Workplace violence against emergency medicine registrars and consultants, and their experience of job safety and satisfaction

by

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with

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Abbreviations

A&E	Accident and Emergency
CEM(SA)	College of Medicine of South Africa
CMSA	College of Medicine of South Africa
DipPEC	Diploma in Primary Emergency Care
EC	Emergency Centre
ED	Emergency Department
EU	Emergency Unit
EM	Emergency Medicine
EMCT	Emergency Medicine Cape Town
EMS	Emergency Medical Services
EMSSA	Emergency Medicine Society of South Africa
FCEM	Fellowship of the College of Emergency Medicine
GDP	Gross Domestic Product
HPCSA	Health Professions Council of South Africa
HREC	Human Research Ethics Committee
ICN	International Convention of Nurses
ICU	Intensive Care Unit
ILO	International Labour Office
IFEM	International Federation for Emergency Medicine
MMed	Master of Medicine
MPhil	Master of Philosophy
NIOSH	National Institute for Occupational Safety and Health
PSI	Public Services International
SA	South Africa
SATS	South African Triage Scale
SU	Stellenbosch University
UCT	University of Cape Town
WHO	World Health Organization

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PART A: LITERATURE REVIEW

Introduction

Emergency Medicine in South Africa

According to the Emergency Medicine Society of South Africa (EMSSA), Emergency Medicine (EM) is defined as "A field of practice based on the knowledge and skills required for the prevention, diagnosis and management of acute and urgent aspects of illness and injury, affecting patients of all age groups with a full spectrum of undifferentiated physical and behavioural disorders. It further encompasses an understanding of the development of pre-hospital and in-hospital emergency medical systems, and the skills necessary for this development." (1-2).

EM has been recognised as a formal speciality in the United Kingdom, the United States of America, and Australia for decades (2). While EM has long been practised to a high standard and in many forms across South Africa, EMSSA was only granted full membership in the International Federation for Emergency Medicine (IFEM) in 2004 (3). In 2003, EM was added to the list of recognised Health Professions Council of South Africa (HPCSA) specialties, and the College of Emergency Medicine (CEM(SA)) was established (3-4).

The University of Cape Town (UCT) and Stellenbosch University (SU) both offer the Master of Medicine (MMed) in EM training programme (3-4). The 4-year MMed registrar programme is divided into 3-month clinical rotations, all taking place within Western Cape province, state sector, peri-urban to urban setting, healthcare facilities (3). These rotations fall into three categories: general Emergency Units (EUs), specialised (adult / paediatric, medical and surgical / trauma) EUs, and specialised (non-EU)) rotations (including: Emergency Medical Services (EMS), Intensive Care Units (ICUs), and obstetrics and gynaecology) (3). The first 10 registrars graduated from UCT, and became EM specialist physicians, in 2007 (3).

Violence in South Africa

South Africa is an upper middle-income country consisting of nine provinces and spread over an area of 1.2 million square kilometres (3,5). In 2018 the Gross Domestic Product (GDP) of South Africa was 368 billion U.S. Dollars, and the population was 57 779 622 (5). South Africa is a young democracy with a socio-politically turbulent history, and the decades-long racial oppression and forced segregation of Apartheid rule was only completely abandoned in 1994 (3). This history of violence, as well as high levels of poverty (in 2014 55.5% of the population lived below the national poverty line) and unemployment, contribute to an ever-increasing burden of disease (3,5). In fact, South Africa faces a quadruple disease burden, with violence, HIV/AIDS, other infectious (communicable) diseases, and chronic and non-infectious (non-communicable) diseases of lifestyle all contributing to a life expectancy at birth of 63.5 years (compared to an average of 75.5 years, in upper middle-income countries worldwide) in 2017 (3,5,6).

Violence is defined as "The intentional use of physical force or power, threatened or actual, against another person, against oneself, or against a group or community, that results in injury, death or deprivation" (7). The interpersonal type of violence includes acts of family violence (occurring amongst related individuals), and community violence (occurring amongst unrelated individuals)

(7). The mortality rate due to violence in low- to middle-income countries, where more than 90% of violence-related deaths occur, is 2.5 times greater than in high-income countries (8). As a result of its decades-long history of social injustice and political violence (much of which was state-sponsored), violence has become a normative and acceptable approach to conflict resolution in South Africa (7). While the political transition that took place in the late 1980s / early 1990s, has seen a decrease in political conflict in South Africa, rapid urbanisation and ongoing economic disparities, drive the exceedingly high levels of interpersonal violence remaining in the country (7). In the year 2000, in South Africa, an estimated 27 563 deaths occurred as a direct result of injuries sustained due to interpersonal violence, and, the age-standardised homicide rate was 65 per 100 000 (more than seven times the global average) (7). Homicide was the leading cause of fatal injury in males in 2000, with rates peaking in the 15 to 29-year age group at 184 per 100 000 (approximately nine times the global average) (7). South Africa also boasts high levels of gender-based violence, and resultant excessive rates of female homicides, and the highest reported intimate femicide rate in the world (7).

In South Africa, there were a total of 3 923 403 crimes committed in 2018 (9). These included the following number of contact crimes (crimes against a person): 20 306 murders; 49 991 sexual offenses (including rape, sexual assault, attempted sexual offenses, and, contact sexual offenses); 18215 attempted murders; 166 871 assaults (with the intent to do grievous bodily harm); 155 977 assaults (common); 50 666 robberies (common); 138 233 robberies (with aggravating circumstances) (9). At 845 168, the Western Cape was the province with the second highest number of total crimes committed in 2018 (after Gauteng, at 1 122 366) (9). These included the following number of contact crimes: 3729 murders (4^{th} highest); 7075 sexual offenses (4^{th} highest); 3698 attempted murders (3^{rd} highest); 23 583 assaults (with the intent to do grievous bodily harm) (3^{rd} highest); 38 579 assaults (common) (2^{nd} highest); 12 003 robberies (common) (2^{nd} highest); 24 329 robberies (with aggravating circumstances) (2^{nd} highest) (9).

Workplace Violence in Emergency Medicine

Violence in the workplace is a common and largely under-reported global occupational and public health burden, with nearly two million non-fatal assaults occurring annually, as a result of workplace violence, in the USA alone (10). As emergency care workers are often the first point of entry for patients into the health care system, they operate at the intersection of society and the health care system. They are therefore exposed to interpersonal violence and its effects daily. This review will explore the published literature on workplace violence in the EU, with a specific focus on the experiences of EM physicians in training (called EM registrars or EM residents in different parts of the world), and EM specialist physicians.

Search Strategy

The purpose of this study was to determine the amount of workplace violence, and the sub-types thereof, perpetrated against Western Cape EM registrars and specialists. Furthermore, we investigated their perceived level of job safety, and barriers thereto. The literature review search strategy was carried out using Pubmed and Google Scholar. The search terms included:

(workplace) violence and hospital staff; (workplace) violence and Emergency (Emergency Centre (EC) / Emergency Department (ED) / Emergency Unit (EU) / Accident and Emergency (A&E) / Casualty Department) staff; (workplace) violence and EM specialist physicians; (workplace) violence and EM physicians in training / registrars / residents; (workplace) violence in (South) African hospitals; and, (workplace) violence in (South) African ECs / EDs / EUs / A&Es / Casualty Departments. The identified sources covered a broad topic and thus needed to be filtered, in order to narrow them down to a smaller number covering more specific core topics. The approach to deciding which sources were included in the literature review involved dividing them into broader African (specifically South African) studies, due to the fact that limited African, and no South African, studies existed on workplace violence in EM specialists and registrars, and, narrower global studies, in order to identify those studies specifically focusing on workplace violence in EM specialists and registrars.

A definition of workplace violence

The National Institute for Occupational Safety and Health (NIOSH) defines workplace violence as "physical assaults and threats of assault, directed toward persons at work or on duty" (11). The above definition was expanded upon, by Gates et al, to include verbal threats, verbal harassment, and sexual harassment, which revealed the greater scope of the problem (12). In 2000, the International Labour Office (ILO), the International Convention of Nurses (ICN), the World Health Organisation (WHO), and Public Services International (PSI) spear-headed a joint programme to develop guidelines to address workplace violence in the healthcare industry (13). The resultant synthesis report defined workplace violence as: "Incidents where staff are abused, threatened or assaulted in situations related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health" (13).

Workplace violence can be divided into physical and non-physical violence. Common forms of physical violence include spitting, pinching, biting, hitting, slapping, pushing, punching, kicking, stabbing, and shooting. Non-physical violence is usually described as psychological violence or emotional abuse, and is further sub-divided into three groups:

- Verbal harassment (e.g. cursing, yelling, racial slurs, humiliating actions);
- Verbal threats (including written threats and threatening body language); and,
- Sexual harassment (e.g. unwelcome sexual advances, insulting gestures, requests for sexual favours, offensive contact) (13).

More important than the statistical significance of reporting all incidents of workplace violence (physical and non-physical), is the fact that the threat of workplace violence compromises job safety (16,19,20,22). This may have significant and far-reaching effects, including decreased job satisfaction, and a negative impact on both mental health ("burnout"), and physical health (psychosomatic illness) (16,19,20,22). These effects may result in decreased work performance and productivity, increased absenteeism and resignations, impaired patient care, and increased cost to the healthcare facility (16,19,20,22).

Workplace violence in the healthcare sector

While the risk of workplace violence in the healthcare sector may not be as high as other occupations (e.g. the military or the police), in the USA the number of non-fatal assaults per annum per 1000 workers has been estimated at 16.2 for physicians, 21.9 for nurses, and 69 for mental health care workers, as compared to 12.6 for all occupations (10).

Although there has been a lag in studies being carried out in developing and transition countries, the problem of workplace violence exists and appears to be as widespread as in industrialised countries (13). This is illustrated by the synthesis report, with more than half of the responding health care workers (from Brazil, Bulgaria, Lebanon, Portugal, South Africa, Thailand, and Australia) having experienced at least one incident of physical or non-physical violence in the preceding year (13).

The synthesis report also noted that while all health care facilities are at risk, health care facilities in suburban, densely populated, high crime or isolated areas, were most at risk (13). Crime in South Africa is rife, with the Western Cape being the province with the second highest number of total crimes committed, in 2018 (9). Several studies have shown that this high crime rate appears to be permeating into the healthcare industry, with high rates of workplace violence being reported (19-21).

A country case study commissioned in South Africa identified that 61.9% of all healthcare workers had experienced at least one incident of workplace violence in the preceding year (19,20). While the risk of workplace violence was high in the private health care sector (32.6% of respondents had experienced physical workplace violence), it was significantly higher in the public health care sector (67.4% of respondents had experienced physical workplace violence) (19,20). The EU and the Psychiatric Department have been identified as higher risk for workplace violence than other hospital departments (13,14). Concerningly, studies on workplace violence amongst South African nurses found that the problem is escalating, particularly in the Western Cape (19-21).

In the event of physical workplace violence, emergency treatment is available (19). Non-physical workplace violence, conversely, has limited treatment avenues available, especially in public health care facilities, where counsellors and social workers are scarce and overworked (19). There also seems to be an institutional mind-set that "the patient is always right", which acts as a barrier to open communication and often prevents staff coming forward and reporting incidents of non-physical workplace violence (19). An organisational culture is evident, within the healthcare industry, which denies workplace violence, or underplays it by labelling it "part of the job" (20).

Workplace violence in the EU

The EU specifically is a high-risk area for workplace violence (15-17). This is not only dependent upon, and a reflection of, the prevalence of crime in the particular patient population an EU serves but can be explained by the nature of the patients cared for by the EU staff (15-17, 19-21). These patients are acutely ill or injured, and present with a wide range of undifferentiated conditions (15-

17). This is often compounded by underlying social issues, psychiatric disease, and alcohol or substance intoxication or withdrawal, which result in these patients being unpredictable and potentially violent (15-17). Their accompanying friends and/or family may be under considerable stress and may also be in a state of intoxication or withdrawal, and thus also pose a risk of violence (15-17).

Health care workers working in this setting are thus at a high risk of workplace violence (15-18). This has been illustrated in both national and international studies on workplace violence in Emergency Medical Service (EMS) staff, and EU nurses and other personnel (15-20). It has also been demonstrated in several international studies on workplace violence amongst EM specialist physicians (15-18). In their country case study Steinman *et al* identified that 61.9% of all healthcare workers had experienced at least one incident of workplace violence in the preceding year (19,20). Nursing personnel and EMS staff were found to be the professions, and the EU the department, most at risk of workplace violence. (19,20).

Another concerning finding, and a common theme throughout the literature, is the under-reporting and normalisation of workplace violence (15,19,20,22). This has been attributed to workplace violence being considered "part of the territory" (15,20). This appears to be particularly evident in the EU, where non-physical workplace violence is often rationalised and accepted if the patient is psychotic, confused or intoxicated (20). Non-physical workplace violence is so commonplace in some settings (like the EU), that it is seen as "minor" or "the norm" and acknowledging and reporting it is seen as senseless (20). It has been argued that normalising workplace violence is the precursor to institutional violence (22).

Workplace violence amongst EM specialists

A 2018 survey-based study by Kowalenko *et al* attempted to reassess the incidence and experience of workplace violence, by Michigan-based EM specialists (18). This reassessment was carried out by comparing data attained from an electronic survey, with the results of a 2005 study ("Workplace Violence: A Survey of Emergency Physicians in the State of Michigan"), by Kowalenko et al (15,18). The 2005 study was one of the few, and one of the earliest, to address workplace violence amongst doctors (specifically EM specialists), in the EU (15,18).

The 2018 study identified several new examples of workplace violence, which included confrontations outside of the EU; stalking; violence through patient satisfaction surveys (Reported by 17.9% of respondents); and, violence through social media (reported by 6.3% of respondents, statistically significant association with working in urban / large city hospitals) (18).

Despite an increase in hospital security measures (as evidenced by an increase in: security personnel performing whole-hospital rounds; EU-assigned security personnel; armed security personnel; and, EU-based police / sheriff security officers), workplace violence, in general, was as common an occurrence in 2018 as it was in 2005 (72.4% of respondents experienced any form of workplace violence in the preceding year) (18). The incidence of physical workplace violence, however, increased by 10% (from 28.1% to 38.1%), in the interceding 10 years (18).

EM specialists appeared to become more fearful of becoming a victim of workplace violence, in the EU, between 2005 and 2018 (9.4% vs 21.9% felt frequently fearful, while 1.2% vs 8.1% felt constantly fearful) (18). While EM physicians demonstrated a continued tendency towards taking personal measures to ensure their safety (e.g. obtaining a knife for personal protection; asking for a security escort to their vehicle; or, considering leaving the hospital in which they work, secondary to perceived threats of violence), this tendency appeared to decrease between 2005 and 2018 (18).

Workplace violence amongst EM registrars

Until recently, there appears to have been a paucity in data regarding the prevalence of workplace violence amongst EM physicians in training (called EM registrars or EM residents in different parts of the world) (16,17). This is despite the observations in a study carried out amongst EM specialist physicians, that those with less years of experience are more at risk of physical workplace violence (with a mean difference of 3.6 years), and of non-physical workplace violence (with a mean difference of 4 years) (15,17,18). This is thought to be due to less experience in recognizing and dealing with potentially violent patients (15-17). It could therefore be reasoned that EM registrars are a vulnerable group, and, that research into their exposure to violence should be prioritised.

Prior to the study performed by Schnapp et al, there appears to have been only one study focusing solely on the experience of EU workplace violence, by EM registrars (17). More than 20 years ago, McNamara et al demonstrated a 98% rate of harassment, and an associated increased risk of burnout, in EM registrars (16). Schnapp et al found workplace violence to be a significant problem amongst EM registrars, with 65.5% having experienced at least one act of physical violence, 96.6% of verbal harassment, 78.2% of verbal threats, and 52.1% of sexual harassment, in the EU, by a patient (17).

Patient and visitor factors identified as predisposing to workplace violence included alcohol use (95%), drug use (94.1%), and psychiatric disease (91.6%) (17). Environmental factors contributing to workplace violence included a lack of security or police presence (82.4%), and security / police not responding in a timely manner (68.1%) (15). Staffing factors predisposing to workplace violence included a lack of adequate staff (79.8%) and working evening and night shifts (49.6%) (17). According to this study, only 16.8% of EM registrars had received prior training in violence prevention or de-escalation techniques (14.3% within the preceding 12 months) (17). This study also found that while 77.3% of EM registrars experienced job safety “often” or “always”, this left nearly a quarter experiencing job safety “occasionally”, “seldom”, or “never”, while working in the EU (17).

Conclusion

Workplace violence is a common and largely under-reported global occupational and public health burden. Several studies have shown that the high crime rate in South Africa, of which, the Western Cape was the province with the second highest number of total crimes committed, in 2018, appears to be permeating into the healthcare industry. This resulted in high rates of workplace violence being reported.

Healthcare workers in the EU are at a particularly high risk of both physical and non-physical workplace violence. This is not only dependent upon, and a reflection of the prevalence of crime in the patient population an EU serves but can be explained by the nature of the patients cared for by the EU staff. This has been illustrated in both national and international studies on workplace violence in EMS staff, and EU nurses and other personnel.

The same picture has emerged through several international studies on workplace violence amongst EM specialist physicians. One of these studies showed that those with less years of experience are more at risk. Until recently, there appears to have been a paucity in data regarding the prevalence of workplace violence amongst EM physicians in training (called EM registrars or EM residents in different parts of the world). There are currently no South African studies assessing the extent of workplace violence against EM registrars and specialists.

This study will attempt to determine the amount of workplace violence (and the sub-types thereof), perpetrated against Western Cape EM registrars and specialists. Furthermore, we will investigate their perceived level of, and identified barriers to, job safety and satisfaction.
The information gained during this study will be useful in improving safety and security policies at an EU (and hospital) level. It may even be applicable at a provincial (or national) level, in changing legislation in order to reduce, and, ultimately prevent, workplace violence in the EU.

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PART B: MANUSCRIPT IN SOUTH AFRICAN MEDICAL JOURNAL ORIGINAL FORMAT

Workplace violence against emergency medicine registrars and consultants, and their experience of job safety and satisfaction

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Abstract

Background: Studies have shown that healthcare workers in Emergency Units (EUs) are at a high risk of both physical and non-physical workplace violence. While several international studies have focused on the experience of workplace violence by Emergency Medicine (EM) specialist physicians, there is a paucity of data regarding that of EM physicians in training.

Objectives: This study aimed to determine the amount of workplace violence (and the sub-types thereof) perpetrated against Western Cape EM registrars and consultants, and their perceived level of, and identified barriers to and facilitators of, job safety and satisfaction.

Methods: This cross-sectional study relied upon responses to a survey, electronically disseminated over a 6-week period, in May/June 2018, amongst Western Cape public sector EM registrars and consultants. The primary outcome was the incidence of workplace violence experienced. The secondary outcomes were the sub-types of workplace violence perpetrated, as well as the perceived level of job safety and satisfaction, and identified barriers thereto and facilitators thereof.

Results: In total, 66% of respondents had experienced at least one act of physical violence while working in Western Cape EUs, specifically by patients. Regarding non-physical violence, 90.6% of respondents had experienced at least one act of verbal harassment, 84.9% of verbal threat, and 45.3% of sexual harassment. The rates of both physical and non-physical workplace violence (especially sexual harassment), perpetrated by patients specifically, were found to be higher in female than in male respondents. Apart from acts of verbal harassment, which were perpetrated equally by patients and visitors, all other acts of physical and non-physical workplace violence were perpetrated at a higher rate by patients than visitors. The rates of both physical and non-physical workplace violence, perpetrated by patients specifically, were found to be higher in EM consultants than in EM registrars. The factors most commonly indicated by respondents as contributory to workplace violence were patient and/or visitor alcohol use, drug use and psychiatric illness. Other factors commonly indicated were long waiting times and unmet expectations, and resultant patient and/or visitor frustration.

Conclusion: Workplace violence against EM registrars and consultants is a significant problem in Western Cape EUs. The information gained during this study will be useful in improving safety and security policies at an EU (and hospital) level. It may even be applicable at a provincial (or national) level in changing legislation, in order to reduce, and ultimately prevent, workplace violence in the EU.

Keywords
Workplace violence; Emergency medicine; Emergency service, Hospital

Introduction

Workplace violence is a common and largely under-reported global occupational and public health burden (1). It can be defined as: "Incidents where staff are abused, threatened or assaulted in situations related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health" (2). Workplace violence can be divided into physical and non-physical violence (2). Non-physical violence is further sub-divided into verbal harassment, verbal threats and sexual harassment (2).

In the year 2000, in South Africa, an estimated 27 563 deaths occurred as a direct result of injuries sustained due to interpersonal violence, and the age-standardised homicide rate was 65 per 100 000 (more than seven times the global average) (3,4,5). Homicide was the leading cause of fatal injury in males in 2000, with rates peaking in the 15 to 29-year age group at 184 per 100 000 (approximately nine times the global average) (3,4,5). South Africa also boasts high levels of gender-based violence, and resultant excessive rates of female homicides, and the highest reported intimate femicide rates in the world (3,4,5). In South Africa there were a total of 3 923 403 crimes committed in 2018 (6). At 845 168, the Western Cape was the province with the second highest number of total crimes committed in 2018 (after Gauteng, at 1 122 366) (6). Several studies have shown that the high national, and more specifically provincial, crime rate appears to be permeating into the healthcare industry, with high rates of workplace violence being reported amongst healthcare workers (2,7,8,9).

Compared to other healthcare workers, those in the Emergency Unit (EU) are at a particularly high risk of both physical and non-physical workplace violence (10,11,12,13). One of the few and one of the earliest studies to address workplace violence amongst doctors (specifically Emergency Medicine (EM) specialist physicians) in the EU, was a 2005 study by Kowalenko et al (10). This study found that those EM specialist physicians with less years of experience are most at risk of both physical and non-physical workplace violence, which was thought to be due to less experience in recognising and dealing with potentially violent patients (10,11,12,13). It could therefore be reasoned that EM physicians in training (called EM registrars or residents in different parts of the world) are a vulnerable group, and yet there is a paucity of data regarding their experience of workplace violence (10,11,12,13).

More than 20 years ago, in a 1995 study, McNamara et al demonstrated a 98% rate of harassment, and an associated increased risk of burnout, in EM registrars (11). More recently, in 2016, Schnapp et al found that 65.5% of EM registrars had experienced at least one act of physical violence, 96.6% of verbal harassment, 78.2% of verbal threats, and 52.1% of sexual harassment, in the EU, by a patient (12). A concerning finding, and a common theme throughout the literature, is the under-reporting and normalisation of workplace violence (7,8,10,14). This has been attributed to workplace violence being considered "part of the territory" (8,10). This appears to be particularly evident in the EU, where non-physical violence is often rationalised and accepted if the patient is psychotic, confused or intoxicated, and acknowledging and reporting it is seen as senseless (8).

More important than the statistical significance of reporting all incidents of workplace violence (physical and non-physical), is the fact that the threat of workplace violence compromises job

safety (7,8,11,14). This may have significant and far-reaching effects, including decreased job satisfaction, and a negative impact on both mental health ("burnout") and physical health (psychosomatic illness) (7,8,11,14). These effects may result in decreased work performance and productivity, increased absenteeism and resignations, impaired patient care, and increased cost to the healthcare facility (7,8,11,14).

There are currently no South African studies assessing the extent of workplace violence against EM registrars and EM specialist physicians. This study aimed to determine the perceived amount of workplace violence (and the sub-types thereof), perpetrated against Western Cape EM registrars and EM consultants (EM specialist physicians and senior clinicians acting as heads of public sector EUs). In addition, this study sought to describe their perceived level of, and identified barriers to and facilitators of, job safety and satisfaction.

The information gained during this study will be useful in improving safety and security policies at an EU (and hospital) level. It may even be applicable at a provincial (or national) level in changing legislation in order to reduce, and ultimately prevent, workplace violence in the EU.

Methods

This was a cross-sectional survey-based study. The study population included all Western Cape public sector EM registrars currently registered as University of Cape Town (UCT) or Stellenbosch University (SU) post-graduate students, and all Western Cape public sector EM consultants currently serving as UCT and/or SU faculty. At the time of the study there were 44 EM registrars and 34 EM consultants rotating through or working in Western Cape public sector EUs respectively, and the study population thus totalled 78. Approval for this study was obtained from the UCT Human Research Ethics Committee (HREC). Approval for the use of students in research was sought from both UCT and SU.

The *Emergency Centre (EC) Workplace Violence and Job Safety* Survey (Appendix 2) was adapted from a previous study on workplace violence and job safety, amongst EM registrars from New York City (USA), with the written permission of the lead author, Dr BH Schnapp (12). The survey was disseminated by email in May 2018, utilising the online survey tool Survey Monkey, and was open for six weeks. Fortnightly email reminders were sent to those members of the study population with incomplete surveys, and paper copies of the survey were made available at weekly EM registrar teaching sessions. The anticipated response rate was 65% (n=51). Survey respondent identifying information was not collected, allowing for anonymity in data collection. Study participant survey responses were stored in a password-protected electronic format, allowing for confidentiality in data analysis.

The survey (Appendix 2) collected the following data from survey respondents: demographic descriptors; experience of workplace violence; and perceived level of, barriers to, and facilitators of job safety and satisfaction. Responses were analysed using basic descriptive statistics. Age and gender differences between the registrar and consultant groups were assessed by Fisher's exact test.

Results

While the study population totaled 78, there were 53 completed responses at closure of the electronic survey. This yielded a 68.0% response rate overall, with a 64.0% and 74.0% response rate in EM registrars (n=28) and EM consultants (n=25) respectively.

Participant demographics

The age and gender distribution of the study participants is shown in **Table 1**. Gender distribution was similar between the two groups, with 35.7% (n=10) of registrars and 40.0% (n=10) of consultants being female, and 64.3% (n=18) of registrars and 60.0% (n=15) of consultants being male ($p>0.05$).

Age distribution differed between the two groups in that the consultants were older, with 64.0% (n=16) being under the age of 40 years old, while the registrars were younger, with 89.3% (n=25) being under the age of 40 years old ($p=0.047$).

Table 1: Demographic details of study participants

	Registrars (28)	**Consultants (25)**	**Total (53)**
Gender			
Female	35.7 (10)	40.0 (10)	37.7 (20)
Male	64.3 (18)	60.0 (15)	62.3 (33)
Age			
26-30 years	17.9 (5)	20.0 (5)	18.9 (10)
31-35 years	60.7 (17)	12.0 (3)	37.7 (20)
36-40 years	10.7 (3)	32.0 (8)	20.7 (11)
41-45 years	3.6 (1)	28.0 (7)	15.1 (8)
46-50 years	7.1 (2)	4.0 (1)	5.7 (3)
51-55 years	0.0 (0)	4.0 (1)	1.9 (1)

Values shown are proportions (%) of total in each category, with n shown in parentheses.

The consultants completed their EM registrar training between 2005 and 2017. The range within which their years of experience (including four years of EM registrar training) fell was thus 5 to 17 years, with a median of 12 years. All of the registrars commenced their EM registrar training between 2013 and 2018, and the majority (n=24, 85.7%) between 2014 and 2017. The range between which their completed years of EM registrar training fell was thus 0 to 5 years, with a median of 2 years.

Non-Physical Assault in the EC

The proportion of study participants who reported experiencing non-physical assault, by patients and visitors, in Western Cape public sector EUs, in the form of verbal harassment and/or verbal threats is shown in **Figure 1**, and of sexual harassment in **Figure 2**.

Verbal harassment was reported to have been perpetrated in equal proportions by patients and visitors overall (90.6%), as well as in the registrar group (85.7%) and consultant group (96%) of study participants. Verbal threats, however, were reported to have been perpetrated in a larger proportion by patients than visitors overall (84.9% vs 69.8%), as well as in the registrar group (78.6% vs 60.0%) and the consultant group (92.0% vs 80.0%) of study participants. A larger proportion of respondents reported experiencing verbal harassment than verbal threats overall, as well in the consultant and registrar groups of study participants. When comparing the experience of EM registrars and EM consultants, a larger proportion of the latter group of study participants reported experiencing both verbal harassment and verbal threats overall, as well as by patients and by visitors, than the former group.

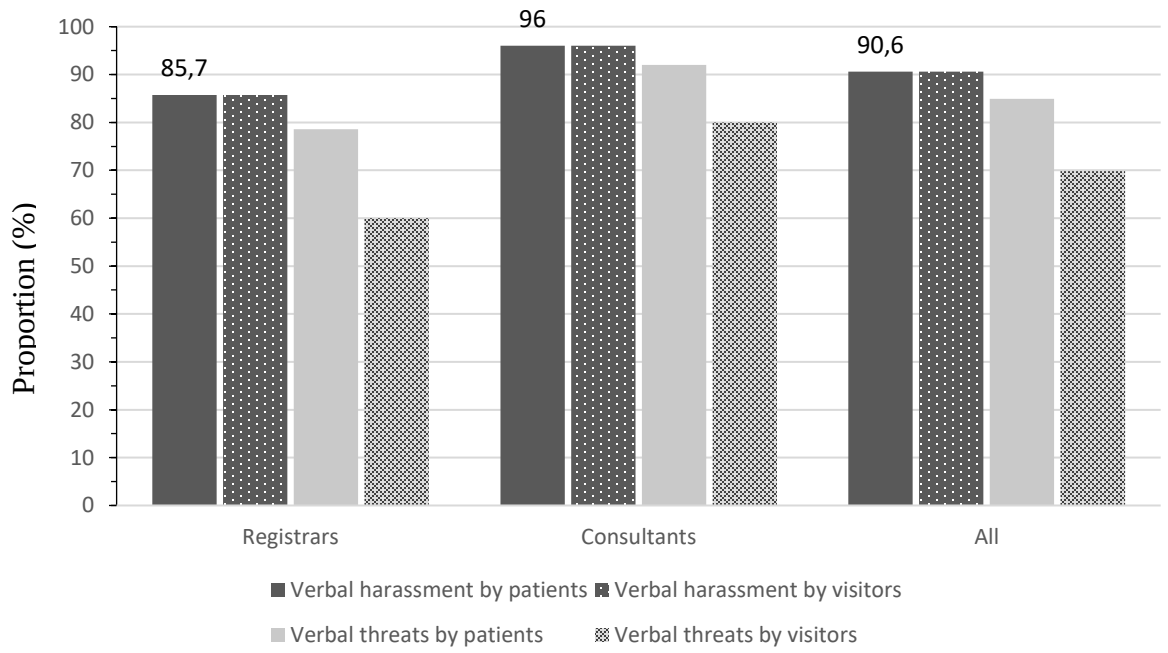

Figure 1: The proportion (%) of study participants who reported experiencing non-physical assault (in the form of verbal harassment and/or verbal threats), in Western Cape public sector EUs, by patients and visitors

Sexual harassment was reported to have been perpetrated in a larger proportion by patients than by visitors overall (45.3% vs 15.1%), as well as in the male (16.7% vs 11.1%) and female (70.0% vs 40.0%) registrar groups, and the male (33.3% vs 0.0%) and female (90.0% vs 20.0%) consultant groups of study participants.

When comparing the experience of EM registrars and EM consultants, a larger proportion of the latter group of study participants reported experiencing sexual harassment, than the former group. A larger proportion of female than male respondents reported experiencing sexual harassment, in both the registrar and consultant groups.

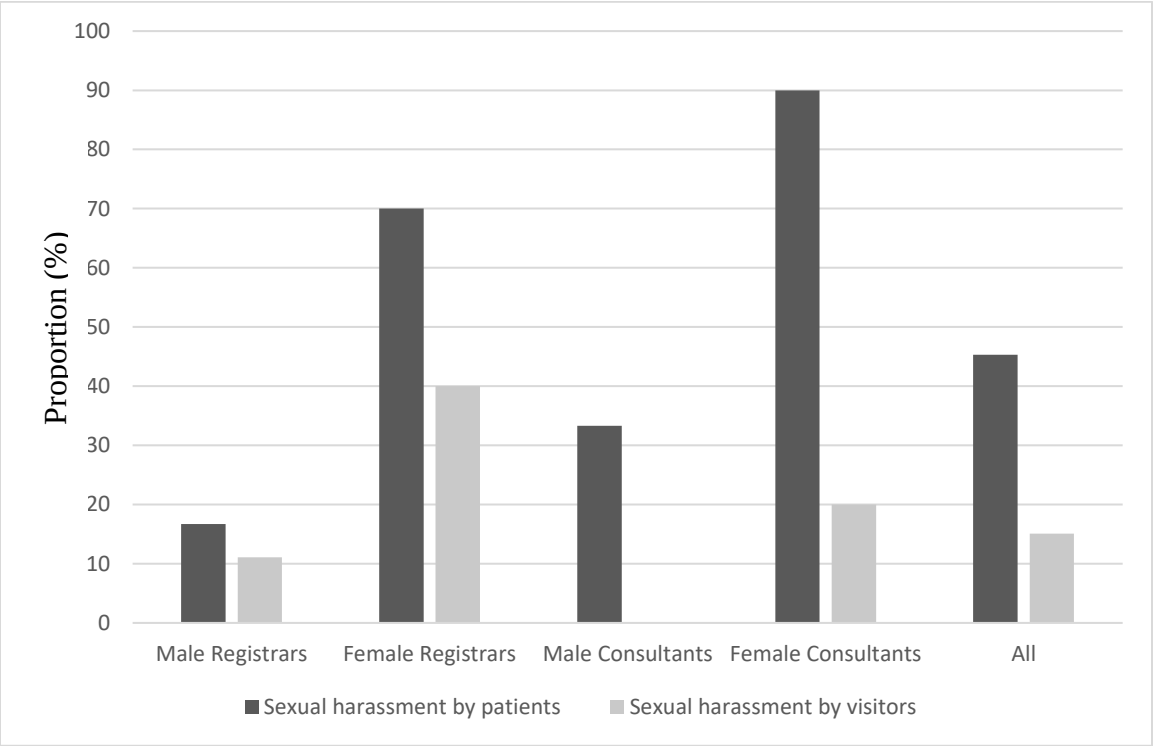

Figure 2: The proportion (%) of study participants who reported experiencing non-physical assault (in the form of sexual harassment), in Western Cape public sector EUs, by patients and visitors

Physical Assault in the EC

The proportion of study participants who reported experiencing physical assault, by patients and visitors, in Western Cape public sector EUs, is shown in **Figure 3**. In total, 66.0% (n=35) of study participants reported experiencing physical assault by a patient, and 18.9% (n=10) reported experiencing physical assault by a visitor. With respect to physical assault by a patient, 32.1% (n=17) of participants had experienced between one and five incidents, and 34.0% (n=18) had experienced five or more incidents, with 20.8% (n=11) of participants experiencing more than 10 incidents. With respect to physical assault by a visitor, 13.2% (n=7) of participants had experienced between one and five incidents, and 5.7% (n=3) had experienced five or more incidents, with 3.8% (n=2) of participants experiencing more than 10 incidents.

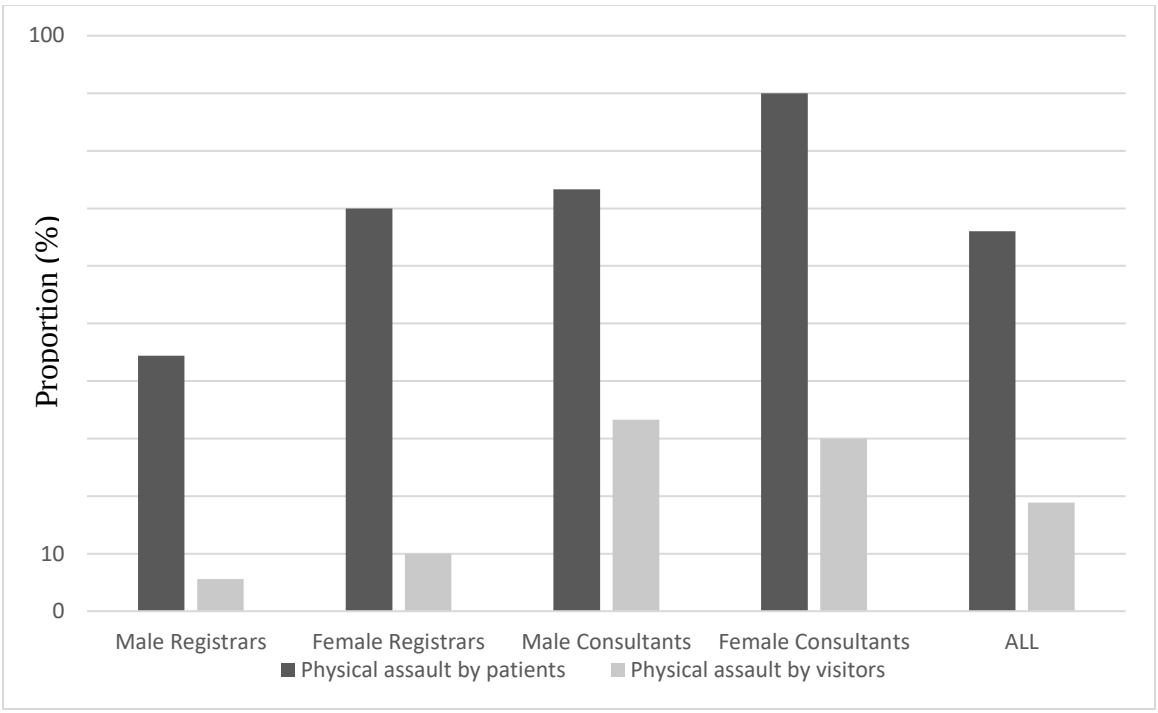

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Figure 3: The proportion (%) of study participants who reported experiencing physical assault, in Western Cape public sector EUs, by patients and visitors

Perceived Precipitating Factors of EU Workplace Violence

The patient and visitor related attributes indicated most frequently by respondents as contributing factors to EU workplace violence included alcohol use (52/53, 98.1%), drug use (50/53, 94.3%), and Psychiatric illness (50/53, 94.3%) (**Table 2**).

Fourteen (26.4%) study participants offered other patient and visitor associated factors that they thought predisposed to workplace violence in the EU. Twelve (22.6%) raised patient and visitor frustration due to long waiting times, unmet expectations, and little to no understanding of the EU triage system. Seven (13.2%) raised patient and visitor attitudes and personality traits (e.g. entitlement, impatience, disrespect and aggression) (An example that was provided is that of the patient who uses violence as a means to force staff to move them forward in queues).

Table 2: Patient and visitor related predisposing factors to EU workplace violence

PATIENT and VISITOR Factors	**Number of Respondents**	**% of Total Respondents (53)**
Alcohol use	52	98.1
Drug use	50	94.3
Psychiatric illness	50	94.3
Delirium (Organic Brain Syndrome) / Dementia	31	58.5
Inability to cope or deal with a Crisis Situation	28	52.8
Gang involvement / Criminal behaviour	31	58.5
OTHER	14	26.4

The staff related attributes indicated most frequently by respondents as predisposing factors to EU workplace violence included being alone with patients and/or visitors (34/53, 64.1%), and long shifts (33/53, 62.3%) (**Table 3**).

Ten (18.9%) study participants offered other staff related attributes that they thought contributed to workplace violence in the EU, with three themes being commonly raised. Firstly, an insufficient number of EU staff, who are not adequately trained or rested, to handle the patient volumes and EU workload (5.7%, n=3). Secondly, an insufficient number of security staff, who are not adequately trained, well rested, or appropriately motivated, to keep the EC safe (7.5%, n=4). The third commonly raised theme (7.5%, n=4) was two-fold, and included the poor response to, and lack of support after, incidents of workplace violence, by EU (and Hospital) management. It also included the perceived tolerance of workplace violence, in the EU, at the hands of patients and visitors, by the provincial and national department of health. This tolerance was felt to be exhibited by the lack of consequences for such violence, in the form of a mandated directive and resultant punishment, especially in the case of repeat offenders ("Over-emphasis of patients' rights, without mention of staff rights").

Table 3: Staff related contributing factors to EU workplace violence

EMERGENCY UNIT Environment and Staff Factors	**Number of Respondents**	**% of Total Respondents (53)**
Lack of adequately trained Staff	31	58.5
Evening / Night Shifts	26	49.1
Long Shifts	33	62.3
Being alone with Patients and / or Visitors	34	64.1
Lack of prior knowledge about Patients and / or Visitors who are known Violent Offenders	26	49.1
Lack of Violence Prevention Training	31	58.5
OTHER	10	18.9

The environment related attributes indicated most frequently by respondents as contributing factors to EU workplace violence included long patient waiting times (47/53, 88.7%), security and/or police not responding timeously or with a sense of urgency (40/53, 75.5%), and Security and/or Police not helpful (36/53, 67.9%) (**Table 4**). Seven (13.2%) study participants offered other environment related attributes that they thought predisposed to workplace violence in the EU, with four themes being commonly raised. The first theme related to security equipment (e.g. metal detectors, metal barricade doors) being faulty or not being used (3.8%, n=2). The second theme referenced the shortage of well-trained clerical staff, and poorly developed or improperly used EU patient information systems (1.9%, n=1). The third theme regarded high patient volumes in relation to EU and Hospital size, infrastructure, and resources (3.8%, n=2). The fourth and final theme was two-fold and included the lack of a Department of Health policy, or EU (and Hospital) standard operating procedure, dealing with workplace violence in the EC (1.9%, n=1). It also included the poor education and training of EU staff in Health Care Worker Rights (1.9%, n=1).

Table 4: Environment related predisposing factors to EU workplace violence

HOSPITAL Environment and Staff Factors	**Number of Respondents**	**% of Total Respondents (53)**
Long Patient Waiting Times	47	88.7
Lack of Security and / or Police presence	32	60.4
Security and / or Police present, NOT helpful	36	67.9
Security and / or Police present, NOT responding timeously or with a sense of urgency, when needed	40	75.5
Multiple Public Access Points / Entrances to the EU (i.e. Various Areas of the EU being open to Patients and / or Visitors)	24	45.3
Lack of Metal Detectors / Alarms (i.e. Ease of ability for Patients and / or Visitors to bring Weapons into the EU)	19	35.8
Lack of Policies / Procedures for handling Patients and / or Visitors who are known Violent Offenders	32	60.4
OTHER	7	13.2

Perceived Protective Factors against EU Workplace Violence

A small minority of study participants (16.9%; n=9) indicated that they had received training in violence prevention or de-escalation techniques, within the last 12 months.

Perceived Level of Job Safety and Satisfaction

Slightly over half (52.8%; n=28) of the study participants indicated that they always or often felt safe working in the EU, with 24.5% (n=13) indicating that they never or seldom felt safe working in the EU.

Only 10 study participants (18.9%) indicated that they felt somewhat satisfied with the security measures in the EU in which they work, with no study participants indicating that they were very satisfied. The majority of study participants (58.5%; n=31) indicated that they were very or somewhat dissatisfied with the security measures in the EU in which they work.

Thirty-nine responses were received when study participants were asked what would make them feel safer while working in the EU. Recurrent themes included the need for adequately trained and visible security personnel with the ability to assess situations and act appropriately and timeously to protect EU staff. The need for better access control in the EU, including limiting the numbers of visitors and accompanying persons, was also frequently raised. Another common theme was the need for a separate area for the processing and management of aggressive, psychotic and intoxicated patients. The need for violence prevention training for EU staff, and the importance of adequate staffing, including nursing staff, to reduce waiting times and allow better communication with patients and accompanying visitors, were also frequently raised. Another common theme was the need for a Department of Health policy, and EU (and Hospital) standard operating procedure, dealing with aggressive patients, which prioritizes the rights of EU staff, and outlines consequences for inappropriate behavior, from patients and/or visitors.

Discussion

This article presents the results of the first South African study assessing the experience of EU workplace violence, specifically by EM registrars and EM consultants. The most important finding of this study is the high proportion of both physical violence (66.0%) and non-physical violence (verbal harassment (90.6%), verbal threats (84.9%), and sexual harassment (45.3%)), experienced by EM registrars and EM consultants, in Western Cape public sector EUs, perpetrated by patients specifically. The study by Schnapp et al yielded similar results, with 65.5% of respondents having experienced at least one act of physical violence, 96.6% of verbal harassment, 78.2% of verbal threats, and 52.1% of sexual harassment, in the EU, by a patient (12).

The second important finding of this study is the discrepancy in the experience of workplace violence, by EM registrars and EM consultants, in Western Cape public sector EUs, perpetrated by patients specifically, based on gender. The proportion of physical violence was higher in female than in male EM registrars (70.0% vs 44.4%) and in female than in male EM consultants (90.0% vs 73.3%). Regarding non-physical violence, the proportion of sexual harassment was higher in female than in male EM registrars (70.0% vs 16.7%), and in female than in male consultants (90.0% vs 33.3%). The study by Schnapp et al also yielded discrepant results, with 68.9% of females and only 41.9% of males having experienced at least one act of sexual harassment, in the EU, by a patient (12). The larger gender disparity evident in this study reflects South Africa's high levels of gender-based violence (3,4,5,6).

The third important finding of this study is the disparity in the experience of workplace violence, by EM registrars and EM consultants, in Western Cape public sector EUs, perpetrated by patients

specifically, based on years of experience and/or level of seniority. The proportion of physical violence was higher in female EM consultants than EM registrars (90.0% vs 70.0%) and in male EM consultants than EM registrars (73.3% vs 44.4%). Regarding non-physical violence, the proportion was higher in EM consultants, compared to EM registrars, of verbal harassment (96.0% vs 85.7%) and verbal threats (92.0% vs 78.6%). The proportion of sexual harassment was also higher in female EM consultants than in female EM registrars (90.0% vs 70.0%), and in male EM consultants than in male EM registrars (33.3% vs 16.7%). These findings reflect the fact that the EM consultants have more EM work experience (median: 12 years) than the EM registrars included in this study (median: 2 years). Interestingly, the study by McNamara et al found that those EM specialist physicians with less years of experience were more at risk of both physical and non-physical workplace violence, presumably due to less experience in recognizing and dealing with potentially violent patients, however the study by Schnapp et al found no statistically significant protective or harmful effect of years of experience (11,12).

It is worth noting the factors raised by EM registrars and EM consultants as likely contributors to workplace violence, in Western Cape public sector EUs. The three factors most commonly raised in this study, as well as in the study by Schnapp et al, were patient and/or visitor alcohol use, drug use and psychiatric illness (12). Another factor that was raised in this study was long patient waiting times which reflects that, in Western Cape public sector EUs, while higher-acuity patients are seen faster than lower acuity patients, waiting times are longer than recommended for the South African Triage Scale (SATS) (15).
Lastly, 24.5% of EM registrars and EM consultants indicated that they did not feel safe working in Western Cape public sector EUs, and 58.5% of EM registrars and EM consultants indicated that they were dissatisfied with the security in these EUs. These findings are in keeping with those of both local and international studies that have demonstrated the harmful sequelae of workplace violence (7,8,11,14). In the presence of any threat of workplace violence, job safety is compromised, the effects of which may include decreased job satisfaction, and a negative impact on both mental health ("burnout"), and physical health (psychosomatic illness) (7,8,11,14). These effects may result in decreased work performance and productivity, increased absenteeism and resignations, impaired patient care, and increased cost to the healthcare facility (7,8,11,14).

Strengths and Limitations

This study was based on self-reported survey responses, meaning that the results are at risk of recall bias. Recall may have also been influenced by incidents of violence (either within the EU or the country as a whole) during the months leading up to the survey. The response rate to the survey was satisfactory, with 68% of potential respondents participating (64% of EM registrars and 74% of EM consultants).

This study asked EM registrars and EM consultants, with varying years of experience and/or level of seniority, to report on their exposure to violence, in Western Cape public sector EUs. All of the EM consultants reported having completed their EM registrar training, and all of the EM registrars were in the process of completing their EM registrar training, in Western Cape public sector EUs. The study didn't, however, account for time spent, by both EM registrars and EM consultants,

working in EUs outside of the Western Cape (and South Africa), working in private sector EUs, or working in departments outside of the EU. Additionally, the study did not control for the number of months spent rotating through, as well as the locations of, the Western Cape public sector EUs through which respondents had rotated. While varying time periods spent rotating through Western Cape public sector EUs may have affected reported levels of workplace violence, given the number and variety of these EUs surveyed, the results likely represent the experience of workplace violence in Western Cape public sector EUs in general.

While the most commonly cited predisposing factors of EU workplace violence were included in the survey tool, by Schnapp et al, it is possible that other contributing factors were missed by the instrument (12). Although study modifications were minimal, the modified survey instrument used by Schnapp et al (and, with permission, in this study), has not been validated for the EU population (12).

Recommendations

Further studies are needed to provide more detailed data in order to confirm the results of this study, as well as to compare the results to those attained from studies set in other South African public sector EUs. Future research into sub-categories of EU workplace violence that are new and/or previously unstudied, or appear to be increasing in incidence, can yield specific interventions to address and reduce these behaviours.

Examples of these future research topics include separate studies to address the experience of workplace violence by female EM registrars and EM consultants (the proportion of whom experienced both physical and non-physical violence (especially sexual harassment), by patients specifically, being greater than that of male EM registrars and EM consultants), and by EM consultants (the proportion of whom experienced both physical and non-physical violence, by patients specifically, being greater than that of EM registrars).

Other examples of future research topics include separate studies to address incidents of violence occurring while commuting to and from work (included in the definition of workplace violence used by this study), and to explore incidents of physical sexual assault, which were not addressed in this study.

Conclusion

This study aimed to describe the perceived prevalence and sub-types of workplace violence, perpetrated against EM registrars and EM consultants, in Western Cape public sector EUs. It also explored their perceived level of, and identified barriers to and facilitators of, job safety and satisfaction.

Workplace violence against EM registrars and consultants is a significant problem in Western Cape EUs, with the prevalence of both physical and non-physical violence similar to that reported

in previous studies. The threat of EU workplace violence compromises job safety, which may have significant and far-reaching effects. These effects may result in decreased job satisfaction, and negative effects on both mental health ("burnout") and physical health (psychosomatic illness) (16,19,20,22). These effects result in decreased work performance and productivity, increased absenteeism and resignations, impaired patient care, and increased cost to the healthcare facility (16,19,20,22).

The information gained during this study will be useful in improving safety and security policies at an EU (and hospital) level. It may even be applicable at a provincial (or national) level in changing legislation in order to reduce, and ultimately prevent, workplace violence in the EU.

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PART C: ADDENDA

1. Journal Instructions to Authors

This manuscript was prepared in accordance with the instructions for authors submitting to the South African Medical Journal.
(www.samj.org.za/index.php/samj/about/submissions)

2. Emergency Centre Workplace Violence and Job Safety Survey

1. *Demographics*

1.1. What is your Gender?

a. Male

b. Female

1.2. What is your Age?

a. < / = 20 years old

b. 21 - 25 years old

c. 26 - 30 years old

d. 31 - 35 years old

e. 36 - 40 years old

f. 41 - 45 years old

g. 46 - 50 years old

h. > / = 51 years old

1.3. Are you an Emergency Medicine Specialist?

a. Yes

b. No

1.3.1. If YES (to 1.3.), where did you complete your registrar training?

1.3.2. If YES (to 1.3.), in what year did you complete your registrar training?

1.4. Are you an Emergency Medicine Registrar?

a. Yes

b. No

1.4.1. If YES (to 1.4.), in what year did you commence your registrar training?

1.5. Which Western Cape Emergency Centres have you rotated through as part of your EM registrar training?

a. Victoria Hospital (Wynberg) EC? Yes / No

b. Groote Schuur Hospital C14 (Trauma EC)? Yes / No

c. Groote Schuur Hospital C15 (Medical / Surgical EC)? Yes / No

d. Mitchell's Plain District Hospital EC? Yes / No

e. Heideveld EC? Yes / No

f. GF Jooste Hospital EC? Yes / No

g. New Somerset Hospital EC? Yes / No

h. Khayelitsha District Hospital EC? Yes / No

i. Tygerberg Hospital F1 (Medical / Surgical EC)? Yes / No

j. Tygerberg Hospital Trauma (Trauma EC)? Yes / No

k. Tygerberg Hospital G Ground (Paediatric EC)? Yes / No

l. Red Cross Hospital Trauma (Paediatric EC)? Yes / No

m. Paarl Hospital EC? Yes / No

n. Karl Bremer Hospital EC? Yes / No

2. Non-Physical Workplace Violence

2.1. Have you ever experienced VERBAL HARASSMENT (e.g. cursing, yelling, racial slurs, humiliating actions), from a PATIENT?

a. Yes

b. No

2.2. Have you ever experienced VERBAL HARASSMENT (e.g. cursing, yelling, racial slurs, humiliating actions), from a VISITOR?

a. Yes

b. No

2.3. Have you ever experienced VERBAL THREATS (e.g. verbal threats / written threats / body language expressed with intent to harm), from a PATIENT?

a. Yes

b. No

2.4. Have you ever experienced VERBAL THREATS (e.g. verbal threats / written threats / body language expressed with intent to harm), from a VISITOR?

a. Yes

b. No

2.5. Have you ever experienced SEXUAL HARASSMENT (e.g. unwelcome sexual advances; insulting gestures; requests for sexual favours; offensive contact), from a PATIENT?

a. Yes

b. No

2.6. Have you ever experienced SEXUAL HARASSMENT (e.g. unwelcome sexual advances; insulting sexual gestures; requests for sexual favours; offensive contact), from a VISITOR?

a. Yes

b. No

3. Physical Workplace Violence

3.1. How many times have you been PHYSICALLY ATTACKED (e.g. hitting, slapping, punching, kicking, spitting, biting, hitting with an object / having an object thrown, stabbing, shooting), by a PATIENT?

a. Never

b. Once

c. Twice

d. Three times

e. Four times

f. Five times

g. Six times

h. Seven times

i. Eight times

j. Nine times

k. Ten or more times

3.2. How many times have you been PHYSICALLY ATTACKED (e.g. hitting, slapping, punching, kicking, spitting, biting, hitting with an object / having an object thrown, stabbing, shooting), by a VISITOR?

a. Never

b. Once

c. Twice

d. Three times

e. Four times

f. Five times

g. Six times

h. Seven times

i. Eight times

j. Nine times

k. Ten or more times

4. <u>CONTRIBUTING Factors TOWARDS EC Workplace Violence</u>

4.1. Please check off all the factors below that you believe to be PATIENT and VISITOR factors contributing to WORKPLACE VIOLENCE:

___ Alcohol use

___ Drug use

___ Psychiatric Disease

___ Organic Brain Syndrome / Dementia

___ Inability to deal with a crisis situation

___ Gang involvement

___ OTHER (Please specify)

4.2. Please check off all the factors below that you believe to be STAFFING factors contributing to WORKPLACE VIOLENCE:

___ Lack of adequate staff

___ Evening / night shifts

___ Working long hours

___ Being alone with patients / visitors

___ Lack of information about patients / visitors with prior history of violence

___ Lack of violence prevention training

___ OTHER (Please specify)

4.3. Please check off all the factors below that you believe to be HOSPITAL-BASED / ENVIRONMENTAL factors contributing to WORKPLACE VIOLENCE:

___ Long patient waiting times

___ Lack of security / police presence

___ Security / police present, but unhelpful

___ Security / police not responding in a timely manner, when called

___ Various areas of the EC open to the public

___ Ease of ability to bring weapons into the EC

___Lack of metal detectors / alarms

___ Lack of policies / procedures for handling known violent offenders

___ OTHER (Please specify)

5. PROTECTIVE Factors AGAINST EC Workplace Violence (Violence Prevention Training)

5.1. Have you received any form of Violence Prevention Training, in the last 12 months?

a. Yes

b. No

5.1.1. If YES (to 5.1.), did you receive Violence Prevention Training, in the last 12 months, with your current employer?

a. Yes

b. No

5.1.2. If NO (to 5.2.), did you receive Violence Prevention Training, in the last 12 months, from someone besides your current employer?

a. Yes

b. No

6. Job Safety and Satisfaction

6.1. How often do you feel SAFE (free from VIOLENCE) while working in the EC?

a. Never
b. Seldom
c. Occasionally
d. Often
e. Always

6.2. How SATISFIED are you with your current position / job title?

a. Very dissatisfied
b. Somewhat dissatisfied
c. Neutral
d. Somewhat satisfied
e. Very satisfied

6.3. How SATISFIED are you with the EC(s)?

a. Very dissatisfied
b. Somewhat dissatisfied
c. Neutral
d. Somewhat satisfied
e. Very satisfied

6.4. How SATISFIED are you with the Hospital(s)?

a. Very dissatisfied
b. Somewhat dissatisfied
c. Neutral
d. Somewhat satisfied
e. Very satisfied

6.5. How SATISFIED are you with the security in the EC(s)?

a. Very dissatisfied

b. Somewhat dissatisfied

c. Neutral

d. Somewhat satisfied

e. Very satisfied

6.6. What would make you feel SAFER, while working in the EC(s)?

3. HREC-Approved Research Protocol

Workplace Violence against Western Cape Emergency Medicine Registrars and Specialists, and their Experience of Job Safety

Student:

Dr Alexandra Midgley (MBChB (UCT), DipPEC (CMSA)) (UCT, MDGALE001)

Supervisors:

Dr Heike Geduld (MBChB, FCEM, MMed) (Joint Division of EM, UCT / SU)

Dr Willem Jooste (MBChB, FCEM, MMed) (Joint Division of EM, UCT / SU)

Dr Colleen Saunders (PhD (UCT))

MMed in Emergency Medicine

24 May 2017

Plagiarism Declaration

1. I know that plagiarism is a serious form of academic dishonesty.
2. I have read the document about avoiding plagiarism, am familiar with its contents and have avoided all forms of plagiarism mentioned there.
3. Where I have used the words of others, I have indicated this by the use of quotation marks.
4. I have referenced all quotations and properly acknowledged other ideas borrowed from others.
5. I have not and shall not allow others to plagiarise my work.
6. I declare that this is my own work.
7. I am attaching the summary of the Turnitin match overview (when required to do so).

Signature: Alexandra Midgley

Date: 23 May 2017

Workplace Violence against Western Cape Emergency Medicine Registrars and Specialists, and their Experience of Job Safety

Table of Contents:

Abstract

Introduction:

Workplace violence has been shown to be a common and largely under-reported global occupational and public health burden. International studies have shown that healthcare workers in the Emergency Centre (EC) are at a particularly high risk of both physical and non-physical workplace violence. Nationally, there have been several studies that have shown high rates of workplace violence amongst healthcare workers, particularly in the EC, and particularly in the public healthcare sector. There are currently no South African studies assessing the extent of workplace violence amongst Emergency Medicine (EM) registrars. This study will attempt to determine the amount of workplace violence (and the sub-types thereof), perpetrated against Western Cape EM registrars and specialists, and their perceived level of, and barriers to, job safety.

Methods:

This is a Cross-sectional Survey Study. The "Emergency Centre (EC) Workplace Violence and Job Safety Survey" (Appendix 1) is adapted from that of a previous study, by Schnapp et al, on workplace violence and job safety, amongst EM physicians in training / EM residents, from New York City, USA (6), with the written permission of the study's lead author, Dr BH Schnapp. The survey tool will be electronically disseminated, amongst Western Cape EM registrars and specialists. After a set maximum survey response time of 6 weeks, data from completed surveys will be collected and analysed under the following headings: DEMOGRAPHICS; PRIMARY OUTCOME (Amount of workplace violence); SECONDARY OUTCOMES (Sub-types of workplace violence; Perceived level of job safety; Identified barriers to job safety). With an expected minimum response rate of 65%, the sample population will be made up of approximately 50 study participants.

Expected Outcomes:

PRIMAY OUTCOME: A large amount of workplace violence is expected to be reported upon.
SECONDARY OUTCOMES: It will be of interest to ascertain the predominant sub-types of workplace violence. A low level of perceived job safety is anticipated to be described. The contributing factors present (and absent preventative factors), identified as barriers to job safety, will be useful in improving safety and security policies at an EC (and hospital) level. They may even be applicable at a provincial (or national) level, in changing legislation, in order to reduce, and ultimately prevent, workplace violence in the EC.

Introduction

2.1. Background (Literature Review) and Motivation

Violence in the workplace is a common and largely under-reported global occupational public health burden, with nearly two million non-fatal assaults occurring annually, as a result of workplace violence, in the USA alone (1). Some occupations inherently involve violence against those working in such environments, examples being the military and the police. The healthcare industry in general is not considered to be at high risk for workplace violence. Healthcare industry employees have, however, been shown to experience high rates of non-fatal assault, due to workplace violence. In the USA, the number of non-fatal assaults, per annum, per 1000 workers, has been estimated at 16.2 for physicians, 21.9 for nurses, and 69 for mental health care workers, as compared to 12.6 for all occupations (1).

In 2000, the International Labour Office (ILO), the International Convention of Nurses (ICN), the World Health Organisation (WHO), and Public Services International (PSI) spear-headed a joint programme to develop guidelines to address workplace violence in the healthcare industry (2). From this programme, country case studies were commissioned in Brazil, Bulgaria, Lebanon, Portugal, South Africa, and Thailand (2).

Together with an additional Australian study, these case studies were then collated into a synthesis report (2).

According to this report, workplace violence is defined as: “Incidents where staff are abused, threatened or assaulted in situations related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health” (2). Workplace violence is divided into: physical violence (hitting, slapping, punching, kicking, pushing, spitting, biting, pinching, being hit by an object / having an object thrown at one, shooting, stabbing), and non-physical violence (psychological violence / emotional abuse), including verbal harassment (cursing, yelling, racial (and other derogatory) slurs, humiliating actions), verbal threats (also including written threats and threatening body language), and sexual harassment (unwelcome sexual advances, insulting gestures, requests for sexual favours, offensive contact) (2).

The EC and the Psychiatric Department have been identified as higher risk for workplace violence than other hospital departments (3). The fact that the EC specifically is such a high-risk area for workplace violence, can be explained by the nature of the patients cared for by the EC staff. These patients are acutely ill or injured, and present with a wide range of undifferentiated conditions. This is often compounded by underlying social issues, psychiatric disease, and alcohol or substance intoxication or withdrawal, which result in these patients being unpredictable and potentially violent. Their accompanying friends and / or family may be under considerable stress and may also be in a state of intoxication or withdrawal, and thus also pose a risk of violence. Health care workers working in this setting are thus at a high risk of workplace violence. This has been illustrated in studies on workplace violence in Emergency Medical Service (EMS) staff and EC nurses and other personnel (4 – 6). It has also been demonstrated in a number of international studies on workplace violence amongst specialist EM physicians (4 - 6).

Until recently, there appears to have been a paucity in data regarding the prevalence of workplace violence amongst EM physicians in training / EM residents. This is despite the observations, in a study carried out amongst specialist EM physicians, that EM

physicians with less experience are more at risk of physical workplace violence (with a mean difference of 3.6 years), and of non-physical workplace violence (with a mean difference of 4 years). This is thought to be due to less experience in recognizing and dealing with potentially violent patients (4 – 6).

Prior to the study performed by Schnapp et al (6) there appears to have been only one study focusing solely on the experience of EC workplace violence, by EM physicians in training / EM residents. More than 20 years ago, McNamara et al (5) demonstrated a 98% rate of harassment, and an associated increased risk of burnout, in EM physicians in training / EM residents. Schnapp et al (6) found workplace violence to be a significant problem amongst EM physicians in training / EM residents, with 78% having experienced at least one act of physical violence, 96.6% of verbal harassment, 78.2% of verbal threats, and 52.2% of sexual harassment. This study also found that while 77.3% of EM physicians in training / EM residents experienced job safety “often” or “always”, this left nearly a quarter experiencing job safety “occasionally”, “seldom”, or “never”, while working in the EC. Patient-based factors predisposing to workplace violence identified in this study included alcohol use (95%), drug use (94.1%), and psychiatric disease (91.6%). Only 16.8% of EM physicians in training / EM residents confirmed having received prior training in violence prevention or de-escalation techniques.

Although there has been a lag in studies being carried out in developing and transition countries, the problem of workplace violence exists and appears to be as widespread as in industrialised countries. This is illustrated by the synthesis report, with more than half of the responding health care workers (from Brazil, Bulgaria, Lebanon, Portugal, South Africa, Thailand, and Australia) having experienced at least one incident of physical or n on-physical violence in the preceding year (2).

The synthesis report also pointed out that while all health care facilities are at risk, health care facilities in suburban, densely populated, high crime or isolated areas, were most at risk (2). Crime in South Africa is rife, with the Western Cape being the province with the highest homicide and assault rates (7). Several studies have shown that this

high national crime rate appears to be permeating into the healthcare industry, with high rates of workplace violence being reported (8 - 10).

The country case study commissioned in South Africa, spear-headed by Susan Steinman, identified that 61.9% of all healthcare workers had experienced at least one incident of workplace violence in the preceding year (8). Nursing personnel and EMS staff were found to be the professions, and the EC the department, that were most at risk of workplace violence (8). While the risk of workplace violence was high in the private health care sector (32.6% of respondents had experienced physical workplace violence), it was significantly higher in the public health care sector (67.4% of respondents had experienced physical workplace violence) (8).

A concerning finding in studies, on workplace violence, amongst South African nurses, i s that it seems to be on an upward trend, particularly in the Western Cape (9 - 10). Another concerning finding, and a common theme throughout the literature, is the under-reporting and normalisation of workplace violence (4, 8, 9, 11). This has been attributed to workplace violence being considered “part of the territory” by EC staff (4). In the event of physical workplace violence, emergency treatment is available (8). Non-physical workplace violence conversely, has limited treatment avenues available, especially in public health care facilities, where counsellors and social workers are scarce and overworked (8). There also seems to be an institutional mind-set that “the patient is always right”, which acts as a barrier to open communication and often prevents staff coming forward and reporting incidents of non-physical workplace violence (8). An organisational culture is evident, within the healthcare industry, which denies workplace violence, or underplays it by labelling it “part of the job” (9). This appears to be particularly evident in the EC, where non-physical violence is often rationalised and accepted if the patient is confused or intoxicated (9). Non-physical violence is so commonplace in some settings (like the EC), that it is seen as “minor” or “ the norm” and acknowledging and reporting it is seen as senseless (9). It has been argued that normalising workplace violence is the precursor to institutional violence (11)

The importance of acknowledging and reporting all incidents of workplace violence (physical and non-physical) is not just a statistical one, but, much more importantly, in the presence of any threat of workplace violence, job safety is compromised (5, 8, 9, 11). This has significant and far-reaching effects, including decreased job satisfaction, and, negative effects on both mental health (”burnout”) and physical health (psychosomatic illness) (5, 8, 9, 11). These effects result in decreased work performance and productivity, increased absenteeism and resignations, impaired patient care, and increased cost to the healthcare facility (5, 8, 9, 11).

There are currently no South African studies assessing the extent of workplace violence against EM registrars. This study will attempt to determine the amount of workplace violence (and the sub-types thereof), perpetrated against Western Cape EM registrars and specialists, and their perceived level of, and barriers to, job safety. The information gained during this study will be useful in improving safety and security policies at an EC (and hospital) level. It may even be applicable at a provincial (or national) level, in changing legislation in order to reduce, and, ultimately prevent, workplace violence in the EC

2.2. Research Question

What is the extent of workplace violence (and the sub-types thereof), perpetrated against Western Cape EM registrars and specialists, and what are their perceived level of, and barriers to, job safety?

2.3. Aims

To determine the extent of workplace violence (and sub-types thereof), perpetrated against Western Cape EM registrars and specialists, and their perceived level of, and barriers to, job safety.

2.4. Objectives

- To quantify the extent of workplace violence, perpetrated by EC patients and visitors, against Western Cape EM registrars and specialists.
- To describe the predominant sub-types (physical or non-physical (verbal harassment, verbal threats, sexual harassment)), of workplace violence, perpetrated by EC patients and visitors, against Western Cape EM registrars and specialists.
- To ascertain the perceived level of job safety, of Western Cape EM registrars and specialists.
- To identify the perceived barriers to job safety, of Western Cape EM registrars and specialists (presence of contributing factors to, and absence of preventative factors against, workplace violence).

3. Methodology

3.1. Study Design

This is a Cross-sectional Survey Study. The “Emergency Centre (EC) Workplace Violence and Job Safety Survey” (Appendix 1) is adapted from that of a previous study, by Schnapp et al, on workplace violence and job safety, amongst EM physicians in training / EM residents, from New York City, USA (6), with the written permission of the study’s lead author, Dr BH Schnapp.

3.2. Study Population and Sampling

The study population will include all current Western Cape EM Registrars (Students of the joint EM division of University of Cape Town and Stellenbosch University), as well as all current Western Cape EM Specialists (Faculty of the joint EM division of

University of Cape Town and Stellenbosch University). This study will not be hospital-based but will be carried out with the approval of the University of Cape Town and Stellenbosch University.
There are currently 44 active Western Cape EM Registrars (including Supernumerary Registrars), and 34 active Western Cape EM Specialists. This means that the study population will total 78.

3.3 Data Collection and Analysis

Email addresses of the relevant Western Cape EM registrars and specialists (making up the study population), will be attained from the joint EM divisions of University of Cape Town and Stellenbosch University, and a mailing list will be created, for use in the electronic dissemination of the “Emergency Centre (EC) Workplace Violence and Job Safety Survey” (Appendix 1), utilising the online survey tool, Survey Monkey.
The “Emergency Centre (EC) Workplace Violence and Job Safety Survey” (Appendix 1) will be completed voluntarily. An “Informed Consent Form” (Appendix 2) will be electronically disseminated, with the “Emergency Centre (EC) Workplace Violence and Job Safety Survey” (Appendix 1), to the entire study population. Those members of the study population who sign informed consent and complete the survey become study participants and will make up the sample population.
A minimum response rate of 65% is expected, which will mean that, of the 78 members of the study population, there will be approximately 50 respondents to the electronically disseminated “Emergency Centre (EC) Workplace Violence and Job Safety Survey” (Appendix 1) (the sample population will thus be made up of approximately 50 study participants).
A set maximum survey response time of 6 weeks has been decided upon, prior to data collection and analysis. A delay in survey response time is expected, and this will be countered by sending 2 weekly email reminders to those members of the study population with incomplete surveys. Paper copies of the “Emergency Centre (EC)

Workplace Violence and Job Safety Survey" (Appendix 1) will also be available at weekly EM registrar teaching sessions.

The "Emergency Centre (EC) Workplace Violence and Job Safety Survey" (Appendix 1) will be completed anonymously, and data will be collected and analysed in a confidential manner. Respondents answers will be sent to a link, where all data will be stored in a password-protected electronic format. Study population identifying information (e.g. name, email address, IP address) will not be collected, and their choice of whether or not to participate in the research project, as well as their responses to the online survey, if they choose to participate in the research project, will therefore be completely confidential.

Data from completed surveys will be collected, using Excel. This data will then by analysed under the following headings:

- Respondent Demographics
- Primary Outcomes:
  - The amount of workplace violence, perpetrated by EC patients and visitors, against Western Cape EM registrars and specialists.
- Secondary Outcomes:
  - The predominant sub-types (physical or non-physical (verbal harassment, verbal threats, sexual harassment)), of workplace violence, perpetrated by EC patients and visitors, against Western Cape EM registrars and specialists.
  - The perceived level of job safety, of Western Cape EM registrars and specialists.
  - The perceived barriers to job safety, of Western Cape EM registrars and specialists (presence of contributing factors (patient and visitor / hospital / staff) to, and absence of preventative factors (training in de-escalation techniques / violence prevention) against, workplace violence).

Collected and analysed data will be summarised using basic descriptive statistics, and a statistician will be consulted if statistical help is required.

4. Expected Outcomes

- Primary Outcomes:
  - It is expected that the amount of workplace violence, perpetrated by EC patients and visitors, against Western Cape registrars and specialists, will be high.
- Secondary Outcomes:
  - It will be of interest to ascertain the predominant sub-types (physical or non-physical (verbal harassment, verbal threats, sexual harassment)) of workplace violence, perpetrated by EC patients and visitors, against Western Cape EM registrars and specialists.
  - A low level of perceived job safety, of Western Cape EM registrars and specialists, is anticipated.
  - The contributing factors present (and absent preventative factors), identified as barriers to job safety, of Western Cape EM registrars and specialists, will be useful in improving safety and security policies at an EC (and hospital) level. They may even be applicable at a provincial (or national) level, in changing legislation, in order to reduce, and ultimately prevent, workplace violence in the EC.

5. Ethical and Legal Considerations

The only inherent risks, to the study participants / sample population, in completing the "Emergency Centre (EC) Workplace Violence and Job Safety Survey" (Appendix 1), and participating in the research project, could be potential emotional discomfort / distress, caused by the sensitive / emotional nature of some of the survey questions. This distress / discomfort should be minimal, however, as the relevant questions are closed-ended, and do not require detailed / descriptive answers.

This risk will be further mitigated by the fact that contact details of ICAS (Independent Counselling and Advisory Service) will be made available to the study participants / sample population, while they are completing the survey, for use in the event that they experience any emotional discomfort / distress.

The participation of the study participants / sample population is completely voluntary, and they will not be coerced into participating, nor will they be reimbursed in any way for their participation.

The only potential benefit in completing the "Emergency Centre (EC) Workplace Violence and Job Safety Survey" (Appendix 1) would be that their responses may help us to learn more about the amount (and sub-types) of workplace violence perpetrated against Western Cape EM registrars and specialists, as well as their perceived level of (and barriers to) job safety. These results may then lead to improvement in safety and security policies at an EC (and hospital) level, and may potentially be applicable at a provincial (or national) level, in changing legislation in order to reduce, and ultimately prevent, workplace violence in the EC. This would then lower the amount of workplace violence to which they are exposed and improve their perceived job safety and satisfaction.

6. Limitations

Information bias is a potential limitation, as the study participants / sample population may under-report their experience of workplace violence, due to the inherent stigma surrounding workplace violence.

The study will also be prone to recollection bias, as it will largely be assessing the perceptions of the study participants / sample population, regarding their level of, and barriers to, job safety.

7. Reporting and Implementation of Results

Once data is collected and analysed, results will be compiled into a final report, for university submission.
The aim is that the resultant article will be published in a peer-reviewed journal.

8. Time Schedule

EMDRC (Full)	June - July 2017
Ethics	November - December 2017
Data Collection	January – February 2018
Data Analysis	March – April 2018
Write-up and Submission	May – June 2018

9. Resources and Budget

Communication Costs (Data (Emails))	+/- R250
Personnel Costs (Data Capturer, Statistician)	+/- R1000
Transport Costs	R0
Consumable Costs (Stationery, Printing)	+/- R250
TOTAL	+/- R1500

This study will be self-funded.

10. References

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4. Consent Forms and Related Patient Information Sheets

"Workplace Violence against Western Cape Emergency Medicine Registrars and Consultants, and their Experience of Job Safety": INFORMED CONSENT FORM

You are invited to complete the "Emergency Centre (EC) Workplace Violence and Job Safety Survey". This online survey forms the basis of a research project entitled "Workplace Violence against Western Cape Emergency Medicine Registrars and Consultants, and their Experience of Job safety", in which you will be participating. This research project is being conducted by Dr Alexandra Midgley, an EM Registrar, completing an MMed as a student of the University of Cape Town. The online survey should take approximately 5 to 10 minutes to complete.

Participation:

Your participation in this research project is voluntary. You may choose not to participate. If you choose to participate, you may withdraw at any point. If you choose to participate, you are also free to decline to answer any of the online survey questions, for whatever reason. You will not be penalised, in any way, for any of the above choices.

Risks:

The only risks inherent in your participation in this research project, could be potential emotional discomfort / distress, caused by the sensitive / emotional nature of some of the questions in the online survey. This distress / discomfort should be minimal, however, as the questions are closed-ended, and do not require detailed / descriptive answers.

In the event that you do experience any degree of emotional discomfort / distress, while completing the online survey, you are encouraged to make contact with ICAS

(Independent Counselling and Advisory Service), via phone (at 021 673 6500), or via email (at info@icas.co.za).

Benefits:

You will not be coerced into participating in this research project, nor will you be reimbursed

in any way for your participation in this research project. Your responses to this online survey may, however, help us to learn more about the amount (and sub-types) of workplace violence perpetrated against Western Cape EM registrars and consultants, as well as their perceived level of (and barriers to) job safety. These results may then lead to improvement in safety and security policies at an EC (and hospital) level, and, may potentially be applicable at a provincial (or national) level, in changing legislation in order to reduce, and ultimately prevent, workplace violence in the EC.

Confidentiality:

Your answers to the online survey will be sent to a link at www.surveymonkey.com, where all data will be stored in a password-protected electronic format. Identifying information (e.g. your name, your email address, your IP address) will not be collected, and your choice of whether or not to participate in the research project, as well as your responses to the online survey, if you choose to participate in the research project, will therefore be completely anonymous.

Contact:

If you have any questions regarding this online survey, or, the research project for which it forms the basis, you may contact me, via phone (at 0723682510), or via email (at indimavsta@gmail.com).

If you feel that your rights as a study participant have not been honoured during the course of this research project, or, you have any questions or concerns or complaints that you wish to address directly to my research supervisor, you may contact Dr Willem Jooste, via phone (at 0832644649), or via email (at willem.jooste@uct.ac.za).

Electronic Consent:

Please select your choice below. Clicking on the “Agree” button indicates that:

- You have read and understood the information within this form
- You voluntarily agree to participate in this research project, by completing the online survey
- You are 18 years of age or older

☐ Agree

☐ Disagree

5. HREC Approval Letter

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee

Room E53-46 Old Main Building
Groote Schuur Hospital
Observatory 7925
Telephone [021] 406 6492
Email: sumayah.ariefdien@uct.ac.za
Website: www.health.uct.ac.za/fhs/research/humanethics/forms

16 November 2017

HREC REF: 796/2017

Dr H Geduld
Division of Emergency Medicine
C/o Ms Aileen Maas
E52.27, OMB

Dear Dr Geduld

PROJECT TITLE: WORKPLACE VIOLENCE AGAINST WESTERN CAPE EMERGENCY MEDICINE REGISTRARS AND SPECIALISTS, AND THEIR EXPERIENCE OF JOB SAFETY (MMeD-candidate- Dr A Midgley)

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee (HREC) for review.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

Approval is granted for one year until the 30 November 2018.

Please add the UCT FHS HREC contact details to the informed consent document.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.
(Forms can be found on our website: www.health.uct.ac.za/fhs/research/humanethics/forms)

We acknowledge that the student: Dr A Midgley will also be involved in this study.

Please quote the HREC REF in all your correspondence.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

Yours sincerely

pp TBurgess

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE