact person: **Pearl Maponya**
Section/Unit: **Knowledge Management**

Tel: 012 358 4559
Email: PearlMap3@tshwane.gov.za
Date 26 November 2019

Ms Mantai Zuma
6789 Strawberry Street
Villa Lantana Estate
Amandasig
0182

Dear Ms Zuma

RE: THE PSYCHOSOCIAL WORK ENVIRONMENT OF PARAMEDICS.

Permission is hereby granted to Mantai Zuma, Master of Science Degree candidate at University of Witwatersrand (WITS), to conduct research in the City of Tshwane Metropolitan Municipality.

It is noted that the purpose of the study is to investigate the psychosocial work environment of the paramedics working at City of Tshwane Metropolitan Municipality. The City of Tshwane further notes that all ethical aspects of the research will be covered within the provisions of WITS Research Ethics Policy. You will be required to sign a confidentiality agreement with the City of Tshwane prior to conducting research.

Relevant information required for the purpose of the research project will be made available as per applicable laws and regulations. The City of Tshwane is not liable to cover the costs of the research. Upon completion of the research study, it would be appreciated that the findings in the form of a report and or presentation be shared with the City of Tshwane.

Yours faithfully,

PEARL MAPONYA (MS.)
DIRECTOR: KNOWLEDGE MANAGEMENT

Annexure: 5 Information leaflets

Participating in the study on psychosocial work environment of paramedics in The City of Tshwane

Good day colleagues

My name is Mantai Lillian Zuma and I am a Masters student in Occupational Health Nursing at the University of the Witwatersrand in Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating the psychosocial work environment of paramedics in City of Tshwane municipality. The aim of this research project is to find out how is the psychosocial environment of paramedics.

You are invited to participate in a research study that forms part of my formal MSc. Occupational Health Nursing study. This information leaflet will help you to decide if you would like to participate. Before you agree to take part, you should fully understand what is involved. You should not agree to take part unless you are completely satisfied with all aspects of the study.

If you choose to take part in the study, you will be required to complete a self-administered questionnaire, which will take you about 15 to 20 minutes to complete. It is through these questionnaires that the researcher will be able to investigate the psychosocial work environment of paramedics in City of Tshwane.

The study involves completing a questionnaire. There are no harmful and risky procedures that will compromise your health. However, some people might find some of the questions on the questionnaire to be emotionally sensitive. Should you experience any emotional distress although not expected as a result of participating in the study or while completing the questionnaires, feel free to discontinue? Arrangements have been made with Dr Nokuthula Nkosi-Mafutha to provide counselling to respondents who experience emotional distress (Telephone: (011 488 3094). This will be a professional counselling and at no cost to you.

The benefits of participating in this study are that you will be contributing to giving information which might be used to create awareness of the importance of work place

psychosocial hazards. However, there is no direct benefits. Participation is voluntary and there are no financial gains for participating in the study.

All the information you provide in the study will be handled confidentially. Your name will not be mentioned on the questionnaire, therefore, the information you provide in the study will not in any way be linked to your name or address.
Access to the information you provide will be limited to:

- The researcher
- Study supervisor

This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee"). A principal function of this Committee is to safeguard the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

If you have any concern over the way the study is being conducted, please contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. The study will be written up as a research report which will be available online through the university library website.

Your co-operation and participation in the study will be greatly appreciated.

Thank you for your participation in the study.

Yours sincerely

Mantai Zuma

Researcher's details: email address mantai.zuma@gmail.com 082 785 8422

Supervisor: Ms Agnes Huiskamp, Agnes.Huiskamp@wits.ac.za 0832388084

Annexure 6: psychosocial work environment of paramedics in the city of Tshwane

Consent form

Name of researcher: Mantai Zuma

I…….... Agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. Please circle the relevant option below.

I agree that my participation will remain anonymous Yes No

I agree that the researcher may use anonymous quotes in her research report Yes No

Signature…….

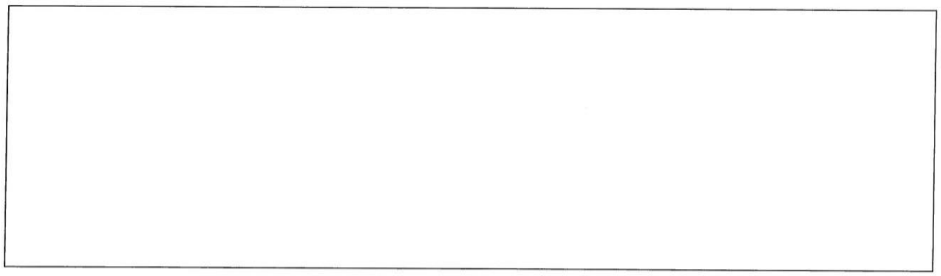
Name of participant……

Date: ……

Annexure 7: Questionnaire

Questionnaire on psychosocial factors at work

This space is for company logo or name





Which department do you work in? _____

What is your job? _____

Are you:	☐ Woman	☐ Man
How old are you?	☐ Under 30 years ☐ 30-39 years ☐ 40-49 years ☐ 50-59 years ☐ 60 years or more	

Psychosocial factors at work

The following questions are about your psychosocial work environment and job satisfaction. Some of the questions may fit better to your work than others, but please answer all questions.

	Always	Often	Some-times	Seldom	Never/ hardly ever
Is your work unevenly distributed so it piles up?	☐	☐	☐	☐	☐
Does your work put you in emotionally disturbing situations?	☐	☐	☐	☐	☐
Do you have a large degree of influence concerning your work?	☐	☐	☐	☐	☐
Do you have to work very fast?	☐	☐	☐	☐	☐
Is there a good atmosphere between you and your colleagues?	☐	☐	☐	☐	☐

	Always	Often	Some-times	Seldom	Never/ hardly ever
Do you have to relate to other people's personal problems as part of your work?	☐	☐	☐	☐	☐
Do you have a say in choosing who you work with?	☐	☐	☐	☐	☐
Do you have any influence on what you do at work?	☐	☐	☐	☐	☐
Do you get behind with your work?	☐	☐	☐	☐	☐
Is there good co-operation between the colleagues at work?	☐	☐	☐	☐	☐
How often do you not have time to complete all your work tasks?	☐	☐	☐	☐	☐
Do you have enough time for your work tasks?	☐	☐	☐	☐	☐
Do you feel part of a community at your place of work?	☐	☐	☐	☐	☐
Can you influence the amount of work assigned to you?	☐	☐	☐	☐	☐
How often do you consider looking for work elsewhere?	☐	☐	☐	☐	☐
How often do you get help and support from your colleagues?	☐	☐	☐	☐	☐
How often are your colleagues willing to listen to your problems at work?	☐	☐	☐	☐	☐
How often do your colleagues talk with you about how well you carry out your work?	☐	☐	☐	☐	☐

	To a very large extent	To a large extent	Some-what	To a small extent	To a very small extent
Is it necessary to keep working at a high pace?	☐	☐	☐	☐	☐
Is your work emotionally demanding?	☐	☐	☐	☐	☐
Does your work require you to take the initiative?	☐	☐	☐	☐	☐
Is your work meaningful?	☐	☐	☐	☐	☐
At your place of work, are you informed well in advance concerning for example important decisions, changes, or plans for the future?	☐	☐	☐	☐	☐
Does your work have clear objectives?	☐	☐	☐	☐	☐
Are contradictory demands placed on you at work?	☐	☐	☐	☐	☐
Is your work recognised and appreciated by the management?	☐	☐	☐	☐	☐
Do you feel that the work you do is important?	☐	☐	☐	☐	☐
Would you recommend a good friend to apply for a position at your workplace?	☐	☐	☐	☐	☐
Do you know exactly which areas are your responsibility?	☐	☐	☐	☐	☐
Does the management at your workplace respect you?	☐	☐	☐	☐	☐
Do you get emotionally involved in your work?	☐	☐	☐	☐	☐
Can you use your skills or expertise in your work?	☐	☐	☐	☐	☐
Do you enjoy telling others about your place of work?	☐	☐	☐	☐	☐
Do you receive all the information you need in order to do your work well?	☐	☐	☐	☐	☐

	To a very large extent	To a large extent	Some-what	To a small extent	To a very small extent
Do you do things at work, which are accepted by some people but not by others?	☐	☐	☐	☐	☐
Are you treated fairly at your workplace?	☐	☐	☐	☐	☐
Do you know exactly what is expected of you at work?	☐	☐	☐	☐	☐
Do you sometimes have to do things, which ought to have been done in a different way? (	☐	☐	☐	☐	☐
Do you have the possibility of learning new things through your work?	☐	☐	☐	☐	☐
Do you feel motivated and involved in your work?	☐	☐	☐	☐	☐
Do you sometimes have to do things, which seem to be unnecessary?	☐	☐	☐	☐	☐
Do you work at a high pace throughout the day?	☐	☐	☐	☐	☐
Does your work give you the opportunity to develop your skills?	☐	☐	☐	☐	☐
Do you feel that your place of work is of great importance to you?	☐	☐	☐	☐	☐

Regarding your work in general.

How pleased are you with:

	Very satisfied	Satisfied	Un-satisfied	Very unsatisfied
- your work prospects?	☐	☐	☐	☐
- the physical working conditions?	☐	☐	☐	☐
- the way your abilities are used?	☐	☐	☐	☐
- your job as a whole, everything taken into consideration?	☐	☐	☐	☐

The workplace as a whole

The next questions are not about your own job but about the workplace as a whole.

	To a very large extent	To a large extent	Some-what	To a small extent	To e very small extent
Does the management trust the employees to do their work well?	☐	☐	☐	☐	☐
Can you trust the information that comes from the management?	☐	☐	☐	☐	☐
Are conflicts resolved in a fair way?	☐	☐	☐	☐	☐
Does the management withhold important information from the employees?	☐	☐	☐	☐	☐
Are employees appreciated when they have done a good job?	☐	☐	☐	☐	☐
Do the employees withhold information from each other?	☐	☐	☐	☐	☐
Do the employees withhold information from the management?	☐	☐	☐	☐	☐
Do the employees in general trust each other?	☐	☐	☐	☐	☐
Are all suggestions from employees treated seriously by the management?	☐	☐	☐	☐	☐
Are the employees able to express their views and feelings?	☐	☐	☐	☐	☐
Is the work distributed fairly?	☐	☐	☐	☐	☐

The next questions concern your relationship to your nearest superior.

	Always	Often	Some-times	Seldom	Never/ hardly ever
How often is your nearest superior willing to listen to your problems at work?	☐	☐	☐	☐	☐
How often do you get help and support from your nearest superior?	☐	☐	☐	☐	☐
How often does your nearest superior talk with you about how well you carry out your work?	☐	☐	☐	☐	☐

To what extent would you say that your immediate superior...

	To a very large extent	To a large extent	Some-what	To a small extent	To a very small extent
- makes sure that the individual member of staff has good development opportunities?	☐	☐	☐	☐	☐
- gives high priority to job satisfaction?	☐	☐	☐	☐	☐
- is good at work planning?	☐	☐	☐	☐	☐
- is good at solving conflicts?	☐	☐	☐	☐	☐

Work and private life

The next questions are about the connection between work and private life.

	Yes, often	Yes, some-times	Rarely	No, never
Do you often feel a conflict between your work and your private life, making you want to be in both places at the same time?	☐	☐	☐	☐

	Yes, certainly	Yes, to a certain degree	Yes, but only very little	No, not at all
Do you feel that your work drains so much of your energy that it has a negative effect on your private life?	☐	☐	☐	☐
Do you feel that your work takes so much of your time that it has a negative effect on your private life?	☐	☐	☐	☐
Do your friends or family tell you that you work too much?	☐	☐	☐	☐

If you have more comments on your psychosocial work environment, please write here:

Health and well-being

These questions are about how you have been during <u>the last 4 weeks.</u>

	All the time	A large part of the time	Part of the time	A small part of the time	Not at all
How often have you slept badly and restlessly?	☐	☐	☐	☐	☐
How often have you felt worn out?	☐	☐	☐	☐	☐
How often have you found it hard to go to sleep?	☐	☐	☐	☐	☐
How often have you been physically exhausted?	☐	☐	☐	☐	☐
How often have you been emotionally exhausted?	☐	☐	☐	☐	☐
How often have you woken up too early and not been able to get back to sleep?	☐	☐	☐	☐	☐
How often have you felt tired?	☐	☐	☐	☐	☐
How often have you woken up several times and found it difficult to get back to sleep?	☐	☐	☐	☐	☐
How often have you had problems relaxing?	☐	☐	☐	☐	☐
How often have you been irritable?	☐	☐	☐	☐	☐
How often have you been tense?	☐	☐	☐	☐	☐
How often have you been stressed?	☐	☐	☐	☐	☐

	Excellent	Very good	Good	Fair	Poor
In general, would you say your health is:	☐	☐	☐	☐	☐