

# **Workplace violence towards emergency medical services staff in Gauteng**

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A dissertation submitted to the Department of Emergency Medical Care and Rescue  
at Durban University of Technology in fulfilment of the requirements for the degree of  
MHSc in Health Science

25 March 2024

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## DECLARATION

This is to certify that the work is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

17/6/2025

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## **DEDICATION**

This research is dedicated to all EMS personnel in the South African Military Health Service (SAMHS) and EMS in Gauteng, South Africa.

## ACKNOWLEDGEMENTS

I would like to thank the Almighty God for granting me the strength and wisdom to complete my master's in Emergency Medical Care dissertation.

- To the loves of my life, my mom, Sesi Mofokeng, the woman who was and is my strength through thick and thin and I will forever be grateful as her life experience moulded me to be a hard worker, strong, persistent and an achiever. My Son Fezile Mzimkulu, I love you and you will always be my first love, may God keep you save always.
- My blood family, spiritual family for being my anchor in times of need. You were my greatest support in times of need; you lifted my soul with so much love and spiritual upliftment.
- To my supervisors (Dr Arek-Bawa and Mr Naguran) and the Emergency Medical Sciences department at Durban University of Technology, I appreciate all of the support and motivation throughout my EMS education and especially during this project.
- To the Gauteng Emergency Medical Service and the SAMHS EMS: may this research empower each of you and thanks to all those who participated in the study.
- My thanks and appreciation to Mr West Williams (Lebone College) for your assistance, and Mr Chule for unrestricted dedication in helping students.
- Lastly, I would like to thank, show my appreciation and honour my General Officer Commanding (Brig. Gen. Mdutywa) for the support he gave me when I lost hope due to life challenges. I could not have made it this far if it were not for your intuition and support that made me regain my strength to rise up again. Without it I could not have made it this far. For that I say SALUTE to you, General! May God Almighty bless you and give you the desires of your heart.

## **ABSTRACT**

Paramedics are a crucial component of South African public health, medical and emergency services systems. While some interventions have been tried, it seems that violence against paramedics just keeps getting worse. In recent years, there have been an increasing number of newspaper reports suggesting that the rate of violent incidents against emergency medical services personnel in South Africa may be accelerating. With these acts of hostility and violence growing, job satisfaction amongst paramedics will invariably decline and further push them to consider leaving the profession. The aim of this study was to investigate workplace violence among paramedics during emergency call outs in Gauteng, South Africa. The study used a mixed-method approach, gathering data from paramedics through surveys and interviews. Semi-structured interviews and a questionnaire were used to gather the data. For the quantitative data, thematic analysis was used, and for the qualitative data, descriptive statistics. The results indicated that the number of women who took up the profession as paramedics was lower than that of men. The quantitative data revealed that workplace violence the emergency medical services was largely reported during on emergency assignments. Workplace violence exists and most of the employees have experienced it at some point while on duty. Verbal abuse was the most frequent kind of workplace violence, followed by physical violence, while sexual abuse was the least frequent. Very little has been done to safeguard emergency medical services employees from workplace violence and reporting the violence is met with a number of limitations. The study also found that the majority of emergency medical services workers did not know where or were not sure how to report workplace violence. In light of the above results, the study recommended a collaborative effort between regional and South African health organisations in providing site-specific education and policies. In addition, awareness programmes should focus on empowering victims to report workplace violence, as well as strategies to handle cases of workplace violence.

## Table of contents

<b>Declaration</b> .....	<b>i</b>
<b>Dedication</b> .....	<b>ii</b>
<b>Acknowledgements</b> .....	<b>iii</b>
<b>Abstract</b> .....	<b>iv</b>
<b>Chapter 1: Overview of the study</b> .....	<b>1</b>
1.1. Introduction and background .....	1
1.2. Problem statement .....	2
1.3. Research aim .....	3
1.4. Research objectives .....	3
1.5. Research questions.....	3
1.5.1.Main research question .....	3
1.5.2.Subsidiary research questions .....	4
1.6. Significance of the study .....	4
1.7. Structure of the dissertation.....	4
1.8. Summary .....	5
<b>Chapter 2: Literature review</b> .....	<b>6</b>
2.1. Introduction.....	6
2.2. Literature search strategy.....	6
2.3. Theoretical framework.....	7

2.4. Defining violence .....	8
2.5. Defining workplace violence .....	9
2.6. The prevalence of workplace violence against paramedics.....	9
2.6.1. International perspective on workplace violence against EMS.....	10
2.6.2. Workplace violence on EMS in South Africa .....	12
2.7. The types of workplace violence against paramedics .....	13
2.7.1. Verbal violence.....	14
2.7.2. Physical violence.....	14
2.7.3. Sexual harassment .....	15
2.7.4. Threatening behaviour .....	15
2.8. Factors that influence workplace violence against paramedics .....	15
2.9. The perceptions of paramedics on workplace violence .....	16
2.10. Impact of workplace violence on emergency medical services workers.....	17
2.11. Summary .....	19
<b>Chapter 3: Research methodology .....</b>	<b>20</b>
3.1. Introduction .....	20
3.2. Research philosophy.....	20
3.3. Research approach .....	21
3.4. Research design .....	23
3.5. Study setting .....	24

3.6. Study population and sampling .....	25
3.6.1 Sampling .....	25
3.6.2. Sample size.....	27
3.6.3. Inclusion and exclusion criteria.....	28
3.7. Data collection.....	28
3.8. Validity and reliability of the research tools .....	31
3.9. Trustworthiness of qualitative findings.....	32
3.9.1. Transferability.....	32
3.9.2. Dependability.....	32
3.9.3. Confirmability.....	33
3.10. Data analysis.....	33
3.11. Ethical considerations .....	35
3.11.1. Beneficence.....	36
3.11.2. Non-malevolence .....	36
3.11.3. Informed consent.....	36
3.11.4. Privacy, confidentiality and anonymity.....	37
3.12. Summary.....	37
<b>Chapter 4: Presentation of results.....</b>	<b>38</b>
4.1. Introduction .....	38
4.2 Respondents' profiles.....	38

4.3 Descriptive statistics of demographics .....	38
4.3.1 Participants who gave consent of his or her participation.....	39
4.3.2 City of work .....	39
4.3.3 Distribution of the sample according to age .....	40
4.3.4 Gender of respondents.....	41
4.3.5 Distribution of the sample according to educational qualification level.....	42
4.3.6 Distribution of field of work .....	42
4.4. Section A: Statistical analysis of quantitative data.....	43
4.4.1: Frequency distribution per question .....	43
4.4.2. Response to emergency calls .....	43
4.4.3. Distribution of participants exposed to violence.....	44
4.4.4. Distribution of participants exposed to violence on a weekly basis while on duty .....	45
4.4.5. Types of violence encountered by participants .....	46
4.4.6. Distribution of participants willing to share their experience .....	47
4.4.7. Reactions of participants on whether there are procedures for reporting violence .....	47
4.4.8. Proportion of participants familiar with procedures for reporting violence .....	48
4.4.9. Shift of the day when violence took place .....	49
4.4.10. Time when incident of violence happened .....	50
4.4.11. Day of the week with incidents of violence .....	50

4.4.12. Distribution of perpetrators of violence .....	51
4.4.13 Distribution of areas with violence .....	52
4.4.14. Ways in which participants were physically violated by perpetrator .....	53
4.4.15. Ways participants verbally abused by the perpetrator .....	53
4.4.16 Distribution on how participants were sexually abused by the perpetrator ....	54
4.4.17. Distribution of causes of violence .....	56
4.5 Correlation analysis .....	57
4.6 Regression analysis .....	59
4.7. Section B: Data presentation and analysis of qualitative data.....	61
4.7.1 Types of violence .....	61
4.7.2. Circumstances and sources of violence .....	64
4.7.3. Emotional impact of workplace violence.....	66
4.8. Summary .....	69
<b>Chapter 5: Conclusions and recommendations .....</b>	<b>70</b>
5.1. Introduction .....	70
5.2. Achievement of research objectives.....	70
5.3. Conclusions regarding research objective 1: To determine the incidence of workplace violence against paramedics .....	71
5.3.1. Choice of profession by gender.....	71
5.3.2. WPV on emergency calls .....	71

5.4. Conclusions regarding research objective 2: To describe the perceptions of paramedics subjected to incidences of workplace violence .....	72
5.4.1. Experience of WPV .....	72
5.4.2. Types of workplace violence .....	72
5.4.3. Procedures for reporting workplace violence .....	73
5.5. Recommendations .....	73
5.5.1. Collaboration .....	73
5.5.2. WPV education programme .....	74
5.5.3. Urgent employer response to cases of WPV .....	74
5.6. Limitations .....	75
5.7. Conclusion .....	76
References .....	77

## **LIST OF FIGURES**

Figure 4.1: Participants who consented to participate in the study .....	39
Figure 4.2: Participants who work in Gauteng/Johannesburg Emergency Medical Services	40
Figure 4.3: Age of participants .....	41
Figure 4.4: Gender distribution of participants .....	41
Figure 4.5: Participants' qualifications .....	42
Figure 4.6: Working area of participants .....	43

## LIST OF TABLES

Table 3.1: Population for the EMS districts in Gauteng .....	25
Table 4.1: Ways in which participants respond to emergency calls.....	44
Table 4.2: Participants exposed to violence, while on duty .....	44
Table 4.3: Rate at which participants are exposed to violence on weekly basis while on duty .....	45
Table 4.5: Number of participants willing to share their experience .....	47
Table 4.6: Reactions of participants on whether there are procedures for reporting violence while on duty .....	48
Table 4.7: The table shows whether participants are familiar with procedures for reporting violence.....	48
Table 4.8: Distribution of shift of the day when violence took place .....	49
Table 4.9: Time when incident of violence happened .....	50
Table 4.10: Day of the week with incident of violence .....	51
Table 4.11: Perpetrators of violence .....	51
Table 4.12: Areas where incidents violence occurred .....	52
Table 4.13: Distribution of ways in which participants were physically violated by perpetrator .....	53
Table 4.14: Ways in which perpetrator verbally abuse the participants.....	54
Table 4.15: How were participants sexually abused by the perpetrator .....	55
Table 4.16: Ways in which participants were abused by perpetrators.....	56
Table 4.17: Causes of violence.....	57
Table 4.18: Correlations between factors .....	58

Table 4.19: Model summary .....	59
Table 4.20: ANOVA .....	60
Table 4.21: Coefficients .....	60

## **ANNEXURES**

Annexure A: Quantitative questionnaire .....	91
Annexure B: Interview questions and questionnaire for paramedics .....	97
Annexure C: Letter of information to participants.....	98
Annexure D: Consent form .....	101
Annexure E: Request for permission to conduct research.....	104
Annexure F: IREC full approval letter .....	107

## **ACRONYMS AND ABBREVIATIONS**

ALS	Advanced life support
BLS	basic life support
DSSC	Daily summary of serious crime
ECP	Emergency care practitioners
ECT	Emergency care technicians
EMS	Emergency medical services
HPCSA	Health Professions Council of South Africa
ICRC	International Committee of Red Cross
ILS	Intermediate life support
NDip	National Diploma
SA	South Africa
SAPS	South African Police Service
WPV	Workplace violence

## CHAPTER 1: OVERVIEW OF THE STUDY

### 1.1. Introduction and background

Globally and in South Africa, workplace violence has been identified as the biggest cause of occupational injuries and deaths (Bentley *et al.* 2014). Violence is a universal epidemic that destroys and threatens the lives of communities (WHO, 2025:1). More than 1.6 million lives around the world are lost each year because of violence (WHO, 2002:1). Workplace violence is one of the types of violence affecting healthcare workers globally. Hajaj (2014:20) and Cashmore *et al.* (2012:1) considered workplace violence as an alarming health phenomenon worldwide. In South Africa, Govender, Grainger, Naidoo and MacDonald (2012) indicated that high risk and exposure to workplace violence threatens the safety of paramedics, hence paramedics are migrating to safer work areas. Bigham *et al.* (2014) and Cashmore, Indig, Hampton, Hegney and Jalaludin, (2012) further indicated that health care workers, including paramedics, have experienced at least one case of either emotional, verbal, physical or sexual violence or all forms of violence during their professional careers. Though all health care workers are exposed to violence in their workplace, paramedics are the most exposed health care workers (Boyle, Koritsas, Coles & Stanley, 2007:760), especially females. Before democratic elections in 1994, the emergency medical services (EMS) field in South Africa was a male-dominated environment and after democracy, females are given the opportunity to work in the EMS field, thus exposing them to workplace violence (Van Wyk, Naidoo, Moodley & Higgins-Opitz, 2016:546).

The paramedic profession is in the emergency medical care field and is meant to manage the sick or injured in a safe environment Health Professional Council of South Africa (HPCSA, 2006:100). Paramedics are highly skilled emergency medical professionals trained to provide advanced pre-hospital care in critical situations, including trauma, cardiac emergencies, and life-threatening illnesses (Runacres, Harvey, O'Brien & Halck, 2024:682). Their field extends beyond traditional ambulance

services into specialised areas such as critical care transport, disaster response and tactical paramedicine.

Paramedics also work in different terrains, as well as all types of weather. They thus expose themselves to different forms of high-stress situations, one of them being workplace violence on a daily basis (Taylor et al., 2023:63). Difficult terrain, high caseloads and inclement weather often delay response times. Patients and their families often abuse paramedics verbally and physically for these delays, which is sometimes out of the control of paramedics (Shabanikiya, Kokabisaghi, Mojtabaeian, Sahebi & Varmaghani, 2021).

In the Gauteng, there are areas that are regarded as “violently charged environments”, and a study by Van Wyk *et al.* (2016:547) showed that in some instances, paramedics are reluctant to attend to emergencies unescorted by security personnel. Even the people in those communities are constantly afraid of the violence (Steinman, 2003:5). Mooki (2012:1) attests that violence against paramedics is of concern. The report stated that two female paramedics were attacked and one raped while attending to an emergency case of a two-year-old in Gauteng (Mooki, 2012:1). Due to the increase of violence against paramedics in Victoria, United States, paramedics refused to service certain areas within their jurisdiction due to constant exposure to violence (Yahoo 7 news, 2016:1).

In spite of the media reports on workplace violence against paramedics while treating patients, this phenomenon has attracted limited research in the South African context. An investigation into workplace violence among paramedics during emergency call-outs in Gauteng can assist the Gauteng Emergency Medical Services with the development of guidelines to reduce violence.

## **1.2. Problem statement**

Workplace violence is one of the types of violence affecting healthcare workers globally. Workplace violence against paramedics is one of the South African health and safety issues that need urgent attention. In South Africa, Govender *et al.* (2012)

indicated that high risk and exposure to workplace violence threaten the safety of paramedics, hence, paramedics are migrating to safer areas of work. Currently, in Gauteng, the prevalence of workplace violence was 73.8 %, with verbal abuse being the most common type at 66 % (Nkadimeng, Engelbrecht & Rajan, 2024:253). The causes of the attacks are unknown. An investigation into the prevalence, causes and types of workplace violence affecting paramedics in Gauteng, South Africa, including the paramedics' perceptions on workplace violence, is needed. Hence, this study is of the utmost importance.

### **1.3. Research aim**

To explore the perceptions of paramedics about the prevalence, causes and types of workplace violence affecting paramedics in Gauteng, South Africa.

### **1.4. Research objectives**

In order to fulfil the research aim, the following objectives guided the study:

1. To determine the incidence of workplace violence against paramedics; and
2. To describe the experiences and perceptions of paramedics regarding incidents, types and causes of workplace violence.

### **1.5. Research questions**

This section presents the main research question and subsidiary questions that the study sought to answer.

#### **1.5.1. Main research question**

The main research question that the study sought to address is this:

What is the nature and scope of workplace violence towards Emergency Medical Services staff in Gauteng, South Africa?

### **1.5.2. Subsidiary research questions**

1. What is the incidence of workplace violence against paramedics?
2. What are the experiences and perceptions of paramedics regarding types and causes of workplace violence?

### **1.6. Significance of the study**

The research may benefit the Emergency Medical Services (EMS) department by identifying the types and causes of violence with which their paramedics are faced, thus influencing the EMS approach towards violence against its staff members. The results will hopefully highlight to EMS managers in Gauteng, the violence their paramedics are exposed to on a regular basis and act as a tool of influence in the development of guidelines, including legislation and policies in relation to safety of paramedics.

If this research was not done, the information on the types, causes and perceptions of workplace violence against paramedics would have remained unknown.

### **1.7. Structure of the dissertation**

The study was structured in the following key stages.

**Chapter 1:** Overview of the study where the researcher provided the context of the study and the severity of workplace violence on EMS workers in South Africa, pointing out the research gaps.

**Chapter 2:** Literature review. The researcher conducted a literature search and reviewed studies on workplace violence on EMS workers on a global and local scale.

**Chapter 3:** Research methodology. The researcher described the methodological processes that were followed, including issues to do with validity, reliability and trustworthiness.

**Chapter 4:** Data analysis. In this chapter, the researcher presented results for both the quantitative and qualitative data.

**Chapter 5:** Conclusion and recommendations: The researcher presented findings from the primary study and offered recommendations for improving the safety of EMS workers in South Africa.

## **1.8. Summary**

This chapter laid the basis for the research. It outlined the prevalence of workplace violence on EMS workers globally, as well as in South Africa. The chapter then presented the research problem that necessitated this study, pointing out research gaps. The research objectives and research questions were outlined. The chapter then justified why this study was necessary, pointing out its significance to practice, knowledge and policy.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1. Introduction**

The purpose of the literature review is to review the research and current discussion about a particular problem that has been identified or that needs to be answered (Van Rensburg, Alpasla, Du Plooy, Gelderblom, Van Eeden & Wigston, 2010:61). Research on the working environment of paramedics in Gauteng shows that it is unsafe as there are sometimes physically attacked while on duty Nkadimeng, Engelbrecht & Rajan, 2024:253). There have only been a few studies done in the South African setting concerning the prevalence, causes, and types of workplace violence impacting paramedics, as well as the paramedics' perceptions of workplace violence, according to a thorough evaluation of pertinent literature. The researcher defined the terms "violence" and "workplace violence" and provided definitions relevant to this study after outlining the methodology for the literature search. The review's primary focal areas were the different forms of workplace violence, its prevalence, its causes, the opinions of emergency medical services personnel, and the effects of the violence on these personnel.

### **2.2. Literature search strategy**

To compile the literature related to workplace violence against emergency medical services (EMS) staff, the researcher conducted a systematic literature review guided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure transparency, reproducibility, and comprehensiveness. The search strategy utilized a combination of Boolean operators (AND, OR) and truncation to capture a wide range of relevant studies.

Key search terms included population terms such as "emergency medical services," "paramedics," and "EMS personnel"; phenomenon terms like "workplace violence," "aggression," "abuse," and "harassment"; and context terms such as "emergency

department," "trauma center," and "pre-hospital setting." These terms were combined into search strings to ensure a thorough search across multiple databases, including Scopus, PubMed, ProQuest, ScienceDirect, Web of Science, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). The search was conducted between January and March 2022 and was limited to studies published in English from 2012 to 2022 to ensure relevance and currency. Inclusion criteria focused on peer-reviewed studies addressing workplace violence against EMS personnel, while exclusion criteria removed studies unrelated to EMS or pre-hospital settings, non-peer-reviewed articles, and opinion pieces.

After removing duplicates, the titles and abstracts of identified studies were screened for relevance, followed by a full-text review to ensure they met the inclusion criteria. Data from the selected studies were extracted using a standardised template, capturing information on study objectives, methodology, key findings, context, and implications for EMS personnel. The findings were synthesised thematically to identify patterns, trends, and gaps in the literature. This systematic approach, combined with comprehensive search terms and clear inclusion criteria, addresses the reviewer's concerns about the superficiality of the initial search method. By aligning with the PRISMA framework and providing a detailed, reproducible process, the revised methodology enhances the rigour and credibility of the literature review, ensuring a robust foundation for the study.

### **2.3. Theoretical framework**

The study employed the Ecological Systems Theory (EST) as lens to explore workplace violence on paramedics. The theory, proposed by Urie Bronfenbrenner, is particularly suitable because it allows for a multi-layered analysis of workplace violence. EST divides the environment into five systems: the microsystem, the mesosystem, the exosystem, the macrosystem and the chronosystem (Koller, Raffaelli & Morais, 2020:160).

The microsystem involves immediate environments such as family and school, where direct interactions occur (Koller et al., 2020:248). The mesosystem reflects the interconnections between multiple microsystems, such as how family dynamics can influence school experiences. The exosystem includes broader social systems that indirectly affect development, such as parental workplace environments, while the macrosystem encompasses overarching cultural and societal influences (Xia, Li, & Tudge, 2020:11). The chronosystem refers to temporal changes such as shifts in workplace violence trends over time. Bronfenbrenner stressed that each of these systems does not function in isolation; rather, they interact dynamically to shape individual development across the lifespan (Tong & An, 2024:3).

The Ecological Systems Theory aligns well with the study's focus on understanding the prevalence, causes, types, and impacts of workplace violence, as it accounts for the complex and interconnected factors that contribute to this phenomenon. Additionally, EST provides a foundation for developing targeted interventions at multiple levels, making it both theoretically and practically relevant for addressing workplace violence in emergency medical services.

## **2.4. Defining violence**

Violence refers to any situation in which a healthcare professional is intimidated, mistreated, or attacked (Hamby, 2017:167). A more specific definition of violence is sometimes given as "the use of physical force to injure someone" (Zhulavska & Piantkovska, 2016:17). Workplace violence refers to any act or threat of physical assault, harassment, intimidation, verbal abuse, or other disruptive behaviour that occurs in or is related to the work environment (Viking, Hugelius & Kurland, 2022:5). It can involve employees, supervisors, clients, visitors, or strangers and may range from verbal threats to physical attacks, including homicide. Within this framework, acts of "physical harassment, sexual abuse, hostility, mobbing, and bullying" are frequently considered forms of violence (Alkorashy & Al Moalad, 2016:227). Nonetheless, it's important to recognise the differences between the various forms of violence.

Physical violence, which includes acts like hitting, kicking, and striking, is the most common kind of violence in the world (Zhulavska & Piantkovska, 2016:17). Acts of aggression like kicking or spitting are also seen as violent. Moreover, vocally aggressive behaviour includes calling names and using profanity in speech, even when there is no physical contact involved (Hamby, 2017:167). Lastly, sexual harassment and acts of menace with the intention of causing harm are instances of violence.

## **2.5. Defining workplace violence**

Workplace violence refers to incidents in which employees are mistreated, intimidated, or attacked in situations connected to their employment, including travelling to and from work, with an explicit or implicit danger to their safety, well-being, or health (Al-Qadi, 2021:3; Hamby, 2017:170). Violence has been further divided into three categories: situations where the perpetrator is not related to the victim; situations where the perpetrator is a service user; and situations where the perpetrator is a coworker, supervisor, or management (Bambi, Guazzini, Felippis, Lucchini & Rasero, 2017:40). The research is still divided on what constitutes workplace violence, though, with some academics proposing that psychological and structural violence, which may not always entail direct physical harm—should be included more broadly (Smith & Jones, 2020:47). The need for a more complex view of workplace violence is highlighted by this lack of agreement, especially in high-risk occupations like emergency medical services (EMS).

## **2.6. The prevalence of workplace violence against paramedics**

Workplace violence is a global workplace challenge that has attracted the attention of human rights organisations, labour organisations and governments to find a solution to ending this phenomenon. In this section, the literature on workplace violence against paramedics has been divided into international and South African

environments. It is crucial to remember that the prevalence of workplace violence is frequently underreported because of cultural shame, a lack of reporting channels, and fear of reprisals. These factors can distort the data and restrict how broadly the findings can be applied (Johnson, Smith & Williams, 2019:899).

### **2.6.1. International perspective on workplace violence against EMS**

Nelson (2014:1373) found that widespread occurrences of high rates of workplace violence against health workers occurred worldwide. A study conducted by Rahmani, Hassankhani, Mills, and Dadashzadeh (2015) to establish the nature, extent and contributing factors to violence against Iranian emergency medical technicians, estimates of physical violence against paramedics vary greatly around the globe, ranging from 2.9% to 79.5%. A related study conducted by Sheikhbardsiri, Afshar, Baniyadi and Farokhzadian (2022:4) investigated workplace violence against prehospital paramedic personnel in Iran. The study found that the most frequent types of workplace violence were verbal violence (47%), physical violence (32.50%), cultural violence (16%).

Violent incidents that have an impact on the provision of healthcare globally have been recorded by the International Committee of Red Cross (2015:15). Its primary goal was to identify the most common forms of violence against healthcare professionals and its manifestations (ICRC, 2015:5). The study's conclusions indicated that both patients and family members have threatened and physically attacked healthcare staff. Health care professionals who are impacted by workplace violence include paramedics. However, most foreign research relies on self-reported data, which can create bias because participants may underreport events out of fear of cultural norms or professional repercussions (Brown & Green, 2018:46).

In Australia, Bigham et al. (2014:489) carried out a study to characterise and investigate the violence that paramedics encounter while working in ground ambulance settings. According to the findings, 75% of participants said they had

experienced violence in the 12 months prior. Verbal abuse accounted for 67% of all reported forms of violence, with intimidation at 41%, physical assault at 26%, sexual harassment at 14%, and sexual assault at 3%. It was determined that patients were the most frequent offenders of violence. It was reported that female healthcare professionals were the most impacted.

Moustafa and Gewaifel (2013:243) carried out a study in Egypt to find out how often workplace violence was among female staff members at the Main University Hospital in Alexandria. The study's findings showed that women were 72.6% more likely to experience violence, with verbal abuse accounting for 70.7% of all cases. The next highest percentage was 2.2% for sexual violence, while the lowest was 17.4% for physical violence. This discrepancy in results raises the possibility that contextual and cultural factors influence the frequency and kind of workplace violence, calling for more studies in a range of contexts (Jones & Patel, 2020). It is important to note that workplace violence against female workers in Arab societies is linked to their cultural and religious practices, which normalise gender-based discrimination against women (Jesús Carrasco-Santos et al., 2023:3). A meta-analysis conducted by Shabanikiya, Kokabisaghi, Mojtabaeian, Sahebi and Varmaghani (2021:206) exploring global prevalence of workplace violence on paramedics established that paramedics in Europe and North America are more at risk of WPV than other regions, while those working in Asia and Australia have the lowest risk of occupational violence. In the Middle East, paramedics experience the highest level of verbal violence and a relatively high level of physical violence (Shabanikiya et al., 2021:207).

Newbury-Birch, Martin, Giles, Moat and Shevills (2017:2) conducted a survey to ascertain the fear of, and actual levels of, assault amongst the Northeast Ambulance Service in the United States of America. The findings revealed that 93% of participants reported that they have experienced a threat of violence, with 47%, having been assaulted by a (perceived) intoxicated member of the public, while 45% endured some form of sexual assault or harassment. The evaluation revealed that most research concluded that there are no appreciable variations in verbal aggression between genders. In general, men were marginally more vulnerable than women. Murray et al. (2020:488) conducted a comprehensive literature analysis to determine

the global frequency of violence against medical services responders in the workplace. The results showed that career exposure for EMS responders to at least one instance of verbal and/or physical violence was between 57 and 93 per cent. The reviewed studies show that data on WPV against paramedics is mainly focused on developed countries and the Middle East, with very little focus on Africa and South Africa in particular.

### **2.6.2. Workplace violence on EMS in South Africa**

In 2012, two female paramedics in South Africa were attacked, and one of them was sexually assaulted while tending to a two-year-old child who had burn injuries (Mooki, 2012:1). This information was published in the Independent web story on March 5, 2010. While helping a patient in Yeoville, Gauteng, on January 29, 2016, News 24 reported that paramedics from Johannesburg were robbed at gunpoint (Quintal, 2016:1). Rocks were thrown at police and medical personnel in Tsakane, Gauteng, on September 7, 2014, according to eNCA (Nzimande, 2014:1). A study conducted by Khoza, Sibiyi and Mshunqane (2024:4) investigated factors predisposing paramedic technicians to workplace violence in Gauteng. The findings revealed that workplace violence toward public service EMTs' in Gauteng is attributed to the high rates of crime, the widening gap of inequality and economic deprivation. In South Africa, the frequency of workplace violence is not well-known. This absence of comprehensive data underlines the necessity for rigorous data collecting and reporting methods to better understand and combat workplace violence in the South African setting (Govender, Smith & Jones, 2020:78).

As an example, Wassermann (2018) used narrative inquiry to investigate how first-year History Education students saw South African history and found that personal narratives influenced their comprehension of historical context and national identity. Analysed teacher narratives about literacy acquisition in the Northern Cape, showing how these stories mirror larger themes of agency and identity in learning environments (Botha & Hendricks, 2019). The significance of narrative as a tool for comprehending educational experiences and the sociocultural elements influencing them is highlighted by this research. While these studies provide valuable insights into

narrative methodologies, their relevance to workplace violence in EMS is limited, highlighting the need for more focused research in this area (Smith & Jones, 2021:47).

## **2.7. The types of workplace violence against paramedics**

There are different types of WPV against paramedics emerging from literature. In Australia, Boyle and McKenna (2017:93) carried out a study to determine the kind and quantity of workplace violence incidents that undergraduate paramedic trainees encountered during their clinical placement aboard an ambulance. According to the survey, women made up 56% of individuals impacted by workplace violence, with verbal abuse accounting for 18% of cases and intimidation for 17%. One (1) female paramedic student among the impacted group experienced sexual harassment more than once. These studies highlight the vulnerability of paramedic trainees and the need for improved safety measures during clinical placements.

Bedia et al. (2016:145) assessed the locations, details, and outcomes of work-related injuries that paramedics and emergency medical technicians in Turkey had received. According to the findings, from a sample size of 163 personnel, 39.8% of participants reported experiencing physical violence from patients' families, while 94.9% of participants reported verbal abuse from the community. In terms of gender, paramedics who were male were more likely to face physical attacks, while those who were female were more likely to experience verbal abuse. Fjeldheim et al. (2014:1) investigated the link between experiences of paramedic trainees to posttraumatic social disorders. While the study identified several traumatic incidents contributing to post-traumatic social disorder, what is pertinent to this study is that 33% of the participants experienced physical assault (33%). The reviewed studies highlight the types of violence faced by paramedics. However, most of the studies were based on developed countries.

### **2.7.1. Verbal violence**

According to Holgate (2015), verbal abuse is the most common form of violence against paramedics (Viking et al., 2022:4). Using language that is or is intended to be personally offensive is commonly referred to as verbal abuse. Aggressive verbal abuse includes derogatory remarks and foul vocabulary. When someone is verbally abused, it's common for phrases to be used that show a clear disregard for their worth and dignity (Boyle & McKenna, 2017:93).

### **2.7.2. Physical violence**

In the workplace, physical assault is a common form of violence (Newbury-Birch et al., 2017:2). The use of physical force against a person, including physical contact without that person's consent, is referred to as physical violence (Zhulavska & Piantkovska, 2016:17), regardless of whether injury results. This includes hitting with one's body parts; examples of physical violence include slapping, kicking, punching, pinching, scratching, biting, pulling hair, hitting with an object, hurling an object, spitting, beating, shooting, stabbing, squeezing, and twisting (Kowalenko, Gates, Gillespie, Succop & Mentzel, 2013:199).

Although there are cultural variances, it has been observed that there is a trend towards weapon-related violence against paramedic technicians, particularly in South Africa (Etheridge, 2017; Khoza et al., 2024:4)). When EMS personnel in South Africa come into touch with patients and onlookers, they frequently experience physical assault (Holgate, 2015:78). Holgate's (2015:78) study found that the perceived incidence of violence towards the paramedics was 56%, which is lower than that experienced by their international EMS colleagues. Apart from interactions with patients and onlookers, another potential cause of abuse is aggressive criminal behaviour. Since they routinely visit high-crime areas unarmed and after dark, it is thought that EMS workers are seen as "easy targets" (Holgate, 2015:78). Thieves target emergency medical services workers in an effort to gain access to expensive medical supplies, prescription drugs, cell phones, and tablet computers. There is no

national data available on the number of SA EMS personnel who have fallen victim to criminal activity while performing their duties. Moreover, the reporting system is weak as victims do not feel comfortable reporting crimes, assaults, or mistreatment that occurs to them while they are working (Holgate, 2015:78).

### **2.7.3. Sexual harassment**

One type of workplace violence that usually affects female workers is sexual harassment. In the healthcare industry, sexual harassment can manifest as physical or verbal abuse. Typically, patients are the ones who commit acts of violence; however, other staff members, management, friends, and relatives of patients may also be involved (Alkorashy & Al Moalad, 2016:227). There may be serious psychological effects when someone violates, assaults, or makes sexually explicit remarks to a patient or staff member in a hospital setting (Zhulavska & Piantkovska, 2016:17).

### **2.7.4. Threatening behaviour**

The use of threats is another way that workplace violence presents itself. According to Zhulavska and Piantkovska (2016), intimidating behaviour is similar to common law assault in that it can happen even when there is no actual physical contact. According to Alkorashy and Al Moalad (2016:227), it includes actions that could endanger someone's safety, such as making angry or threatening gestures, staring with the intent to harm, and acting in a way that could lead to more harm.

## **2.8. Factors that influence workplace violence against paramedics**

Emergency medical services personnel are subjected to a variety of violent acts, including physical, sexual, and verbal abuse. However, the situations in which these acts occur are never the same, making it difficult to identify the root causes of these violent incidents. Koritas, Boyle, and Coles (2009:417) investigated workplace

violence toward paramedics in the United Kingdom. The study found that in 2007, 1,006 physical assaults against ambulance staff in England were recorded. The study found that sexual harassment, verbal abuse, intimidation, and sexual assault all developed into predictions.

The number of hours a paramedic spends in direct patient contact each week, their qualifications, and their response time to an emergency call have all been found to be predictive factors of verbal abuse. Bigham et al. (2014:489) also found that patients, some of whom were reportedly intoxicated, were the attackers in these assaults, and that conflict between family members and paramedics at receiving hospitals was a contributing factor to violence. These findings suggest that operational factors, such as response times and patient interactions, play a significant role in workplace violence, necessitating targeted interventions (Jones & Patel, 2020).

## **2.9. The perceptions of paramedics on workplace violence**

The perception of paramedics of workplace violence varies according to context. In the United States of America, paramedics in the firefighting field reported that women firefighters suffered more patient-initiated violent injuries than their male counterparts (Taylor et al., 2016:150). It was also demonstrated that women were perceived to be more likely than men to suffer violent injuries at the hands of their patients. Furthermore, the study by Bigham et al. (2014:489) revealed that there were more physical assault instances against female paramedics than men, which further corroborated the opinions of the Philadelphia Fire-Fighter Advisory Board (Taylor et al., 2016: 150).

Furin et al. (2015:459) carried out a study in England to describe perceptions of safety and self-reported abuse. The study also looked at potential disparities in years of experience, gender, and shift in an urban EMS system. They found that 68% of individuals expressed concern for their own safety. Compared to men, women were more afraid about their safety. Regarding assault, there were no statistically significant gender differences. This discrepancy between perception and reality highlights the

need for further research to understand the factors influencing paramedics' perceptions of safety (Jones & Patel, 2020:13).

Newbury-Birch et al. (2017:2) conducted a study to establish workplace violence among the North East Ambulance Service personnel. Paramedics who participated in the study highlighted experiencing most callouts related to alcohol on weekend evenings. Most of the paramedics indicated that they had received threats of violence. Some indicated that they experienced physical assault by an allegedly drunk member of the public. In the South African context, a study conducted by Khoza et al. (2024:5) highlights that paramedics in Gauteng mainly experienced physical violence linked to the high rates of crime, the widening gap of inequality and economic deprivation

From the literature reviewed, only one study addressed workplace violence among paramedics in Gauteng, South Africa. Based on this preliminary literature review, there are gaps about prevalence, types, causes and perception of paramedics on workplace violence, hence, the study is of vital importance.

## **2.10. Impact of workplace violence on emergency medical services workers**

Workplace violence affects EMS professionals' employers, nursing students, witnesses to violence, and personal and professional life in addition to having long-term effects on these individuals. The personal ramifications of violence in the workplace might vary, encompassing behavioural, psychological, and physical impacts as well as a decline in emotional stability (Murray et al., 2020:488).

Workplace violence is linked to employee turnover (Ball et al., 2023:3). Govender et al. (2012:59) studied in South Africa the impending departure of advanced life support paramedics to foreign jobs. The study focused on the main push and pull factors that cause paramedics to migrate to South Africa. The two main reasons paramedics left South Africa were found to be working conditions and physical security. Additionally, Holgate (2015:58) carried out a study in South Africa that examined pre-hospital staff members' perceptions of their safety. He emphasised that many variables, including inadequate staffing, interpersonal violence, fatigue, and poor management

communication, can endanger the safety of paramedics. The two studies emphasised how important it is for paramedics to be safe.

Fjeldheim et al. (2014:1) and Al-Qadi (2021:64) assert that paramedical personnel who become victims of workplace violence face cumulative consequences including the emergence of posttraumatic stress disorder and drug abuse in addition to acute trauma from physical attack. PTSD symptoms and psychological trauma are two potential threats to emergency medical professionals (Wolf, Delao & Perhats, 2014:305). According to Itzhaki et al. (2015), exposure may also lead to stress and lower nurses' levels of life satisfaction. Workplace violence has negative effects on nurses' motivation, performance, relationships with coworkers, productivity, and ability to provide quality patient care. It also increases the risk of errors being made (Friis, Larsen & Lasgaard, 2018:494). Businesses and employees are affected by workplace violence directly as well as indirectly (Wolf et al., 2014:306). The following factors are connected to the indirect impacts and have an impact on employees' employment experiences (Friis et al., 2018:495):

- Lack of interest and enjoyment in interacting with patients (Wolf *et al.*, 2014:306);
- Viewing the workplace as an unsafe place, leading to decreased workplace morale;
- thoughts of resignation can be influenced by perceptions of a lack of support (Ramacciati, Ceccagnoli & Addey, 2015:274); and
- loss of experienced nursing staff from the profession and difficulty in getting new staff (Ramacciati *et al.*, 2015:274).

On the other hand, there are substantial upfront costs associated with sick absence, decreased output, property damage, poor nurse attendance rates, and workers' compensation expenses (Holgate, 2015:58). The violence they witness in the workplace hurts those who witness violence against nurses. A decline in the number

of students choosing nursing as a career, emotional reactions, and a drop in morale and self-esteem are some of these outcomes (Ramacciati et al., 2015:274; Wolf et al., 2014:306).

## **2.11. Summary**

The chapter engaged literature on workplace violence against EMS workers, focusing on both the global and South African contexts. Firstly, the literature search strategy that was employed in the study was explained and the steps outlined. Secondly, the definitions of violence and workplace violence were provided. Thereafter, the chapter explored the global prevalence of workplace violence of EMS workers and then provided the South African context afterwards. The types, causes and impact of workplace violence on EMS workers were reviewed. In the next chapter the researcher presents the research methodology, which explains the research processes that guided this study.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1. Introduction**

In the previous chapter the researcher reviewed literature on workplace violence against paramedics, focusing on the global and South African perspectives. In order for this study to come up with credible, valid and trusted findings, the methodological processes should be clear for the reader. To that end, in this chapter the researcher explains the research approach chosen and the justification thereof. Secondly, the researcher presents the research design chosen in line with the mixed-methods approach. The study setting, the population, sampling and sampling techniques are further described. After presenting the inclusion and exclusion criteria, the researcher then outlines the data collection instruments employed for the quantitative and qualitative sections of the study. Validity and reliability as well as trustworthiness of findings are discussed. Lastly, the researcher provides the ethical issues that were considered before, during and after the research journey.

### **3.2. Research philosophy**

Philosophy-based ideas or presumptions serve as the foundation for research projects, providing direction and validation for the data and conclusions. Science-related information is explained by philosophical paradigms (Pulla & Cater, 2020:10). A research philosophy is a belief about how information about a phenomenon should be obtained, examined, and used, according to Jackson, Drummond, and Sakile (2017:25). There are three main research philosophies namely: interpretivism, positivism and critical realism (Cropley, 2019:18).

Positivism is rooted in the belief that reality is objective and can be measured through observable, empirical evidence (Cropley, 2019:18). It emphasizes quantitative methods, hypothesis testing, and the pursuit of generalizable laws, often relying on structured data collection and statistical analysis (Crossman, 2020:5). In contrast,

interpretivism posits that reality is subjective and socially constructed, varying based on individual experiences and contexts (Pulla & Carter, 2020:10). This philosophy prioritizes qualitative methods, such as interviews and observations, to explore the meanings and interpretations people attach to their experiences, aiming for a deeper understanding of phenomena rather than generalization (Crossman, 2020:5).

Critical realism bridges these perspectives by acknowledging the existence of an objective reality while recognizing that our understanding of it is influenced by social, cultural, and contextual factors. It seeks to uncover the underlying structures and mechanisms that shape observable events, often combining both quantitative and qualitative methods to provide a more comprehensive explanation of complex social phenomena (Streefkerk, 2019:3). Each philosophy offers distinct epistemological and ontological assumptions, guiding researchers in their choice of methods and the interpretation of findings.

This study used pragmatism because it was assumed that in order to completely comprehend the prevalence of violence and the experiences that EMS personnel have with it, the issue needed to be both measurable and comprehended in relation to human experiences and perspectives.

### **3.3. Research approach**

Three research approaches can be identified: qualitative, quantitative and mixed-methods research. According to Creswell & Creswell (2017:205), qualitative research is a procedure that includes gathering, analysing, and interpreting non-numerical data like language. In qualitative research, a naturalistic, interpretive method is used to comprehend a phenomenon (Aspers & Corte, 2019:139). A qualitative investigation looks into a phenomenon in its natural environment and tries to explain it or interpret it in terms of the meanings that people give it. Benefits of a qualitative research approach include clarifying the relevance of participants' actions and providing a comprehensive (depth) depiction of their ideas, feelings, and experiences (Creswell & Creswell, 2017:205). The technique has come under fire for using a smaller sample

size that is applied to the whole research population. Aspers and Corte (2019:139) acknowledged that the small sample size of the study prevents the results from being substantially applied to other contexts. The approach is particularly useful when a researcher wants to know how a person interprets and subjectively perceives their social world (Aspers & Corte, 2019:140).

In contrast, quantitative research involves examining a recognised phenomenon through the application of statistical methods, numerical measurements, and theory testing (Aspers & Corte, 2019:139). Finding out whether a theory's predicted generalisations hold true is the focus of quantitative research. Testing causal links between variables, formulating predictions, and extrapolating the results to a larger population are the objectives of quantitative research (Creswell & Creswell, 2017:205). When examining quantitative data, statistical analysis is thought to be a rational and objective scientific method. One advantage of quantitative research is that its conclusions are more likely to be applicable to the entire population or a subpopulation because a larger, randomly selected sample is employed. Furthermore, data processing is done quickly since statistical software like SPSS is used (Rahman, 2016:105). Despite these benefits, there are nonetheless disadvantages to quantitative research. The positivist research paradigm excludes the common interpretations of social phenomena. It also doesn't search for explanations and deeper underlying meanings (Aspers & Corte, 2019:140).

Qualitative and quantitative research methodologies are combined in mixed method studies. Mixed-methods are less of a methodology and more of an approach to analysing a research problem, according to Jackson et al. (2017:25). According to Aspers and Corte (2019:140), the use of a mixed-method approach guarantees that biases resulting from the use of a single method do not arise. According to Kumar (2014:156), there is no distinction between the ontological or epistemological levels of inquiry used by quantitative and qualitative methodologies. Focusing on research challenges that necessitate analysing multi-level viewpoints, cultural influences, and real-life contextual understandings is what defines mixed-method research (Mertens, 2014).

Using a mixed-method approach has several benefits, one of which is the capacity to validate both qualitative and quantitative findings in order to guarantee the reliability of the conclusions (Hafsa, 2019:47). Furthermore, the shortcomings of the first strategy are made up for by the advantages of the other. Two problems with the method, particularly for a cross-sectional study like this one, are a lack of resources and time (Aspers & Corte, 2019:140).

For this study, a mixed-method, cross sectional, descriptive study was used to investigate workplace violence towards paramedics. The study consisted of two phases (Phase 1 and Phase 2) to be conducted in succession.

- **Phase 1:** This phase was quantitative in nature involving a self-administered questionnaire survey which provided an overall statistical picture of the prevalence of workplace violence against paramedics.
- **Phase 2:** Phase two was qualitative in nature involving semi-structured face-to-face interviews. This enabled the understanding of paramedics' perceptions with regard to workplace violence and analyse them in the form of graphs and explanations (Aliyu, Bello, Rozilah Kasim & Martin, 2014:81).

### **3.4. Research design**

A research design, according to Kumar (2014:156), is a methodical strategy for addressing the formulated research questions. According to Jackson et al. (2017), research design is the overarching approach selected to logically and cogently integrate the many study components to address the research topic.

The research design used in this study was survey-based. A survey research design is a technique for gathering data on a phenomenon from a group of people by posing several questions. A survey design is the best tool for determining the attitudes and orientations of a research population, claims Levin (2006) (Kumar, 2014:156). Survey designs come in two flavours: questionnaires and interviews. Open-ended questions allow researchers to incorporate qualitative elements into surveys in addition to the

quantitative ones (Aliyu et al., 2014:81). The two primary categories of survey designs are cross-sectional and longitudinal.

A cross-sectional survey is given just once, while a longitudinal survey is conducted over an extended period of time. A longitudinal design has the benefit of enabling the researcher to make clearer connections and gain a deeper understanding of cause and effect relationships (Cresswell & Hirose, 2019).

Furthermore, more comprehensive data collected over an extended period of time will yield superior and more concise results (Aliyu et al., 2014:81). Conversely, cross-sectional investigations can be carried out quickly, easily, and affordably. They usually come from surveys using questionnaires. There will be no need for follow-up interviews because participants are only interviewed once (Cresswell & Hirose, 2019).

It should be noted that the sample is not typical of the population because there are differences between people who consent to participate in the study and those who do not. Non-response bias could therefore be a possibility in a cross-sectional study (Kumar, 2014:157). Given that a mixed approaches inquiry is suited for this topic, a cross-sectional survey methodology was employed (Cresswell & Hirose, 2019).

### **3.5. Study setting**

The research was conducted in six districts within Emergency Medical Services (EMS) stations located in Gauteng, South Africa. In each district, there are five EMS stations, therefore there are 25 stations in total. Three categories apply to the paramedics working in such areas: basic life support (BLS), intermediate life support (ILS), and advanced life support (ALS). As they respond to emergency calls, the paramedics arrive in various vehicles. Although ALS uses response vehicles and BLS and ILS employ ambulances, they operate in pairs within each ambulance. Along with this, paramedics work 12-hour shifts, either day or night. Medical calls (heart attacks, asthma, etc.), standby calls (rugby and football events, etc.), trauma calls (accidents, gunshots, etc.), and inter-hospital transfer calls are all handled by them. Calls

regarding emergencies are taken in and recorded at the call centre operated by the EMS stations. From the contact centre, the paramedics are sent out.

### 3.6. Study population and sampling

The population for this study were paramedics in six districts in Gauteng. The Johannesburg EMS department has a total six districts in Gauteng. The population distribution of EMS workers for the districts as provided by the Johannesburg Emergency Medical Services and Rescue (Internal communication) (2018) is shown in Table 3.1 below.

**Table 3.1: Population for the EMS districts in Gauteng**

District name	Population
District 1	225
District 2	223
District 3	210
District 4	233
District 5	245
District 6	106
TOTAL	1224

Source: Tiwari, Naidoo, English and Chikte (2021:3)

#### 3.6.1 Sampling

Sampling is the process of choosing a number of study units from a predetermined study population, according to Turner (2020:9). Non-probability sampling, in which the researcher is unable to predict or ensure that every component of the population will be represented in the sample, and probability sampling, in which the researcher can predict in advance that every segment of the population will be presented in a sample,

are the two main categories of sampling. The sampling strategies for the quantitative and qualitative research stages of this mixed technique are outlined below.

### **Phase 1: Quantitative**

For the investigation, the researcher employed probability convenience sampling (Van Rensburg et al., 2010:163). Because probability sampling is more objective and efficient than non-probability sampling in quantitative research, it was used for the study (Turner, 2020:9). To guarantee a representative sample of individuals, random convenience sampling was used for participant selection. With the exception of private EMS services, the researcher chose at random EMS personnel who were working shifts in Gauteng and providing rescue and emergency medical care.

### **Phase 2: Qualitative**

Purposive sampling was used to select participants into this phase of the study. The participants were selected based on the data analysis of Phase 1. The participants were selected to participate in the interview (see appendix C). The participants were selected based on their exposure to workplace violence and the willingness to share their experiences.

Additionally, participants were selected according to the characteristics and objectives of the study. Those who did not meet the profile were excluded, i.e. participants who answered “NO” to question 10 of the questionnaire, which is “Can you share your experience/s of violence?”

The qualitative sampling was done once the EMS personnel gender information was disclosed by the Johannesburg head of EMS department, after the submission of the approved research proposal and ethics committee certificate to them. The researcher contacted the Johannesburg head of EMS department. Once the approval for data

collection was given from the Johannesburg EMS, the researcher identified the participants who answered “YES” to question 10.

### **3.6.2. Sample size**

There are 1244 emergency personnel in all six districts. Using a Raosoft sample size calculator (Olufunso, 2010:90), the sample size was calculated with a 5% margin of error, a 95% confidence level, a total population size of 1244, and a 50% response rate/distribution. In each of the six districts, a minimum of 294 individuals was the suggested sample size. Copies of the questionnaire were classified to reflect the district in question and its personnel. Section heads served as field workers, distributing questionnaire copies. Participants were asked to place their copies of the questionnaire in a designated box.

Dworkin (2012:1319) pointed out that while sample sizes for qualitative research methods are typically less than those for quantitative research methods, data saturation determined the sample size needed for interviews within a district. Gentles, Charles, Ploeg, and McKibbon (2015:1781) contend that it is not feasible to determine the appropriate size of the qualitative sample prior to a study (Gentles et al., 2015:1782). Dworkin (2012:1320) went on to say that a staggering amount of book chapters and publications recommended that five to fifty people be sufficient. Eleven subjects were selected for the study since it was thought that their numbers would be sufficient to accomplish saturation. Saturation refers to the point at which the researcher establishes that the collected data is becoming repetitive of what is in earlier collected data (Dworkin, 2012:1321). Therefore, the researcher determines to stop data collection as new data will not add new information. In this study, the researcher determined that saturation had been reached after the eleventh participant.

### **3.6.3. Inclusion and exclusion criteria**

#### **Inclusion criteria**

Participants who were included in the study are:

- Paramedics in six districts of EMS Gauteng.

#### **Exclusion criteria**

Participants who were excluded from the study are:

- EMS Management and administration staff of the institution;
- The five participants who piloted the questionnaires;
- Participants who did not meet the characteristics and objectives of the study;  
and
- Private EMS paramedics.

### **3.7. Data collection**

Data collection methods and instruments chosen for this study were in line with the mixed-method approach. This meant that there was data collection for the quantitative phase and data collection for the qualitative phase as described in this section.

#### **Phase 1: Quantitative**

To gather information, a questionnaire was employed. The questions were of the expression (open-ended) and Likert (closed-ended) types (Vogt, 1999). The use of questionnaires was appropriate in this study as it allowed the researcher to collect data from a large number of participants simultaneously, making it time and cost-efficient. In addition, questionnaires allow respondents to respond anonymously

(Ranganathan & Caduff, 2023:153), which is particularly important when studying sensitive topics like workplace violence. Anonymity encourages honesty and reduces the risk of social desirability bias. The questionnaire (see Annexure A) was divided into three main sections, each addressing specific aspects of the study. The structure and content of the questionnaire are as follows:

### **Section A: Important Information and Instructions**

This section provides respondents with essential details about the study, including its purpose, the voluntary and anonymous nature of participation, and instructions for completing the questionnaire. Respondents were instructed to mark their answers with a cross in the appropriate boxes and to complete the entire questionnaire.

### **Section B: Demographic Information**

This section collected basic demographic and professional information about the participants. It included questions about respondents' employment in the Gauteng/Johannesburg Emergency Medical Service, age group, gender, and professional qualification.

### **Section C: Main Questions**

This section focused on respondents' experiences of workplace violence. The questions focused on the work environment workplace violence response patterns, and reporting procedures for violence. The questions also asked about the frequency, type (physical, verbal, sexual, emotional), and context (time, day, location) of violence experienced. The questions on perpetrator information and the nature of the violence were included. The questionnaire also provided a checklist of potential causes of violence with space for additional comments. Lastly, open-ended questions were included about the respondent's reaction to the incident, what they could have done differently, and suggestions for preventing future occurrences.

The questionnaire consisted of 25 questions, divided into three sections. It was designed to be concise, and it took approximately 15–20 minutes to complete. The researcher did not include respondents who had participated in the pilot test. To ensure that each participant received a copy of the questionnaire, the researcher designated a field worker. In order to finish the questions, the subjects had at least 24 hours. The researcher left a box for inserting completed questionnaires at every data collection site.

## **Phase 2: Qualitative**

The study used one-on-one interviews. Following the recommendations provided by Meurer et al. (2007:1067), during the one-on-one interviews, the researcher gave the ground rules, and the interview had a 20-minute time limit. Two digital audio recording devices were used to capture each participant's response to prevent accidental data loss.

Researchers note that there are no hard and fast guidelines when it comes to sample size determination for qualitative investigations. The majority of qualitative methodologists recognised the absence of sample size criteria in unison (Marshall, Cardon, Poddar, & Fontenot, 2013:11). Through their qualitative research, Taylor et al. (2016:151) interviewed paramedics and EMTs from the fire department ten times in total; five of the interviews were one-hour individual interviews and the remaining five were two-hour focus groups. The participants in this study were interviewed until data saturation, or until the researcher could find no more information through interviews. In order to find out whether any new notions were emerging after the tenth participant, the researcher interviewed the participants who had selected "YES" for question 10. The researcher concluded that saturation had been reached and ceased data gathering after establishing that no new aspects from the data were emerging.

### **3.8. Validity and reliability of the research tools**

Face validity, construct validity, and content validity are the three categories of validity; however, only content validity is most pertinent to this investigation. Test-takers and non-professional representatives of the legal system define face validity as the extent to which a measure seems associated with a certain construct (Aksay, & Ünal, 2016:5). To put it another way, a test has face validity if the questions only appear to be pertinent to the person taking it (Sürücü & Maslakçı, 2020:2697). For example, even a non-paramedic may subjectively assess the correctness of the notions in this study.

For a construct to be deemed scientifically legitimate in the context of construct validity, it needs to be positioned inside a "nomological network" composed of either statistical or deterministic laws. When it comes to construct validity, the researcher's job is to ascertain whether the conclusions drawn from the assessment's results are pertinent and appropriate given the study's main objective (Sürücü & Maslakçı, 2020:2698).

According to Sürücü and Maslakçı (2020:2698), content validity is a qualitative form of validity that evaluates whether the terminology in the measuring tool adequately represent the object being evaluated. This definition states that content validity in research assesses how well the research instrument fulfils its intended function (Sürücü & Maslakçı, 2020:2698). In order to confirm that the instrument accurately reflects the literature, content validity was employed to compare the measurement's content to the body of knowledge on the subject (Kimberlin & Winterstein, 2008:2279). The triangulation of quantitative and interview data established the study's legitimacy.

The term "reliability" describes a method of making sure that a tool used to measure experimental variables consistently produces results on respondents who are comparable each time. Winterstein & Kimberlin, 2008:2277. By first carrying out a pilot study, the validity of the questionnaire for the study was confirmed based on these descriptions. By creating a coding tree and guaranteeing coding consistency, the qualitative questions' dependability and reliability were improved.

### **3.9. Trustworthiness of qualitative findings**

This study ensured trustworthiness by satisfying the required quality criteria for transferability, dependability and confirmability, outlined by Middleton (2019:3). The process followed towards meeting quality criteria for trustworthiness is articulated in the sections for transferability, dependability and confirmability below.

#### **3.9.1. Transferability**

Transferability refers to the degree to which results of qualitative research can be transferred to other contexts with other respondents and is the interpretive equivalent of generalisability. According to Korstjens and Moser (2018:122), the researcher uses thorough descriptions and deliberate sampling to make transferability easier for a potential user. The goal of the study was to guarantee "thick description." According to Middleton (2019:3), thick description entails providing background in addition to the behaviour and experience, making it more meaningful to an outsider. Each example was contextually analysed, and the responses were analysed and understood. By doing this, the study gathered and reported on data in a framework that allowed for adequate detail and context descriptions.

#### **3.9.2. Dependability**

Middleton (2019:3) defines dependability as the stability of findings over time. Dependability is established using an audit trail, stepwise replication, a code-recode strategy and peer examination (Aspers & Corte, 2019:140). An audit trail is the analysis of the research product and the inquiry process to verify the data. In order to demonstrate how data is gathered, documented, and evaluated, it requires the researcher to account for all study decisions and activities (Middleton, 2019:3). In this study, note-taking was used to capture data, or, if consented upon by participants, audio recordings were used. To determine whether the investigation contained errors

or faults in the design of the study, data collection, interpretation, or reporting of conclusions, an audit trail was carried out.

### **3.9.3. Confirmability**

Confirmability is defined as the extent to which results of an investigation could be confirmed or documented by other researchers (Middleton, 2019:3). The primary goal of confirmability is to demonstrate that the data and conclusions drawn from them are indeed obtained from the data and are not the product of the inquirer's imagination (Aspers & Corte, 2019:140). An audit of the data collecting and analysis procedure was conducted to verify whether the data and research conclusions are corroborated by the information contained in the audit trail. The supervisor gave the researcher help in addition to hiring a qualified statistician.

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### **3.10. Data analysis**

Since this was a mixed-method research project, data was analysed both quantitatively and qualitatively. The first phase of the data analysis was quantitative and the second phase was qualitative, as fully described below.

#### **Phase 1: Quantitative**

Raw data from the completed questionnaire copies were collected and analysed using a statistical program designed specifically for social science, such as SPSS 25.0. The quantitative data analysis process involved several systematic steps to examine the dataset and derive meaningful insights. First, descriptive statistics were employed to analyse demographic data, summarise the data and identify patterns in the distribution of responses. Frequency pie charts, graphs, tables and percentages were used to categorise and present the data, particularly for sensitive topics such as sexual abuse and workplace violence. This step was essential to understand the prevalence and nature of the issues under investigation, as well as to highlight any gaps in the data, such as non-responses due to confidentiality concerns.

Correlation analysis was conducted to explore the relationships between key variables, such as age, gender, job role, and exposure to violence. Pearson correlation coefficients were calculated to determine the strength and direction of these relationships, providing a foundation for understanding how different factors interact within the context of workplace violence. Finally, regression analysis was performed to predict the likelihood of exposure to violence based on independent variables such as gender, response to emergency calls, and location of incidents. This step was crucial for identifying significant predictors of workplace violence and assessing the impact of specific factors on the dependent variable. The regression model was evaluated using  $R^2$  values, ANOVA, and coefficient tables to ensure its statistical validity and reliability. These analytical steps were chosen to address the research objectives, uncover underlying trends, and provide actionable insights for mitigating workplace violence. The use of these methods was justified by their ability to handle large datasets, quantify relationships, and support evidence-based conclusions.

## **Phase 2: Qualitative**

The researcher employed a thematic analysis to examine all of the data in order to pinpoint recurring themes and common concerns, as well as to determine the key topics that encapsulated all of the viewpoints she had gathered. Major themes and

topics were examined by the researcher as primary material (Mortensen, 2020). To code data for this intended study, the following methods were employed:

- Assigning the initial set of codes after going over the data.
- Reading the data and code closely whenever possible.
- Categorising the codes and determining their placement inside the coding framework.
- Finding the recurrent motifs.

After identifying key themes, the researcher embarked on the process of data presentation which follows in Chapter 4.

### **3.11. Ethical considerations**

Prior to the commencement of the study, the researcher awaited ethical clearance and approval from the DUT Research and Ethics Committee.

A letter was written to the Gauteng EMS department requesting permission to collect data (**Appendix A**), following ethics clearance from the Durban University of Technology Research and Ethics Committees to conduct the study.

After approval, the participants were given a full explanatory letter (information letter) and a consent form prior to the distribution of the questionnaire and interviews (**appendix B and C**).

The following ethical concerns were observed in line with health sciences search standards (Miller, 2008:18).

### **3.11.1. Beneficence**

According to Varkey (2021), beneficence is a methodical approach to carrying out research in a way that maximises benefits rather than risks. The researcher weighed the risks and benefits of the study, taking into account all potential outcomes. In order to reduce any possible risk or injury, the researcher told participants that their names would not be disclosed and that pseudonyms would be used (Varkey, 2021). The researcher informed the participants that the data collection focuses on experiences of WPV, which might trigger sad memories and distress. The researcher informed the participants that, should they experience any trigger, they should notify the researcher, who would request a standby mental health professional, requested by the participant to assist them.

### **3.11.2. Non-malevolence**

The investigator bears the responsibility of implementing all appropriate steps to guarantee that study participants suffer no harm as a consequence of the research (Beauchamp & Childress, 2009:164). A number of moral precepts, such as the following, are supported by this straightforward idea: do not kill, do not cause pain or suffering, do not incapacitate, do not offend, and do not deprive others of the good life (Newman, Guta & Black, 2021:3). The researcher was careful to avoid making any assumptions about people based on their race, gender, socioeconomic status, physical or medical condition, or colour.

### **3.11.3. Informed consent**

Informed consent is an agreement between the researcher and the participant to participate in a study, preventing assault to integrity. A letter of consent was given to each participant to sign. In order to prevent frustrations, Cherry (2020:1) emphasises that informed consent should be obtained prior to the start of the study. In accordance with Doerr and Wagner's (2020:2) advice, the researcher disclosed to the participants the goals, methods, and hazards associated with the study. The researcher told the participants they could leave the study at any time if they felt uncomfortable with it.

#### **3.11.4. Privacy, confidentiality and anonymity**

The privacy of research participants was safeguarded by two ethical considerations: anonymity and confidentiality (Copes, Tchoula, Brookman & Ragland, 2018:65). According to Copes et al. (2018:65), anonymity means that a participant will remain anonymous until the study is over, while confidentiality means that a person's identity is not connected to data they submit or make public. In order to maintain participant anonymity during data collection and analysis, the researcher permitted participants to use pseudonyms.

#### **3.12. Summary**

Chapter 3 was confined to the methodology of the study. The researcher focused on the research philosophy, research approach, research design, population and sampling, data collection instruments, validity and reliability, data collection procedures, data analysis and ethical issues. This chapter laid the foundation for Chapter 4 on data presentation and interpretation.

## **CHAPTER 4: PRESENTATION OF RESULTS**

### **4.1. Introduction**

In the previous chapter the researcher outlined the research methodology applied for the study. This chapter is dedicated to the presentation and analysis of both qualitative and quantitative data. These two sections are divided into phase 1 for quantitative data analysis and phase 2 for qualitative findings. Demographic profiles of participants are presented in the initial section of the chapter to help understand their city of work, age, educational qualifications and field of work. The empirical data addresses the research objectives set in Chapter 1.

### **4.2 Respondents' profiles**

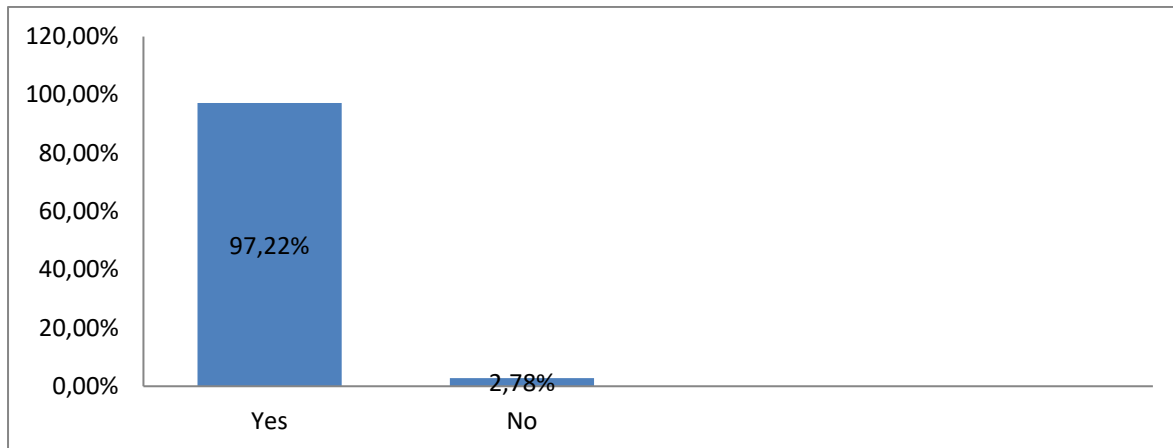
Copies of the questionnaire were distributed to 180 participants. Most of the copies were completed and returned. According to Saleh and Bista (2017:65), an acceptable response rate should be at least 60%. In line with this recommendation, the response rate for this study was 80%. The response rate per question varied, since some of the participants were skipping some questions.

### **4.3 Descriptive statistics of demographics**

In this section, the survey was intended to elicit information relating to demographics of participants, which in this study included city of work, age, gender, education level and field of work.

### 4.3.1 Participants who gave consent of his or her participation

Figure 4.1 highlights the number of paramedics who read, understood and agreed with the information on both the information letter and the consent form.

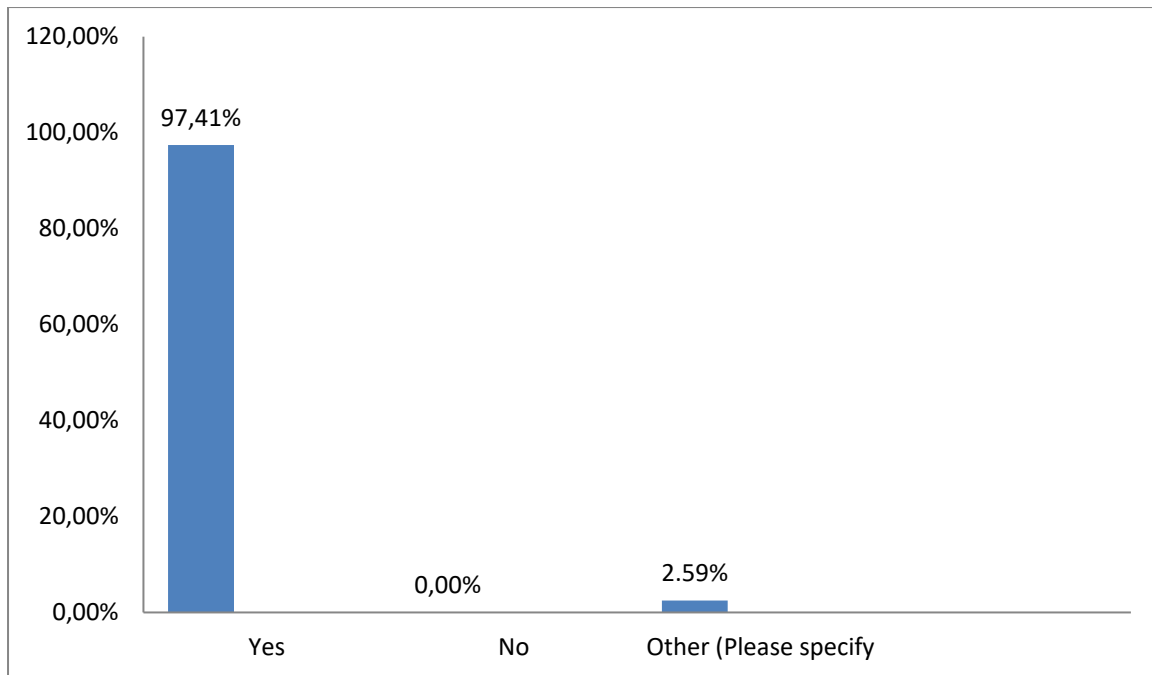


**Figure 4.1: Participants who consented to participate in the study**

As revealed in Figure 4.1, 97.22% (n=175) of the participants agreed to give consent for their participation. The other 2.78% (n=5) were not at liberty to give consent for their participation. This may be due to the fact that they feared that the information they would share would expose them to risks at the workplace. The response rate was 100% on this question.

### 4.3.2 City of work

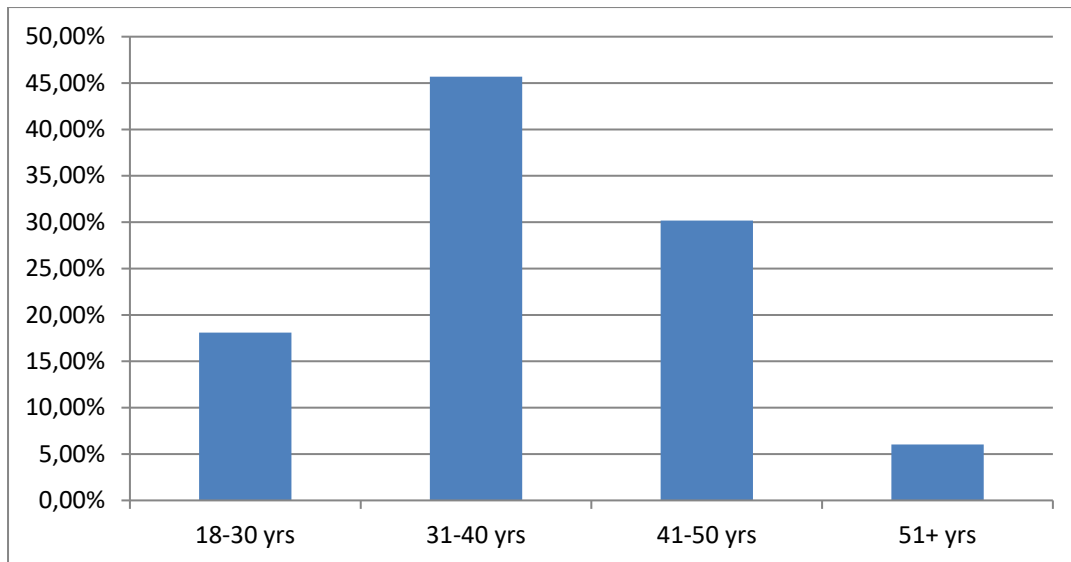
Figure 4.2 displays that the highest proportion of paramedics were based in Johannesburg, which was 97.41%. The other 2.59% were based in Pretoria.



**Figure 4.2: Participants who work in Gauteng/Johannesburg Emergency Medical Services**

#### **4.3.3 Distribution of the sample according to age**

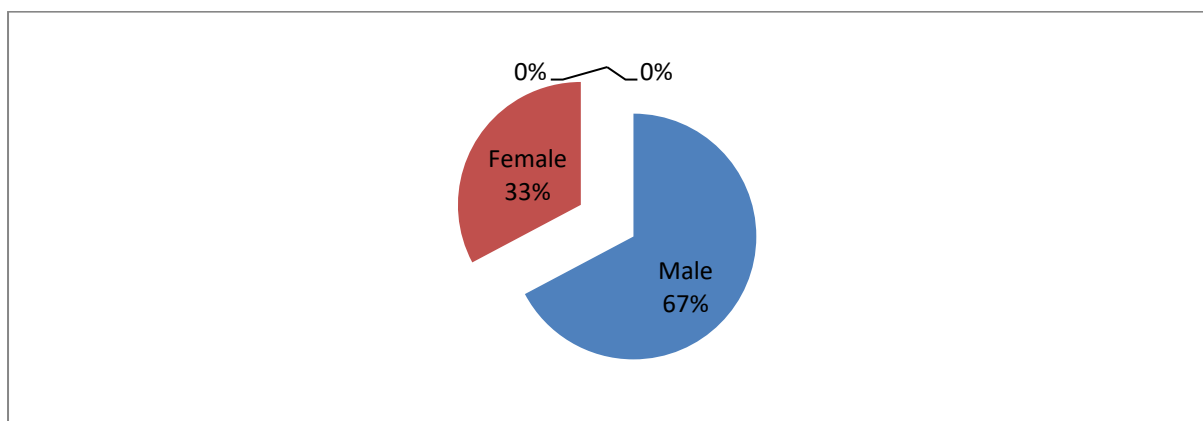
The participants were asked to indicate their age. As Figure 4.3 indicates, slightly less than half (45.69%, n=53) of the participants (n=116) were between 31 and 40 years, while a significant number (30.17%, n=35) of participants were between 41 and 50 years. A smaller number of the participants (6.03%, n=7) were over 51 years, representing the most senior members of the organisation. The data indicates that a youthful workforce was working in emergency medical service (EMS).



**Figure 4.3: Age of participants**

#### 4.3.4 Gender of respondents

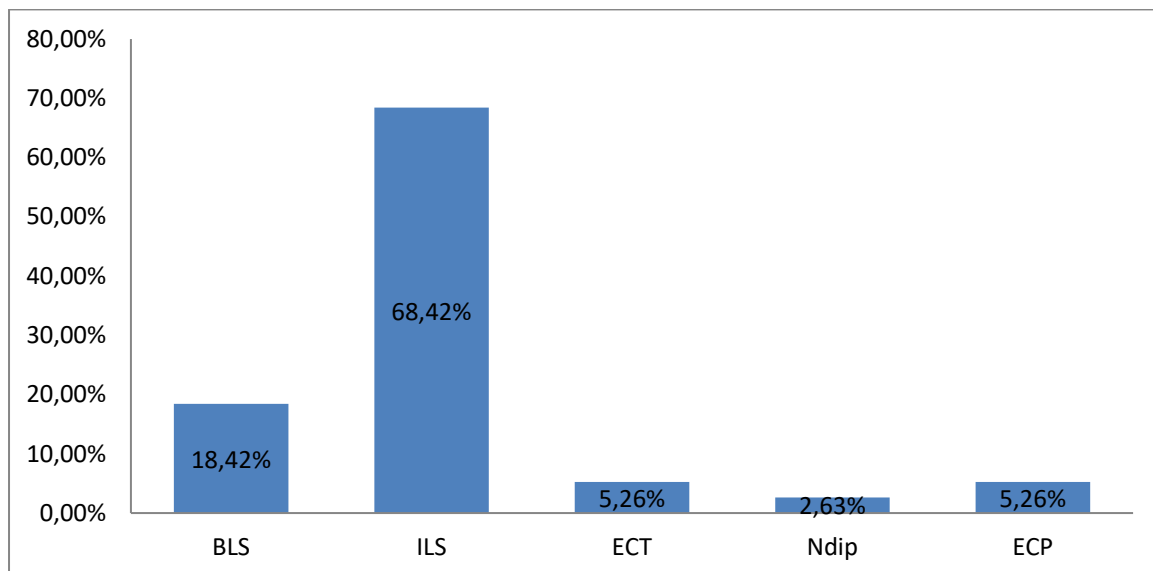
Figure 4.4 indicates the gender distribution of the participants. Out of the 180 participants, there were 67.24% males and 32.76% females. This distribution concurs with the findings of the literature review (Boyle & McKenna, 2017:93; Cenk, 2018:21) which showed that women were more vulnerable to WPV than their male counterparts. Additionally, despite offering abundant freedom to women to take up employment, the EMS labour market is still dominated by men.



**Figure 4.4: Gender distribution of participants**

#### 4.3.5 Distribution of the sample according to educational qualification level

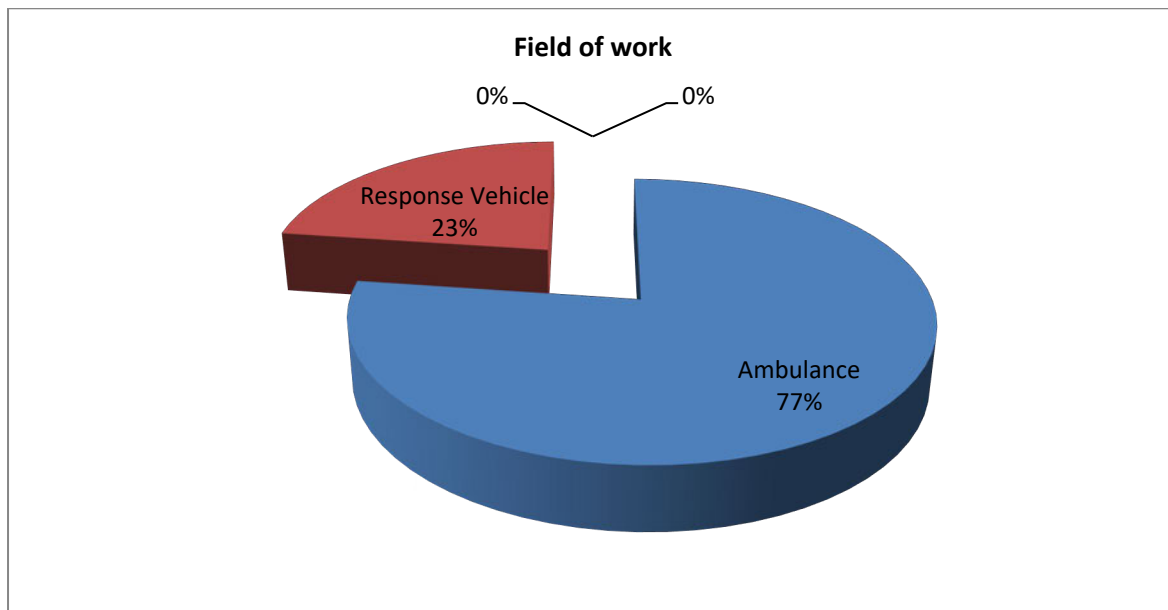
The participants were asked to indicate their highest qualification. Figure 4.5 indicates that all the employees at Gauteng Emergency Medical Services (EMS) had a qualification. More specifically, 18.42% of the participants were basic life support (BLS), 5.26% were emergency care technicians (ECT) and emergency care practitioners (ECP). The majority of the participants (68.42%) had intermediate life support (ILS), while 2.63% had National Diploma (NDip) qualifications. The qualifications reflect a competitive job market where employability is influenced by the level of education. Many companies prioritise professional development of employees as one of the ways to enhancing their skills and competences.



**Figure 4.5: Participants' qualifications**

#### 4.3.6 Distribution of field of work

Results revealed in Table 4.6, highlight that largest proportion 77% (n=88) of the total participants (n=114) worked at ambulance level, whilst 23% (n=26) worked at response vehicle level. The ambulance section has the highest number of employees.



**Figure 4.6: Working area of participants**

#### **4.4. Section A: Statistical analysis of quantitative data**

This section presents quantitative data which was extracted from the online survey.

##### **4.4.1: Frequency distribution per question**

In this section, the frequency distribution per question is depicted and interpreted in graph, pie chart and table format. Percentages will be used to interpret data.

##### **4.4.2. Response to emergency calls**

Participants were asked if they attended to emergency calls alone or with a partner. The responses are presented in Table 4.1 below.

**Table 4.1: Ways in which participants respond to emergency calls**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Alone	36	20.0	20.0	20.0
	Partner	144	80.0	80.0	100.0
	Total	180	100.0	100.0	

Table 4.1 highlights that 20% of the participants responded to emergency call alone, i.e. without a partner. On the other hand, 80% responded with partners. This may be for security reasons on the part of participants. In addition, the higher proportion of participants who responded with partners may reflect managements' approach of ensuring that EMS workers have support from colleagues when on duty. This view concurs with Maguire and O'Neill (2017), who indicated that this situational awareness shows that management anticipates risks that may befall EMS which can be mitigated when they were with partners or working in teams.

#### **4.4.3. Distribution of participants exposed to violence**

The study sought to understand if EMS employees were exposed to WPV while they were on duty. The responses are presented in Table 4.2 below.

**Table 4.2: Participants exposed to violence, while on duty**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Yes	137	76.1	76.1	76.1
	No	43	23.9	23.9	100.0
	Total	180	100.0	100.0	

The results revealed in Table 4.2, indicate that 76.1% of the participants were exposed to violence, while on duty. This may have been caused by the inability of government

to enforce laws which protect EMS personnel. The high proportion of workers exposed to violence may indicate the lack of inter-professional relationships. For instance, the dispatchers and communications personnel and the police should be informed about the potential risks so that the crew can be better prepared upon arrival (Maguire, Browne, O’Neill, Dealy, Clare & O’Meara, 2018:527).

**4.4.4. Distribution of participants exposed to violence on a weekly basis while on duty**

Participants indicated the number of times they were exposed to WPV in a week. Their responses are presented in Table 4.3 below.

**Table 4.3: Rate at which participants are exposed to violence on weekly basis while on duty**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	0–1 times	86	47.8	61.4	61.4
	2–5 times	38	21.1	27.1	88.6
	6–10 times	4	2.2	2.9	91.4
	more than 10 times	12	6.7	8.6	100.0
	Total	140	77.8	100.0	
Missing	System	40	22.2		
Total		180	100.0		

Table 4.3 highlights that most of the participants (61.4%) were exposed to violence 0–1 times per week, 21.1% were exposed 2–5 times per week and the least is 1.8% of

participants who were exposed more than 10 times in a week. In general, the data indicates that participants were highly exposed to violence while on duty.

#### 4.4.5. Types of violence encountered by participants

The study sought to understand the types of violence that paramedics face when they are out on their missions. The results are presented in Table 4.4 below.

**Table 4.4: Types of violence faced by paramedics**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Physical	50	27.8	29.2	29.2
	Verbal	81	45.0	47.4	76.6
	Sexual	40	22.2	23.4	100.0
	Total	171	95.0	100.0	
Missing	System	9	5.0		
Total		180	100.0		

The results presented in Table 4.4 show that 45% (n=81) of paramedics were subjected to verbal violence. In addition, 27.8% (n=50) faced physical violence and the lowest was sexual violence at 22.2% (n=40). The common types of WPV are consistent with the findings of the literature review which indicated that the most common types of WPV are verbal abuse (Boyle & McKenna, 2017:93), physical abuse (Banton, 2020) and intimidation, while sexual harassment was mainly experienced by women (Boyle & McKenna, 2017:93).

#### 4.4.6. Distribution of participants willing to share their experience

Participants were asked to indicate if they were willing to share their experiences of workplace violence. The responses are presented in Table 4.5 below.

**Table 4.5: Number of participants willing to share their experience**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Yes	134	74.3	74.3	74.3
	No	46	25.7	25.7	100.0
	Total	100	100	100.0	

Table 4.5 shows that 74.3% (n=134) of the participants were willing to share experiences of violence, whilst 25.7% (n=46) were not at liberty to share. Many paramedics were willing to share. Perhaps they were thinking that if they share, the issue of violence will be addressed.

#### 4.4.7. Reactions of participants on whether there are procedures for reporting violence

Participants highlighted whether their workplace has procedures for reporting violence or not as indicated in Table 4.6 below.

**Table 4.6: Reactions of participants on whether there are procedures for reporting violence while on duty**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Yes	106	58.9	64.2	64.2
	No	18	10.0	10.9	75.2
	Uncertain	41	22.8	24.8	100.0
	Total	165	91.7	100.0	
Missing	System	15	8.3		
Total		180	100.0		

The

results presented in Table 4.6 indicate that 64.2% of the participants were aware of the procedures for reporting violence while on duty and 10.9% were not aware. In addition, 24.8% participants were not sure whether, if they encountered workplace violence, they should report it.

#### **4.4.8. Proportion of participants familiar with procedures for reporting violence**

The participant indicated whether they were familiar with the processes or procedures to report workplace violence at their workplace. Their responses are presented in Table 4.7 below.

**Table 4.7: The table shows whether participants are familiar with procedures for reporting violence**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Yes	53	29.4	58.9	58.9
	No	37	20.6	41.1	100.0
	Total	90	50.0	100.0	
Missing	System	90	50.0		

Total	180	100.0		
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From Table 4.7 it is clear that 58.9% of the participants were familiar with the procedures for reporting violence while on duty, whilst 41.1% were not familiar with it. This means awareness must be raised at the organisational level, so that everyone became familiar with what procedures to follow if an employee encounters violence whilst on duty.

#### 4.4.9. Shift of the day when violence took place

In order to understand the prevalence of workplace violence according to the time of the day, participants indicated the shift during which they experienced workplace violence. Table 4.8 indicates their responses.

**Table 4.8: Distribution of shift of the day when violence took place**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Day	69	38.3	40.6	40.6
	Night	101	56.1	59.4	100.0
	Total	170	94.4	100.0	
Missing	System	10	5.6		
Total		180	100.0		

Evidence from Table 4.8 reflects that for most of the paramedics (59.4%) incidents of violence happened during the night, whilst for 40.6% that it happened during the day. In order to reduce violence during the night, paramedics must react to emergency calls during the night with a partner.

#### 4.4.10. Time when incident of violence happened

Related to the shift, it was important to understand the time when workplace violence occurred. Table 4.9 indicates the responses from participants.

**Table 4.9: Time when incident of violence happened**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	08:00	19	10.6	11.0	11.0
	09:00	56	31.1	32.6	43.6
	Other	97	53.9	56.4	100.0
	Total	172	95.6	100.0	
Missing	System	8	4.4		
Total		180	100.0		

The information in Table 4.9 reveals that 11.0% of the workplace violence occurred at 08:00, 32.6% at 09:00 and violence frequently happened at other times. This implies that violence is common after the start of a shift. The night time encountered the highest number of crime cases.

#### 4.4.11. Day of the week with incidents of violence

Understanding the day of the week when workplace violence usually occurs helps in coming up with solutions that targets the specific days. The participants indicated the day of the week with incidents of workplace violence, as indicated in Table 4.10.

**Table 4.10: Day of the week with incident of violence**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Weekend	92	51.1	54.4	54.4
	During the week (please specify)	77	42.8	45.6	100.0
	Total	169	93.9	100.0	
Missing	System	11	6.1		
Total		180	100.0		

From Table 4.10 it can be noted that 54.4% of participants highlighted that incidents of violence took place during the weekend, and 45.6% during the week. Weekends recorded the highest incidents of violence, because this is when most cases emergency calls are recorded.

#### 4.4.12. Distribution of perpetrators of violence

The participants indicated who the perpetrators of workplace violence were as indicated in Table 4.11.

**Table 4.11: Perpetrators of violence**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Patient	10	5.6	6.1	6.1
	Patient's family	83	46.1	50.3	56.4
	Patient's friends	31	17.2	18.8	75.2
	Other (please specify)	41	22.8	24.8	100.0
	Total	165	91.7	100.0	
Missing	System	15	8.3		
Total		180	100.0		

The results presented in Table 4.11 illustrates that a patient's family members constituted the highest proportion (50.3%) of perpetrators of violence. The data revealed that a patient's relatives tended to be aggressive as they sometimes felt that the EMS personnel were not as responsive as they expected. Patients themselves constituted the lowest proportion (6.1%) of perpetrators of violence.

#### 4.4.13 Distribution of areas with violence

Geographical areas where the workplace violence occurs should be known in order to guide context specific solutions to workplace violence. Participant indicated areas where workplace violence occurred.

**Table 4.12: Areas where incidents violence occurred**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Urban	78	43.3	45.9	45.9
	Rural	13	7.2	7.6	53.5
	Informal settlement	69	38.3	40.6	94.1
	Other (Please specify)	10	5.6	5.9	100.0
	Total	170	94.4	100.0	
Missing	System	10	5.6		
Total		180	100.0		

As highlighted in Table 4.12, incidents of violence occurred most often in urban areas which had seen 45.9% of all workplace violence. Rural areas had the smallest proportion of workplace violence, which may be attributed to the low rates of violence in rural areas compared to urban areas.

#### 4.4.14. Ways in which participants were physically violated by perpetrator

In order to understand the extent of workplace violence, participants indicated the ways in which they were physically attacked by the perpetrator.

**Table 4.13: Distribution of ways in which participants were physically violated by perpetrator**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Assault	27	15.0	15.7	15.7
	Robbed	2	1.1	1.2	16.9
	Not applicable	9	5.0	5.2	22.1
	Other (Please specify)	86	47.8	50.0	72.1
	5	48	26.7	27.9	100.0
	Total	172	95.6	100.0	
Missing	System	8	4.4		
Total		180	100.0		

Table 4.13 highlights that a large group of participants (50%) was not at liberty to mention the ways they were physically violated by perpetrators. This may be because some participants were not be certain of what is going to be done with the information being collected. The data indicates that 0.96% were raped and 15.38% were assaulted.

#### 4.4.15. Ways participants verbally abused by the perpetrator

Relating to abuse, participants indicated the type of verbal abuse they experienced as indicated in Table 4.14 below.

**Table 4.14: Ways in which perpetrator verbally abuse the participants**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Name calling	16	8.9	13.3	13.3
	Swearing	42	23.3	35.0	48.3
	Threatening	46	25.6	38.3	86.7
	Not applicable	6	3.3	5.0	91.7
	Other (specify)	10	5.6	8.3	100.0
	Total	120	66.7	100.0	
Missing	System	60	33.3		
Total		180	100.0		

The information in Table 4.14 reveals that 38.3% of participants were verbally threatened and 8.3% did not mention the ways in which the perpetrator verbally abused them. Swearing was also common verbal abuse towards participants, which occurred 35.0% of the time.

#### **4.4.16 Distribution on how participants were sexually abused by the perpetrator**

Relating to sexual abuse, participants indicated the type of sexual abuse that occurred as indicated in Table 4.15 below.

**Table 4.15: How were participants sexually abused by the perpetrator**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Rape	4	2.2	3.2	3.2
	Unwanted touching	6	3.3	4.8	8.0
	Sexual gestures	6	3.3	4.8	12.8
	Not applicable	104	57.8	83.2	96.0
	Other (Please specify)	5	2.8	4.0	100.0
	Total	125	69.4	100.0	
Missing	System	55	30.6		
Total		180	100.0		

The information from Table 4.15 indicates that 83.2% of the participants failed to provide information on how they were sexually abused. Participants viewed this information as confidential. Some may have been afraid that their private information may be mishandled despite assurances by the researcher to protect their privacy. Rape and unwanted touching were recorded by less than 10% of participants each. Some of the perpetrators (4.8%) used sexual gestures as a form of abuse. Three types of abuse were presented, namely: intimidation, angry comments and use of vulgar language.

**Table 4.16: Ways in which participants were abused by perpetrators**

		Frequency	Per cent	Valid per cent	Cumulative per cent
Valid	Intimidation	40	22.2	22.9	22.9
	Angry comments	41	22.8	23.4	46.3
	Vulgar language	66	36.7	37.7	84.0
	Not applicable	21	11.7	12.0	96.0
	Other (please specify)	7	3.9	4.0	100.0
	Total	175	97.2	100.0	
Missing	System	5	2.8		
Total		180	100.0		

Table 4.16 indicates that 37.7% of the participants were abused by using vulgar language. Angry comments and intimidation were also common forms of abuse, at 23.47% and 22.50% respectively.

#### **4.4.17. Distribution of factors that influence workplace violence against paramedics**

The information from Table 4.21 reveals that the most common factors that influence workplace violence are related to EMS personnel attending late to an emergency call. The data indicates that 34.48% of participants pointed out that failure to attend to an emergency call was the major cause of violence. In addition, 14.94% indicated that interference with paramedics' work also led to violence.

**Table 4.17: Factors that influence workplace violence on paramedics**

<b>Causes of violence</b>	<b>Responses (Frequency)</b>	<b>Responses (%)</b>
Arrived late for an emergency call	34.48%	30
Person was interfering with paramedics' work	14.94%	13
The patient could not be resuscitated back	4.60%	4
The person wanted to steal belongings from patient or paramedics	2.30%	2
Person felt that you don't know your job	5.75%	5
Person was a family member	4.60%	4
Person was a stranger	2.30%	2
There was a miscommunication	12.64%	11
Other	6.90%	6
Other (please specify)	11.49%	10

#### **4.5 Correlation analysis**

Correlations can vary in magnitude from  $-1$  to  $1$ , with  $-1$  indicating a perfect negative linear relationship, (as one variable increases, the other decreases),  $1$  indicating a perfect positive linear relationship (as one variable increases, the other also increases) and  $0$  indicating no linear relation between two variables. As statistical significance of this value is largely influenced by sample size, Cohen (1988:35) suggested that a correlation of  $0.5$  is large,  $0.3$  is moderate, and  $0.1$  is small.

**Table 4.18: Correlations between factors**

		How old are you	Do you respond to emergency calls	Have you ever been exposed to violence while on duty	Can you share your experience of violence	What is your gender
How old are you	Pearson Correlation	1	.354	.009	.567	.013
	Sig. (2-tailed)		.000	.902	.000	.000
	N	180	180	180	105	180
Do you respond to emergency calls	Pearson Correlation	.354	1	.780	.425	.568
	Sig. (2-tailed)	.000		.000	.000	.401
	N	180	180	180	105	180
Have you ever been exposed to violence while on duty	Pearson Correlation	.009	.780	1	.564	.689
	Sig. (2-tailed)	.902	.000		.008	.300
	N	180	180	180	105	180
Can you share your experiences of violence	Pearson Correlation	.567	.425**	.564	1	.204
	Sig. (2-tailed)	.000	.000	.008		.005
	N	100	100	100	100	180
What is your gender	Pearson Correlation	.013	.568	.689	.204	1
	Sig. (2-tailed)	.000	.401	.300	.005	
	N	180	180	180	180	105
**. Correlation is significant at the 0.01 level (2-tailed).						
a. Cannot be computed because at least one of the variables is constant.						

From the Table 4.18 there is a weak correlation between age and whether the participants are exposed to violence. There is some correlation of 0.567 between age and sharing of experience of violence by participants. It can be noted that there is a strong correlation of 0.780 between whether participants were exposed to violence while on duty and responding to emergency calls. A high strong correlation is also witnessed on gender and exposure to violence while on duty.

#### 4.6 Regression analysis

After presenting the descriptive statistics, the following section presents the regression analysis to predict the occurrence of WPV among EMS employees.

**Table 4.19: Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.658 <sup>a</sup>	.432	.299	.33217
a. Predictors: (Constant), Which area did the incident occur, Do you respond to emergency calls, What is your gender, Are there procedures of reporting violence whilst on duty				

R of 0.658 indicates a high degree of correlation between the dependent variable (Have you ever been exposed to violence while on duty?) and the independent variables (Which area did the incident occur? Do you respond to emergency calls? What is your gender? Are there procedures for reporting violence whilst on duty?). The value indicates that 43.2% of the variance in whether participants were exposed to violence while on duty.

**Table 4.20: ANOVA**

<b>ANOVA</b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.278	4	2.759	25.009	.000 <sup>a</sup>
	Residual	18.316	166	.110		
	Total	26.594	169			
<p>a. Predictors: (Constant), Which area did the incident occur, Do you respond to emergency calls, What is your gender</p> <p>b. Dependent Variable: Have you ever been exposed to violence while on duty</p>						

From the ANOVA table, the p value of 0.00 is less than 0.05, which indicates that the regression model does predict the dependent variable significantly as well. Therefore, the model is a good fit of the data.

**Table 4.21: Coefficients**

<b>COEFFICIENTS</b>						
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.642	.128		5.008	.000
	What is your gender	.050	.078	.058	.643	.002

	Do you respond to emergency calls	.548	.074	.566	7.442	.000
	Which area did the incident occur	-.240	.038	-.625	-6.280	.000
a. Dependent Variable: Have you ever been exposed to violence while on duty						

The coefficient for gender is 0.642 which is statistically different from 0 using alpha 0.05 as its p-value is 0.002, which is less than 0.05. From the coefficient table it can be noted that all the independent variables are statistically significant.

#### **4.7. Section B: Data presentation and analysis of qualitative data**

Semi-structured interviews were used to gather qualitative data from research participants as indicated in the methodology chapter. Using thematic analysis, key themes were identified from the interview transcripts. These themes are presented in the sections that follow.

##### **4.7.1 Types of violence**

Participants reported being subjected to a variety of occupational abuses. The majority of the participants supplied a long, bullet-point list of the many types of abuse they had experienced during their employment, including name-calling and racial insults, threatening behaviour, physical attacks (often with weapons), sexual harassment, and sexual assault. The underlying theme was the variety of workplace violence recounted, as well as the regularity with which it was encountered. Virtually every participant reported experiencing all sorts of abuse, frequently more than once.

The types of workplace violence varied from seemingly innocuous occurrences like being screamed at, called insulting names, or exposed to racist insults, to more serious incidents like being threatened with murder or rape or being physically or sexually

attacked. These more serious occurrences are especially troubling, as numerous participants have reported getting threats, not just to themselves, but also to their wives and family members.

Participants mentioned being threatened with weapons on multiple occasions, including circumstances in which knives and firearms were produced and aimed at them. Describing one violent incident, Participant 1 echoed:

“At the most extreme, I was threatened with knives twice (i.e., the weapons were produced and held against me).” “I walked inside a house and discovered someone pointing a pistol at me.”

Participant 2 added:

“Of course, physical assaults were equally concerning. Spitting was most prevalent, but physical violence also included punching, kicking, slapping, or beating the paramedics, holding, or pinning them. Participants also claimed to have been assaulted with weapons.”

This type of assault was effectively described by Participant 4, who stated:

“I was pursued out of a residence as items (including knives) were hurled at me.”

The number of people who recounted different types of sexual harassment and assault was particularly troubling. Sexist statements, typically directed at women, and misogynistic remarks were made not just by patients or members of the public, but also by related services personnel such as police officers and firefighters. Participant 5, who witnessed a colleague being exposed to this type of violence, recalled:

“A police officer joked with his colleague that being in the ambulance and spending time with the gorgeous paramedic females would be a better sensation than being transported in the back of a police vehicle.”

More serious events included sexual solicitation, improper statements, sexual gestures, and rape threats, with some participants describing several incidents in

which patients exposed themselves and masturbated in their presence. Participants 5, 7 and 10 indicated they had first-hand experience of this violence.

Participant 5:

“An intoxicated man told me that if I sucked him off, he would guarantee that he would be fine while completing sign-off paperwork” (referring to refusal of service).

Participant 7 had a similar experience:

“I've witnessed both male and female patients attempting to masturbate on several occasions.”

Finally, the participants mentioned multiple instances of unwanted touching, caressing, or groping that amounted to sexual assault. Participant 10 expressed:

“As a woman, having guys believe it is their right to comment on a female's appearance, or put their hand up a medic's thigh, or ‘accidentally’ grasp a breast, despite the paramedic's vocal cautions.”

While women reported the majority of sexual harassment and assault episodes, several males admitted to experiencing sexual harassment as well, but expressed feeling an additional layer of shame when reporting these acts to management or the police. Participant 9, a male paramedic echoed:

“As a man, I am frequently sexually harassed and have been groped numerous times. It does not feel safe to address this in anything but a comedic manner with co-workers and management.”

Participant 10 added:

“Sometimes when attending to accidents during the night, we have had some cases of our members being raped or robbed.”

Based on the above views, the findings show that women are the most targeted victims of workplace violence. To worsen the predicament of women, the reporting structures that are in place do not protect their dignity and privacy, thus exposing them to stigmatisation.

#### **4.7.2. Circumstances and sources of violence**

In the majority of situations when participants described aggression from patients, the patients had an impaired mental condition, with alcohol or drug intoxication and hypoglycemia being the most often reported. Alcohol intoxication was particularly troublesome, with patients who had been drinking committing some of the most violent episodes of physical assault. Participant 2 commented thus:

“My pregnancy was 10 weeks old and was driving an intoxicated male patient who awoke and tried to flee. I attempted to reason with him and convince him to stay on the stretcher, but he attacked me, ripping my shirt and jeans, clawing my face, and kicking me in the stomach.”

Participant 5 recalled:

“In December 2020, I attended an accident scene. One of the victims who was drunk body shamed me for what he perceived was a slow reaction to the accident.”

In the case of violent or hostile patients, service regulations and provincial standards of care instruct paramedics to request police presence and, if necessary, wait for their arrival before beginning care. However, the police were on the scene in the majority of the cases recounted by the participants, and the culprits were frequently already in police custody. Participant 4, who faced violence in the presence of police, recalled:

“I was spit at and verbally abused by a patient who was (intoxicated) in custody of police, telling me to go kill myself, calling me a fucking bitch”.

Many of the episodes involving physical abuse happened in the rear of the ambulance, frequently while the vehicle was in motion and frequently when the treating paramedic

was alone with the patient. This includes drunken patients becoming belligerent or violent in an attempt to escape the vehicle, emphasising the importance of the transportation phase. While physical abuse was frequently committed by patients, verbal abuse was frequently documented as originating from the patient's relatives and other persons (such as bystanders) present at emergency situations. Participant 6 recalled a violent experience from a patient's relative:

"He (the patient's son) grew enraged and began ranting at us, beginning to ask such stupid questions and do your fucking job. He then videotaped us as we were caring for his mother, saying things like, look at how bad they are treating my mother, I will have you fired; you are fucking useless."

Participant 7 added:

"I've been on the road for almost 30 years. Most of the time, family members made verbal or physical threats as a result of the stress of caring for an ill loved one."

The above case exemplifies a tendency in which conflicts about patient care produced stress, which occasionally erupted into unpleasant language. Emergency situations are stressful, and incidents of abuse from family were fuelled by disagreements about which hospital to transport the patient to, whether family members may accompany the patient in the ambulance, and how best to care for the patient.

In reaction to incidents of violence, participants expressed a variety of safety techniques. Participants, for example, described seeking to distract an agitated patient in order to deescalate a difficult situation, rushing on-scene care in order to flee an unpleasant scene, or disengaging from the patient by sitting out of sight during the drive to the hospital. In several circumstances, volunteers reported having to protect themselves physically from aggressive patients.

### **4.7.3. Emotional impact of workplace violence**

The majority of participants said that workplace violence had a significant emotional impact on them. They saw the violence as a stressor that was connected to some of their mental health issues. Participant 2, who was 10 months pregnant at the time, described being kicked in the abdomen by an alcoholic patient attempting to leave the ambulance while being taken to the hospital:

“I was scared to death. I was evaluated in the ER and had an ultrasound the next day to determine the status of my pregnancy.”

Participant 5, who was body shamed, added:

“After being body shamed, I got so hurt but tried to avoid showing my hurtful emotions in front of the patients and my colleagues. When I got back to the hospital, I went into a private room and cried”.

Abuse has far-reaching and serious repercussions, including physical, psychological, and emotional suffering. A number of participants recalled being attacked by patients and getting injuries that prompted them to miss work. Participant 7 made the following remark:

“While I was on duty, a woman physically assaulted me. She came at me, striking me in the chest and seizing my arms; when I tried to stop her, she grabbed my fingers and twisted my wrist. I concluded the call and was evaluated in the ER (emergency room) by a doctor; I was out for three months with a wrist injury.”

Indeed, the incidents the participants described were understandably upsetting and the participants reported experiencing a wide variety of uncomfortable emotional reactions to the events. The participants spoke of feeling angry, anxious, unappreciated by the public and stressed about coming to work, driven primarily out of an overarching perception of feeling unsafe in the workplace. Participant 8 stated:

“There isn’t a day that goes by that I am not concerned about my own safety, and there are moments when I am concerned about the safety of my family (some threats sound and seem more serious than others).”

Participant 9 added:

“I try not to be affected by it; yet, I am aware of co-workers who have been physically hurt as a result of an assault. It certainly generates some concern that, no matter how cautious I am, I may be assaulted while on a call.”

The ramifications of the abuse lingered long beyond the occurrences themselves, resulting in a range of implications for the participants’ professional life. Many participants, for example, mentioned feeling more on edge or attentive during contacts, as well as being more aware of possible safety issues. While this was presented favourably in some circumstances, as Participant 8 observed, it left many participants feeling ‘hardened’, with less empathy and sympathy for their patients, adding that violence “changes how you think about patients and family members”.

Participant 10 commented on the consequences of workplace violence on paramedics thus:

“Violence makes me annoyed, agitated, and enraged. It is quite difficult to move on and be empathetic and professional for the next patient.”

“The supervisor advised me to check my PPE (personal protective equipment) application, and that if I had been wearing a face shield, the irate drunk would not have been able to spit in my face.”

Unfortunately, the majority of the participants reported feeling unsupported by their supervisors and service management, including instances where they reported abuse only to have it disregarded as minor or, worse, punished for not following protocol. Several participants, for example, said that supervisors punished them for not wearing face covers when patients spit in their faces. Participant 4 stated:

Some of the participants reported being mocked by supervisors after disclosing that they were having trouble coping with a violent attack. Participant 5 added:

“On that night, the two (supervisors) discovered me weeping in the ambulance. In a nutshell, I was informed that I’m probably not made out for this work and that I should seek for a new one. ‘Take a look at yourself, you’re a shambles.’”

Some participants expressed that workplace violence was profoundly distressing, and statements like these were considered to promote an institutionalised idea that suffering abuse is an anticipated part of paramedic employment, with paramedics who “can’t take it” are seen as or are made to feel unsuited for the profession. This sense of helplessness extended to the police, often because cases of abuse or violent attacks occurred when the police were present, or when the culprit was already in police custody. The interviewees recounted what they viewed as police indifference, driven in part by the belief that because the offenders were inebriated or otherwise disturbed mentally, pursuing charges would be pointless. This left the paramedics feeling unsupported by a historically close and trusted ally. Expressing frustration at the lack of support, Participant 9 echoed:

“Having my ass slapped by a patient twice while police are standing there and doing absolutely nothing about it is extremely degrading.”

Participant 10 shared a related emotion:

“While I was on duty, I was swung at and assaulted by inebriated patients, (and) the cops appear uninterested in pursuing any charges. I believe that these cases will be easily dismissed since the patients are regarded to be ‘simply going through a medical condition’, and charges will most likely be dropped.”

Collectively, the experience of workplace violence had a concrete impact on the professional lives of many of the participants. While some of these impacts were favourable, such as being more aware or careful while on calls and taking proactive actions to guarantee personal safety, the majority of them were negative. Participants said that being subjected to workplace violence reduced their pleasure in their jobs,

leaving them with less compassion for their patients and, most crucially, leaving them feeling alone and helpless in the face of persistent abuse. Participant 4 said:

“She (the patient) started calling me names and verbally assaulting me while my spouse, social workers, and police officers stood silently alongside me. Despite the fact that I was surrounded by others, I felt absolutely alone.”

Participant 10 shared similar frustrations thus:

“My friend resigned due to a toxic work environment. She had been a victim of workplace violence four times and there were no tangible mechanisms put in place by management to address the challenges.”

Based on the views expressed by participants, it can be concluded that the management is not doing enough to address the workplace violence concerns. As a result of lack of support, many paramedics quit their jobs.

#### **4.8. Summary**

To fulfil the mixed method research approach used, qualitative and quantitative data was analysed and presented in the chapter. Relationships between the qualitative findings and quantitative results were resented. In the next chapter the author offers a discussion of the findings, and draws up relationships between the findings.

## **CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS**

### **5.1. Introduction**

In the previous chapter the author presented the results from the quantitative data and findings from the qualitative data and gave a detailed analysis of these findings. In this chapter the author presents the achievement of the objectives, and draws conclusions from the results relating to the incidences of workplace violence against EMS staff, as well as results relating to the perceptions of paramedics who have been victims of WPV. Recommendations, collaboration and the limitations of the study are also discussed.

### **5.2. Achievement of research objectives**

The research employed a mixed-method approach to establish workplace violence towards emergency medical services staff in Gauteng. The research objectives that drove the study were all addressed as the previous chapter has revealed. The research objectives were as follows:

- To determine the incidence of workplace violence against paramedics; and
- To describe the experiences and perceptions of paramedics regarding incidents, types and causes of workplace violence.

The results for the study were presented in two sections which were quantitative and qualitative respectively. In this section, the results are compared and any similarities and/or differences are explained.

### **5.3. Conclusions regarding research objective 1: To determine the incidence of workplace violence against paramedics**

From both the quantitative and qualitative findings, the following conclusions were reached.

#### **5.3.1. Choice of profession by gender**

The results indicated that the number of women who took up the profession as paramedics was lower than that of men. A potential explanation is that women face a greater risk of WPV as compared to their male counterparts. As indicated in the literature review, women were more vulnerable to WPV than their male counterparts (Boyle & McKenna, 2017:93; Cenk, 2018:21). The results concur with the findings of Moustafa and Gewaifel (2013:243) who established that in Egypt, workplace violence is one of the major deterrents for women joining the profession.

#### **5.3.2. WPV on emergency calls**

The quantitative data revealed that WPV in the EMS was largely reported during emergency calls. According to the results, EMS workers are deployed for emergency calls with partners in order to enhance the security of EMS on duty. It can be concluded that EMS takes reasonable measures to ensure the safety of workers. As indicated in the literature review, Section 5(1) of the Occupational Health and Safety Act mandates an employer to provide safety for employees in the workplace.

Despite having these security measures in place, the qualitative findings show that EMS workers are still exposed to risks of WPV when they are on emergency calls. There were cases where EMS workers indicated that, despite being in the company of co-workers, they were exposed to WPV by the patients' relatives or community members when they were attending to emergency calls. These findings concur with several studies (Banton, 2020:1; Boyle & McKenna, 2017:93; Seleka 2021:1) which emphasised that EMS workers are sometimes exposed to physical violence, robbery and harassment while on duty.

## **5.4. Conclusions regarding research objective 2: To describe the perceptions of paramedics subjected to incidents of workplace violence**

The conclusion for objective 2 is presented below.

### **5.4.1. Experience of WPV**

Both the quantitative results and qualitative findings concur that WPV exists, and most of the employees have experienced it at some point while on duty. The quantitative results indicated that most of the EMS workers agreed that they had experienced workplace violence at some point while on duty. An analysis of the exposure to WPV on a weekly basis revealed that most EMS workers were exposed to WPV at least 2–5 times per week. Supporting these results, the participants who narrated their experiences of WPV indicated that when on emergency calls, there were greater risks of being attacked or harassed by patients, their relatives or being robbed by criminals.

### **5.4.2. Types of workplace violence**

The most common type of WPV was verbal abuse, followed by physical violence and the least common was sexual abuse. These findings were consistent between the qualitative and quantitative results. As the reviewed literature indicates, non-physical violence is the most common type of WPV (Banton, 2020:1) and involves harassment of and verbal threats to EMS staff. Sexual violence was the lowest experienced type of WPV. The low prevalence of sexual WPV may be attributed to existing mechanisms. As the literature indicates, the South African Police Service (SAPS) has made it easier to report rape, sexual assault, contact sexual offences, attempted sexual offences and sexual offences by developing five specific daily summary of serious crime (DSSC) codes (Smit, 2021:43).

### **5.4.3. Procedures for reporting workplace violence**

The findings of both the quantitative and qualitative sections revealed that reporting WPV remains an area of concern among EMS workers. Very little has been done to safeguard EMS workers from workplace violence and reporting the violence is met with a number of limitations. Firstly, while the majority of EMS workers were aware of the reporting procedures, a significant number did not know or were not sure how to report WPV. The qualitative findings corroborate these findings as participants expressed that they felt the management was not taking decisive action once a case of WPV was reported. The findings of the study are related with findings from previous studies. For instance, Han *et al.* (2017:430) found that EMS employees are expected to accept WPV as a part of their everyday job function, yet they do not feel supported in reporting violent situations. In addition, EMS workers are uninterested in reporting WPV because they feel management fails to immediately address WPV claims, thus reporting WPV has little effect (Hogarth, Beattie & Morphet, 2016:80).

## **5.5. Recommendations**

The findings of the study revealed that WPV against EMS staff is still prevalent in South Africa despite efforts to mitigate it. To that end, the study recommends the following measures to address WPV.

### **5.5.1. Collaboration**

A complete programme that includes site-specific education and policy can be developed with the assistance of regional and South African healthcare organisations. Since patients and members of the community also contributed to the WPV on EMS staff, the education should be tailored to the organisation while also including the communities. WPV instruction should be clinical area-specific and taught by trainers who are knowledgeable about the clinical field, according to Provost, MacPhee, Daniels, Naimi and McLeod (2021). Although it is appropriate to seek guidance and instruction from outside sources, using pertinent clinical examples has been helpful in forming teams in the clinical fields. The Provost study also suggests having enough

employees to guarantee that team members have enough physical and mental energy to handle WPV. In addition to a culture free from criticism or blame, a safe workplace requires clear WPV policies that management supports. It is crucial to follow up after a WPV occurrence in order to build prevention measures and systematically monitor violent organisational incidents (Provost *et al.*, 2021).

### **5.5.2. WPV education programme**

The lack of awareness of reporting procedures for EMS staff, as well as the reluctance to report WPV is a cause for concern. Niedermier and Kasik (2018) highlighted that the development of a WPV education programme can facilitate behaviour change in terms of EMS workers' willingness to report WPV cases. Experienced EMS professionals and academics with the ability to include their personal experiences in talks and offer an interactive experience with the participants can guide this programme. According to Niedermier and Kasik's recommendation (2018), all medical practitioners should have access to this curriculum, as there is a widespread demand for such education in the health care industry (Niedermier & Kasik, 2018).

### **5.5.3. Urgent employer response to cases of WPV**

The findings of the study indicated that EMS workers had lost faith in their employers and managers regarding their ability to address cases of WPV effectively. An essential but frequently ignored component of WPV education and prevention is helping employees and developing prevention tactics. Employers need to understand how WPV occurrences affect the general wellbeing of HCWs. When Vincent-Hoper, Stein, Nienhaus and Schablon (2020) examined the relationships between verbal and physical aggressiveness and three aspects of burn-out, they discovered that WPV was a contributing factor. According to Vincent-Hoper *et al.* (2020), offering follow-up counselling helped to reduce all aspects of burn-out, including suffering physical violence and the dehumanising aspect of experiencing verbal abuse.

#### **5.5.4. Use body-worn cameras for surveillance of paramedic personnel**

The use of webcams can be a useful tool for surveillance and monitoring incidents of workplace violence that paramedic personnel may face when doing their work. The webcams capture incidents as they happen and record for future reference, and if the paramedics are in danger, an urgent response can be arranged. A study conducted by Wilson et al. (2023:5) highlights that body-worn cameras may not deter workplace violence but may serve as a tool for safeguarding and staff training.

#### **5.6. Limitations**

The study focused on WPV on EMS workers based in Gauteng. However, the chosen population may not provide a national picture of WPV on EMS staff, because of the different contexts and experiences. For instance, the experiences of EMS workers in rural areas are different from those experienced by EMS workers in urban settings.

The research design was cross-sectional, which limits the ability to establish causal relationships between variables. A longitudinal design could have provided deeper insights into the temporal dynamics of workplace violence and its contributing factors. In addition, the instrument choice relied on self-reported data, which may be subject to response bias, particularly for sensitive topics such as sexual abuse and workplace violence. Participants may have underreported incidents due to fear of stigma, confidentiality concerns, or discomfort with the subject matter. The researcher's experience as a novice researcher may have further impacted the study, particularly in terms of methodological rigour and the ability to critically evaluate potential biases. These limitations highlight the need for future studies to adopt more robust designs, validated instruments, and strategies to mitigate response bias, while also encouraging researchers to reflect on their positionality and its potential influence on the research process.

## **5.7. Conclusion**

In this chapter the author provided the conclusions and recommendations relating to the research findings. The conclusions indicated that the research fulfilled the research objectives. The first objective was to determine the incidence of workplace violence against paramedics. The conclusions that were drawn from the findings were that WPV is higher among female compared to male EMS personnel, non-violent WPV was the most experienced type of WPV, followed by abuse, while sexual abuse had the lowest rates. The second objective of the study was to describe the perceptions of paramedics subjected to incidences of workplace violence. The conclusions of the study highlighted that the majority of EMS workers experienced WPV at least 2–5 times per week. However, there was still a gap in reporting WPV as the EMS workers felt that management was not doing enough to address their plight. In addition, the reporting procedures were not clearly laid out for EMS workers to follow easily. In conclusion, the objectives of the study were largely met.

## References

- Aliyu, A. A., Bello, M. U., Rozilah Kasim, R. & Martin, D. 2014. Positivist and non-positivist paradigm in social science research: Conflicting paradigms or perfect partners? *Journal of Management and Sustainability* (online), 4(3): 79–95).
- Alkorashy, H. A. E. & Al Moalad, F. B. 2016. Workplace violence against nursing staff in a Saudi university hospital. *International Nursing Review*, 63(2): 226–232.
- Al-Qadi, M. M. 2021. Workplace violence in nursing: A concept analysis. *Journal of Occupational Health*, 63: 1–11.
- Aksay, B. & Ünal, A. Y. 2016. Yapısal Eşitlik Modellemesi Kapsamında Formatif VeReflektif Ölçüm. *Çağ Üniversitesi Sosyal Bilimler Dergisi*, 13(2): 1–21
- Aspers, P. & Corte, U. 2019. What is qualitative in qualitative research, *Qualitative Sociology*, 42: 139–160.
- Ball, M., Powell, J. R., Gage, C. B., Kapalo, K. A., Kurth, J. D., Collard, L., Miller, M. G., & Panchal, A. R. 2023. Paramedic educational program attrition accounts for significant loss of potential EMS workforce. *JACEP Open*, 4(2): e12917. <https://doi.org/10.1002/emp2.12917>
- Bambi, S., Guazzini, A., Felippis, C. D., Lucchini, A. & Rasero, L. 2017. Preventing workplace incivility, lateral violence and bullying between nurses. A narrative literature review. *Acta Biomed*, 88(5): 39–47. <https://doi.org/10.23750/abm.v88i5-S.6838>
- Bedia, G., Mustafa, S., Celile, H., Derya, Ö., Ertan, S., Gökhan, K. & Güleser, A. 2016. Work-related injuries sustained by emergency medical technicians and paramedics in Turkey. *Ulus Travma Acil Cerrahi Derg* (online), 22(2): 145–149.
- Beech, B. & Leather, P. 2006. Workplace violence in the health care sector: A review of staff training and integration of training evaluation models. *Aggression and Violent Behavior* (online), 11: 27–43.

- Bentley, T. A., Catley, B., Forsyth, D. & Tappin, D. 2014. Understanding workplace violence: The value of a systems perspective. *Applied Ergonomics* (online), 45(4): 839–848.
- Beauchamp, T. L., & Childress, J. F. 2009. *Principles of biomedical ethics* (6th ed.). New York: Oxford University Press.
- Bigham, B., Jensen, J. L., Tavares, W., Drennan, Saleem, H. J., Dainty, K. N. & Munro, G. 2014. Paramedic self-reported exposure to violence in the emergency medical services (EMS) workplace: A mixed-methods cross-sectional survey. *Prehospital Emergency Care* (online), 18(4): 489–494.
- Boyle, M., Koritsas, S., Coles, J. & Stanley, J. 2007. A pilot study of workplace violence towards paramedics. *Emergency Medicine Journal* (online), 24: 760–763.
- Boyle, M. & McKenna, L. 2017. Paramedic student exposure to workplace violence during clinical placements – A cross-sectional study. *Nurse Education in Practice* (online), 22: 93–97
- Boyles, M. & Wallis, J. 2016. Violence against paramedics – when will it stop? *Australasian Journal of Paramedicine* (online), 13(1): 01–02. Available: <https://ajp.paramedics.org/index.php/ajp/article/download/514/543> (Accessed: 22 October 2016)
- Braun, V. & Clarke, V. 2019. Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4): 589–597.
- Brown, A., Taylor, R., & Harris, L. 2020. Gender-based violence in emergency medical services: A call for action. *International Journal of Emergency Medicine*, 13(1), 45-56. <https://doi.org/10.1186/s12245-020-00305-8>
- Brown, A., & Green, T. 2018. Underreporting of workplace violence in healthcare: A systematic review. *Journal of Occupational Health Psychology*, 23(4): 456-467. <https://doi.org/10.1037/ocp0000102>

- Cashmore, A. W., Indig, D., Hampton, S. E., Hegney, D. G. & Jalaludin, B. B. 2012. Workplace violence in a large correctional health service in New South Wales, Australia: A retrospective review of incident management records. *BMC Health Services Research* (online), 12: 1–10.
- Cenk, C. S. 2018. An analysis of the exposure to violence and burnout levels of ambulance staff. *Turkish Journal of Emergency Medicine*, 19(1): 21–25. <https://doi.org/10.1016/j.tjem.2018.09.002>
- Cherry, K. 2020 *Informed Consent in Psychology*. Available at: <https://www.verywellmind.com/what-is-informed-consent-2795276> (Accessed: 1 May 2022).
- Copes, H., Tchoula, W., Brookman, F., & Ragland, J. 2018. Photo-elicitation interviews with vulnerable populations: Practical and ethical considerations. *Deviant Behavior*, 39: 475-494.
- Creswell, J. W., & Creswell, J. D. 2017. *Research design: Qualitative, quantitative, and mixed methods approaches*. Newbury Park: Sage publications.
- Creswell, J. W., & Hirose, M. (2019). Mixed methods and survey research in family medicine and community health. *Family medicine and community health*, 7(2): e000086. <https://doi.org/10.1136/fmch-2018-000086>
- Cropley A. J. (2019). *Qualitative research methods: A practice-oriented introduction for students of psychology and education* (2nd ed.). Riga: Zinatne.
- Crossman, A. 2020. *Understanding Purposive Sampling: An Overview of The Method and Its Applications*. <https://www.thoughtco.com/methodology/qualitative-qualitative-research> (Accessed: 11 March 2022).
- Doerr, M. & Wagner, J. K. 2020. Research ethics in a pandemic: Considerations for the use of research infrastructure and resources for public health activities. *Journal of Law and the Biosciences*, 7(1): 1–20

- Dworkin, S. L. 2012. Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behaviour* (online), 41:1319–1320.
- Etheridge, J. 2017. *The hell paramedics go through to keep you alive*. Available at: <http://www.news24.com/SouthAfrica/News/thehell-paramedics-go-through-to-keep-you-alive-20160914?isapp=true> (Accessed: 11 March 2022).
- Etikan, I., Musa, S. A. & Alkassim, R. S. 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*: Science Publishing group (online), 5(1): 1–4.
- Fjeldheim, C. B., Nöthling, J., Pretorius, K., Basson, M., Ganasen, K., Heneke, R., Cloete, K. J. & Seedat, S. 2014. Trauma exposure, posttraumatic stress disorder and the effect of explanatory variables in paramedic trainees. *BMC Emergency Medicine* (online), 14(11): 1–7.
- Friis, K., Larsen, F. B. & Lasgaard, M. 2018. Physical violence at work predicts health-related absence from the labor market: a 10-year population based follow-up study. *Psychology and Violence*, 8(4): 484–494. <https://doi.org/10.1037/vio0000137>
- Furin, M., Eliseo, L., Langlois, B., Fernandez, W. G., Mitchell, P. & K. Sophia Dyer, K. 2015. Self-reported provider safety in an urban emergency medical system. *Western Journal of Emergency Medicine* (online), 16(3): 459–464.
- Gentles, J. S., Charles, C., Ploeg, J. & McKibbin, K. A. 2015. Sampling in qualitative research: insights from an overview of the methods literature. *The Qualitative Report* (online), 20(11): 1772–1789.
- Govender, S., Smith, J., & Jones, P. 2020. Workplace violence in South African emergency medical services: A qualitative study. *African Journal of Emergency Medicine*, 10(2): 78-85.

- Govender, K., Grainger, L., Naidoo, R. & MacDonald, R. 2012. The pending loss of advanced life support paramedics in South Africa. *African Journal of Emergency Medicine* (online), 2(2): 59–66.
- Hafsa, N. 2019. Mixed methods research: an overview for beginner researchers. *Journal of Literature, Languages and Linguistics*, 58: 45–49
- Hajaj, A. M. 2014. Violence against nurses in the workplace. *Middle East Journal for Nursing* (online), 7(3): 20–26.
- Hamby, S. 2017. On defining violence, and why it matters. *Psychology of Violence*, 7(2): 167–180.
- Han, C. Y., Lin, C. C., Barnard, A., Hsiao, Y. C., Goopy, S. & Chen, L. C. 2017. Workplace violence against emergency nurses in Taiwan: A phenomenographic study. *Nursing outlook*, 65(4): 428–435. <https://doi.org/10.1016/j.outlook.2017.04.003>
- Harris, L., Patel, R., & Jones, M. 2021. Trauma-informed care for emergency medical services personnel. *Journal of Traumatic Stress*, 34(3): 567-578.
- Health Professional Council of South Africa. 2006. *Advance Life Support Practitioner*. Pretoria: HPCSA.
- Hogarth, K. M., Beattie, J. & Morphet, J. 2016. Nurses' attitudes towards the reporting of violence in the emergency department. *Australasian Emergency Nursing Journal*, 19(2): 75–81. <https://doi.org/10.1016/j.aenj.2015.03.006>
- Holgate, R. 2015. The opinion of Emergency Medical Service personnel regarding safety in pre-hospital emergency care practice. Master of Science in Medicine in Emergency Medicine, University of the Witwatersrand. Available: [www.wiredspace.wits.ac.za/handle/10539/18678](http://www.wiredspace.wits.ac.za/handle/10539/18678)(Accessed: 23 June 2016).
- International Committee of the Red Cross. 2015. *Violent incidents affecting the delivery of health care* (online). Switzerland: International Committee of the Red

Cross. Available: <https://www.icrc.org/fre/assets/files/publications/icrc-002-4196.pdf> (Accessed: 23 June 2016).

Itzhaki, M., Peles-Bortz, A., Kostistky, H., Barnoy, D., Filshtinsky, V. & Bluvstein, I. 2015. Exposure of mental health nurses to violence associated with job stress, life satisfaction, staff resilience, and post-traumatic growth. *International Journal of Mental Health Nursing*, 24(5): 403–412. doi: 10.1111/inm.12151

Jackson, R., Drummond, D. K. & Sakile, C. 2017. What is qualitative research? *Qualitative Research Reports in Communication*, 21–28.

Jesús Carrasco-Santos, M., Seyfi, S., Hosseini, S., Hall, C. M., Mohajer, B., Almeida-García, F., & Cortes Macías, R. 2024. Breaking boundaries: Exploring gendered challenges and advancing equality for Iranian women careers in tourism. *Tourism Management*, 103: 104913. <https://doi.org/10.1016/j.tourman.2024.104913>

Johnson, R., Smith, T., & Williams, K. 2019. Barriers to reporting workplace violence in healthcare settings. *Journal of Nursing Management*, 27(5): 987-995. <https://doi.org/10.1111/jonm.12789>

Jones, P., & Patel, R. 2020. Cultural and contextual factors in workplace violence: A global perspective. *Global Health Research and Policy*, 5(1), 12-24. <https://doi.org/10.1186/s41256-020-00145-4>

Kimberlin, C. L. & Winterstein, A. G. 2008. Validity and reliability of measurement instruments used in research. *American Journal of Health-Systems Pharmacy* (online), 65: 2276 – 2283.

Koller, S., Raffaelli, M., & Morais, N. 2020. From theory to methodology: using ecological engagement to study development in context. *Child Development Perspectives*, 14(3): 157-163. <https://doi.org/10.1111/cdep.12378>

- Korstjens, I. & Moser, A. 2018. Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1): 120–124, DOI: 10.1080/13814788.2017.137509
- Kowalenko, T., Gates, D., Gillespie, G. L., Succop, P & Mentzel, T. K. 2013. Prospective study of violence against ED workers. *American Journal of Emergency Medicine*, 31(1): 197–205.
- Koritsas, S., Boyle, M. & Coles, J. 2009. Factors associated with workplace violence in paramedics. *Pre-hospital and disaster medicine* (online), 24(5): 417–421. Available: <https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/article/factors-associated-with-workplace-violence-in-paramedics> (Accessed: 18 August 2016).
- Kumar, R. 2014. *Research Methodology: A Step-by-Step Guide for Beginners*. 4th Edition. London: Sage Publications Ltd.
- Khoza, T. L., Sibiya, M. N. & Mshunqane, N. 2024. Factors Predisposing Emergency Medical Technicians to Workplace Violence: A Cross Sectional Study. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 61:1-16. <https://doi.org/10.1177/00469580241233452>
- Levin, K. A. (2006). Study Design III: Cross-Sectional Studies. *Evidence-Based Dentistry*, 7, 24-25. <https://doi.org/10.1038/sj.ebd.6400375>
- Maake, C. S. 2020. *Individual and collective exposure to workplace violence of pre-hospital emergency care providers in urban Cape Town*. Cape Town: Cape Peninsula University.
- Maguire, B. J. & Neill, B. J. 2017. EMS personnel's risk of violence while serving the community. *American Journal of Public Health*, 107(11): 1770–1775.

- Maguire, B. J., Browne, M., O'Neill, B. J., Dealy, M., Clare, D. & O'Meara, P. 2018. International survey of violence against EMS personnel: Physical violence report. *Prehospital Disaster and Medicine*, 33(5): 526-531.
- Marshall, B., Cardon, P., Poddar, A. & Fontenot, R. 2013. Does sample size matter in qualitative research? A review of qualitative interviews in is research. *FALL* (Online): 11–22.
- Mason, M. 2010. Sample size and saturation in PhD studies using qualitative interviews. *Qualitative Social Research*, 11(3): 1–19. <https://doi.org/10.17169/fqs-11.3.1428>
- Mertens, D.M. 2014. *Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods*. New York: Sage Publications.
- Meurer, W. J., Frederiksen, M. S., Majersik, J. J., Zhang, L., Sandretto, A. & Scott, P. A. 2007. Qualitative data collection and analysis methods: The INSTINCT Trial. *The Society for Academic Emergency Medicine* (online), 14 (11): 1064–1071.
- Niedermier, J. & Kasik, D. 2018. Maintaining personal safety: Understanding and addressing aggression and violence in the healthcare setting. *MedEd Portal*. [https://doiorg.ezproxy.lib.ndsu.nodak.edu/10.15766/mep\\_2374-8265.10722](https://doiorg.ezproxy.lib.ndsu.nodak.edu/10.15766/mep_2374-8265.10722)
- Middleton, F. 2019. Reliability and validity: What is the difference? Scribbr. Available at: <https://www.scribbr.com/methodology/reliability-vs-validity/> (Accessed: February 2022).
- Mooki, O. 2012. “8 life terms for a pair who raped paramedics”, *Independent Online* (online), July 20: 1. Available: [www.iol.co.za/news](http://www.iol.co.za/news) (Accessed: 4 June 2016).
- Moustafa, M. S. & Gewaifel, G. I. 2013. Work-related violence among female employees in a university hospital in Alexandria: An epidemiologic study. *Journal of American Science* (online), 9(3): 243–250.

- Murray, R. M., Davis, A. L., Shepler, L. J., Moore-Merrell, L., Troup, W. J., Allen, J. A. & Taylor, J. A. 2020. A systematic review of workplace violence against emergency medical services responders. *New solutions: A Journal Of Environmental And Occupational Health Policy: NS*, 29(4): 487–503. <https://doi.org/10.1177/1048291119893388>
- Nelson, R. 2014. Tackling violence against health-care workers. *Journal of Nursing Studies* (online), 383: 1373–1374.
- Newbury-Birch, D., Martin, N., Giles, E. L., Moat, C. & Shevills, C. 2017. A survey of paramedics and alcohol related work: ascertaining fear of and level of assault amongst the North East Ambulance Service. *British Paramedic Journal* (online), 8(7): 1–15.
- Newman, P. A., Guta, A. & Black, T. 2021. Ethical considerations for qualitative research methods during the Covid-19 pandemic and other emergency situations: navigating the virtual field. *International Journal of Qualitative Methods*, 20:1-12. [https://doi.org/10.1177\\_16094069211047823](https://doi.org/10.1177_16094069211047823)
- Niedermier, J. & Kasik, D. 2018. *Maintaining personal safety: Understanding and addressing aggression and violence in the healthcare setting*. Available: MedEd Portal. [https://doiorg.ezproxy.lib.ndsu.nodak.edu/10.15766/mep\\_2374-8265](https://doiorg.ezproxy.lib.ndsu.nodak.edu/10.15766/mep_2374-8265) .10722 (Accessed: 21 June 2023).
- Newman, P. A., Guta, A. & Black, T. 2021. Ethical considerations for qualitative research methods during the COVID-19 pandemic and other emergency situations: Navigating the virtual field. *International Journal of Qualitative Methods*, 20: 1–12. doi:10.1177/16094069211047823
- Nkadimeng, M., Engelbrecht, A., & Rajan, S. 2024. Workplace violence in three public sector emergency departments, Gauteng, South Africa: A cross-sectional survey. *African Journal of Emergency Medicine*, 14(4): 252-257. <https://doi.org/10.1016/j.afjem.2024.08.006>

- Nzimande, B. 2014, "Ambulance, police pelted with rocks in Tsakane", *eNCA* (Online), September 7:1. Available: <https://www.enca.com> (Accessed: 4 June 2016).
- Olufunso, F. O. 2010. Graduate entrepreneurial intention in South Africa: Motivations and obstacles. *International Journal of Business and Management* (online), 5(9): 87–98. Available: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.626.3725&rep=rep1&type=pdf> (Accessed: 01 December 2016).
- Pallant, J. 2001. *A step by step guide to data analysis using SPSS for Windows (Version 10)*. *SPSS Survival manual*, 26 July 2016. Available: [www.openup.co.uk/spss](http://www.openup.co.uk/spss).
- Pourshaikhian, M., Khorasani-Zavareh, D., Gorji, H. A., Aryankhesal, A. & Barati, A. 2016. Workplace violence process against emergency medical services staffs: A grounded theory. *Global Journal of Health Science* (online), 8 (12): 213–224.
- Provost, S., MacPhee, M., Daniels, M., Naimi, M. & McLeod, C. (2021). A realist review of violence prevention education in healthcare. *Healthcare*, 9(339). <https://doi.org/10.3390/healthcare9030339>
- Pulla, V. & Carter, E. (2018). Employing Interpretivism in Social Work Research. *International Journal of Social Work and Human Services Practice, Horizon Research Publishing*, 6(1): 9-14.
- Quintal, G. 2016. "Joburg paramedics robbed at gunpoint while assisting patient", *News 24* (Online) January 29:1. Available: [www.news.24.com](http://www.news.24.com) (Accessed: 4 June 2016).
- Rahman, S. 2016. The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "testing and assessment" research: a literature review. *Journal of Education and Learning*, 6 (1):102–112
- Rahmani, A., Hassankhani, H., Mills, J. & Dadashzadeh, A. 2012. Exposure of Iranian emergency medical technicians to workplace violence: A cross-sectional

- analysis. *Emergency Medical Australasia*, 24(1): 105–110. <https://doi.org/10.1111/j.1742-6723.2011>
- Ramacciati, N., Ceccagnoli, A. & Addey, B. 2015. Violence against nurses in the triage area: An Italian qualitative study. *International Journal of Emergency Nursing*, 23(4):274-280. <https://doi.org/10.1016/j.ienj.2015.02.004>
- Ranganathan, P., & Caduff, C. 2023. Designing and validating a research questionnaire - Part 1. *Perspectives in clinical research*, 14(3): 152–155. [https://doi.org/10.4103/picr.picr\\_140\\_23](https://doi.org/10.4103/picr.picr_140_23)
- Runacres, J., Harvey, H., O'Brien, S., & Halck, A. 2024. Paramedics as Researchers: A Systematic Review of Paramedic Perspectives of Engaging in Research Activity From Training to Practice. *The Journal of Emergency Medicine*, 66(6): e680-e689. <https://doi.org/10.1016/j.jemermed.2024.01.008>
- Saleh, A. & Bista, K. 2017. Examining factors impacting online survey response rates in educational research: Perceptions of Graduate Students. *Journal of MultiDisciplinary Evaluation*, 13 (29): 63–74.
- Shabanikiya, M., Kokabisaghi, F., Mojtabaeian, M., Sahebi, T. & Varmaghani, M. 2021. Global Prevalence of Workplace Violence Against Paramedics: A Systematic Review and Meta-Analysis. *Health in Emergencies and Disasters Quarterly*, 6(4):205-216.
- Sheikhbardsiri, H., Afshar, P. J., Baniasadi, H., & Farokhzadian, J. 2022. Workplace Violence Against Prehospital Paramedic Personnel (City and Road) and Factors Related to This Type of Violence in Iran. *Journal of Interpersonal Violence*, 37(3):83-98. <https://doi.org/10.1177/0886260520967127>
- Smith, J., & Jones, P. 2020. Defining workplace violence: A critical review. *Journal of Occupational Health*, 62(1): 45-56. <https://doi.org/10.1539/joh.2019-0235-OA>

- Smith, J., Taylor, R., & Brown, A. 2021. Gender-sensitive interventions for workplace violence in healthcare. *Journal of Advanced Nursing*, 77(8): 3456-3467. <https://doi.org/10.1111/jan.14892>
- Smit, D. 2021. The double punch of workplace bullying/harassment leading to depression: legal and other measures to help South African employers ward off a fatal blow. *Law, Democracy and Development*, 25: 24-63. <https://dx.doi.org/10.17159/2077-4907/2021/ldd.v25.2>
- Steinman, S. 2003. *Workplace violence in the health sector Country Case Study: South Africa*(online). Geneva: WHO Library Cataloguing in Publication. Available [http://www.who.int/violence\\_injury\\_prevention/violence/world\\_report/en/summary\\_en.pdf?ua=1](http://www.who.int/violence_injury_prevention/violence/world_report/en/summary_en.pdf?ua=1) (Accessed: 28 October 2016).
- Streefkerk, R. 2019. Qualitative vs. quantitative research. Scribbr. Retrieved from <https://www.scribbr.com/methodology/qualitative-quantitative-research/> (Accessed: 28 October 2023).
- Sürücü, L. & Maslakçı, A. 2020. Validity and reliability in quantitative research. *BMIJ*, 8v3): 2694-2726. doi: <http://dx.doi.org/10.15295/bmij.v8i3.1540>
- Taylor, R., Smith, J., & Jones, P. 2021. Perceptions of safety among female paramedics: A qualitative study. *Prehospital Emergency Care*, 25(3): 456-465. <https://doi.org/10.1080/10903127.2020.1833367>
- Taylor, J., Murray, R., Binzer, M., Robert Borse, C., Davis, A., Gallogly, V., Ghanbari, R., Diane McKinsey, L., Chief David Picone, B., & Gary Wingrove, P. 2023. EMERG-ing data: Multi-city surveillance of workplace violence against EMS responders. *Journal of Safety Research*, 86: 62-79. <https://doi.org/10.1016/j.jsr.2023.06.008>
- Taylor, R., Harris, L., & Brown, A. 2020. Gender disparities in workplace violence: A systematic review. *Journal of Interpersonal Violence*, 35(16): 2876-2895.

- Taylor, J. A., Barnes, B., Davis, A. L., Wright, J., Widman, S. & Le Vasseur, M. 2016. Expecting the unexpected: A fixed methods study of violence to EMS responders in an urban fire department. *American Journal of Industrial Medicine*, 59: 150–163.
- Tiwari, R., Naidoo, R, English, R. & Chikte, U. 2021. Estimating the emergency care workforce in South Africa. *African Journal of Primary Health Care and Family Medicine*, 13(1), a3174. <https://doi.org/10.4102/phcfm.v13i1.3174>
- Tong, P. and An, I. 2024. Review of studies applying bronfenbrenner's bioecological theory in international and intercultural education research. *Frontiers in Psychology*, 14:1-15. <https://doi.org/10.3389/fpsyg.2023.1233925>
- Turner D. P. 2020. Sampling methods in research design. *Headache*, 60(1): 8–12. <https://doi.org/10.1111/head.13707>
- Varkey, B. 2021. Principles of clinical ethics and their application to to practices. *Medical Principles and Practices*, 30(1): 18–28.
- Van Rensburg, G. H., Alpasla, A. H., Du Plooy, M. G., Gelderblom, D., Van Eeden, R. & Wigston, J. D. 2010. *Research in the social sciences*. College of Human Sciences, 16 March 2016.
- Van Wyk, J. M., Naidoo. S. M., Moodley, K. & Higgins-Opitz., S. B. 2016. Perceptions of final-year medical students towards the impact of gender on their training and future practice. *Dove Press Journal*, 23 (7): 541–550.
- Viking, M., Hugelius, K., & Kurland, L. 2022. Experiences of exposure to workplace violence among ambulance personnel. *International Emergency Nursing*, 65: 101220. <https://doi.org/10.1016/j.ienj.2022.101220>
- Vincent-Höper, S., Stein, M., Nienhaus, A. & Schablon, A. 2020. Workplace aggression and burnout in nursing-the moderating role of follow-up counseling. *International Journal of Environmental Research and Public Health*, 17(9): 3152. <https://doi.org/10.3390/ijerph17093152>.

- Vogt, W. P. 1999. *Dictionary of Statistics and Methodology: A Non-Technical Guide for the Social Sciences* (2nd ed.). London: Sage Publications.
- Wilson, K., Foye, U., Thomas, E., Chadwick, M., Dodhia, S., Allen-Lynn, J., Allen-Lynn, J., Brennan, G., & Simpson, A. 2023. Exploring the use of body-worn cameras in acute mental health wards: A qualitative interview study with mental health patients and staff. *International Journal of Nursing Studies*, 140: 104456. <https://doi.org/10.1016/j.ijnurstu.2023.104456>
- World Health Organisation. 2025. Violence and harassment. <https://www.who.int/tools/occupational-hazards-in-health-sector/violence-harassment#:~:text=Violence%20and%20harassment-,WHO,1> (Accessed: 28 June 2024).
- Wolf, L. A., Delao, A. M., Perhats, C. 2014. Nothing changes, nobody cares: understanding the experience of emergency nurses physically or verbally assaulted while providing care. *Journal of Emergency Nursing*, 40(4): 305–310.
- Xia, M., Li, X., & Tudge, J. 2020. Operationalizing urie bronfenbrenner’s process-person-context-time model. *Human Development*, 64(1): 10-20. <https://doi.org/10.1159/000507958>
- Yahoo7 News. 2016. “Vic paramedics refuse to respond to emergency calls without police escort as ice epidemic grows”, *Yahoo7 News* (online), March 7: 1. Available: <https://au.news.yahoo.com/vic/.../vic-paramedics-refuse-to-respond-to-emergency-calls-without-police-escort-as-ice-epidemic-grows/> (Accessed: 20 November 2016).
- Zhulavska, O. & Piantkovska, A. 2016. *Means of verbalization of the concept of terrorism in the British newspaper discourse of 2014*, paper presented at *GISAP: Philological Sciences*, 16–18.

## ANNEXURES

### Annexure A: Quantitative questionnaire

#### Section A: Important information and instructions

##### IMPORTANT NOTICE

1. The purpose is to investigate workplace violence against paramedics during emergency call outs in Gauteng, South Africa.
2. The participation in the study is voluntary and participants in the study are anonymous.
3. Thank you in advance for participating.

##### INSTRUCTIONS

1. Indicate your answer by marking your choice with a cross in an appropriate box.
2. Please complete the whole questionnaire.

#### SECTION B: Demographic information

1. Do you work in the Gauteng/Johannesburg Emergency Medical Service?

Yes
No

2. How old are you?

18 – 30yrs
31 – 40yrs
41 – 50yrs

51 +yrs

3. What is your gender?

Male

Female

4. What is your qualification?

BLS

ILS

ECT

NDIP

ECP

### Section C: Main questions

5. Where are you working?

Ambulance

Response

Vehicle

6. Do you respond to emergency calls?

Alone

Partner

7. Have you ever been exposed to violence, while on duty?

Yes

No

8. How often are you exposed to violence on a weekly basis, while on duty?

0 -1 times

2-5 times

6-10 times

More than 10  
times

9. What type of violence was it?

Physical

Verbal

Sexual

Emotional

10. Can you share your experience/s of violence?

Yes

No

11. Are there procedures for reporting violence while on duty?

Yes

No

Uncertain

12. If you answered yes to the above, are you familiar with them?

Yes
No

13. What shift of the day was the incident?

Day
Night

14. What time of the day was that?

15. What day of the week was the incident?

Weekend
During Week
Specify (Mon, Tues, etc.):

16. Who was the perpetrator?

Patient
Patient's family
Patient's Friend
Other (Specify)

17. Which area did the incident occur?

Urban area
Rural area

Informal Settlement

18. How did the perpetrator physically violate you?

Assault (Punch,  
Slap, Kick, stabbed)

Rape

Robbed

Other (Specify)

19. How did the perpetrator verbally abuse you?

Name calling

Swearing

Threatening

Other (Specify)

20. How did the perpetrator sexually abuse you?

Rape

Unwanted touching

Sexual gestures

Other (Specify)

21. How did the perpetrator emotionally abuse you?

Intimidation

Angry comments

Vulgar language

Other (Specify)

---

## Causes of violence

22. What was the cause of violence?

	Yes	No
Unknown		
Arrived late for an emergency call		
Person was intoxicated		
Person was interfering with paramedic work		
The patient could not be resuscitated back to life		
Person wanted to steal belongings (from patient or paramedic)		
Person felt that you do not know your job		
Person was a family member		
Person was a stranger		
There was a miscommunication		
Other (Specify)		

23. What was your reaction?

24. In hindsight, what could you have done differently?

25. What can be done to avert future occurrences?

**THANK YOU FOR TAKING YOUR TIME TO COMPLETE THIS QUESTIONNAIRE IT IS MUCH APPRECIATED**

## Annexure B: Interview questions and questionnaire for paramedics

1

### SECTION C: INTERVIEW QUESTIONS

#### IMPORTANT NOTICE

1. The purpose is to investigate workplace violence among paramedics during emergency call outs in Gauteng, South Africa.
2. Participation in the study is voluntary and participants in the study will remain anonymous.
3. Thank you in advance for participating.

#### INCIDENT SPECIFIC QUESTIONS:

1. Have you experienced violence while on duty?
2. If YES, tell me what happened.
3. If No, did you experience violence being practiced on your colleague?
4. Tell me the details of the incident.

#### EMOTIONAL QUESTIONS:

5. Tell me about your emotions with regard to the incident.

#### PROCESS

6. Tell me about the processes/systems in place of reporting the incidents such as the one you have experienced?

#### AWARENESS QUESTIONS:

7. Please tell me about the workplace violence policies and procedures in your department?

#### CLOSING QUESTION:

Is there anything else you would like to add before we end the interview?

**THANK YOU FOR YOUR TIME.**

D.I. MzimkhuluMHSc EMC20819704

## Annexure C: Letter of information to participants



### LETTER OF INFORMATION

**Title of the Research Study:**

Workplace violence towards Emergency Medical Services Staff in Gauteng Province

**Principal Investigator/s/researcher:**

D.I. Mzimkulu

Qualifications: BHSc Emergency Medical Care

**Supervisor/s:** (Name, qualifications)

MR S. Naguran

Qualifications: MTech EMC

**Brief Introduction and Purpose of the Study:**

I am a MSc Emergency Medical Care student in the Faculty of Health Sciences, Department of Emergency Medical Care and Rescue at the Durban University of Technology. You are invited to volunteer to participate in my research project on workplace violence against Paramedics in Gauteng Province: South Africa.

This information leaflet will help you decide if you are willing to participate. Before you agree to take part, you should fully understand what is involved. If you do not understand the information or have any other questions that this leaflet does not fully explain, please do not hesitate to ask the primary investigator, Mrs D.I. Mzimkhulu. You should not agree to take part unless you are completely happy about what is expected of you.

The purpose of the study is to explore the perceptions of paramedics about the prevalence, causes and types of workplace violence affecting paramedics in Gauteng Province, South Africa.

### **Outline of the Procedures:**

This study involves voluntary completion of a questionnaire including a conduction of interviews to the victims of violence. This may take about 30 minutes to 1 hour. You are requested to place the completed questionnaire in a box given to a team leader of your shift. The researcher will collect the questionnaires from him/her. They will be kept in a safe place to ensure confidentiality. Please do not write your name on the questionnaire. Your questionnaire will be having a number. Post answering of the questionnaires, those who are willing to conduct an interview will be contacted by the researcher, on their cell phone. Participants are welcomed to send an SMS or WhatsApp to the researcher (Mrs Mzimkulu), on the number above, to volunteer to be interviewed. Please remember your questionnaire number, on the bottom right of the questionnaire, as it will be used as a reference for the interview to maintain confidentiality. The inclusion criteria is Paramedics in EMS Gauteng province who are operational and an exclusion criteria is EMS Management and administration staff of the institution, the five participants who piloted the questionnaires, participants who do not meet the characteristics and objectives of the study and private EMS services paramedics.

### **Risks or Discomforts to the Participant:**

There are no risks involved, as this study does not interfere with the emergency services that you provide.

### **Benefits:**

The study will not benefit individuals, but every member working in the Emergency Medical Services (EMS) Department, the results of the study will also benefit the Emergency Medical Services (EMS)

Department by identifying the types and causes of violence their paramedics are faced with, thus influencing the EMS approach towards violence against it's staff members. The study will hopefully lead to policies and guidelines being reviewed thus improving service delivery. The results and recommendations of the study will also hopefully lead to an improved safety of paramedics. The study will also be published.

**Reason/s why the Participant May Be Withdrawn from the Study:**

There will be no adverse consequences for the participants should they choose to withdraw

**Remuneration:**

There will be no monetary or other types of remuneration for participants. Your participation is voluntary.

**Costs of the Study:**

No participants will be expected to cover any costs towards the study.

**Confidentiality:**

The researcher will collect the questionnaires from him/her. They will be kept in a safe place to ensure confidentiality. Please do not write your name on the questionnaire. Your questionnaire will be having a number. Post answering of the questionnaires, those who are willing to conduct an interview will be contacted by the researcher, on their cell phone. Participants are welcomed to send an SMS or Whatsup to the researcher (Mrs D.I. Mzimkulu), on the number above, to volunteer to be interviewed. Please remember your questionnaire number, on the bottom right of the questionnaire, as it will be used as a reference for the interview to maintain confidentiality.

**Research-related Injury:**

No research related injuries will occur as the research is based on questionnaires and interviews.

**Persons to Contact in the Event of Any Problems or Queries:**

My Supervisor is Mr S. Naguran. Please contact the researcher, Mrs D.I. Mzimkulu on 073 657 8834, my supervisor's tel no is 031 373 5203 or the Institutional Research Ethics Administrator on 031 3732375. Complaints can be reported to the Director: Research and Postgraduate Support, Prof S Moyo on 031 373 2577 or [moyos@dut.ac.za](mailto:moyos@dut.ac.za).

**General:**

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form will be in English, as English was said by the EMS management to be the recruitment requirement by the department.

**Annexure D: Consent form**



**CONSENT**

**Statement of Agreement to Participate in the Research Study:**

- I hereby confirm that I have been informed by the researcher, \_\_\_\_\_ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: \_\_\_\_\_.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.

- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own freewill) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may

Relate to my participation will be made available to me.

**Full Name of Participant                      Date                      Time                      Signature      /      Right  
Thumbprint**

I, \_\_\_\_\_ (name of researcher) here with confirm that the above participant has been fully

Informed about the nature, conduct and risks of the above study.

**Full Name of Researcher                      Date                      Signature**

**Full Name of Witness(If applicable)      Date      Signature**

**Full Name of Legal Guardian (If applicable) Date      Signature**

## Annexure E: Request for permission to conduct research

11 March 2019

Gauteng Emergency Medical Care  
2<sup>nd</sup> Level Parking  
Johannesburg Hospital  
Jubilee Road  
Parktown  
Johannesburg  
2193

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### Request for Permission to Conduct Research

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Dear Mr Mucavele

My name is Mrs Dieketseng Mzimkulu, a Masters of Health Science Emergency Medical Care student at the Durban University of Technology. The research I wish to conduct for my Masters dissertation involves workplace violence towards Emergency Medical Services Staff in Gauteng Province.

I am hereby seeking your consent to conduct the research in your area, with the members under your command.

I have provided you with a copy of my proposal which includes copies of the data collection tools and consent and/ or assent forms to be used in the research process, as well as a copy of the approval letter which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me on 073 657 8834 and/or on an email [Dimzi770@gmail.com](mailto:Dimzi770@gmail.com). Thank you for your time and consideration in this matter.

Yours sincerely,

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D.I. Mzimkulu  
Durban University of Technology Student

11 March 2019

Gauteng Department of Health  
37 Albertina Sisulu Road  
Ferreira Dorp  
Johannesburg  
2107

Request for Permission to Conduct Research

Dear MEC: Dr Gwendoline Malegwale Ramokgopa

My name is Mrs Dicketseng Mzimkulu, a Masters of Health Science Emergency Medical Care student at the Durban University of Technology. The research I wish to conduct for my Masters dissertation involves workplace violence towards Emergency Medical Services Staff in Gauteng Province.

I am hereby seeking your consent to conduct the research in Gauteng area.

I have provided you with a copy of my proposal which includes copies of the data collection tools and consent and/ or assent forms to be used in the research process, as well as a copy of the approval letter which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me on 073 657 8834 and/or on an email [Dirnzi770@gmail.com](mailto:Dirnzi770@gmail.com). Thank you for your time and consideration in this matter.

Yours sincerely,

D.I. Mzimkulu  
Durban University of Technology Student

5. It is imperative that you adhere to your specified guidelines for completion of your research and institutional/faculty deadlines as published on the DUT website.

**Declarations**

**Student Declaration**

I, the undersigned, certify that:

- I am familiar with the rules regulating higher qualifications at Durban University of Technology, and understand the seriousness with which DUT will deal with violations of ethical practice in my research.
- Where I have used the work of others this has been correctly referenced in the proposal and again referenced in the bibliography. Any research of a similar nature that has been used in the development of my research project is also referenced.
- This project has not been submitted to any other educational institution for the purpose of a qualification.
- All subsidy-earning outputs (artefacts and publications) from postgraduate studies will be in accordance with the Intellectual Property Policy of the Durban University of Technology.
- Where patents are developed under the supervision of the Durban University of Technology involving institutional expenditure, such patents will be regarded as joint property entitling the Durban University of Technology to its share, subject to the Durban University of Technology's policy on the Management and Commercialisation of Intellectual Property.
- I understand that I am expected to publish an article based on my research results.
- I understand that plagiarism is wrong, and incurs severe penalties.

I HEREBY DECLARE THAT THE ABOVE FACTS ARE CORRECT.

Signed: \_\_\_\_\_ Date: 25/04/2019  
 (Student)

**Supervisor Declaration**

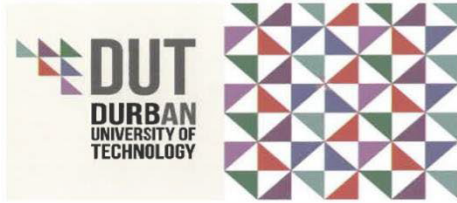
(a) I approve the student's provisional title of research project.  
 (b) I acknowledge that the topic is researchable and the student has the potential to complete the dissertation in the suggested time frame allowed.  
 (c) I am satisfied with and approve the research proposal;  
 (d) \*I approve of the Co-Supervisor(s) proposed by the HoD and student.  
 (e) I have checked that the student has complied with all the instructions outlined in the Postgraduate Student Guidelines and those appended to the Research Proposal, and confirm that the Research Proposal is ready for submission to the FRC.  
 (f) I accept responsibility to advise and guide the student.  
 (g) I accept the appointment of Supervisor.

*\*delete and sign alongside if not applicable*

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Supervisor)

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Co-Supervisor)

## Annexure F: IREC full approval letter



**Institutional Research Ethics Committee**  
Research and Postgraduate Support Directorate  
2<sup>nd</sup> Floor, Berwey Court  
Gate 1, Steve Biko Campus  
Durban University of Technology  
P O Box 1334, Durban, South Africa, 4001  
Tel: 031 373 2375  
Email: lavishad@dut.ac.za  
[http://www.dut.ac.za/research/institutional\\_research\\_ethics](http://www.dut.ac.za/research/institutional_research_ethics)  
[www.dut.ac.za](http://www.dut.ac.za)

12 February 2020

Mrs D I Mzimkulu  
21 Krombek Street  
Birch Acres 3  
Kempston Park  
1618

Dear Mrs Mzimkulu

**Workplace violence towards public sector Emergency Medical Services Staff in Gauteng Province**  
**Ethical Clearance number IREC 161/19**

The Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of the data collection tool.

Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the IREC acknowledges receipt of your gatekeeper permission letter.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Yours Sincerely,

Professor J K Adam  
Chairperson: IREC

