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Knowledge attitudes and practices of emergency care practitioners towards intimate partner violence

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KNOWLEDGE ATTITUDES AND PRACTICES OF EMERGENCY CARE PRACTITIONERS TOWARDS INTIMATE PARTNER VIOLENCE

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A Research report submitted to the Faculty of Health Sciences at the University of the Witwatersrand in partial fulfillment of Master of Medicine in Emergency Medicine

Johannesburg, 2016

I, Lucy Elizabeth Hindle, declare that this research report is my own, unaided work. It is being submitted for the degree of Master of Medicine in Emergency Medicine at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.

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The…… day of ……. 2016

Presentations arising from Report

LE Hindle, E Kramer. Knowledge, Attitudes and Practices of Emergency Care Practitioners regarding Intimate Partner Violence. Abstract presentation, Combined World Congress on Disaster and Emergency Medicine/Emergency Medicine Society of South Africa Conference 2015, 21 – 24 April, Cape Town

Abstract

Objective

Intimate partner violence (IPV) is a significant social and health concern in South Africa, with far reaching consequences. One in three South African women will experience IPV, and many of the survivors of IPV will have contact with Emergency Care Practitioners (ECPs), either for treatment related to the direct sequelae of the abuse or for other health issues. ECPs already play a role in identifying and managing IPV but current knowledge, attitudes and practices were not known.

The aim of the study therefore was to describe current levels of knowledge, attitudes and practices regarding IPV amongst ECPs, including doctors, nurses and paramedics in South Africa and to describe differences according to the respondent's reported prior training and profession.

Methods

A prospective, cross sectional study was performed using an online survey administered anonymously to ECPs in South Africa. Information regarding demographic data, qualification, prior IPV training, knowledge, attitudes and practices towards IPV were obtained.

Results

One hundred and fifty three respondents completed the survey. Of those 56% were doctors, 33% paramedics and 9.8% nurses. In total 65% reporting having received no training on IPV. There was a significant association between respondents reporting

having received any IPV training and improved self-reported knowledge (p=0.0001), and actual knowledge (p=0.011).

Of the respondents in clinical practice 75% had diagnosed IPV in the last six months, although the frequency of diagnoses being made is lower than would be suggested by the South African prevalence rates. Those respondents who reported any prior training on IPV were more likely to have diagnosed IPV in the last 6 months (p= 0.0076) Most of the ECPs who diagnosed IPV counselled the patients on options and/or referred to police and/or social workers.

Conclusion

Although ECPs are diagnosing and managing IPV, training in this important health concern is inadequate. Any reported training on IPV for ECPs improves self-reported knowledge, actual knowledge and practices regarding IPV.

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Definitions and Abbreviations

For the purposes of this research report the focus was specifically on Intimate Partner Violence (IPV) as defined below, although the researcher conforms to the broadly accepted view that IPV as defined by the World Health Organisation[1], constitutes a particular form of Domestic Violence (DV) which is very broadly defined in South African legislation [2].

Definitions and abbreviations used throughout this study are set out below:

- **Emergency Care Practitioners ("ECPs"):** Healthcare professionals including doctors, nurses and paramedics, who practice and undertake emergency medical care.
- **Emergency Care Society of South Africa ("ECSSA"):** "A professional society and non-profit organisation representing paramedics in South Africa" [3].
- **Emergency Department ("ED"):** A medical facility providing 24-hour acute care to patients who present without appointment.
- **Emergency Medicine**: The medical field dedicated to the diagnosis and treatment of unforeseen illness or injury and including emergency nursing and prehospital care.
- **Emergency Medicine Society of South Africa ("EMSSA"):** "A professional society of ECPs, including doctors, nurses and paramedics, dedicated to the development of quality emergency care throughout South Africa"[4].
- **Health Professions Council of South Africa (HPCSA):** "A statutory body formed by the South African government in terms of the Health Professions Act and

committed to protecting the public and guiding the professions". Registration with the HPCSA is a pre-requisite for practicing in a health profession in South Africa [5].

- **Intimate Partner**: Both current and former spouses and partners[6].
- **Intimate Partner Violence ("IPV"):** Behaviour within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviour [6].
- **Paramedic:** Prehospital ECPs who hold an advanced life support qualification and are registered by the HPCSA on the paramedic professional register.
- **Pre-Hospital Care**: Assessment, stabilization and care of a medical emergency, which may include transport to the appropriate receiving facility.
- **World Health Organisation ("WHO"):** The specialised agency of the United Nations that is concerned with international public health.
- **IPV Survivor**: For the purposes of this research report the term "survivor" in relation to those who experience IPV has been used. Due to the disproportionate extent to which women experience IPV compared to men [7], the term survivors in IPV literature generally assume that the person is a woman. Men can, however also experience IPV and for this reason the survey instrument was gender neutral in its design, and the term survivors as used in this research report relates to any persons who have experienced IPV

Chapter 1: Introduction and Problem Statement

This research report describes the knowledge, attitudes and practices of Emergency Cape Practitioners (ECPs) in relation to Intimate Partner Violence (IPV). It reports on the results of a survey administered to ECPs and evaluates trends and patterns in the results with regard to profession and prior training. The reported is structured into 7 main parts: the first three chapters state the problem, introduce the issues and provide a review of relevant literature. Chapters 4 and 5 describe the methodology and results of the study. In describing the results, the chapter has been laid out to correspond with the design of the survey tool. The final part of the report contains an analytical discussion of the results, with reference to the literature discussed in chapter 3. The concluding remarks in chapter 7 emphasize the need to incorporate IPV into Emergency Medicine training programmes and suggest concrete recommendations for how this could best be achieved.

Background and Problem Statement

IPV is a significant social and health concern in South Africa, with far reaching consequences [8]. In South Africa, the majority of IPV survivors are women, although significant underreporting of both male and female prevalence is likely[9]**.** IPV therefore remains a gendered issue, and one which falls into a broader framework of violence against women.

The WHO considers violence against women to be a human rights issue. The majority of the female victims of violence worldwide are women who have experienced IPV, either by current or previous intimate partners or by male relatives[10]. Globally the prevalence of IPV is 30%[1]. Women are more likely to experience violence from intimate partners than from strangers, acquaintances or other immediate family members[10]. The WHO specifically recommends strengthening the poor health sector response to IPV as one of the ways to interrupt the cycle of IPV. Despite often being considered a private issue, IPV impacts on the health sector in a number of ways. The health, socioeconomic, legal and ethical ramifications will be discussed below.

According to local research, South Africa has prevalence rates of IPV which equate to or surpass those found internationally[11].In relation to lifetime physical violence against women, the prevalence in the first large scale survey conducted by Rachel Jewkes et al in 1999 was 19.1%, 26.8% and 28.4% in the former Northern Province (now Limpopo), Eastern Cape and Mpumalanga respectively[11]. Of particular mention, 81.9% of respondents in the above study who disclosed being injured by physical abuse sought medical attention after the abuse. Of those who sought medical attention 85.2% told their attending healthcare worker who had injured them. In the same study, Jewkes et al showed that only 15% to 20.4% of women who experienced physical abuse by a current or ex-partner in the year prior to the survey had reported the abuse to a police officer[11]. Health care workers could play an important role therefore in

(i) identifying survivors of abuse and;

(ii) encouraging and assisting survivors to access other services [8].

Although the prevalence of IPV in South Africa is similar to that reported worldwide [12], South Africa has the highest documented rate in the world of women being murdered by

an intimate partner [13]. Abrahams et al in 2009 found that 8.8 per 100 000 women aged 14 years and older were murdered by an intimate partner per year[14]. This rate of intimate partner murder is the highest that has been reported in the literature worldwide, and speaks to the significance of IPV in South Africa [14]. According to Abrahams et al "the killing of a woman by her partner represents the most extreme consequence of IPV" [13]. There is a clear correlation between IPV and intimate partner murder. Research in the United States of America (USA) by Campbell et al showed that 76-80% of cases of intimate partner murders were preceded by physical IPV [15]. To establish this link Campbell et al conducted research in 11 cities in the USA to identify risk factors for murder in abusive relationships [15]. The risk factor that was most predictive of intimate partner murder in all cases was prior IPV [15]. Access to a firearm, estrangement and prior threats with a firearm also increased the risk of murder [15]. In South Africa, South African Police Service records show a previous history of IPV in 33% of cases of intimate partner homicide [13]. This figure is likely to be an underestimation since many cases of IPV are not formally reported to the police [11]. Diagnosing IPV in a relationship and recognising specific risk factors for femicide may allow identification of women at risk [15].

As well as a high prevalence of IPV, South Africa also has a high prevalence of abuse against children, including physical, sexual, emotional and economic [16]. Any person who works with children, including all health care workers, is legally obligated to report any suspicion of abuse against children [17] and carries an ethical responsibility to assess the safety of children who may be at risk of abuse. In a situation where a woman is experiencing IPV by her partner, there is a reported 30% to 60 % increased risk of the children in that household also being abused [16,18]. Identification of IPV therefore may increase case identification of children who are experiencing abuse in the home.

Children are at particular risk in a number of ways. They may be directly abused as part of a general pattern of violence in the household [16,18]. They may also be used as "shields" by women, either deliberately in order to deflect violence, or as a reflex response while holding a child [19]. A limited review of children at Red Cross Hospital in Cape Town who sustained non accidental injury showed that 47% were not the intended victim of violence and were injured as part of the shield phenomenon [19].

The health implications of IPV go beyond the obvious effects of trauma. In a WHO study, women who had experienced IPV were significantly more likely to report poor health [10]. Internationally research has shown that both depression and the risk of suicide attempts are higher among women who have experienced IPV [1]. Amongst women in South Africa the same link was demonstrated, showing that women who have experienced IPV are at a higher lifetime risk for any mental illness and suicidal behaviour [20]. Women who experience IPV are also more likely to misuse/abuse alcohol [1].

Women in South Africa who have experienced IPV are 50% more likely to test positive to the Human Immunodeficiency Virus (HIV) [21], possibly due to the fact that women in abusive relationships may be unable to negotiate either condom use or monogamy and also because the biological risk of transmission is increased in the context of a violent sexual encounter [22]. Women in abusive relationships may also delay testing for HIV and may be unable to access treatment if stopped from doing so by a partner [22].

Economically, IPV imposes a significant burden on the healthcare system, both in terms of health provider time and total cost. In the USA the total estimated medical cost in the year following victimization for all victims ranges between 38.8 to 118.2 billion Rand [23]. In South Africa women who experience are one and a half times more likely to have visited a doctor in the past year than women who have not been abused, implying increased

health costs [12]. The lifetime prevalence of experiencing IPV in South Africa is estimated at a minimum of 19% and the cost of treating victims of IPV is likely to be significant [11]. In 2014, the financial services firm KPMG South Africa published a report on the economic impact of all gender-based violence in South Africa. This found the minimum annual cost to the economy of gender-based violence to be 24.8 billion Rand, calculated conservatively [24]. These costs include absenteeism from work, health expenses, legal costs and the negative impact of women in abusive relationships not being allowed to work.

Despite the multiple negative health effects of IPV and the high prevalence in South Africa, health care providers have no legal requirement to screen for IPV [8]. According to guidelines released by the Health Professions Council of South Africa (HPCSA) in 2011, prehospital emergency care professionals have a professional obligation to assess risk and offer appropriate care and referral in cases of IPV [25]. Although screening for IPV is not mandated in South African law, doctors have an ethical and legal responsibility to adequately document case specifics and management of IPV if they do make a diagnosis, as this may affect the legal outcome of a case [26].

In a study conducted in Michigan in the USA, nearly two thirds of women who had engaged with the criminal justice system after experiencing IPV had used an Emergency Department (ED) in the year of the index assault, for both injury and non-injury complaints [27]. Care for IPV victims by ED's has historically focused on the physical aspect of the assault but this is slowly changing as awareness and understanding of IPV improves [28]. Nevertheless, there are significant barriers to screening and risk assessment in an ED setting which would need to be addressed before this aspect of care improves, particularly in South Africa [28, 29].

A 2003 study by Joyner et al looked at 62 participants who had presented to a South African trauma centre following DV. A total of 76% of the cases were related to IPV. Ina disturbing result, only 5% of the participants had received a referral for further treatment or advice on how to obtain a protection order [30].

This study describes and assesses current levels of self-reported and actual knowledge regarding IPV, as well as attitudes and current practice of ECPs around the issue of IPV. The study consists of the results of a survey administered to doctors, nurses and paramedics who work in the field of Emergency Medicine in South Africa.

This study provides distinctive information about the knowledge, attitudes and practices of ECPs from a variety of settings, all of whom have the potential to assist survivors of IPV in some way.

Chapter 2: Literature Review

IPV in South Africa and its links to Emergency Medicine

IPV is associated not only with immediate physical injury but also with a number of adverse health consequences which include depression, reproductive and physical health problems, increased high risk sexual behaviour, increased risk of HIV infection, chronic and infectious diseases and early death [31]. Violence in the form of IPV is similarly cited as a risk factor for adverse health outcomes and, as a result, is considered to be a global public health concern [12].

An estimated 31% of women in South Africa report that they have experienced IPV in a recent relationship [12]. IPV is the most common form of violence experienced by South African women [12]. In 2009, South Africa's murder rate for female victims was 6 times the global average, with more than half of female murders being caused by an intimate male partner [13].

It is well established in the literature that violence in all its forms places a heavy burden on the criminal justice and public health systems, social and welfare services, and on the economy [31]. A significant proportion of victims of violence access emergency medical care services: analysis of 9236 consecutive Trauma Centre admissions at a Cape Town hospital from October 2010 to September 2011 showed that at least 38% of cases were the result of injuries sustained in an assault [32]. Estimates suggest that at least one in four women who sustain injury as a result of IPV require medical care [33], although data on the actual usage of emergency medical care by IPV survivors in South Africa is not known.

Policy analysts repeatedly recommend improving services to the victims of IPV [34] and although this has prompted some response from the criminal justice system, those interventions have been limited. Literature suggests that much more can be done to address key risk factors for violence. Improving the ability of ECPs to adequately respond to IPV is linked not only to a reduction in immediate physical trauma but has been suggested as a critical means of preventing repeat victimization or perpetration [31].

ECPs current training on IPV

Training for all doctors in South Africa consists of at least 5 or 6 years of full time medical school, with further postgraduate training depending on the individual doctor. Although medical personnel have always treated and managed emergencies, Emergency Medicine as a specialist training program only began in the USA in the 1970's. In South Africa, the division of Emergency Medicine at the University of Cape Town first offered a Master of Philosophy in Emergency Medicine in 2001, with a Master of Medicine in Emergency Medicine being offered for the first time in 2004. The first Fellowship of the College of Emergency Medicine by examination was awarded by the University of Cape Town in 2007. Since 2007, further training programs were developed by the University of the Witwatersrand, the University of Pretoria, the University of Limpopo and the University of KwaZulu-Natal [35]. As of May 2016, 107 specialist emergency medicine physicians are registered with the HPCSA. The prescribed textbook for the South African Emergency Medicine specialist exam is Rosen's Emergency Medicine. Chapter 68 of this prescribed textbook covers IPV, its diagnosis, documentation and management in detail [36]. IPV also forms part of the official curriculum for Emergency Medicine physicians in training as per the National South African College of Medicine website.

Along with these programs for the training of Specialist Emergency Physicians there has also been a diploma in Emergency Medicine offered in South Africa since 1986, with various hospitals offering training for doctors wanting to attempt this examination. Some doctors may also have attended the Advanced Trauma Life support (ATLS) course, which since 1997 has included an hour long lecture on trauma in women. This lecture includes some information about DV/IPV. However, a survey in America looking at DV knowledge pre and post attending the ATLS course showed no improvement in DV knowledge after this section was added, potentially due to the section making up only a small part of the course. [37]

Many doctors working in EDs however have not undergone further postgraduate training since medical school, as EDs are commonly staffed by junior medical officers. These doctors may or may not have received training related to IPV during undergraduate education.

Pre-Hospital ECP training

Formal training for pre-hospital ECPs was started in South Africa in the 1980s [38]. It initially consisted of 3 levels of training, referred to as short course training;

i. **Basic Ambulance Assistant** which is a very brief training program, and enables practitioners to offer basic assessments and care and transport patients to definitive care.

ii. **Ambulance Emergency Assistant** which is an intermediate life support (ILS) qualification and requires 1000 hours of practical experience

iii. **Critical Care Assistant** is an advanced life support qualification and these personnel are registered as Paramedics with the HPCSA.

Training was initially predominantly based on in-service training and these short course qualifications still exist. In 1986 the first higher education programme was introduced. There are now 2 higher education qualifications that can be completed. The Emergency Care Technician course is 2 years and is an ILS level qualification. The Bachelor Degree in Emergency Medical Care is a 4 year degree and graduates are able to provide advanced life support including rapid sequence intubation.

Nurses who wish to pursue further training in Emergency Medicine are able to register for a diploma in advanced nursing in trauma and emergency nursing, with the course either as a year full time or two years part time. There is also a Master of Science in nursing degree in trauma and emergency nursing. The survey did not ask nurses to specify whether they had any specific training in emergency medicine.

ECPs Knowledge and Training regarding IPV

Determining current training and knowledge levels, as well as current practice may identify the resources and barriers to effective screening and management of IPV survivors.

Internationally, a variety of surveys for health care providers regarding IPV or DV knowledge, attitudes and practices have been conducted. Although DV has a slightly broader definition than IPV (DV includes violence perpetrated by adult family members against other adult family members) research looking at DV has been included in the literature review since IPV makes up the majority of DV cases [34]. Discussions on surveys that were part of interventional studies have also been included. These usually consist of a survey before and after a training intervention and are therefore useful in suggesting

future research and skills development needs, as well as describing typical training on IPV in a healthcare setting.

Very little research has been conducted specifically on ECPs regarding IPV [39,40], although some studies included ECPs as part of a wider survey. Paramedics and other pre-hospital personnel in particular have not been studied in depth. Two studies internationally and one locally looked specifically at prehospital personnel regarding IPV and these will be reviewed in detail.

International surveys of doctors and nurses regarding IPV

In Turkey, Aksan and Aksu surveyed the staff of a large university hospital ED [39]. Both doctors and nurses were included, and the aim was to ascertain training needs regarding IPV. Turkey has a higher estimated lifetime prevalence of IPV than South Africa, and has a similar culturally patriarchal society [39]. The survey found that despite IPV in Turkey being recognised as a public health concern affecting EDs, 89.9% of all the respondents had not received training on dealing with IPV in a professional setting. The survey also assessed respondent's knowledge regarding the definition of IPV, clinical aspects of IPV recognition as well as legal issues specific to Turkey. The respondents in that study correctly answered 65.52% of the questions related to the clinical aspects of IPV. Knowledge on clinical aspects of IPV was better for acute clinical conditions as compared to chronic or psychiatric conditions [39].

In the United States of America (USA) a survey instrument on IPV was developed by the Centre for Disease Control and Prevention and used as part of a broader study assessing effectiveness of a training program on IPV [41]. Gadomski et al assessed knowledge, attitudes, beliefs and behaviours of health care providers to IPV before and

after a training program. The training intervention consisted of 2 hour long sessions, implementation of a clinical protocol, modification of ED medical records and a public health campaign. Health care providers who were assessed included doctors, nurses and physician assistants, and included staff working in emergency departments, although the specific number of ED staff was not quantified. The pre-intervention survey showed that only 38% of respondents reported ever having prior training in DV. Those without previous training were less likely to have made a diagnosis of DV in the previous year. The post intervention survey indicated an improvement in victim identification with an odds ratio of 2.86 (95% CI, 1.73-4.74) and reported self-efficacy after the intervention [41].

Also in the USA Maiuro et al developed a 39 item survey measuring health care providers knowledge, attitudes and self-reported behaviours regarding IPV [42]. The survey was piloted among 129 primary health care providers, including doctors and nurses. It was then analysed and adapted and then re-administered to a further group of 246 primary health care providers.

The survey instrument developed above by Maiuro was then used in a group randomised trial by Thompson et al to assess the effectiveness of an IPV intervention which including skills training on IPV [43]. The participants were health care providers in the USA, including doctors, physician assistants and nurses working in 5 primary care sites. The training provided consisted of 2 half day training sessions with additional training for designated leaders. Environmental interventions such as posters and cue cards were also provided. IPV case finding and management was assessed before and after the intervention using the survey instrument. A group randomised trial was performed, with the survey being administered at the beginning and end of a yearlong intensive training program on IPV [43]. The results showed that the provided training improved health care providers reported self-efficacy, and also resulted in increased screening from a baseline

of 3.5% to a post intervention rate of 20.5% of patients ((odds ratio 3.9, 95% CI 2.5- 5.9) as compared to those health care providers who did not receive training.

Elliot et al in the USA conducted a postal survey of 2400 doctors including emergency physicians, looking at how frequently doctors screen patients for DV [44]. The study found that overall; a median of 10% of female patients was screened for DV. However, screening was less frequent for patients seen by emergency physicians (OR, 1.72; CI, 1.13 to 2.63) as compared to doctors from other specialties.

The survey that was used as the basis for the questions in this research was the "Physician readiness to manage IPV survey" or PREMIS [45]. It was published in 2006 by Short et al and was developed initially in 2002 using expert consensus and previous surveys as a base. It was then tested on a group of primary care doctors, analysed, reworked and tested again for validity among a further group of primary care doctors. It was published as a freely accessible resource for further research into IPV. It has been used in a number of studies assessing health care providers but has never been administered specifically to health care providers working in emergency medicine.

Research by Ramsay et al among 272 doctors and nurses working in primary health care in the UK using the PREMIS survey tool showed that the doctors and nurses reported low levels of previous IPV training (mean 1 hour), and that 40% of respondents seldom or never asked about IPV when seeing a women with injuries [46].

The same group of doctors and nurses were then enrolled in a cluster randomised controlled trial known as the Identification and Referral to Improve Safety (IRIS) trial, conducted by Feder et al [47]. The intervention consisted of 4 hours of training as well as improving medical records (which prompted an IPV enquiry) and a referral pathway to an

IPV advocate if a patient was identified. The practices in which doctors received training showed improved identification and referral of women experiencing IPV [47].

Cann et al conducted a large survey among 685 doctors and nurses in the UK, including 51 doctors and nurses working in EDs, as well as Primary Care and Obstetrics and Gynaecology staff [48]. The survey tool used was developed and piloted by the authors. The results were published showed that 70% of all respondents had never attended a lecture or seminar on DV and 97% did not have a written protocol for dealing with DV cases [48]. Among ED staff surveyed 65% reported identifying a DV case once a month or more, which was higher than either Primary Care at 10% or Obstetrics and Gynaecology at 1%. Overall 82% of respondents felt that that would welcome training on DV.

International surveys of pre-hospital ECPs

Research among pre-hospital ECPs has been limited but there has been recognition that emergency medical services may be an underutilised resource for IPV victims. Mason et al showed that in Canada, 90% of emergency care technicians (EMTs) surveyed reported attending to at least one DV related call in the previous year [40], and 65% reported attending between 10 and 20 calls related to DV in the previous year. Of the EMTs surveyed 58.3% had received only informal education about domestic violence, and 84.5% wanted more training about domestic violence [40].

A small pilot study by Dousek at al in 2012 among 50 Australian paramedics showed that 90% had attended at least one IPV case in the preceding year, with an average of 3.66 cases [49]. Although the lifetime prevalence of IPV in Australia is lower than for South Africa it is still a significant problem affecting almost 1 in 5 women [50]. The lifetime prevalence of IPV in Australia is estimated at 16.9% for women and 5.3% for men [50] so it is likely that paramedics attending to only an average of 3.66 cases per year represents

under recognition of the problem. Almost 4 out of 5 paramedics surveyed in this study felt "less than confident" in managing IPV cases [49].

Surveys to South African Health Care Providers on IPV

Very little research has been performed on the knowledge, attitudes and practices of South African health care providers regarding IPV. Some research among doctors and nurses in general has been conducted but to the researcher's knowledge, this is the first survey specifically targeting doctors, nurses and paramedics working in the field of Emergency Medicine in South Africa.

A South African study published in 2003 by Peltzer used a random sample postal survey of the 19 000 South African doctors registered with the HPCSA in 2000 [51]. A total of 1200 surveys were distributed and 402 surveys were returned with a response rate of 33.5%. The survey was based on a previously developed Australian survey looking at attitudes and practices of doctors towards DV [51]. Data on the clinical setting in which the doctors surveyed worked was not collected so it is not known how many of the respondents worked in an emergency setting. Peltzer's study found that doctors were treating patients who had been victims of DV at a far higher rate than that reported internationally, with a mean number of patients treated for DV per month being 11.4. Despite this high rate of DV cases being treated, only 9.7% of doctors surveyed reported having had any training on DV. What this training may have consisted of and the length thereof was not asked in the survey.

In a study published in 2013, Naidoo et al looked at prehospital ECPs in the Western Cape and assessed knowledge, attitudes and beliefs on domestic violence via a short anonymous survey [52]. A total of 154 pre hospital ECPs were surveyed, with 42% of respondents having between 2 and 5 years of experience working for the Emergency

Medical Services. Of the ECPs surveyed 81% felt that their training was inadequate in preparing them to manage domestic violence [52]. Those with advanced qualifications were in general more knowledgeable about DV, however the qualifications of the respondent did not affect knowledge of South African legislation related to DV or whether a respondent referred DV survivors to another resource.

Knowledge Affecting IPV Practice

Despite the fact that IPV undermines the health and well-being of millions of women, it is often misclassified, with either the cause being attributed to some other factor (e.g. a kitchen accident) or the victim perpetrator relationship not being noted [31]. Improved knowledge and training about IPV has been shown to translate to a change in practice among health care providers.

The study In the USA by Thompson et al discussed above showed a small improvement in screening for domestic violence after a training program [42]. Similarly, the postal survey by Elliot et al found that a history of any training improved screening rates for DV, and that training more recently (within the previous 12 months) was even better [44]. The IRIS study in the UK among general practitioners showed an improvement in both identification of IPV victims and referrals to domestic violence agencies after the introduction of a short training program [47].

Conversely, a study among doctors working in trauma in the USA showed that even after the introduction of a training program the rate of enquiry about IPV did not improve [53].This study suggests that among patients who are particularly at risk, such as female victims of trauma, mandatory screening rather than allowing physicians to enquire as

they feel is necessary may be of benefit, as practitioner resistance to screening may still be a significant barrier.

Research among South African ECPs relating to IPV is clearly lacking, and a response to the health care issues of IPV is needed from the emergency medicine community. This research therefore aims to act as a preliminary step in understanding the current knowledge, attitudes and practices of ECPs as they relate to IPV.

Summary

Emergency Medicine has a critical role to play in the response to IPV. Survivors of IPV already utilise medical care at a disproportionately high rate compared to those who have not experienced IPV [12], and although rates of utilisation of emergency services are not known, they are likely to also be high.

Internationally, health care providers surveyed report low levels of training on IPV, as well as infrequent rates of screening [41, 43, 44, 46]. Among doctors and nurses working specifically in Emergency Medicine reported levels of training were also low, although research is lacking [39,40]. In South Africa very little research on the training of ECPs has been conducted, although older research among South African doctors showed that only 9.7% had received training on DV [51], and research among prehospital ECPs showed 81% felt their training was ‘inadequate’ to manage DV [52].

These low levels of reported training of health care workers and specifically ECPs both in South Africa and internationally are of particular concern due to the demonstrable link between IPV training and changes in practise. This includes improvements in screening and identification of patients who have experienced IPV [47,44].

Chapter 3: Methodology

Study Aim

To describe the current levels of knowledge, attitudes and practices of ECPs towards IPV, and to assess whether these are affected by reported prior training.

Study Objectives

This study had the following objectives:

i. to describe reported hours of training on IPV amongst ECPs;

ii. to describe levels of self-reported knowledge about IPV by ECPs;

iii. to assess actual knowledge on IPV by ECPs;

iv. to describe the attitudes of ECPS towards IPV;

v. to describe current practices of ECPs with regards to IPV and;

vi. to describe any associations between hours of training on IPV and either self-reported knowledge, actual knowledge, attitudes and practice.

Study Methodology

Development of the Survey Tool

In developing the survey, questions were taken from a freely available previously developed instrument called the Physician Readiness to Manage IPV Survey (PREMIS) [45]. The PREMIS survey consists of 5 parts: respondent profile, background, IPV knowledge, opinions and practice issues. The original PREMIS tool was developed and validated in the USA by Lynn Short et al and a final version was published in 2006 [45]. The

PREMIS survey was available online with open access, and permission from the original authors was obtained (see appendix). The full survey was reported by the original authors to take 15 minutes to complete [45]. When used in a trial by Ramsay et al conducted among a group of doctors from the UK the doctors reported that the survey took about 30 minutes to complete [46] and that the time to complete it was a limitation to that study.

Due to the time constraints required for an online survey of this kind as well as context specific considerations related to administering the survey in South Africa, a short selection of questions from each section was used. The resultant new survey, with questions taken from the PREMIS survey was estimated to take less than 10 minutes to complete. The questions that were included in the revised tool were selected because of their particular relevance to the South African context, and although the survey is much shorter than the original PREMIS survey, it still surveys a range of issues across different spheres. A total of fifteen items were included in the new modified survey, as detailed in the flowchart overleaf.

Because of the high prevalence of HIV in South Africa and the proven link between HIV prevalence and IPV [21], an additional question relating to HIV and IPV was added to the survey.

This study was exploratory research on the topic. It is the first time that this shortened modified version of the survey was used. For this reason the validity and reliability of the shortened survey is not known, and cannot be related to the validity of the original full version as described by Short et al.

The survey questions in the knowledge section that were adapted from the PREMIS survey were coded using the PREMIS coding tool [45] and the answers were also verified

using current literature from a South African context. New knowledge and opinion questions that were developed were drawn from the literature. The questions that were asked in the survey are captured in the flowchart below, and the full survey is available in the appendix.

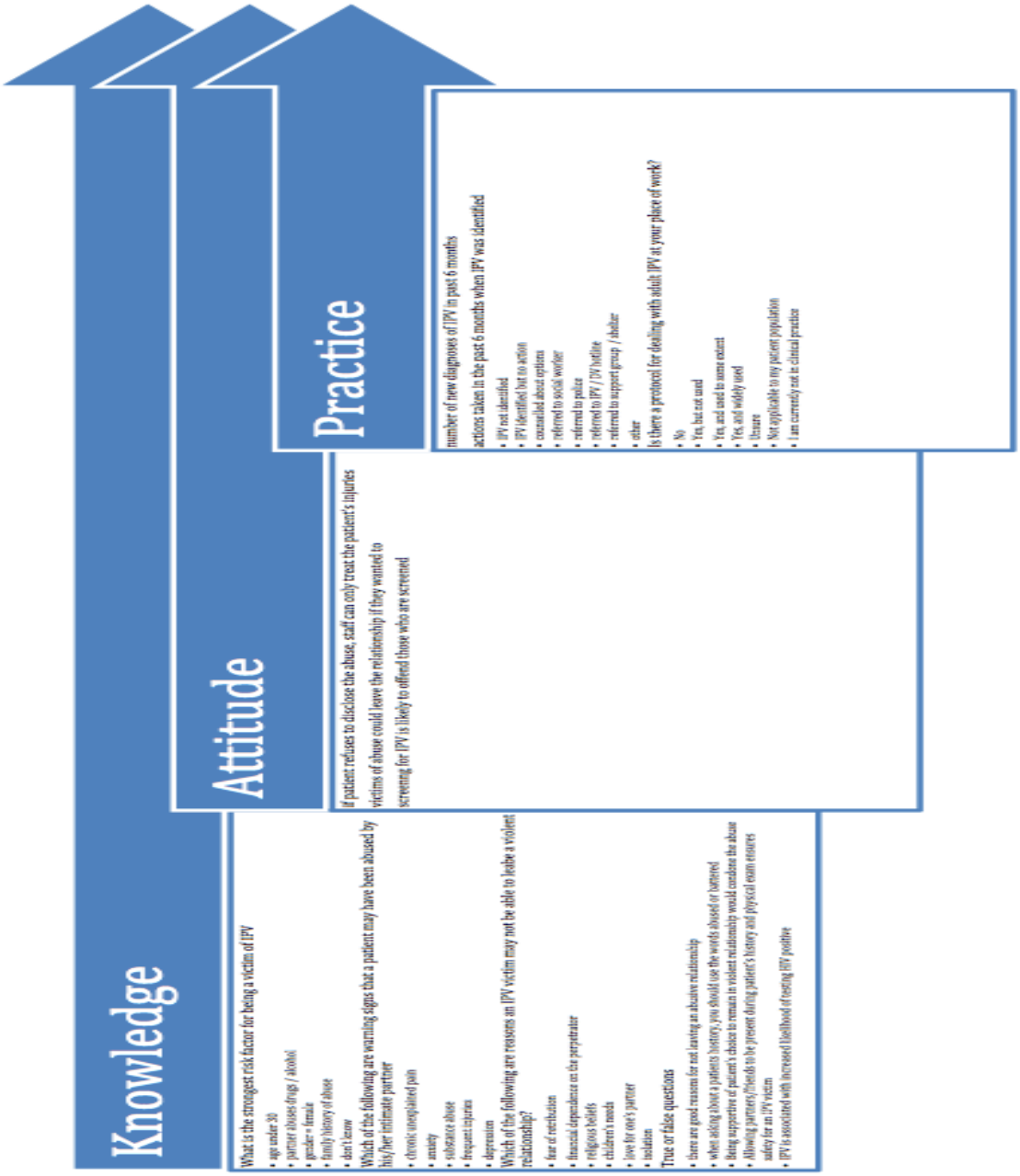


Figure 3.1: Survey Flowchart

Distribution of the Survey Tool

The survey, together with ethics approval, was sent to the Emergency Medicine Society of South Africa (EMSSA), the Emergency Care Society of South Africa (ECSSA), the emergency medicine departments and private healthcare providers described below for approval and distribution.

i. ER Consulting, a private company providing emergency medical services to private hospitals across South Africa,

ii. Kwa-Zulu Natal Emergency Medical Services, which provides pre-hospital care in Kwa-Zulu Natal,

iii. The University of Witwatersrand Division of Emergency Medicine,

iv. The University of Cape Town and Stellenbosch University combined Emergency Medicine Department,

v. ER24, a company providing private pre-hospital care across South Africa; and

vi. The Emergency Medicine Department staff of Helen Joseph Hospital in Johannesburg, New Somerset Hospital and Khayalitsha Hospital in Cape Town and George Provincial Hospital in George.

Once approved the survey was emailed out through the organisation or department as detailed above to all ECPs on each of their databases. A covering letter was emailed to participants and this email included consent information. (See appendix). The researcher did not have the list of participants to whom the survey has been sent. The survey was

attached to the email using SurveyMonkey™ (Survey Monkey Inc. (US)), which allows for complete anonymity of the respondents.

Study Design

Prospective cross sectional study.

Study Setting

South Africa.

Study Population and Inclusion Criteria

The study population includes ECPs in South Africa including doctors, paramedics and nurses. According to HPCSA data there are 40749 registered medical practitioners in South Africa. Of these, only 107 are registered specialist emergency physicians. However, most doctors working in Emergency Departments are not specialist emergency physicians, so it is difficult to ascertain the overall number of doctors who work in the field. In terms of paramedics, at the time of the survey there were 3768 individuals registered with the HPCSA with an advanced life support qualification. Emergency nursing is a specialist area of nursing as regulated by the South African Nursing Council. However, similarly to the situation with doctors, many nurses who work in Emergency Departments do not have this additional qualification so the exact numbers of nurses working in Emergency Departments is not known.

To be included in the study, the following criteria had to be met:

- Respondents needed to be accessible via email;
- Respondents must have been 18 years or older at the time of completing the survey;

- Respondents must have expressly consented to inclusion in the study; and
- Respondents must have reported that they had practiced or were currently practicing in the field of emergency medicine in South Africa as a doctor, nurse or paramedic.

Data Management Plan

Data was collected by the primary researcher. The anonymous data from Survey Monkey™ was automatically captured onto an online database and analysed by the SurveyMonkey™ program. This data was kept on a password-protected computer that is used exclusively by the primary researcher. Regular backups of study data were made daily as needed onto a flash drive which was kept in a secure location, and this was backed up weekly onto an external hard drive also kept in a secure location.

Ethical Considerations

This study complies with the 7th revision of the Declaration of Helsinki (2013). The study was submitted to the Human Research Ethics Committee (Medical) of the University of Witwatersrand for clearance before data collection commenced. The ethics certificate is attached (see appendix).

Consent

A consent information sheet was sent in the body of the email (see appendix). If the recipient of the email elected to participate in the study by clicking on the URL online link, this implied informed consent, as advised in the covering email.

Statistical Considerations including Data Analysis Plan

Initial responses were automatically collected by the SurveyMonkey™ program. The surveys were coded and analysed using SAS.[54] Results for each of the sections were analysed separately. Subgroup analysis was also done according to gender, age, profession and previous IPV training. The 5% significance level was used throughout, unless specified otherwise.

The X^2 test was used to assess the relationships between two categorical variables. Fisher's exact test was used for 2 x 2 tables or where the requirements for the X^2 test could not be met. The strength of the associations was measured by Cramer's V and the phi coefficient respectively. The following scale of interpretation was used:

- 0.50 and above high/strong association
- 0.30 to 0.49 moderate association
- 0.10 to 0.29 weak associations
- below 0.10 little if any association

The relationship between a continuous and a categorical variable was assessed by the t-test (or ANOVA for more than two categories). Where the data did not meet the assumptions of these tests, a non-parametric alternative, the Wilcoxon rank sum test (or the Kruskal-Wallis test for more than two categories) was used. The strength of the associations was measured by the Cohen's d for parametric tests and the r-value for the non-parametric tests. The following scale of interpretation was used:

- 0.80 and above large effect
- 0.50 to 0.79 moderate effect
- 0.20 to 0.49 small effect
- below 0.20 near zero effect

The relationship between two continuous variables was assessed by Pearson's correlation coefficient. Where the data did not meet the assumptions of these tests, a non-parametric alternative, Spearman's rank correlation coefficient was used. The strength of the associations was measured by interpreting the absolute value of the correlation coefficient. The following scale of interpretation was used:

- 0.50 and above large effect
- 0.30 to 0.49 moderate effect
- Below 0.30 small effect

Data and Data Analysis Dissemination Plan

The study will be submitted for publication in a peer-reviewed journal. It was presented at the Combined World Congress on Disaster and Emergency Medicine/ Emergency Medicine Society of South Africa Conference in April 2015.

Chapter 4: Results

Response rate

The surveys were distributed through a variety of different avenues and due to confidentiality issues the researcher did not have access to the lists of potential respondents that received the survey. It is also not known how many surveys were ultimately distributed and via which avenues. For this reason a response rate cannot be given, as the total number of people that received the survey is unknown.

Completion

A total of 153 completed surveys were received for analysis. Where respondents skipped individual questions the rest of the data from those respondents were retained for analysis.

Three respondents dropped out at the start of the knowledge section, one at the HIV question, three at the start of the attitude section and seven at the start of the practice section. Data from questions answered before a respondent dropped out were retained for analysis. The total numbers of responses for each section have been reported on with the results.

Age (Number of Respondents (n) = 152)

The mean age of the respondents was 36.5 years (SD 7.3 years; range 22-61 years; median 36 years; interquartile range 31-41 years)

Gender (n= 153)

Of the respondents, 55.6% reported their gender as male, with 44.4% being female.

Qualification (n=152)

Slightly more than half (56.58%) of respondents were doctors, 9.87% were nurses and 33.55% were paramedics.

Hours of IPV Training (n= 153)

The median and mode time of reported previous training on IPV was 0 hours (SD 11.4h; range 0-120h; mean 3.6h; interquartile range 0-3h). Most respondents (65.36%) reported 0 hours of previous IPV training. For further analysis, the training time was grouped as follows: 0 hours / 1-9 hours / 10+ hours. The frequency distribution of these groups is shown below.

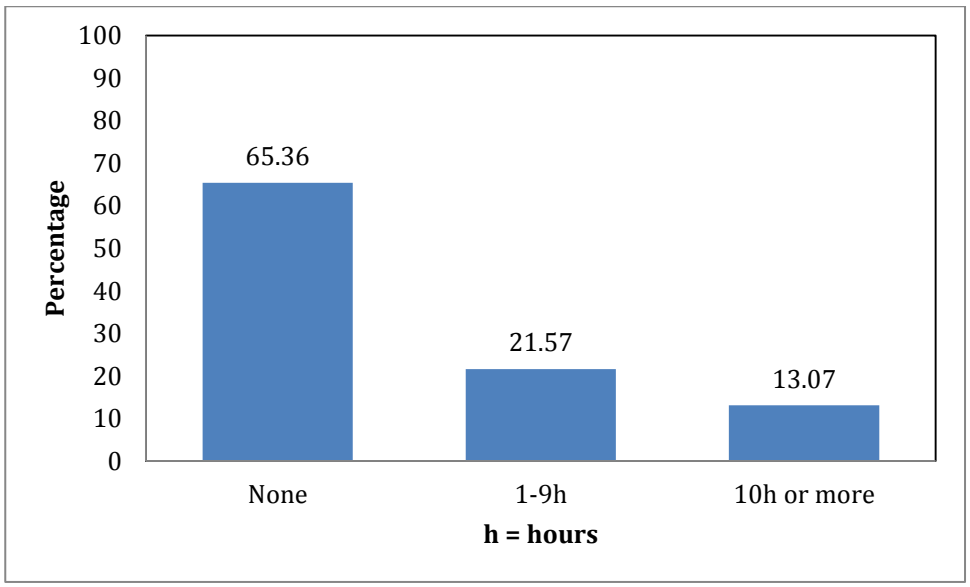


Figure 4-1: Frequency Distribution of Hours of Training of Respondents

There was a significant, weak, association between qualification and reported hours of IPV training (Fisher's exact test: p=0.034; phi coefficient=0.25). Doctors had had the most training, followed by Paramedics. Nurses reported either no training or extensive training. However, the sample size for nurses was small compared to the other groups.

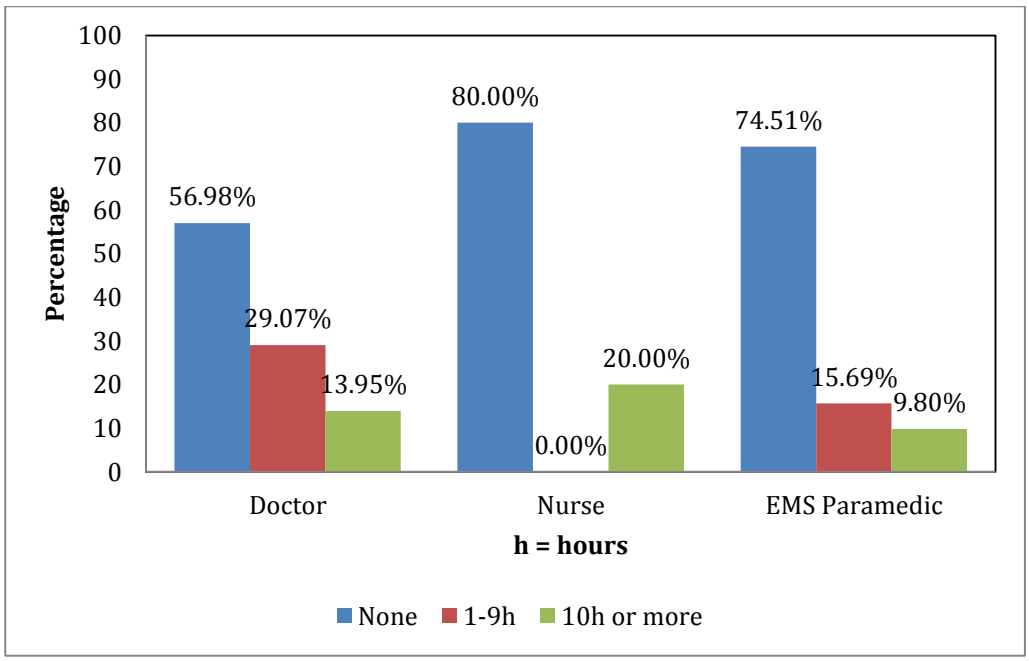


Figure 4-2: Qualification and Hours of IPV training by percentage

Self-reported Knowledge

To test a respondent's current self-reported knowledge, a score was calculated based on 6 questions. The mean Self-reported Knowledge score was 3.5 (SD 1.2, median 3.3, IQR 2.7-4.5), corresponding to ‘a little / a moderate amount’.

The mean scores for the six individual questions making up the Self-reported Knowledge scores are shown below. In these and similar graphs, the error bars denote the 95% confidence interval for the mean.

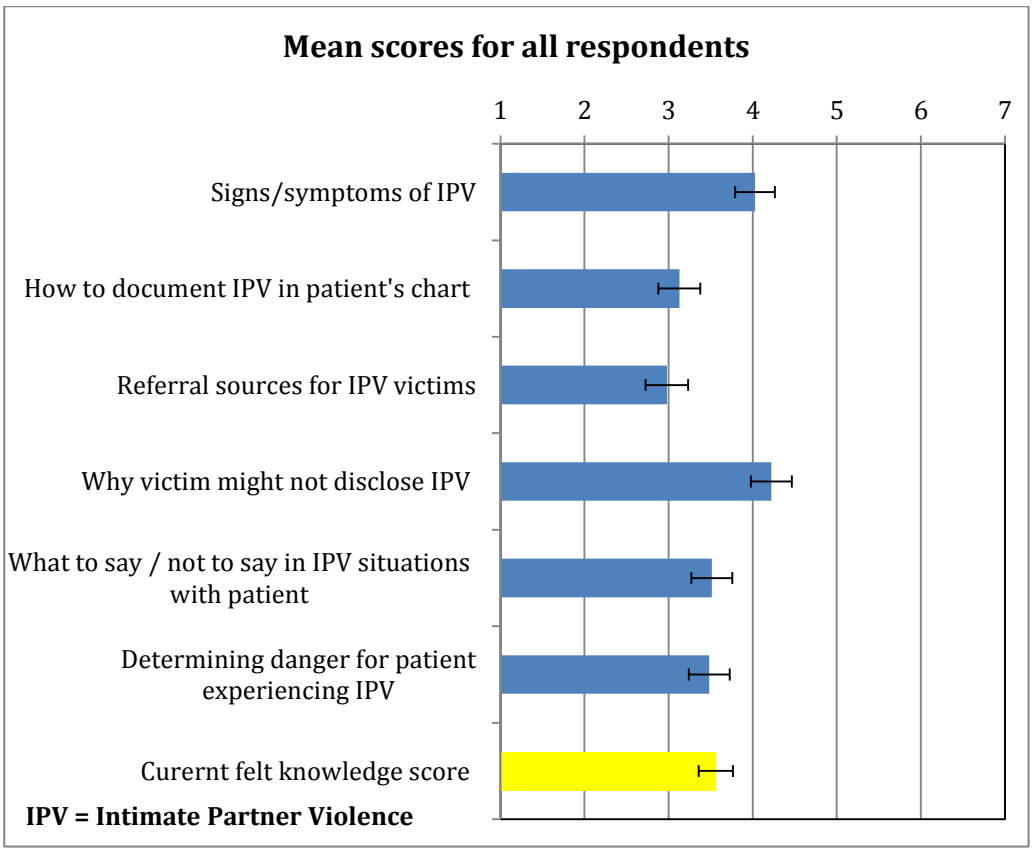


Figure 4-3: Mean Scores for individual self-reported knowledge questions

There was a significant relationship between the Self-reported Knowledge score and hours of training (ANOVA: $p<0.0001$). Those with one or more hour of reported training, scored significantly higher than those who reported no prior training on IPV (Cohen's $d=0.28$ and 1.04; small and large effect sizes respectively).

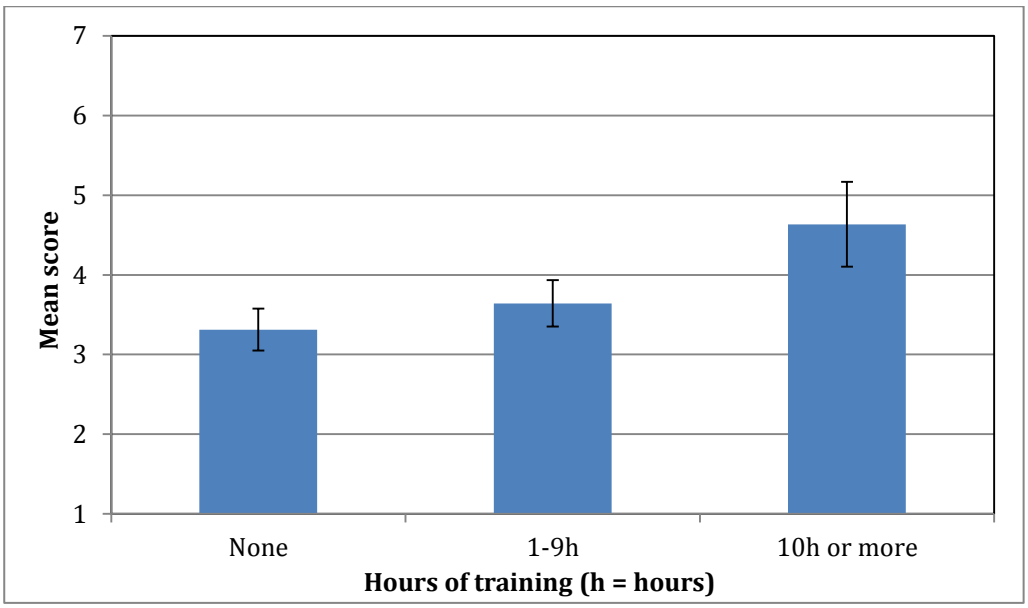


Figure 4-4: Mean Overall Knowledge Score by Hours of Training

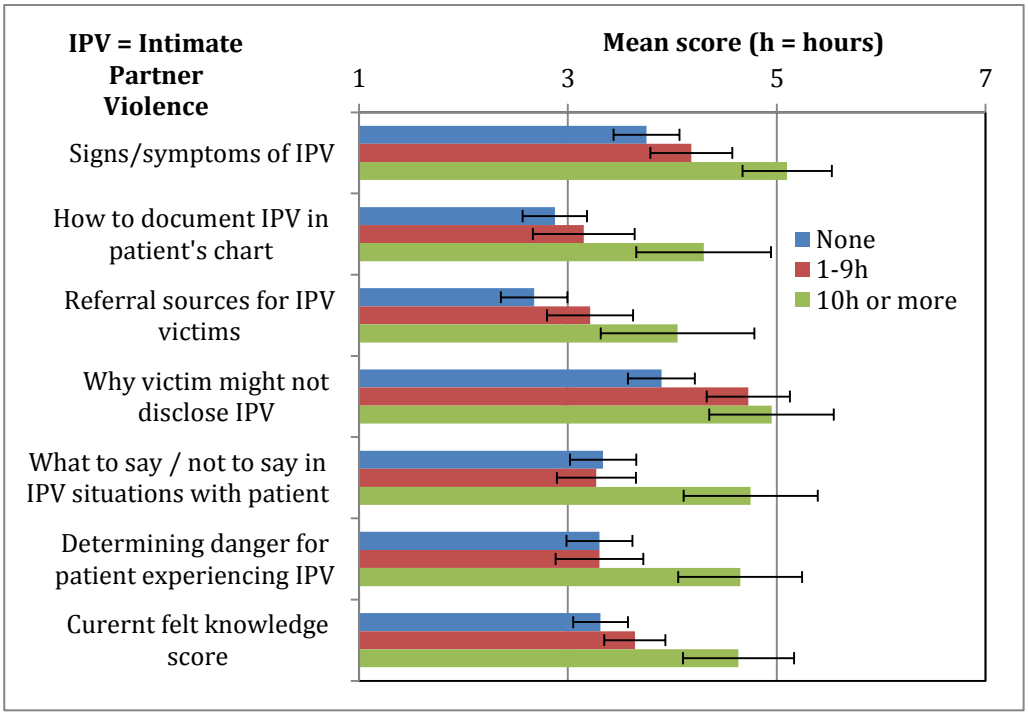


Figure 4-5: Mean Scores for Individual Self-reported Knowledge Questions

Knowledge

To measure knowledge, respondents were asked 17 questions about IPV aimed at

measuring factual levels of knowledge about IPV. The mean Knowledge score was 12.1 (SD 2.8, median 13, IQR 10-14), corresponding to a percentage of full score of 12.1/17=71%. This means that on average respondents correctly answered 71% of the questions.

There was a significant relationship between the Knowledge score and the number of hours of training a respondent had received (Kruskal-Wallis test: $p<0.0001$). Those who reported 0 hours of training had a median score of 12, those with 1 to 9 hours had a median score of 13, and those with 10 or more hours scored 14. ($r=0.27$ and 0.34 respectively; small effect sizes).

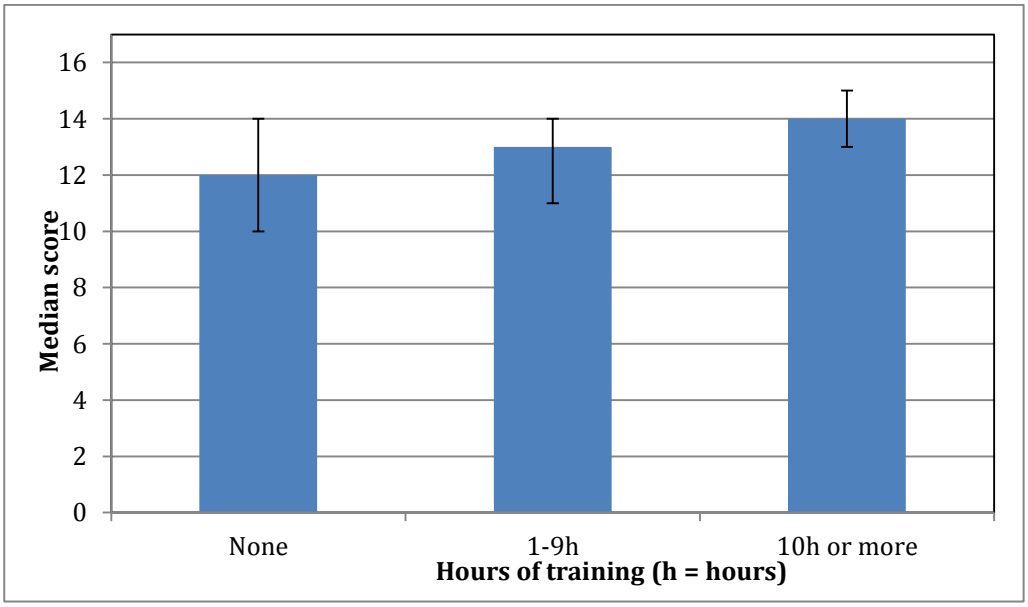


Figure 4-6: Graph showing median knowledge scores by hours of training received

There was a significant association between knowledge score and qualification, with a median score of 14 for the doctors, 12.5 for nurses and 11 for paramedics ($r= 0.25$ for nurses vs paramedics and $r= 0.42$ for doctors vs paramedics).

Selected knowledge questions will be discussed below.

IPV Risk Factors

The first knowledge question asked respondents to indicate the strongest single risk factor for IPV. More than 60% of respondents indicated that the single biggest risk factor for IPV is a partner abusing drugs or alcohol, which is incorrect. Of respondents, 21.3% correctly identified that female gender is the strongest risk factor. The distribution of responses on this question is shown below.

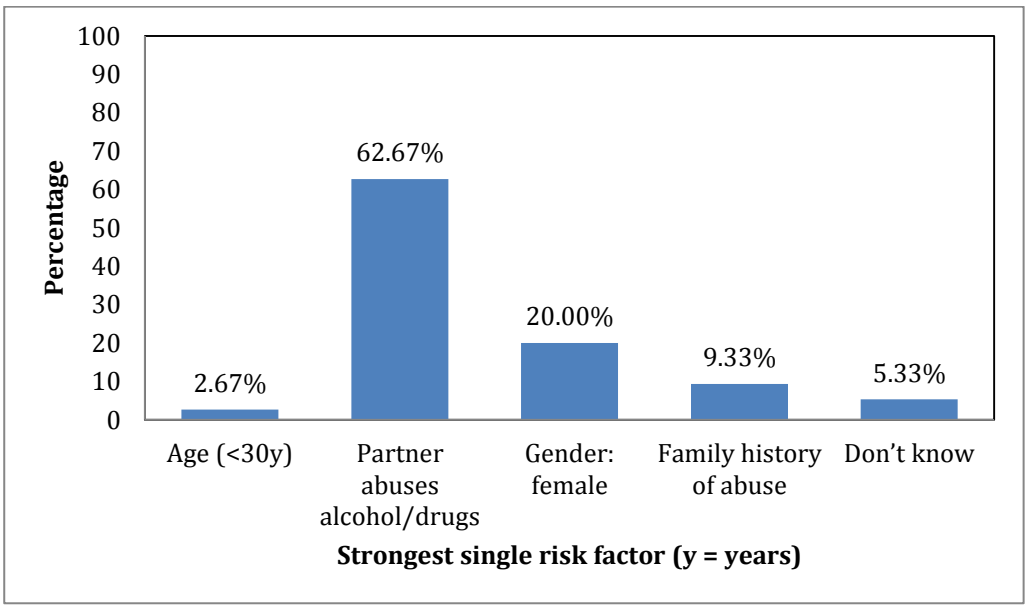


Figure 4-7: Bar Graph showing respondents selection of risk factors by percentage

HIV association with IPV

A total of 40% of respondents did not know whether IPV was associated with HIV and almost 20% of respondents incorrectly stated that there was no association.

Practice

The final component of the survey was to survey a number of practice issues related to IPV case management. This included the number of new diagnoses of IPV made in the previous 6 months and the actions performed by the respondent if IPV was identified.

New IPV diagnoses

Of the respondents in clinical practise, 75% had identified at least 1 case of IPV in the previous 6 months. Among those respondents in clinical practice who reported no previous IPV training, 69% had identified a case of IPV in the previous 6 months. Among respondents who reported any prior training the percentage that had identified IPV was 92%.

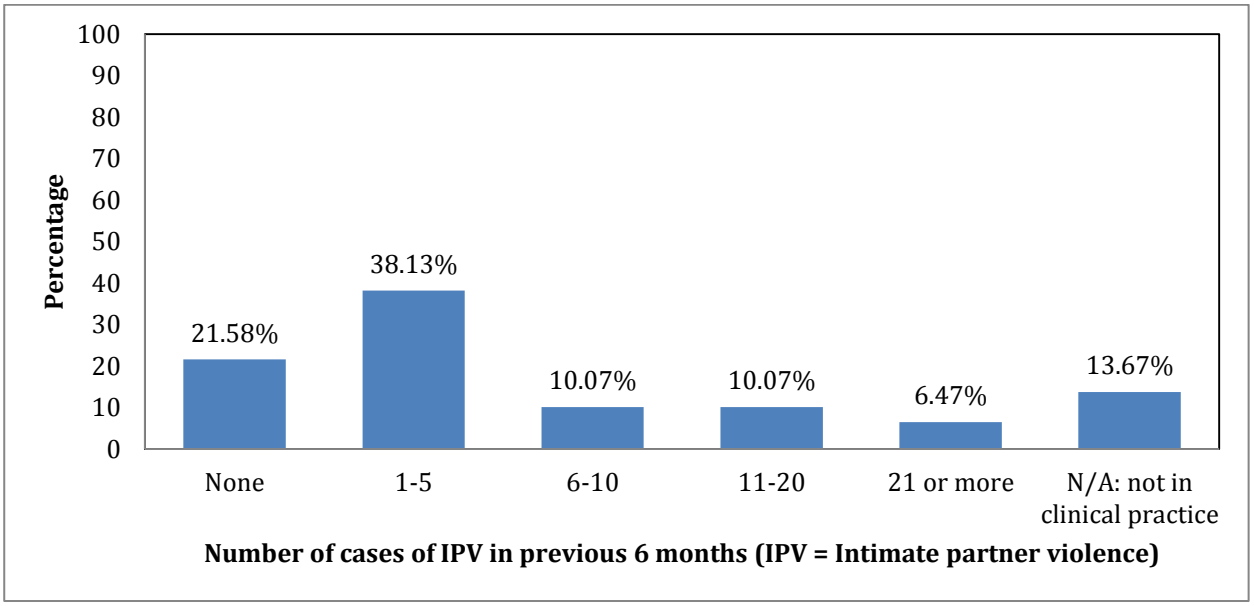


Figure 4-8: Graph showing percentage of respondents who had made new IPV diagnoses in previous 6 months (139 respondents)

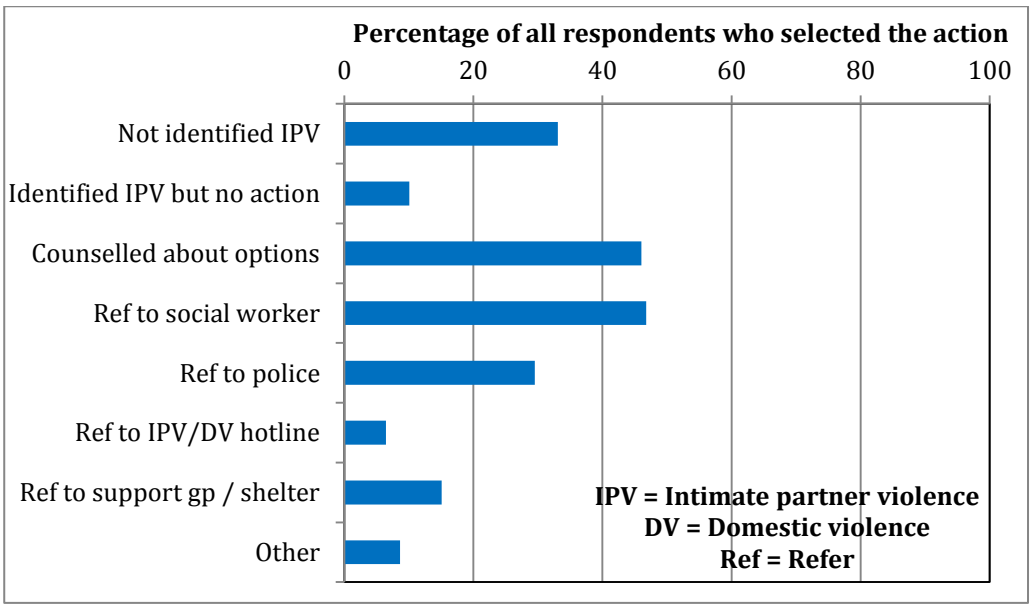


Figure 4-9: Graph indicating the percentage of respondents who had taken selected actions upon identifying IPV in the previous 6 months

Associations between Practice and Hours of Training

There were significant differences in practice issues that appear to result from differences in a respondents training on IPV. Those respondents who had received training were more likely than those who had received no training to diagnose new cases of IPV.

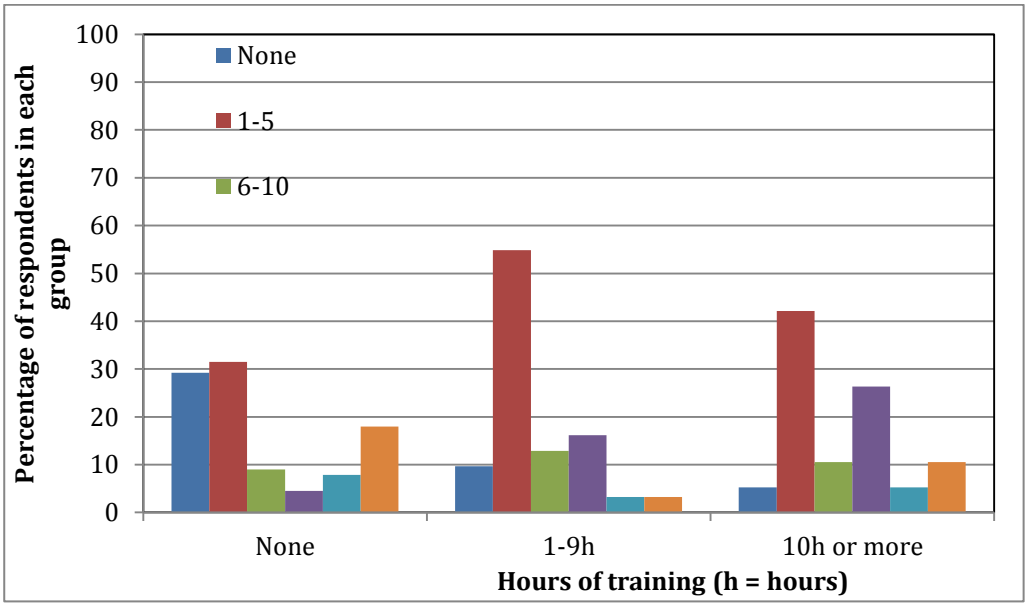


Figure 4-10: Graph showing number of new diagnoses by hours of reported training.

Those who reported IPV training were also more likely than those who had received no training to have counselled a victim about their options, referred a victim to a social worker and referred a victim to the police. The graph below shows differences in relation to actions taken according to the number of hours of training received.

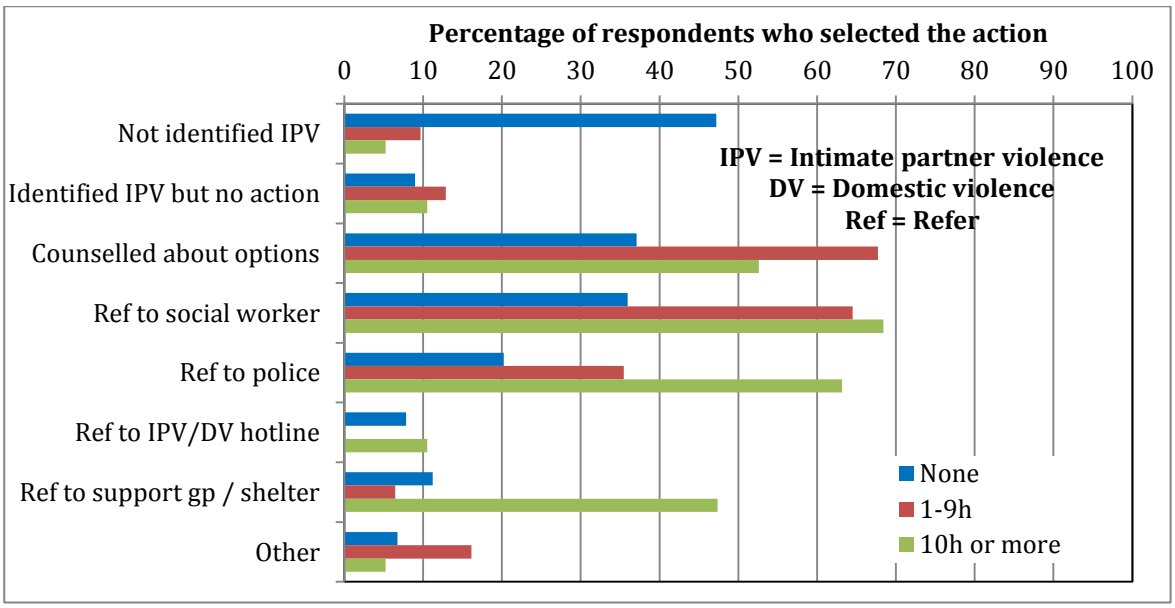


Figure 4-11: Graph showing actions taken by hours of training.

Global Summary of Results

The results showed very low levels of reported training on IPV across the board, with the majority of respondents (65.3%) reporting having received no training on IPV. There was a significant association between having received any IPV training and both self-reported knowledge, actual knowledge and practice. Doctors tended to be more likely to have received any training, as compared to paramedics. Doctors also self-reported feeling overall more knowledgeable regarding IPV and made more diagnoses of IPV.

Despite low levels of training, ECPs report diagnosing and managing IPV in their clinical settings. It was encouraging to note that almost two thirds of respondents in clinical practice had diagnosed IPV in the last six months, although this still likely represents significant under diagnosis of this common issue. Most of the ECPs who diagnosed IPV counselled the patients on options or referred to police or social workers, and it would seem that improvements could be made in the utilisation of other already existing resources.

Chapter 5: Discussion

Aim

The aim of this study was to determine the knowledge, attitudes and practices relating to IPV among ECPs in South Africa, including doctors, nurses and paramedics. Respondents completed an online questionnaire and were asked about previous training on IPV, factual questions about IPV, questions about self-reported knowledge and attitude towards IPV and about current practice in terms of diagnosis and management of IPV. Differences in the above issues were compared according to any previous reported training. By assessing whether prior training positively influences knowledge, attitudes and practice regarding IPV, recommendations could then be made both for training ECPs and for improved management of patients who have experienced IPV.

Discussion on Demographics of respondents

Age

The mean age of the respondents was 36.5 years. The distribution of the ages was skewed towards the younger age group, with 73% of respondents being under the age of 41 years. Peltzer's survey of a random sample of all South African doctors about domestic violence found the mean age of respondents to be 41, which is also relatively young [51]. The majority of the paramedics sampled by Mason in Canada were also young, predominantly under 40 years of age [40]. The relatively young age of respondents in this survey may also reflect that the field of emergency medicine is relatively young in South Africa. The young mean age of respondents in this study may therefore be reflective of the demographics of emergency care practitioners in South Africa, although this cannot be adequately proven. The doctors targeted by the distribution channels of the survey would have been registrars in emergency medicine, specialist emergency physicians and

medical officers working in selected EDs. Registrars generally commence training after completing medical school, internship, community service and then some time as a medical officer. They would therefore likely be in their twenties or thirties. Likewise, it is common for doctors to work in EDs, either in public or private, for a period of time following community service. ER consulting for example is a private company providing staffing for private emergency departments. Doctors working for ER consulting are generally just out of community service or are working as locum doctors part time while pursuing other career paths. For this reason the medical officers targeted by the survey via ER consulting were likely also younger doctors. South Africa has no data on the average ages of paramedics, so whether the ages of the paramedics who responded to the survey is representative of the field as a whole is unknown. Very few nurses responded to the survey, likely due to flaws in the survey methodology, so no comments on the average nurse's age can be made.

The relatively young age of the respondents in the survey may have affected the results in a number of ways. The responses must be interpreted with the understanding that younger respondents may have less experience both in the field of emergency medicine and with dealing with IPV. On the other hand, younger respondents may have more recently completed undergraduate training which may have included training on IPV. Ultimately, the demographics of the respondents is representative of all ECPs in South Africa is unknown, and the responses should not be interpreted as representative of the whole.

Gender

Overall the respondents were almost evenly matched in terms of gender, with 55.6% of respondents overall being male. Among doctors exactly 50% of respondents reported as

male. South Africa had a historical male predominance in the medical field, which has been only partially addressed through increasing the enrolment of female students into medical schools [55]. Overall there are still more men in the medical field [55], so the even gender breakdown of respondents in the survey may result from the younger age of the respondents for reasons previously discussed.

Among the small group of 15 nurse respondents there was a female predominance, with 80% of respondents reporting their gender as female. According to 2015 statistics from the South African Nursing Council from 243 376 registered persons with the nursing council were female and 279 037 were male, [56] so this female predominance amongst the respondents likely represents a true picture of the current gender breakdown of nursing in South Africa.

On the other hand among paramedic respondents over 70% were male, which is also likely a true reflection of a male predominance amongst South African paramedics. Research conducted amongst South African paramedics previously showed that about two thirds of respondents were male [57], although exact gender statistics are not available. In the USA 64% of emergency medical technicians and paramedics are male[58], and statistics from Australia show that 68% of registered paramedics there are male [59].

The differences in the gender breakdown between the doctor, nurse and paramedic respondents in the study may have affected the results of the survey in a variety of ways. Gender differences in knowledge, attitudes and practices towards IPV have been found in previous studies and it is possible that these differences played a role in the study. Peltzer's study of South African doctors showed that female respondents had a more positive attitude towards IPV [51] and in the UK Cann et al found again that female respondents were more knowledgeable and had more positive attitudes towards IPV[48].

Due to scope limitations differences in responses between genders in this study have not been assessed and discussed, however these differences may have served to accentuate or minimise differences between doctors, nurses and paramedics as a confounding factor.

Qualification

Just over half of the respondents (56.57%) were doctors. paramedics made up 33.55% and 9.87% of respondents were nurses.

The low response rate for nurses may be attributed to a failure in the study design with regard to distribution. The survey distribution was through a variety of channels, all of which may have targeted doctors and paramedics more than nurses. Email links from ED heads of department from certain EDS were likely sent to only the doctors working in a unit and not to the nursing staff. ER Consulting is a private company that solely deals with doctors who staff private EDs. For this reason emails from ER consulting would not have gone out to nurses working in those same EDs. ER24 and the Kwazulu-Natal Emergency Medical Services also sent out links and these predominantly would have targeted paramedics. Links sent from University Emergency Medicine Departments also would have targeted mainly doctors with only a few nurses who may have been registered for a postgraduate diploma receiving the email. Further research with a specific focus on emergency nurses is therefore needed for an accurate picture of the status quo.

Previous Training

Of 153 respondents, 65.36% overall reported no prior training in IPV. Among doctors 56.9% reported no prior training, and among paramedics it was 74.51%.

Previous surveys internationally among health care providers have also demonstrated low levels of prior training,[41] [43] and so the low levels of prior training revealed in this study are comparable to health care providers surveyed internationally. These will be discussed below.

Among Turkish ED staff surveyed by Aksan, 89.8% of the doctors and nurses reported no prior training on how to manage a patient who may have experienced IPV [39]. They attributed this low level of IPV training on the lack of IPV content in both the medical and nursing curriculae in Turkey, as well as a lack of participation by health care workers in training programs offered by Non-Governmental organisations. Reasons for the low levels of training in my study are likely due to similar reasons, although information on IPV content in the medical, nursing and paramedic undergraduate training programs in South Africa are lacking.

Gadomski surveyed health care providers (including nurses and doctors within emergency departments) in the USA both before and after an intervention program on IPV [41]. The survey found that 62% of respondents reported no prior training on IPV before the intervention commenced. Inclusion of training on IPV as part of the medical curriculum has not been widely implemented in the USA, although certain states such as California now mandate IPV training for both medical students and doctors [60]. some of the barriers to including training on IPV into medical school teaching includes limited contact time with students and a concern that IPV does not fit “neatly” into a specific medical school subject [60], These challenges would be similar in a South African context, and although research on IPV inclusion in the curriculae of South African medical students is lacking, lessons from internationally would be useful .

Interestingly IPV training has been integrated into almost all nursing bachelor degrees in the USA, and position statements from professional nursing organisations in the USA recognise both the role of nurses in the management of IPV as well as the necessity for ongoing training [61].

In the UK Cann surveyed 685 doctors and nurses on IPV included ED staff in the sample, although it is not known how many of the respondents were from the ED and how many were health care workers in other fields. In that study 70% of respondents reported no prior training in the form of a lecture or seminar [48].

In South Africa, a previous survey of South African doctors in 2003 by Peltzer showed that only 90.3% of doctors surveyed reported receiving no previous training on IPV [51]. The survey population in this survey was all registered doctors in South Africa, and not specifically doctors working in Emergency Medicine. It is again therefore difficult to directly compare this group to the ED doctors from this survey. However, with 90.3% of doctors in that survey previously reporting no training on DV, the results from the current study of doctors reporting no training on IPV of 56.9% is an improvement. This may also suggest improved training at medical school level for doctors.

Paramedics in South Africa were surveyed by Naidoo regarding knowledge around DV [52]. Although the number of hours of previous training was not asked in that study, it is striking to note that 81% of respondents felt that their previous emergency care training was inadequate when it came to DV. In this current survey, 74.51% of the paramedics reported no previous training on IPV which demonstrates a similar training gap for South African paramedics regarding IPV.

Qualification and reported IPV training

Out of the 86 doctors who answered the question on prior IPV training, 49 (56.98%) reported zero hours of prior training on IPV.

The survey was not specifically targeted at Emergency Physicians or Registrars. Currently, there are only 107 registered specialist emergency physicians in South Africa, and they therefore are not able to provide emergency care for the vast majority of the population. Similarly, registrar programs are only running at the major academic centres and there are still relatively few emergency medicine registrars as compared to other specialties. In order to better survey the range of doctors who actually work in emergency medicine in South Africa the survey was therefore aimed at all doctors who report working in the field of emergency medicine who received the survey. This could have included medical officers, registrars undergoing specialist training in emergency medicine and specialist emergency physicians.

There are also potential differences between the medical officers working in the public sector and those working in private, for example the locum (temporary or part time) doctors working for ER consulting. Further details on postgraduate training was not requested and so it is difficult to know what post graduate training in emergency medicine or any other specialty the doctors may have had.

More doctors reported prior training (43.02%) than either paramedics (25.49%) or nurses (20%). In a large Canadian survey of doctors and nurses, doctors and nurses reported similar levels of prior formal training on IPV, with 61.5% of nurses having no training as compared to 58% of doctors [62]. However, nurses were more likely (20.9%) to report a lack of training as a barrier to screening compared to the doctors (2.1%). In that study the nurses in particular felt that training on IPV in formal education programs should be

emphasised [62]. Further research on the knowledge and training needs of South African nurses is needed.

Studies comparing previous training on IPV between doctors and paramedics have not been done, however Naidoo's study of paramedics in the Western Cape showed that 81% of respondents felt that their previous training was inadequate [52].

Differences between these 3 groups is multifactorial, but are likely due to different undergraduate training between doctors, nurses and paramedics, as well as postgraduate training by selected respondents.

Discussion: Self-Reported Knowledge

Respondents were asked a series of six questions asking about self-reported knowledge on IPV. Each question asked how much the respondent currently felt that they knew about an IPV issue and asked them to answer on a scale from 1 (nothing) to 7 (very much). These responses were then scored and combined into an overall self-reported knowledge score.

Overall results

The mean Self-reported Knowledge score was 3.5 (SD 1.2, median 3.3, IQR 2.7-4.5), corresponding to 'a little / a moderate amount'.

In general, respondents scored higher, with mean scores of 4 or more (corresponding to "a moderate amount") with the 2 theoretical questions around IPV. These were specifically

- what the respondent knew about the signs and symptoms of IPV and;
- the reasons why a victim might not be able to leave the perpetrator.

In Ramsay et al's survey using the PREMIS tool the signs and symptoms of IPV were also one of the areas where perceived knowledge was relatively high. Reasons as to why respondents were more confident with these areas of IPV knowledge are likely multifactorial. The signs and symptoms of IPV is something that a respondent may have been able to think through on their own using their own medical knowledge of assault patterns and knowledge of other stress related medical conditions. In this way, general background knowledge relevant to the area of IPV plays a role in confidence related to this question.

For reasons that a victim may not be able to leave a perpetrator the respondents may again have been able to use background general knowledge of IPV gleaned from previous training or the media. Respondents could also be drawing from personal experience or the experiences of family or friends who may have experienced IPV. A small study among South African nursing staff demonstrated that one third of the female study participants had personally experienced physical abuse by a partner [63].

Conversely, respondents scored lower, with mean scores below 4, for the more practical elements of

- how to document IPV (mean score of 3.1),
- where to refer a patient once IPV has been identified (mean score of 2.9) and;
- determining danger for the victim (mean score of 3.4).

These practical elements are critical for effective management and legal documentation, which has been shown to be generally poor in South African health care [26] as well as ED care worldwide [64].

Documentation of IPV

Appropriate documentation of IPV would generally consist of a thorough history of the current incident including information on the alleged perpetrator, information about previous episodes of abuse, detailed documentation of any examination findings and documentation of what actions or referrals were made for the patient [26]. Appropriate examination finding documentation is aided by either a schematic representation or photography of the injuries in the case of physical abuse. These findings are also documented on the forensic J88 form which is submitted to the police, however many victims of IPV do not report instances of abuse to the police[11] in which case a J88 form will not be completed. For this reason thorough documentation at the time of consultation is needed as the notes may later become relevant in future legal action[26]. Times constraints in the ED or in the prehospital setting are generally a major constraint when it comes to adequate documentation; however my results indicate that a perceived lack of knowledge as to how documentation of abuse should actually be done for these patients is also a limiting factor. Adequate documentation of potential medicolegal cases is mandated by law [26] and may have major implications on legal proceedings. For this reason this lack of knowledge is one that needs to be urgently addressed.

Referral sources for IPV

The issue of perceived lack of knowledge around referral sources for IPV was also highlighted as a concern in my study, with a mean score among respondents of 2.9 which corresponds to “Very little/ A little”. Referral sources for patients who have experienced IPV would be different depending on geographical area, hospital and the provider (i.e. paramedic vs doctor). Each hospital or system should ideally have a

protocol and a list of available referral sources. Issues around referral for IPV are discussed further under the actions taken by respondents when IPV was identified, where again respondents appeared unclear on local referral options.

Determining risk

In South Africa with our very high rate of femicide[13], determining risk and safety planning is particularly vital to ensure that we are not discharging patients into unsafe environments [8]. Safety assessment tools for use in a primary care setting have been developed for use in South Africa as part of previous studies [65], however they have not been put into practice in primary health care and no similar tools for use in EDs or prehospital settings exist. An awareness of what may make a home situation less or more risky (eg access to guns) is therefore currently dependant on the knowledge of the ECP seeing the patient. The respondents in the survey reported a mean score of 3.4 which corresponds to “A little”, which indicates a lack of confidence in this important area. This result therefore indicates a gap in knowledge and highlights a potential focus area for future training among health care professionals. These results are similar to those in Ramsay et al’s study discussed above, where perceived knowledge of both determining danger for the woman and referral sources for female DV victims was low [46].

Self-reported knowledge and prior training

Any reported training in IPV by a respondent improved how knowledgeable respondents felt about the IPV issues discussed above ($p= 0.011$), which included signs and symptoms of IPV, documentation, referral sources and how to determine danger for the victims of IPV. Although this study was not interventional, this phenomenon of training improving knowledge has been well demonstrated in interventional studies, where the

introduction of a training program on IPV among health care providers tends to improve self-reported knowledge and efficacy [43] [41]This was shown in Gadomski's interventional study in the USA. That study showed improved self-efficacy after a multifaceted training program was introduced with improvement in multiple aspects relevant to the clinical management of patients, including knowledge of how to screen, workplace resources and referral resources.

In practical terms the fact that respondents who reported prior training felt more confident in multiple aspects of IPV care should act as a motivating factor for the introduction of a training program. Until further research is done it cannot be known whether this will definitely lead to improved patient care however, with such an important and worthwhile cause these interventions should be considered.

Actual Knowledge

Overall score

This section of the survey asked 17 questions on IPV covering both clinical and social aspects of IPV. Questions consisted of a variety of formats including true/false/don't know, choose a most correct answer from a list or select multiple answers from a list. The answers were then marked (either correct or incorrect) and combined into an overall knowledge score. This overall knowledge score is a brief overview of the respondents knowledge related to IPV but was kept short to fit into the scope of the survey.

On average, respondents correctly answered 71% of the questions, with particular questions making up the common knowledge gaps. These will be discussed below.

In Aksans study on Turkish ED doctors and nurses, knowledge was assessed for the definition of IPV, the clinical aspects of IPV as well as legal issues specific to Turkey [39].

When assessing clinical issues, the respondents in that study correctly answered an overall total of 65.52% of the questions. Knowledge was better for acute clinical conditions as compared to chronic or psychiatric conditions [39].

Due to the scope of the research project each individual question will not be discussed. The only two questions that will be discussed were those answered incorrectly by the majority of respondents and are of particular interest in a South African context. The reasons why these questions were chosen as well as further assessment into these results will be discussed below.

Question 1: Strongest single risk factor for IPV

The first question that will be discussed from the knowledge section asked what the strongest single risk factor was for experiencing IPV. Although all of the answers provided are risk factors and have been associated with IPV, the most correct answer is female gender [66]. The reasons for this are multifactorial and will be further discussed below.

In relation to these risk factors the other options of an age under 30, alcohol/drug use by a partner and having experienced violence previously are all positively associated with IPV [6]. However, although men also experience abuse by intimate partners, the rate of IPV is far higher for women than for men [7 66], and therefore regardless of any other factors specific to either the perpetrator or the victim the single strongest risk factor for experiencing violence by an intimate partner is female gender, with the prevalence rate for physical IPV among South African women being an estimated 31%[12].

South Africa has a traditionally patriarchal society, where violence against women in intimate relationships is often seen as normal, even among health care providers [63]. Men using violence to control and dominate women within an intimate or domestic relationship

can be seen as “socially acceptable” [11], even though it should not be considered acceptable or normal by society. Within this framework of a generally violent society, and with violence against women often being seen as socially acceptable, simply being a woman in South Africa is the main risk factor for experiencing IPV.

Only 21.3% of respondents chose this answer as their response. This is a significant result, as failure to recognise that any woman presenting to the ED could be at risk for IPV may lead ECPs to not consider the diagnosis in some cases. This holds true for women of any age, from any background, with or without a prior history of experiencing IPV and regardless of substance use by the partner. None of those are as great a risk factor as female gender. Some guidelines even call for universal screening of female patients for IPV [8]. Although this may not be practical in our resource and time poor setting [65] we should always consider the diagnosis of IPV in unexplained injuries or other worrying pathology, regardless of age, history or a partner’s use of substances.

The most commonly selected answer (56%) for the main risk factor for IPV was ‘partner abuses drugs or alcohol’. In Naidoo’s study among pre-hospital ECPs in the Western Cape, 97% of respondents felt that alcohol and drug use was the primary cause of domestic violence [52]. This perception has therefore previously been found among South African ECPs, and is likely due to the ECPs “on the ground” experiences with situations and patients. The experiences of IPV that may stand out to them are likely the situations of extreme violence and aggression that may indeed be fueled and aggravated by substance abuse, as a link between physical violence and alcohol/drug use by a perpetrator has been found in South Africa [67] The presentations of IPV that are not related to an acute episode of violence may be missed by the ECPs as routine screening for IPV is not performed. [68]

Although there is a link between IPV and drug/ alcohol use, [67] it is not the main or the only risk factor, and this perception threatens to overshadow the main issue of gender inequality as a cause of IPV.[69] In a South African study, Peltzer showed a link between use of alcohol or drugs by the perpetrator and experiencing abuse. [67] However, one third of the women interviewed in that study reported perpetrators with no problem drinking or drug use in the three months prior to being interviewed.

Even in societies where alcohol use is prohibited for religious reasons IPV is still a significant problem. Although there are very few studies on IPV in countries with a significant Muslim population, research in Pakistan shows prevalence rates of IPV of above 50% [70] despite per capita alcohol consumption of almost zero. [71]

Alcohol use by a female patient has also been associated with an increased risk of that patient having experienced IPV, and conversely, women who experience IPV have higher rates of alcohol use. [1] As with other psychological problems, alcohol or drug misuse/abuse by a patient should be a potential prompt to enquire about IPV. Research has shown that in fact, women with substance abuse issues are actually less likely to be screened for abuse, which may be leading to missed opportunities for diagnosis and management. [72]

HIV

Only 43.9% of all respondents correctly identified that IPV was associated with an increased risk of testing HIV positive.[21]

HIV in South Africa poses a significant health problem, with emergency medicine being at the forefront of dealing with the epidemic. A Study from a district level ED in Kwazulu-Natal showed an HIV prevalence rate of medical patients presenting to the ED to be 49.7%.[73] Dunckle found that South African women who have experienced IPV are at

increased risk of testing HIV positive [21] and a similar link has been elucidated internationally. [1] There are a number of postulated reasons why a woman who has experienced abuse may be more likely to contract HIV. [1 74] Women who fear violence in their relationships may be unable to negotiate condom use or monogamy. [74] There is also evidence that men who are abusive are also more likely to engage in concurrent risky behaviour, such as multiple partners [21] and the use of prostitutes. HIV positive women in South Africa have reported difficulty with negotiating condom use and fidelity with their partners, [74] and relate these difficulties to an increased risk of HIV. Women who experience IPV may also leave an abusive relationship and find a new partner, exposing themselves to increased risk via exposure to a new sexual partner.

This study demonstrates that the link between IPV and HIV is not clearly understood by the ECPs who completed the survey. Any effort to decrease the transmission of HIV in South Africa should be a key health concern. Early identification of those at risk would assist in this process through a number of means. Those who are HIV negative at the time of questioning may be amenable to counselling on risk reduction and ways to negotiate safer sex and decreased exposure to violence. For those who are HIV positive there is a benefit in early commencement of ARVs as well as counselling on risk reduction.

Training of ECPs on the link between HIV and IPV could assist ECPs with both identifying patients at risk of both HIV and IPV, as well as providing an additional consideration when counselling a patient who has been found to be experiencing IPV. [65]These patients could ideally be offered early testing for HIV [74] which may assist with access to treatment as detailed above.

Practice

Overall, 75% of practitioners who described themselves as being in clinical practice had diagnosed IPV in the previous 6 months. Although this is not an unexpected result given the high prevalence of IPV in South Africa, it does clearly demonstrate that IPV is an issue encountered by ECPs in South Africa. Of respondents in clinical practice 26.5% had diagnosed more than 6 cases within the designated 6 months, with 9 respondents (6.5%) having diagnosed 21 or more cases.

The survey question did not differentiate between physical, emotional, economic or sexual abuse when asking respondents about IPV diagnoses. Respondents may have considered IPV only as it relates to physical abuse and may not have considered the other forms that IPV can take.

Although ECPs surveyed in this study report making diagnoses of IPV, these numbers almost certainly represent a significant under diagnosis of IPV as a problem presenting to emergency care. An estimated 1 in 4 women in South Africa have experienced IPV [11] and women who are abused are more likely to access health care. [23] This includes care needed after physical or sexual abuse, as well as for the multiple negative health effects of IPV. [8] Taking this into account it is possible that at least a quarter of women seen in EDs in South Africa at some point been victims of IPV, although research on this is lacking and the exact prevalence of IPV among patients presenting to emergency care in South Africa is not known.

Jewkes et al found that women who have experienced IPV in South Africa are more likely to present to a health care facility after an instance of violence than to report the incident to the police or other welfare resources.[11] In Primary Health Care in South Africa prevalence rates of IPV have been found to be reflective of the estimated national

prevalence rates, and this is likely to be similar among the patients presenting to EDs and prehospital care. Jacobs and Suleman surveyed women presenting over a 24 hour period to a Community Health Centre in the Western Cape, and found that of the 412 women surveyed just less than half (200) reported current or previous IPV. Of those, 8 patients (2%) were presenting specifically as a result of a current incident of IPV.

The relatively low frequency with which respondents in this survey report detecting IPV could be due to a number of factors. Respondents may have only considered cases in which the IPV was the immediate reason for presentation, for example after physical injury. Screening for IPV among patients with other presenting complaints is not frequently done by health care workers, [8] and although data on this area among emergency care practitioners from South Africa is lacking, international evidence suggests it is generally similar among ECPs. [27]

Respondents may also have had difficulty with recalling specific numbers of IPV cases over the previous 6 months, and although research on this is lacking, it is possible that the numbers given may have been based more on recollection of specific noteworthy cases rather than accurate numbers.

Prior training and IPV identification

This study demonstrated that any reported previous training of 1 hour or more increased the likelihood of an ECP having made an IPV diagnosis within the previous 6 months. This result is similar to previous studies elsewhere in the world, where introduction of a training program led to improved identification of IPV [41]. In this survey any reported hours of training, meaning anything more than1 hour, made a difference to IPV identification numbers. Among this group of respondents with prior training, 92% of respondents in clinical practice reported identifying IPV in the previous 6 months. This result is similar to

that in international interventional studies, where the introduction of IPV training positively influenced identification and referral of patients. In the large IRIS trial conducted by Ramsay et al in the UK the documented IPV disclosure rate increased almost threefold after the introduction of training on IPV (adjusted intervention rate ratio 3, CI 2.4-4.3).[47]

Reasons for the difference in my study are likely multifactorial. Previous training may lead to improved screening for IPV, which would improve detection rates. A link between training and improved screening has again been found internationally [44] but has not been studied in a South African context. ECPs with a history of training may also be more willing to identify IPV as they have improved self-identified knowledge and actual knowledge, as demonstrated by this study. This provides impetus for the necessity of adequate training in IPV for ECPs in South Africa, and a realisation that even a small amount of training may improve detection rates and referral patterns for IPV patients.

In previous interventional studies involving the implementation of a training program, the training typically consisted of one or two training sessions with some adjustments in records and provision of ongoing support. [47] A systematic review of training programs for DV found that although brief seminar sessions improved DV knowledge, this did not lead to changes in behaviour or attitudes. The approach that was more effective in actually improving management for DV patients was to combine training and some form of system support. The system support consisted of interventions such as posters in waiting areas, checklists in patient's notes to prompt screening and information on local resources and services. [75] The ideal length of time and content requirements for a training program for ECPs in South Africa is not known, and details would need to be discussed with role-players from the emergency care side as well as those from civil society and other experts in the field of IPV, with the understanding that IPV is a problem of national concern and a significant public health issue. [8]

A short training program similar to that introduced in the UK IRIS study would be feasible to implement as part of the training programs for ECPs in South Africa, along with assistance for EDs and pre-hospital management to implement small, cost-effective systems changes such as information on local resources which have been shown to improve patient management. [75]

Actions upon identifying IPV

Respondents could select multiple actions when answering this question and many respondents selected more than one response. This echoes what the actual response would be in an ED or prehospital environment where it is often appropriate for multiple concurrent actions to be undertaken for a patient.

When IPV was identified by practitioners, the majority of respondents either counselled the patient on options (46%) referred to social workers (46.8%) and/or or referred patients to the police (29.5%). Fewer respondents made use of an IPV/DV hotline (6.5%) or a referral to a shelter (15.11%).

Respondents were asked to generalise as to typical actions taken when identifying IPV, but clearly the actions that a respondent might take when dealing with a specific patient will vary depending on the patient's wishes, whether or not the patient is being admitted to hospital and the specifics of the case. Specific protocols for management and referral of IPV have been developed in South Africa but not implemented and therefore current management and referral is left up to the discretion of the individual dealing with the case. The actions given by the respondent therefore are a guide to what general actions they may have taken when identifying IPV, rather than what they might do for a specific case.

It is important to note that identifying IPV and referring a patient to a potential resource is only of value if that referral resource has the capacity and ability to assist in a meaningful way.[76] Of concern in South Africa is that resources for IPV are globally underfunded, and some commonly used resources, such as the police services, have been specifically noted by Non-Governmental organisations as being insufficient for their lack of progress when dealing with persons who have experienced IPV. [77] In practical terms this may limit the ECP when referring a patient onwards. If options which may be generally recommended for certain cases are either not available or not effective care is affected. Each of the options suggested in the survey will be discussed further below.

Referring to a social worker

Referring patients to a social worker was the most common action taken, and social workers do have an important role to play within a multidisciplinary approach to IPV management .[27] In Peltzer's survey of doctors in South Africa, referral to a social worker was also the most common action taken when IPV was suspected [51]. Unfortunately, the number of social workers in South Africa would be insufficient to deal with every case of IPV identified by health care workers, as social workers are understaffed for the number of people in South Africa, and excessive caseloads on individual social workers may make this resource less useful [78]. Lack of access to a social worker in the ED was listed as a barrier to care in Aksu's study of Turkish ED personnel regarding IPV [39] and although ECPs in this study are clearly using social workers as a referral option it is clear that this route may not always be sufficient. Another concern is that of patients seen after hours or on the weekends when social workers are generally unavailable. Where a social worker is available to patients it is a useful resource. Another role for the social worker would be in training and empowering health care workers with regards to other

resources, safety assessments and legal procedures. In this way even when the social worker is not available patient management of IPV can continue.

Counselling patient on options

It is interesting that 46% of respondents' reported counselling patients on their options, despite a minority (34.64%) of respondents reporting ever receiving training on IPV. This encouraging result indicates that many ECPs are willing to tackle the often complex issue of IPV with patients even though formal training has not been widespread. This is clearly an area where more training and information provided to ECPs would benefit patients, given that ECPs are already counselling patients who present with IPV. Improved resources and protocols in a unit or within a service, such as a pre- printed information sheet could also allow for standardisation of advice, as well as prove time saving for the health care workers .

Referral to the Police

Another common action taken (29.5%) was to refer the patient to the police. South Africa does not have mandatory reporting of IPV and so patients are free to choose not to report IPV if they wish. The South African Domestic Violence Act of 1998 provides a legal imperative for police officers to assist in the survivors of IPV, [2] and so they should be considered a vital resource for patients who wish to lay criminal charges against an abuser. In Peltzer's study only 8% considered referring a patient to the police after suspected abuse, and so the increased numbers in this study are encouraging.[51] However, there is evidence that patients present to health facilities preferentially rather than police stations, after experiencing IPV. [11] The relatively low number or respondents in my study referring patients to the police is therefore likely to be an appropriate figure. Many patients presenting with IPV may not want to involve the police at the time of an

incident. Another concern is that the care and advice received at a police station may be inadequate.[66] Patients may also not wish to lay criminal charges against an abuser at the time of presentation, and this remains the choice of the patient. There are legal options available to the patient other than criminal charges, such as obtaining a protection order which needs to be applied for at a magistrate's court.

Referral to a support group/program/shelter

Of all respondents, 15.11% reported referring a patient to a support group or program or a shelter. Similarly to social workers, support groups and shelters for IPV in South Africa are also under resourced and underfunded to cope with the scope of the problem, and may not be available in all areas.[79] Contact details and an understanding of what a shelter or program may be able to offer may also not be available within an ED, especially since shelters generally service a specific geographical area.

Referral to a DV/IPV Hotline

Very few (6.45%) respondents referred patients to DV/IPV hotlines, possibly because the numbers and services may not be well known to ECPs. DV/IPV hotlines are a resource that could be used by ECPs for patients who have experienced IPV. They are typically run by Non-Governmental Organisations and awareness and availability of these resources has been increasing internationally. [80] Referral to a telephonic hotline would not need additional resources within emergency departments or pre-hospital, and would allow for someone specifically trained in IPV counselling to get involved. Importantly in our time and resource limited environments, referring someone to a helpline can be quick and simple, while at the same time opening a door for further interventions. Lifeline offer a 24 hour "stop gender violence" helpline, and other organisations such as People opposing woman abuse (POWA) also offer telephonic counselling and advice.

Chapter 6: Conclusions

IPV is a significant health concern in South Africa, with far reaching medical, social and economic effects. Although emergency services could have a significant role to play in managing IPV, ECPs seem to be under prepared to deal with victims of IPV. Levels of reported training on IPV amongst ECPs were very low, and my study demonstrates the importance of training on both knowledge and practice issues.

Any prior training improved both self-reported knowledge and actual knowledge, which provides impetus for an improvement in how ECPs are trained.

Although it is likely that victims of IPV are significantly under recognised within emergency services, cases are being picked up by most ECPs in clinical practice. Training affects how likely a practitioner is to have made a diagnosis of IPV in the previous 6 months, and this effect was seen even with training of 1 to 10 hours.

Limitations

Low Response Rate

It is not known how many people received the survey via the various channels in which it was distributed. In order to ensure confidentiality, the survey was emailed out via third parties, including heads of department and via the secretary of EMSSA, rather than directly from the researcher.

169 responses were received, of which 16 were eliminated since these respondents had only completed the demographic section of the questionnaire, leaving 153 responses, which is less than the target sample size. The actual response rate cannot be determined, as the total number of respondents who received the survey is unknown.

A secondary concern about the unknown response rate is that it may have led to selection bias, as it is possible that those who elected to participate in the study are those with a particular interest or experience in IPV, and thus are not representative of ECPs in South Africa. However, the fact that the majority of respondents had had no prior training on IPV would seem to suggest that this was not the case.

In relation to the demographics of the respondents; the respondents were evenly matched in terms of gender, but on the whole were quite young. This may reflect a more junior group of paramedics and doctors, and it is difficult to then generalise these results to the population as a whole. Unfortunately very few nurses answered the survey with only 10% of respondents reporting their profession to be nursing. It would have been interesting to have the results for emergency care nurses in South Africa, as nurses have the potential to be a valuable resource in the management of IPV.

Although the unknown and potentially low response rate may threaten the validity of my findings, this research is not intended to serve as a definitive statistical presentation but should rather be regarded as a preliminary investigation on the topic.

Survey Limited in Scope

In an attempt to ensure the highest possible response rate, the survey developed as part of this research was much shorter and simpler than the original PREMIS survey. Although this still gives valuable information about the knowledge, attitudes and practices of ECPs in South Africa, the information cannot be directly compared to populations where the original validated survey was performed. As a result of the closed nature of the survey questions, the data set does not document or detail why certain knowledge, attitudes or practices prevail however, in the discussion section suggestions for possible

reasons for associations between variables have been made. Wherever possible, this is supported with reference to literature.

Ideally the survey instrument used would have been one that was developed and validated in South Africa for use among ECPs. This was not possible and therefore an adapted version of the PREMIS survey was used. Although the PREMIS survey was developed using available literature, it was developed in the USA and answers were based on information related to IPV in that setting. To mitigate this potential limitation, certain answers were reviewed by the researcher with reference to a South African context to ensure that they were applicable and correct. This was particularly important in the knowledge section as factual answers may have been different in a South African context.

Recommendations

Further research into the impact of IPV on emergency medicine in South Africa is needed. This research would ideally develop a more thorough understanding of the current issue, recognising that this study was exploratory in nature. A focus on nurses practicing emergency medicine would also be helpful, given the global emphasis on the role of nurses in recognising IPV. A more thorough understanding of the number of patients presenting as a result of IPV and the utility of screening and further management would also be useful in informing the development of training programs and ED management. Based on the results of this study, the researcher recommends a review of how issues surrounding IPV are currently taught, with the recognition that even short amounts of training could improve the rate of diagnosis of IPV.

Training should have two areas of focus. Firstly, the importance of IPV as a medical issue should be emphasised, with information about how to recognise and screen for IPV.

Secondly, training should include practical issues such as assessing risk and local resources. Along with training, small systems changes such as posters with IPV information and easily accessibly information on IPV resources within the workplace could be considered

Although universal screening has been suggested as useful, [8] it may not be practical in a time and resource limited environment.[81] I would therefore suggest that patients presenting with specific complaints should be screened using an IPV screening tool validated for the ED.

Screening should be performed on women presenting with trauma where abuse may be a possibility. This would include cases where a given explanation seems unlikely, evidence of injuries of different ages, and evidence of strangulation and injuries to the upper body and face. [82]

Screening should also be performed on any women presenting with psychiatric illness, including depression, suicidality and substance abuse issues. [81,1] There is also a clear link between STIs, including HIV and IPV [1] and therefore patients with presentations relating to these should also be screened. The last group of patients who should be screened is those presenting with chronic pain syndromes such as backache or frequent headaches [81] as these may be related to underlying IPV.

When the diagnosis of IPV is made in the ED or pre-hospital environment a protocol based approach to management should be used, with an understanding that the ED/pre-hospital environment is not ideal for in depth counselling or thorough risk assessments. Protocols should be developed in conjunction with local resources, including social workers and external organisations working in DV/IPV. They should include a focused risk assessment and referral to relevant and accessible resources.

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Appendix A: Human Research Committee clearance

R14/49 Dr Lucy Hindle

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M131150

NAME: (Principal Investigator)	Dr Lucy Hindle
DEPARTMENT:	Emergency Medicine South Africa
PROJECT TITLE:	Knowlege, Attitudes and Practices of Emergency Care Practitioners towards Intimate Partner Violence
DATE CONSIDERED:	29/11/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Prof Efraim Karmer
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	02/12/2013

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

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report.**

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix B: Consent information email (copy of text)

Hello

My name is Dr. Lucy Hindle and I am an emergency medicine registrar from Wits. I am doing my Masters in Medicine in Emergency Medicine (MMed) and would really appreciate your assistance. Below is a link to a survey which will take 10 minutes (or less) to answer, and is about your knowledge, attitudes and practices towards intimate partner violence (domestic violence) which I am asking you to complete.

Your participation would be greatly appreciated. Intimate partner violence is a major issue in South Africa, and every 6 hours in our country, a woman will be killed by her intimate partner. Everyone who works in emergency care should be part of the fight against this, but we need to know where we currently stand.

You are under no obligation to complete the survey, and are welcome to leave out any of the questions that you do not wish to answer. The survey is done through Survey Monkey™, an online anonymous survey provider. Once you click through to the survey there is no link between your email address or identity and the survey, and the survey will not ask for your name. If you click through to the link, this will mean that you have given your informed consent that you wish to participate.

There is no financial benefit to participating in the survey.

Ethics clearance for this study was obtained from the University of Witwatersrand Human Research Ethics Committee (Medical). For any further information regarding the ethics approval please contact Anisa Keshav on (011 717 1234) or contact me on 082 871 0638.

Please assist by giving 10 minutes of your time, I would be very grateful. The link to the survey follows

https://www.surveymonkey.com/s/IntimatePartnerViolenceSurve

Appendix C: Request to use PREMIS survey tool from original authors

Dear Dr. Hindle,

This tool is in the public domain, so you are free to use it for non-commercial purposes.

As you may have noted in the paper, this tool was based on existing tools and advice from our expert panel. Dr. Short led this effort, so you may want to ask for her help.

I have no knowledge that the tool has been used in Africa.

You can certainly change any questions you want, but I cannot tell you how this would affect its validity. Once you make changes, you have a new tool and you are starting over with validity. The least problematic approach is to simply add a few questions as a separate subscale, which keeps everything else intact, but that is your call.

Best of luck with your work. I would be delighted to hear about the results of your efforts.

John M. (Skip) Harris Jr., MD, MBA, FACP

Executive Director

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Appendix D: Survey Instrument

See copy of survey attached

1. Where do you currently live?

- South Africa
- Elsewhere in Africa
- Europe
- North America
- South America
- Asia
- Australasia

2. What is your field of work?

- Nurse
- EMS Paramedic
- Doctor

Other (please specify)

3. What is your gender?

- Female
- Male

4. how old are you?

Background

5. Estimated total number of hours of previous IPV training

6. How much do you feel you currently know about the following?

	(1) Nothing	(2) Very Little	(3) A little	(4) A moderate amount	(5) A fair amount	(6) Quite a bit	(7) Very much
Signs or symptoms of IPV	○	○	○	○	○	○	○
How to document IPV in patient's chart	○	○	○	○	○	○	○
Referral sources for IPV victims	○	○	○	○	○	○	○
Why a victim might not disclose IPV	○	○	○	○	○	○	○
What to say and not say in IPV situations with a patient	○	○	○	○	○	○	○
Determining danger for a patient experiencing IPV	○	○	○	○	○	○	○

Knowledge

7. What is the strongest single risk factor for becoming a victim of intimate partner violence?

- ○ Age <30
- ○ Partner abuses alcohol/drug
- ○ Gender- female
- ○ Family history of abuse
- ○ Don't know

8. Which of the following are warning signs that a patient may have been abused by his/her partner? (Tick all that apply)

- ☐ Chronic unexplained pain
- ☐ Anxiety
- ☐ Substance abuse
- ☐ Frequent injuries
- ☐ Depression

9. Which of the following are reasons an IPV victim may not be able to leave a violent relationship? (Tick all that apply)

- ☐ Fear of retribution
- ☐ Financial dependence on the perpetrator
- ☐ Religious beliefs
- ☐ Children's needs
- ☐ Love for one's partner
- ☐ Isolation

10. Please pick true, false or don't know for the following

	True	False	Don't know
There are good reasons for not leaving an abusive relationship	○	○	○
When asking patients about IPV you should use the words “abused” or “battered”	○	○	○
Being supportive of a patient’s choice to remain in a violent relationship would condone the abuse	○	○	○
Allowing partners or friends to be present during a patient’s history and physical exam ensures safety for an IPV victim	○	○	○

11. IPV is associated with an increased likelihood of testing HIV positive

- ○ True
- ○ False
- ○ Don't know

Opinions

12. For each of the following statements, please indicate you response on the scale from “Strongly Disagree” (1) to Strongly Agree (7).

	1 Strongly disagree	2	3	4	5	6	7 Strongly Agree
If a patient refuses to disclose the abuse, staff can only treat the patient’s injuries	○	○	○	○	○	○	○
Victims of abuse could leave the relationship if they wanted to	○	○	○	○	○	○	○
Screening for IPV is likely to offend those who are screened	○	○	○	○	○	○	○

Practise issues

13. How many new diagnoses of IPV (picked up an acute case, uncovered on-going abuse or had a patient disclose a past history) would you estimate you have made in the last 6 months

- ○ None
- ○ 1-5
- ○ 6-10
- ○ 11-20
- ○ 21 or more
- ○ N/A (not in clinical practise)

14. In the past 6 months which of the following actions have you taken when you identify IPV? Tick any that apply.

- ☐ Have not identified IPV
- ☐ Identified IPV but did not perform any further actions
- ☐ Counselled patients about options he/she may have
- ☐ Referred patient to Social worker
- ☐ Referred patient to Police
- ☐ Referred patient to Local IPV/DV hotline
- ☐ Referred patient to Support group/program/shelter
- ☐ Other

15. Is there a protocol for dealing with adult IPV at your place of work?

- ○ Yes and widely used
- ○ Yes and used to some extent
- ○ Yes but not used
- ○ No
- ○ Unsure
- ○ Not applicable to my patient population
- ○ I am not currently in a clinical practise

Thank you for completing the survey, I really appreciate it.