Intimate partner violence among pregnant women seeking antenatal care in urban and rural public healthcare facilities in the Tshwane District

By

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DECLARATION

I, Sindile Mabunda, hereby declare, that what I submit for the degree Masters of Medicine in Public Health is my own work and has not been presented either wholly or in part for any other degree.

Signed

Dr Sindile Mabunda Date

DEDICATION

I lovingly dedicate this work to my husband and beautiful children, who supported me each step of the way.

ACKNOWLEDGEMENT

Different people have contributed to this work, most knowingly and very few not so. I would like to thank God for giving me strength to do this work. I would also like to thank the following people:

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DEFINITION OF TERMS

For the purposes of this study, the following definitions apply:

Interpersonal violence, according to the World Health Report on Violence and Health 2002, is divided into two subcategories; family and intimate partner violence (IPV) and community violence. It includes forms of violence such as child abuse, IPV and abuse of the elderly[1].

Intimate partner violence, according to the World Health Report on Violence and Health 2002, refers to any behaviour that causes physical, psychological or sexual harm to those in an intimate relationship[1].

Rape, according to the World Health Report on Violence and Health 2002, is defined as physically forced or otherwise coerced penetration (even slight) of the vulva or anus using a penis, other body parts or an object[1].

Prevalence: proportion of people in a population that have a condition of interest at a given point in time. (NB. This is not a population-based study therefore, for the purpose of this study; prevalence refers to the proportion of antenatal clinic attendants that were seen during the study period, in the selected public health care facilities).

LIST OF ACRONYMS

For the purposes of this study, the following acronyms apply:

AIDS	Acquired Immunodeficiency Syndrome
CHCs	Community Health Centres
COPC	Community Oriented Primary Care
HIV	Human Immunodeficiency Virus
IPV	Intimate Partner Violence
KZN	KwaZulu-Natal
MDGs	Millennium Development Goals
MP	Mpumalanga
MRC	Medical Research Council
NGOs	Non-Governmental Organizations
NP	Northern Province
PTSD	Post-Traumatic Stress Disorder
SASH	South African Stress and Health
USPSTF	United States' Preventive Services Task Force
WHO	World Health Organisation

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ABSTRACT

Title: Intimate partner violence amongst pregnant women seeking antenatal care in urban and rural public healthcare facilities in the Tshwane district.

BACKGROUND:

Intimate partner violence (IPV) is recognised as a global public health and human rights concern with profound health implications. IPV has been identified as the most common type of violence that is perpetrated by men against their intimate partners. The primary objective of the study was to estimate the occurrence of IPV amongst pregnant women seeking antenatal care in one urban and one rural Community Health Centre (CHC), and to explore risk factors associated with IPV in pregnant women seeking antenatal care at these facilities. The urban Soshanguve and rural Kgabo Community Health Centres are located within the City of Tshwane Metropolitan Municipality in the Gauteng province of South Africa.

METHODS:

A cross-sectional facility-based study was conducted. A total sample of 361 pregnant women seeking antenatal care at the two CHC's was selected for study by means of systematic random sampling. The number of study subjects from each of the two CHC's was proportional to the average monthly antenatal attendances in that clinic. A questionnaire which included items on demographics and experiences of IPV was administered. Both univariate and multivariate odds of IPV exposure were estimated using logistic regression analysis. Ethical approval was obtained from the University of Pretoria's ethics committee.

RESULTS:

The prevalence of reported IPV was 59% (95% CI: 0.49, 0.69) and 43% (95% CI: 0.37, 0.49) for the participants attending the rural Kgabo and urban Soshanguve CHC respectively. The most common type of violence reported across both sites was emotional violence; 53% for the rural CHC and 37% for urban the CHC.

In the multiple logistic regression, being older than 24 years was found to be protective of emotional violence in urban Soshanguve CHC [OR=0.48 (95% CI: 0.25; 0.95) p=0.03]. Furthermore, the absence of a history of exposure to sexual violence was found to be protective of the various types of intimate partner violence in the urban CHC:

- Emotional violence [OR=0.29; (95% CI: 0.10, 0.78) p=0.02].
- Economic violence [OR=0.18; (95% CI: 0.04, 0.81) p=0.03]
- Physical violence [OR=0.14; (95% CI: 0.04, 0.42) p=0.001]
- Sexual violence [OR=0.096; (95% CI: 02, 0.46) p= 0.003]

Abstaining from the use of alcohol was found to be protective of emotional violence in rural Kgabo than the urban Soshanguve CHC [OR=0.26; (95% CI: 0.08, 0.80) p=0.02].

Being in an intimate relationship with a male partner who does not use alcohol was also found to be protective of physical violence among respondents from urban Soshanguve [OR=0.31; (95% CI: 0.05; 0.81) p=0.01].

CONCLUSION:

This was a facility based study as a result its findings cannot be generalised to the populations where these facilities are located. However, the study suggests extremely high levels of IPV among pregnant women residing in rural Winterveldt and Soshanguve urban township. The findings of this study are consistent with the reported high prevalence of intimate partner violence in South Africa. In addition, the findings of this study are in agreement with prior national and international research studies that have demonstrated that childhood exposure to sexual violence; and alcohol use by one or both partners are significantly associated with IPV later in a person's life. It is important therefore, that the South African government and civil society organizations develop and implement a national violence prevention strategy, which will outline a coordinated response with a focus on effective primary prevention efforts that will be directed to the reduction of the occurrences of the associated risk factors. Secondary prevention could still play an important role in

reducing the impact of early childhood violence. Thus early identification of the high risk factors can be used in support of interventions to reduce the burden of IPV.

CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

This chapter will outline the background and rationale of this research study. The chapter will also review the literature of Intimate Partner Violence as it is the main focus of the study. The literature review will examine the main issues related to Intimate Partner Violence.

1. INTRODUCTION

1.1 Background

Interpersonal violence has been highlighted as an issue of public health concern, globally and in South Africa. It includes child maltreatment, intimate partner violence, and elder abuse[1]. Interpersonal violence usually occurs in the home but also occurs outside the home in settings such as schools, long-term care facilities and hospitals.

Intimate partner violence (IPV) is recognised as a global public health and human rights concern with profound health implications[1]. IPV occurs in all countries and communities, irrespective of social, economic, religious or cultural background and it is the most common type of violence against women globally[2-5]. Studies have shown that South Africa has one of the highest levels of gender-based violence in the world (which includes rape and domestic violence)[2,6-7].

At the Fourth World Conference on Women, which was held in Beijing in 1995, governments and non-governmental organisations were encouraged to promote research in the causes and consequences of violence against women as well as the delivery of effective public health interventions that would prevent and mitigate violence against women[8]. In 1996, the 49th World Health Assembly declared violence a major public health issue. In 2002 the first World Health Report on Violence and Health was launched. The main aim of this World Health Report on Violence and Health was to raise awareness of the fact that violence is a preventable global problem; and also the importance of the public health approach in addressing its causes and consequences[1].

IPV in its subtle form may go undetected and in its most extreme form may result in extensive bodily harm and even death[9]. Healthcare facilities are ideal environments that bring together women of all ages in relationships, including pregnant women. Furthermore abused women are more likely to visit healthcare facilities than other women[10]. Therefore healthcare facilities maybe considered as cost effective sites for a researcher to access pregnant women from different backgrounds.

Studies have shown that pregnant women are at a greater risk of IPV victimization than those who are not pregnant[11-12]. This is mostly attributed to the factor of age, as pregnant women are mostly between the ages of 15 and 49 years. Pregnant women are also more likely to be in a relationship than women who are not pregnant[11]. Although there have been some inconsistencies, some studies have also shown that women residing in rural settings are more likely to experience intimate partner violence compared to women residing in urban settings[5,13].

1.2 Literature review

1.2.1 Intimate partner violence defined

According to the World Health Organisation (WHO), IPV refers to any behaviour by one or both of the partners in an intimate relationship that causes physical, psychological or sexual harm to the other partner[1]. It includes acts of physical aggression (slapping, hitting, kicking or beating), psychological abuse (intimidation, constant belittling or humiliation), forced sexual intercourse or any other controlling behaviour (isolating a person from their family and friends, monitoring their movements, and restricting access to information or assistance)[1]. IPV has been identified as the most common type of violence that is perpetrated by men against their intimate partners[5].

1.2.2 Prevalence of intimate partner violence

Intimate partner violence (IPV) is recognised as a global public health and human rights concern with profound health implications[1]. IPV occurs in all

countries and communities, irrespective of social, economic, religious or cultural background and it is the most common type of violence against women globally[2-5].

The WHO conducted a multi-country study in ten countries in 2005 on women's health and domestic violence against women. The WHO reported that the lifetime prevalence of physical or sexual violence, or both, by an intimate partner ranges between 15% and 71%[5,14].

Studies have shown that South Africa is one of the countries with the highest prevalence of IPV globally[2,6-7,11,15]. IPV was also shown to be a leading cause of morbidity and mortality amongst South African women[7,9-10,16]. Some studies have identified IPV as the second highest contributor to the burden of disease after HIV and AIDS[15,17].

There are no recent reliable South African national population based studies on the prevalence of IPV; however there exist population-based estimates from 1998 which are considered good. These estimates suggest that the national lifetime IPV prevalence is 25%, whereas past year IPV prevalence is 10%[18]. However it is likely that the reported estimate may be lower than the actual figures, as suggested by other studies, including studies conducted with men [16].

Most recently data from a cross sectional, nationally representative South African Stress and Health (SASH) survey conducted between 2002 and 2004, was used to assess exposure to IPV among a sample 1229 women. The prevalence of IPV reported by women in their most recent marriage and cohabiting relationship was 31%[10]. Precision was however not indicated in this study.

A gender-based violence project, conducted in 2010 by the Medical Research Council in the Gauteng Province, reported that 51% of women interviewed have experienced some form of violence in their lifetime. Only 3.9% of these women however, have reported the crimes to the police[19]. In the same gender-based violence project, 78% of men interviewed reported

that they had advocated some form of violence against women. In addition, more than 40% of the men interviewed reported having been physically violent to an intimate partner[19].

In a study on the prevalence of rape and factors associated with rape perpetration, conducted in KwaZulu-Natal (KZN) and the Eastern Cape (EC), 27% of the men interviewed reported having raped a girl or a woman and 46% of these men said they had raped more than one girl or woman [20].

A cross sectional study was conducted across three South African provinces in 2001 where 1306 women participated reported the following:

- The prevalence of women having been ever physically abused by a current or ex-partner were 27% (95% CI: 14; 24) in the Eastern Cape, 28% (95%CI: 23; 33) in Mpumalanga (MP) and 19% (95% CI: 13, 24) in Northern Province (NP), currently known as Limpopo.
- The prevalence of women experiencing abuse in the last year were 11% (9%CI: 6; 15) in the EC, 12% (95% CI: 8;15) in MP and 4%(95% CI: 3; 6) in NP.

Death as a result of IPV is common in South Africa. A national study on the mortality of women, found that 50% of female homicides are at the hands of their intimate partners and that the mortality rate from IPV is 8.8 per 100 000. This IPV-associated mortality rate is more than twice that of the USA[9]. Separate studies found that the weapons most used in female homicides in South Africa, are firearms[6,16,22-23].

Systematic reviews have been conducted on IPV against pregnant women and have reported that, globally, IPV against pregnant women range between 0.9 to 20% and 0.9 to 30%. However; of the six studies from low income countries which were included; only one study was from Africa [24].

In 2005, the WHO's multi country study on women's health and domestic violence against women established that IPV prevalence during at least one pregnancy ranged from 1% to 28% in the ten participating countries, with the

highest prevalence reported in Ethiopia and Tanzania[14]. Most recently, in 2010, a systematic review of African studies on intimate partner violence against pregnant women identified IPV in Africa to be the highest reported globally, with the prevalence ranging from 2% to 57%, with meta-analysis yield of an overall prevalence of 15% (95% CI: 14; 16)[24].

In South Africa the prevalence of IPV against pregnant women varies, but it is constantly high, as shown by the KZN community-based survey which reported a prevalence of domestic violence of 31% (95%CI 26; 36); and intimate partners were identified as the main perpetrators (79%)[25]. In addition, the Soweto facility-based study reported a lifetime prevalence of physical/sexual partner violence of 56% among women attending antenatal clinics[11]. A study conducted in three South African provinces reported physical abuse during pregnancy as 9% (EC), 7% (MP) and 5% (NP)[21].

Studies conducted in other African countries are also reporting higher levels IPV against pregnant women. In a study conducted in 2006 on intimate partner violence against pregnant women in Rwanda, an estimated 35% of pregnant women experienced IPV in the past year[26]. In a separate study conducted in a district in Uganda in 2003, the lifetime IPV prevalence was estimated to be 54% (95% CI: 48-60); and the past year physical violence prevalence was estimated to be 14% (95% CI: 11-16) among pregnant women[13].

1.2.3 The consequences of intimate partner violence

The consequences of IPV can be profound and long lasting and can impact the physical, mental and reproductive health of women[5,15,24]. The impact of IPV can persist across generations; children who have borne witness to and experienced violence in their childhood are at a high risk of becoming victims or perpetrators of violence later on in their lives[21,27]. Consequences associated with IPV, can go beyond the health of individuals to affect the wellbeing of families and entire communities. These include IPV victims adopting health risk behaviours such as smoking, alcohol abuse and illicit drug use[24,28].

1.2.3.1 Sexual and reproductive health:

IPV experienced during pregnancy is associated with a high risk of long term adverse outcomes for mothers and infants[24-25,28-31]. IPV victims are more likely to present with gynaecological disorders such as decreased sexual desire, pain during intercourse, genital irritation, vaginal bleeding, vaginal discharge, chronic pelvic pain, urinary infections and sexually transmitted illnesses[28-29] (including HIV)[5,11,24,32-33]. The adverse pregnancy outcomes associated with IPV during pregnancy include but not limited to the following: spontaneous abortions, preterm labour, low birth weights and neonatal deaths[25].

1.2.3.2 Physical outcomes of intimate partner violence:

Victims of IPV are likely to report negative physical effects such as high blood pressure, poor health status and poor quality of life[5,10,28,31].

1.2.3.3 Mental health outcomes:

Studies suggest that there is a high prevalence of mental illnesses amongst abused women[5,28-29]. The relationship between mental health problems and IPV is reportedly both causal and bidirectional, in that women with mental disorders are more vulnerable to IPV and IPV may also cause mental health problems[34].

Mental health disorders that have been shown to be associated with IPV globally include depression, Post-Traumatic Stress Disorder (PTSD), suicide and suicidal ideation and substance abuse[28-29].

In South Africa there is a high prevalence of IPV and there is also a high prevalence of mental illness in the general population. The most common mental health problems reportedly attributed to IPV in South African women are depression (21%), anxiety disorders (14%) and suicides (36%)[35].

1.2.3.4 Use of healthcare facilities:

There are inconsistencies regarding findings related to use of healthcare services by victims of IPV. Some studies have shown that there is an increased use of healthcare services amongst victims of IPV[11]. Other studies have reported that women who are victims of IPV experience barriers to accessing healthcare[3].

Separate studies in South Africa have however shown that, although IPV victims are treated within the healthcare system, they often do not present with obvious trauma[17,35]. Of concern is that less than 10% of women experiencing IPV are identified in South African primary healthcare facilities, as most of these women present with psychological cues and mental disorders[17]. Moreover, mental health services are neglected in the public sector, therefore most victims of IPV may not be able to access the care they need[35].

1.2.4 Factors associated with intimate partner violence:

Many of the risk factors of IPV during pregnancy are similar to the risk factors described in general IPV studies[19]. Findings from both the WHO's multi country study on women's health and domestic violence against women and the systematic review of African studies on intimate partner violence against pregnant women, showed a wide variation in the prevalence of IPV across both study sites. The study also established that many of the risk factors associated with IPV are similar in pregnant women and in non-pregnant women[5,19,32].

1.2.4.1 Socio demographic factors:

Age

Findings linking age and IPV are inconsistent. In some settings young women have been found to be at a particularly high risk of IPV,[25,36-39] whereas other studies have found no association between age and IPV[3,18,21,40]. In the WHO's multi country study on women's health and

domestic violence, in three out of fifteen sites, being older was found to be associated with an increased risk of IPV[36]. This is in contrast with a study conducted in Botswana on intimate partner violence amongst pregnant women, which reported that the risk of experiencing IPV decreased with advancing age[2].

Educational level

Studies have found that having a secondary level of education is associated with a reduced risk of experiencing IPV[5,18,36]. A study conducted in 2006 in Rwanda on intimate partner violence amongst pregnant women reported that participants with some formal education were less likely to have experienced IPV compared to those who have had no formal education[26]. In separate studies conducted in Eastern Uganda (2003), in Botswana (2007), in Nigeria's Demographic Health Survey and a special report on reproductive health and intimate partner violence, it was established that less educated women were more likely to experience IPV than more educated women[2,13,25,39,41]. A study conducted in Kwa-Zulu Natal among rural women reported that women with lower educational status were 8 times more likely to be victims of domestic violence [25].

HIV status

Studies linking HIV status and IPV are inconsistent. Some studies have found that there is an association between HIV and IPV, and that the risk of experiencing IPV increases if a woman is diagnosed or tests positive for HIV[5,9,13-14,19-20,22,24,42-43,45]. In addition, women experiencing IPV are also faced with an increased risk of being infected with HIV[11,18,32]. However other studies have established that IPV is not consistently associated with HIV[44]. Further research is thus needed on this issue.

1.2.4.2 Poverty

Although IPV occurs in all countries, irrespective of social, economic, religious or cultural background, IPV is more common amongst people who have a lower socio-economic status[5,13,39]. The WHO's multi country study found that higher socio economic status was associated with reduced

levels of IPV in 14 sites[36]. A study conducted in Botswana found a significant association between the economic status of IPV victims and the risk of victimization, furthermore, this risk decreased as the victims' income increased[2]. Poverty and its associated stressors (such as related conflicts and its negative effects on women's power and male identity) are likely to be key contributors to IPV[3].

1.2.4.3 Early life /childhood experiences

Witnessing family violence, or being physically or sexually abused in childhood are risk factors for victimization and perpetration of IPV in adulthood[11,21,24,26-27,36,46]. Furthermore, there is a strong link between men having witnessed violence against their mothers and them engaging in publically violent acts[41].

1.2.4.4 Alcohol consumption

Excessive alcohol use by men and women has been found to be associated with an increased risk of IPV perpetration and victimization respectively[21]. The risk of experiencing IPV was found to be higher in relationships where one or both partners use alcohol frequently, compared to relationships where none of the partners uses alcohol[2-3,13,26]. Furthermore, the risk is greater in instances where the male partner uses alcohol more frequently, than the female partner[36].

1.2.4.5 Other factors:

Some studies have found significant links between marital status and the risk of IPV, whereas others have found no such links. Unmarried women who are co-habiting with a partner were reported to be more likely to experience IPV than women who are formally married[2,36]. Women not living with a partner were less likely to experience violence compared to those living with a partner[36].

Similarly, studies linking place of residence and IPV have been inconsistent in their results. Some studies have found that the risk of experiencing IPV increases if a woman is from a rural setting rather than an urban

setting[5,13]. Other studies have found no association between place of residence and IPV[14,18].

Attitudes supportive of wife beating[36,41] and male behaviour commonly associated with 'traditional masculinity', such as having multiple sexual partners and controlling male behaviour are also associated with increased risk of experiencing IPV[2,13,26,32,36,41].

1.2.5 Responses to intimate partner violence

In South Africa after 1994, new policies and other initiatives were developed in order to address IPV. The 1998 Domestic Violence Act[47], abolished district surgeons and declared that all doctors could undertake medico-legal examinations of rape victims. It also introduced the sexual assault evidence collection kit and DNA testing. A new 'Sexual Offences' Bill[48] was also enacted and a national curriculum to standardise training of providers in post=rape care was developed. Furthermore, a national training programme to strengthen post rape responses was rolled out country-wide[16].

Despite these efforts, service responses to survivors were patchy, in terms of quality and accessibility. A study conducted in five South African provinces reported that rape survivors experienced challenges accessing information on Post Exposure Prophylaxis (PEP) and on accessing PEP[49]. Furthermore, the study reported that clinical treatment of survivors at health facilities was fragmented and that the police had a negative attitude towards rape survivors[49].

Primary prevention efforts in the country are extremely limited. Non-Governmental Organizations (NGO's) have engaged in primary prevention efforts which include awareness campaigns, challenging social norms through community-based workshops with men, as well as engaging traditional leaders on issues of gender-based violence and masculinity[16]. These efforts are ad hoc and not bound or guided by any coherent policy or theoretical framework. There have also been limited policies created and implemented by the South African government to promote gender equity,

although the focus of these have been mainly on secondary prevention with the development of service responses[10]. There is a substantial gap between existing policy and legislation and actual service provision within the country, to the great detriment of survivors.

1.3 Study rationale

Intimate Partner Violence is an enormous but preventable problem in South Africa, particularly amongst pregnant women. Responses by government to IPV are ad hoc, limited and fractured. IPV greatly undermines the potential for South Africa to attain the Millennium Development Goals (MDG's), particularly goals 3, 4 and 6, which deal with promoting gender equality and empowerment of women, reducing child mortality and improving maternal health[45].

The long term consequences and costs of IPV have a crippling effect at different levels, including the lives of individuals, as well as within families and communities and this translates to costs at national level. These crippling effects may continue to cycle through generations, as children exposed to violence in their childhood have an increased risk of becoming perpetrators, or falling victim to such violence in adulthood.

IPV studies in other parts of the world and in some parts of South Africa have been reported in the literature therefore knowledge already exists about the magnitude of IPV and its determinants. However, there is limited published data in South Africa on IPV experiences during pregnancy; and no such studies have been conducted in the Tshwane area.

In light of this background a facility-based survey on the occurrence and risk factors associated with IPV amongst pregnant women seeking antenatal care, in one urban and one rural Community Health Centre (CHC) was undertaken. Although population based studies would be ideal they are however not feasible. Healthcare facilities provide a more cost effective environment for accessing women in their reproductive age group.

Data obtained from this study will help to better understand any differences that may exist in the occurrence and the risk factors amongst women residing in rural and urban settings. This will help to inform policy makers and stakeholders from the private and public sectors and civil society that ought to be involved in the prevention of IPV to appropriately distribute the resources needed for the prevention of IPV and to develop evidence-based responses and prevention interventions. Findings obtained from this study will further enable the selected public health facilities to determine support requirements, to develop strategies and policies to guide approaches to IPV in antenatal health services.

CHAPTER 2: AIMS AND OBJECTIVES

This chapter outlines the aims and objectives of this research study.

2.1 Aim

This study aimed to evaluate the occurrence and risk factors of IPV amongst pregnant women seeking antenatal care, in one urban and one rural South African community health centre in 2012.

2.2 Objectives

In line with this aim, the study objectives were to:

- determine the extent to which pregnant women seeking antenatal care in one urban and one rural CHC in the Gauteng Province experience IPV;
- compare and contrast levels of IPV experienced amongst pregnant women attending the urban versus rural CHCs;
- identify risk factors of IPV amongst pregnant women attending antenatal clinics in urban and rural CHCs; and
- compare and contrast the risk factors associated with IPV amongst pregnant women in the urban and rural CHCs.

CHAPTER 3: METHODS

This chapter outlines the study setting, population, design, sampling (including sample size calculation), data collection, data management, statistical methods of analysis, data capturing and quality assurance, and ethical consideration.

3.1 Study setting

The study was conducted in the City of Tshwane Metropolitan Municipality, also known as the Tshwane District, in Gauteng Province, South Africa. The District's land area increased from 2,198 square kilometres (849 sq. mi) in 2010 to 6, 368 square kilometres (2,459 sq. mi) after the incorporation of the former Metsweding District Municipality on May 18th, 2011[50]. There are 2, 5 million people residing in the Tshwane District[50]. There are 60 health care facilities in the District, 8 of which are public hospitals.

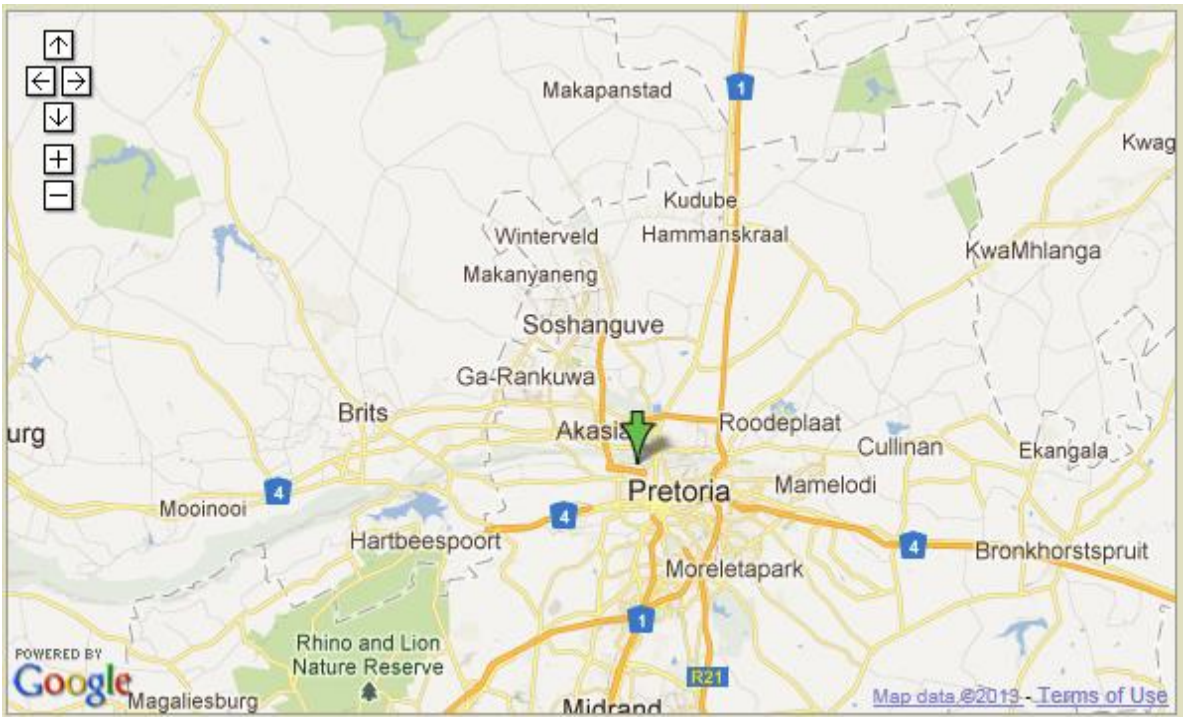

Figure 1: Map of the Tshwane District showing Winterveldt and Soshanguve in relation to Pretoria *(Source: Google maps)*

The two study sites chosen from the Tshwane District are Soshanguve-3 Community Health Centre and Kgabo Community Health Centre Soshanguve-3 CHC is a public healthcare facility located in the Soshanguve Township, in

block BB. Soshanguve is located approximately 25km North of Pretoria, and is part of the City of Tshwane Metropolitan Municipality.

For the purpose of this study Soshanguve township is classified as an urban area as it is a well-established township with formal housing and accessible basic services such as reticulated water supply and sanitation to individual housing units, electricity supply, and public transportation system with links to formal job markets in adjacent industrial areas such as Roslyn, Pretoria and Johannesburg Central Business District.

Kgabo CHC is also a public healthcare facility located in Winterveldt. Winterveldt is located approximately 40km North East of Pretoria within the City of Tshwane Metropolitan Municipality. Although Winterveldt is located within the City of Tshwane Metropolitan Municipality, most of the Winterveldt area is a typical rural area, with part of the population living in informal settlements that have sprawled as in the privately owned large un-serviced plots. Subsistence farming is the main economic activity for a substantial number of the population. In addition, there is limited access to infrastructure and basic resources (such as water and sanitation, electricity, transportation, schools and healthcare facilities). A large proportion of the current residents of Winterveldt are the recently settled migrants from other parts of the country and of Southern African countries.

3.2 Study population

The study population consisted of pregnant women who were, either residing in the Soshanguve Township or the Winterveldt area (in Tshwane District), and seeking antenatal care in the Soshanguve and Kgabo CHCs respectively.

All pregnant women were considered eligible for the study if they were aged 18 years or older, 16 weeks or more gestational age and if they visited either Soshanguve or Kgabo CHC to seek antenatal care.

Pregnant women were considered non-eligible if they were below the age of 18 years, less than 16 weeks gestational age.

Women who did not understand, or who spoke any language other than one of the eleven official South African languages, were also excluded from the survey.

3.3 Study design

The study used a cross-sectional facility-based study design, with both descriptive and analytical components.

3.4 Sampling

3.4.1 Sample size

The sample size was calculated using STATA version 12 and was based on the following assumptions:

- a desired confidence level of 95%,
- Alpha = 0.05 (two sided)
- Power of 80% (0.80)
- an expected IPV prevalence of 30%

The estimated sample size was 172 pregnant women. In order to make allowance for a design effect of 2.0 and a non-response rate of 10%, the sample size was adjusted to 382.

(172*2.0)/0.9
=382

The allocation of samples to the CHCs was done proportionally, according to the monthly average number of women seeking antenatal care at each facility. The monthly average number of pregnant women seeking antenatal care at Soshanguve CHC was five hundred (500) and one hundred and eighty (180) at Kgabo CHC. As a result, the number of subjects drawn from Soshanguve CHC was 284 which constitute 74% of the total sample size and 98 subjects were drawn from Kgabo CHC, which constitute 26% of the total sample size.

3.4.2 Sampling technique

3.4.2.1 Selection of facilities:

For the purpose of this study convenience sampling was used to identify two out of seven CHCs in the Tshwane District, one situated in an urban area (Soshanguve-3 CHC) and the other in a rural area (Kgabo CHC). The sites were selected from the seven CHCs in the Tshwane Health District on the basis of their accessibility, proximity and cost implications.

3.4.2.2 Subject selection:

In both CHCs the Antenatal Care Clinic (ANC) is open from Monday to Friday. The researcher visited each facility on alternating weeks from Monday to Thursday. Systematic random sampling was used to select potential participants who were then invited to participate in the study. On a daily basis the first potential participant was selected by simple random sampling from the first 5 ANC patients in the queue by drawing a random number between 1 and 5. The client fitting on the selected number was included and considered to be the starting point for sample selection; hereafter every third (3rd) patient in the queue was invited to participate in the study.

To differentiate between pregnant women who had been interviewed already and those who had not been interviewed, the researcher placed little colourful stickers on the antenatal cards of the women that had already been interviewed. This was to ensure that the researcher does not interview the same women more than once.

The researcher explained the nature of the survey to all potential participants while they were in the queue awaiting consultation. Participants were given an information leaflet explaining the nature of the study, procedures, potential risks involved and assurance of the confidentiality of data (see Appendix 1). It was also emphasised that participation in the study is voluntary and participants were informed of their right to withdraw

from the study at any point without any negative consequences should they wish to do so.

Interviews were conducted, for data collection, after the conclusion of each participant's clinical consultation by the clinic staff. Each selected potential participant was led to a private room where, if she met the eligibility criteria and had given her consent to participate, a face-to-face interview using a structured questionnaire was conducted by the researcher in the patient's language of choice *(Sesotho, isiZulu, Xitsonga or English)*. Once the questionnaire was completed the researcher deposited it in a sealed 'questionnaire box'.

3.5 Data collection

A researcher-administered questionnaire was used in this study. This was a standard questionnaire recommended by the WHO, which had been adapted and validated by the Medical Research Council (MRC) of South Africa, to suit the country's setting. The questionnaire was used to record information obtained from participants during a face to face interview with the researcher No identifying information such as names, were obtained from any of the participants.

Information on socio-demographic variables (age, education level, marital status and employment status) was obtained from each participant. Participants were also asked questions concerning, alcohol use by the participant and the participant's intimate partner, and male controlling behaviour experienced (such as male partner refusing the other partner to visit with family or friends). Participants were further asked if their current partner had abused them emotionally, economically, physically or sexually in the past twelve months.

3.6 Time frame of the study

The study was conducted between July 2012 and September 2012 at both sites. The researcher collected data from Monday to Thursday at each facility on alternate weeks.

3.7 Study pilot

A pilot study was conducted to help the researcher test the instrument, to refine procedures and to ensure that all the logistic arrangements were in place for the study. The instrument was piloted amongst pregnant women attending ANC services at three primary health care facilities in the Tshwane District, namely Daspoort, Atteridgeville-1and Mamelodi West Clinics. During the pilot study it was established that the proposed length of time to complete the questionnaire was too short. It was also established that the estimated non-response rate might be higher than was estimated, as patients could not always spare time for the interview after their clinical consultation. Microsoft EXCEL was used to process and analyse the data from the pilot sites.

3.8 Statistical methods of data analysis

Data analysis was done using the STATA version 12 statistical package. The analysis undertaken were descriptive statistics, which consisted of means, medians, standard deviations, ranges for continuous data and frequency tables for categorical data. Graphical representation of the data was done using bar charts.

Pearson's Chi Square Test was used to determine associations between categorical variables and intimate partner violence outcomes. However, where individual cells in the contingency tables were less than five (5), Fisher's Exact Test was used. A significance level of 0.20 was used as a cut-off point for variables to be included in the logistic regression model to investigate predictors of intimate partner violence outcomes.

3.9 Data capturing and quality assurance

Data capturing on Epidata was done by a data capturer at the University of Pretoria and to validate the data, double data entry was done by the researcher.

3.10 Ethical considerations

The study was conducted after authorisation was granted by the Department of Health, the Tshwane District Office's Research Committee and the Facility Managers of the two CHCs involved in the study. Ethical clearance was also granted by the University of Pretoria's Faculty of Health Sciences' Ethics Committee (see Appendix 2).

The WHO's standard ethical guidelines on conducting gender-based violence studies and the recommendations prescribed in the Ethical and Safe Guidelines for Research in Domestic Violence were followed when conducting this survey[51].

The participants were given an information leaflet written in English, explaining the nature of the study; procedures, potential risks involved and confidentiality of data (see Appendix 1). It was also emphasised that participation in the study is voluntary. Furthermore, participants were informed of their right to withdraw from the study at any point without any negative consequences should they wish to do so.

The researcher explained the nature of the survey to all potential participants in Sesotho, isiZulu, Xitsonga or English. Occasionally the researcher would ask one of the clinic nurses or lay counsellors to explain the nature of the study in Tshivenda to the Venda-speaking patient. This was to ensure that those who do not speak English and those who are illiterate, are adequately informed and understand what was contained in the information leaflet, as to enable them to make an informed decision regarding their choice on whether or not to participate.

Written consent was obtained from those who agreed to participate in the study. Participants were requested to participate in a face to face interview conducted by the researcher using a structured questionnaire.

The interviews were conducted in private rooms provided at each of the two CHCs. No personal identifying information of participants was captured on the questionnaires. The consent forms were stored separately from the questionnaires. This was to ensure that the questionnaire could not be linked to the participant.

Because this study involved the possibility of disclosing painful experiences, the social worker and psychologists at both sites were informed about the study and were on standby to offer counselling services should the need arise. The participants were also made aware that there are counselling services readily available on site, should they need them. For all participants who experienced emotional distress during the interviews immediate arrangements were made for their consultation with a social worker or psychologist onsite, for counselling and personal support (see Appendix 3). In addition, the researcher had made arrangements for debriefing sessions with a private psychologist to address and manage any unconscious trauma.

CHAPTER 4: RESULTS

In this chapter, descriptive findings on general characteristics of both the participants and their reported partners are presented, followed by experiences of intimate partner violence. Analytic findings are presented later in this section.

4.1 Population

Of the 382 pregnant women targeted to participate in the study at the two study sites, 361 (94%) consented to and eventually participated in the study.

Of the 361 pregnant women who took part in the survey a total of 8 experienced emotional distress during the interviews and were referred immediately to a either a social worker or psychologist onsite, for counselling and personal support. The researcher attended two debriefing sessions with a private psychologist to address and manage any unintended trauma that she may have experienced herself.

4.2 General characteristics of participants

This section presents data on the frequency distribution of selected variables describing background characteristics of the participants.

4.2.1 Socio-demographic characteristics

4.2.1.1 Age

The results show that the majority (47%) of participants from both study sites were young; aged between 18 to 24 years. Very little differences between age ranges of participants across sites were noted (Table 1).

4.2.1.2 Educational status

The level of education varied only slightly across the two sites, as depicted in Table 1. All participants from the rural Kgabo clinic had formal education, and only one participant from the urban Soshanguve clinic reported that she had no formal education. The proportion of participants with secondary level education was highest in Soshanguve CHC (72%), compared to 68% in Kgabo CHC.

4.2.1.3 Marital status

For the purposes of this study all participants who were divorced, widowed, or separated were grouped together under 'currently not married and not living with a partner (Table 1).

The percentage of participants who are married was similar across sites the two sites. Thirty six percent (36%) of participants from Kgabo and 34% of participants from Soshanguve reported being married. However, nearly half of all the participants from Soshanguve had a regular partner but living apart (49%), whilst just over a third of participants from Kgabo CHC (34%) were not living with their regular partner.

4.2.1.4 Employment status

Unemployment levels were very high among participants from both sites (Table 1). The proportion of participants that were unemployed was highest at the rural-based Kgabo CHC (77%), compared with 58% of participants from urban Soshanguve CHC.

4.2.2 Alcohol use

The majority of participants from both the rural site Kgabo (70%) and the urban site Soshanguve CHC (69%) did not consume alcohol at all (Table 1). Less than 5% of participants at both sites reported consuming alcohol on a weekly basis.

4.2.3 Social support

Less than half of the participants from both study sites belonged to some form of social club in their respective communities. Those who did attend social 'support' groups experienced little resistance for doing so (Table 1).

4.2.4 Exposure to violence in childhood

Participants' past experiences of violence before age 15 years varied across the two sites. It is evident from Table 1 that the majority of women who had experienced childhood abuse were found at the rural site, Kgabo CHC. At Kgabo CHC, 18% of women compared to a mere 8% of the participants from Soshanguve had experienced sexual assault before the age of 15 years. Also, 34% of participants from Kgabo CHC, compared with

27% from Soshanguve CHC have witnessed either their mothers or female guardians being physically or emotionally abused by an intimate partner.

Table1: General information and characteristics of the participants

Parameter	Kgabo rural CHC Number (%)	Soshanguve urban CHC Number (%)	P value
Total number of participants	98	263	
Age			0.33
18-24	42(43)	127(48)	
25-34	43(44)	72.61(43)	
35+	13(13)	22(8.37)	
Attended school			0.73
Yes	98(100)	262(100)	
No	0(0)	1(0.38)	
Educational level			<0.001
Primary	18(18)	14(5.3)	
Secondary	71(72)	179(68)	
Higher	9(9)	69(26)	
Employment status			0.01
Employed	15(15)	71(27)	
Unemployed	75(77)	153(58)	
Studying	8(8)	38(15)	
Marital status			0.04
Married	35(36)	88(34)	
Cohabiting	27(28)	44(17)	
Regular partner, living apart	36(37)	127(49)	
Social Club Membership			0.14
Yes	39(40)	84(32)	
No	58(60)	179(68)	
Prevented to attend social club			0.23
Yes	2(2.06)	2(0.76)	
No	95(98)	260(99)	
Alcohol intake frequency			0.83
1-2 times a week	2(2.04)	10(3.80)	
1-3 times a month	4(4)	13(5)	
<1 month	23(23)	58(22)	
Never	69(70)	182(69)	
Sexually assaulted before age 15			0.01
Yes	17(18)	22(8)	
No	79(82)	238(92)	
Witnessed mother being abused			0.17
Yes	33(34)	70(27)	
No	64(66)	192(73)	

4.3 General characteristics of the participants' intimate partners

This section presents data on the frequency distribution of selected variables describing background characteristics of the participants' intimate partners.

4.3.1 Socio-demographic characteristics

4.3.1.1 Age of participants' intimate partners

The results show that the majority of the intimate partners were aged between 18 to 40 years across both sites, 49% of partner in the rural site and 48% of partners in the urban site fell in this age group (Table 2).

4.3.1.2 Educational status of participants' intimate partners

Although the level of secondary education was similar in both sites, with 59% for Kgabo and 58% for Soshanguve, the rural site had the lowest percentage of people with a higher education (14% compared with 26% in the urban site) (Table 2).

4.3.1.3 Employment status of the participants' intimate partners

Table 2 shows that the majority of the participants' intimate partners at both sites are employed but the majority (70%) of the participants' intimate partners from the rural site Kgabo were employed as unskilled workers, compared with their urban counterparts in Soshanguve (39%).

4.3.2 Alcohol consumption by participants' intimate partners

As depicted in Table 2, about 31% of participants from Kgabo CHC had intimate partners who consumed alcohol on a weekly basis, compared to 33% from Soshanguve.

Table2: General information and characteristics of the participants' intimate partners

Parameter	Kgabo rural CHC Number (%)	Soshanguve urban CHC Number (%)	p-value
Total number of participants	**98**	**263**	
Age			0.52
18-24	18(18)	54(21)	
25-34	44(45)	129(49)	
35+	36(37)	80(30.42)	
Education level			0.001
Primary/Less	12(13)	11(4)	
Secondary	56(59)	152(58)	
Higher	13(14)	68(26)	
Don't know	14(15)	30(11)	
Employment status			0.48
Employed	73(74)	210(80)	
Unemployed	20 (20)	41(16)	
Studying	5 (5)	12(5)	
Retired	0	0	
Type of employment			<0.001
Skilled	2(3)	33 (39)	
Semi-skilled	19(27)	81 (39)	
Unskilled	50(70)	82 (39)	
Military/Police	0	13(6)	
Alcohol intake frequency			0.47
Daily	1 (1)	6(2)	
1-2 times a week	29 (30)	86 (33)	
1-3 times a month	13(13)	20(8)	
<1 month	16(16)	41(16)	
Never	39 (40)	108(41)	
Alcohol intake frequency in the past 12 months			0.35
Daily	1 (1)	6 (2)	
1-2 times a week	30(31)	86(33)	
1-3 times a month	15(15)	23(9)	
<1 month	13 (13)	38(14)	
Never	39(40)	110(42)	

4.4 Prevalence of IPV

In this study the overall reported prevalence of violence against pregnant women by their intimate partners within the past twelve months is reported. The prevalence of IPV for the rural site was 59% (95% CI: 0.49; 0.69) and for the urban site 43% (95% CI: 0.37; 0.49).

Table 3: Overall IPV experienced in the previous year in pregnant women in Kgabo and Soshanguve CHC (2012)

Site	Ever experienced any type of violence				
	No Number (%)	95% CI	Yes Number (%)	95% CI	Total (%)
Kgabo CHC (rural) n= 96	39 (41)	0.31; 0.51	57(59)	0.49; 0.69	96(100)
Soshanguve CHC (urban) n = 263	150 (57)	0.51; 0.63	113(43)	0.37; 0.49	263(100)

Table 4 presents data on the reported prevalence of different forms of violence against pregnant women by their intimate partners within the past twelve months. Table 4 shows marked differences across the sites with higher reports of all forms of violence reported by women using the CHC in the rural site than the urban site.

Across both sites the most common form of IPV reported was emotional violence. Over half (53%) of women visiting rural Kgabo and 38% from urban Soshanguve CHC reported this. Economic violence was also much higher for women attending the rural clinic. About twenty-eight percent (28%) of Kgabo CHC participants reported experience of economic violence, compared to 12 % of the Soshanguve CHC participants. A further 28% of Kgabo CHC participants reported experience of physical violence, compared to 14% of the Soshanguve CHC participants. Nineteen percent (19%) of Kgabo CHC participants reported experience of sexual violence compared to 16% of the Soshanguve CHC participants.

Table 4: Type of IPV experienced in the previous year in pregnant women in Kgabo and Soshanguve CHC (2012)

Site	Prevalence of each type of violence			
	Emotional Number(%)	Economic Number(%)	Physical Number(%)	Sexual Number(%)
Kgabo CHC (rural) n= 96	51(53)	27(28)	27(28)	24(19)
Soshanguve CHC (urban) n=263	97(38)	31(12)	36(14)	32(16)

4.5 Predictors of intimate partner violence

To identify variables for inclusion in the regression analysis univariate analysis using Pearson's Chi Square test or Fischer's Exact Test was performed, the findings of which are provided in the following section.

Table 5 highlights predictors of emotional violence. In the rural site the key predictors were the intimate partner's current alcohol use (p-value=0.04) and alcohol use in the past twelve months (p-value=0.02) respectively. In the urban site marital status (p-value=0.03), alcohol use by the participants (p-value=0.02) and the respondent's past history of sexual abuse before the age of 15 years (p-value=0.001) were the key predictors of emotional violence. There was no overlap of risk factors for emotional IPV across sites.

Table 5: Predictors of IPV: Emotional

Variables	Kgabo (rural)	Soshanguve (urban)
Age of respondent	0.36	0.15
Age of partner	0.50	0.69
Educational level	0.26	0.75
Employment status	0.37	0.90
Marital status	0.54	*0.03
Social club membership	0.91	0.74
Prevented from attending social club	0.22	0.61
Alcohol frequency	0.10	*0.02
Partner's age	0.94	0.14
Partner's level of education	0.08	0.43
Partner's employment status	0.49	0.71
Partner's occupation	0.89	0.47
Partner's alcohol intake frequency	*0.04	0.19
Partner's alcohol intake frequency in the past 12months	*0.02	0.13
Sexual abuse before age 15	0.49	*0.001
Witnessed mother being abused	0.44	0.39

*P-value < 0.05

Table 6 highlights the predictors of economic violence. The statistically significant predictor of economic violence was the age of the participants, for both the rural Kgabo and urban Soshanguve CHC participants (p-value=*0.03 and p-value=*0.02 respectively).

Additional factors found to be significantly associated with economic violence among women attending the Soshanguve CHC included the educational level of the respondent (p-value=0.02), the employment status of the respondent (p-value=0.003), the respondent's marital status (p-value=0.004), the partner's occupation (p-value=0.004), alcohol consumption by the participant's intimate partner (p-value=0.03) and the participant's past history of sexual abuse before the age of 15 years (p-value=0.004).

Table 6: Predictors of IPV: Economic

Variables	Kgabo (rural)	Soshanguve (urban)
Age of respondent	*0.03	*0.02
Educational level	0.41	*0.02
Employment status	0.08	*0.003
Marital status	0.06	*0.004
Social club membership	0.97	0.98
Prevented from attending social club	0.51	0.77
Alcohol frequency	0.13	0.56
Partner's age	0.6	0.15
Partner's level of education	0.73	0.14
Partner's employment status	1.00	0.54
Partner's occupation	0.89	*0.004
Partner's alcohol intake frequency	0.74	*0.03
Partner's alcohol intake frequency in the past 12months	0.53	0.06
Sexual abuse before age 15	0.27	*0.004
Witnessed mother being abused	0.14	0.95

*P-value < 0.05

Table 7 highlights the predictors of physical IPV. Again either Chi2 or Fisher's exact test was performed. Across both sites the key predictors of physical violence were alcohol use by the participants (p-value=0.001, p-value=0.05), the respondent's past history of sexual abuse before the age of 15 years (p-value=0.01, p-value<0.001) and the respondent's past history of having witnessed her mother or guardian being abused (p-value=0.03, p-value=0.003), respectively.

Additional key predictors of physical violence in the urban site included the participant's age (p-value=0.06), age of the participant's intimate partner (p-value=0.04), alcohol consumption by the participant's intimate partner (p-value=0.02) and the participant's intimate partner's occupation (p-value=0.01).

Table 7: Predictors of IPV: Physical

Variables	Kgabo (rural)	Soshanguve (urban)
Age of respondent	0.12	*0.06
Educational level	0.58	0.15
Employment status	0.73	0.33
Marital status	0.94	0.47
Social club membership	0.97	0.87
Prevented from attending social club	0.51	0.74
Alcohol frequency	*0.001	*0.05
Partner's age	0.45	*0.04
Partner's level of education	0.97	0.27
Partner's employment status	0.64	0.71
Partner's occupation	1.00	*0.01
Partner's alcohol intake frequency	0.39	*0.02
Partner's alcohol intake frequency in the past 12months	0.31	*0.01
Sexual abuse before age 15	*0.01	*<0.001
Witnessed mother being abused	*0.03	*0.003

*P-value < 0.05

Table 8 highlights risk factors for experiencing sexual IPV. Either a Chi2 or Fisher's exact test was used to obtain these results. Across both the Kgabo and Soshanguve CHC's a key predictor of sexual violence was alcohol use by the participant, p-value=0.03, p-value=0.08 respectively.

Additional key predictors of sexual violence in the urban site included the participant's past history of sexual abuse before the age of 15 years (p-value<0.001), and the participant's past history of having witnessed her mother or guardian being abused (p-value<0.001).

Table 8: Predictors of IPV: Sexual

Variables	Kgabo (rural)	Soshanguve (rural)
Age of respondent	0.42	0.82
Educational level	0.63	0.20
Employment status	0.71	0.64
Marital status	0.40	0.12
Social club membership	0.28	0.09
Prevented from attending social club	0.56	0.77
Alcohol frequency	*0.03	0.08
Partner's age	0.74	0.42
Partner's level of education	0.81	0.12
Partner's employment status	0.83	0.4
Partner's occupation	1.00	*0.01
Partner's alcohol intake frequency	0.14	0.06
Partner's alcohol intake frequency in the past 12months	0.05	0.16
Sexual abuse before age 15	0.07	*<0.001
Witnessed mother being abused	0.39	*<0.001

*P-value < 0.05

4.6 Factors associated with intimate partner violence

Table 9 presents results from multivariate logistic regression analysis. All the variables with a p-value ≤0.2 were included in the regression model and the listed adjusted odds ratios were obtained.

4.6.1 Emotional intimate partner violence

4.6.1.1 Alcohol use

An association was found between alcohol use and emotional violence across both sites. Abstaining from alcohol was found to be protective against emotional violence at the rural site [OR=0.26 95% CI (0.08; 0.80), p-value=0.02]. Furthermore, participants from the rural site who had an intimate partner who occasionally used alcohol were less likely to experience emotional violence compared to participants who had an intimate partner who used alcohol once or more a week; [OR=0.17, 95%CI (0.04; 0.80), p-value=0.03].

The association was however not statistically significant in the urban site. Women who did not use alcohol [OR=0.88 95% CI (0.48; 1.62), p-value=0.684] and women who had an intimate partner who did not use alcohol [OR=0.68 95% CI (0.35; 1.31), p-value=0.248] were both less likely to experience emotional violence.

4.6.1.2 Education

The educational level of the intimate partner was found to be associated with emotional violence in the rural site. However, this association was not statistically significant. Having an intimate partner with a secondary [OR=0.33, 95%CI (0.09; 1.23), p-value=0.09] or higher [OR=0.36, 95%CI (0.07; 1.90), p-value=0.23] educational level was found to be protective against emotional violence.

4.6.1.3 Age

For participants visiting the urban CHC there was a significant association between age and emotional violence. Women aged between 25 to 35 years

experienced less emotional violence than younger women [OR=0.48, 95%CI (0.25; 0.95), p-value=0.03]. Women above the age of 35 years also experienced less emotional violence but the association was not statistically significant; [OR=0.44, 95% (0.14; 1.36), p-value=0.15]. The association between age and emotional violence was however not evident in the rural site.

4.6.1.4 Marital status

Participants from the urban site who were cohabiting were almost twice more likely to experience emotional violence compared to those who were formally married [OR=1.90, 95% CI (0.86; 4.23, p-value=0.12].

In contrast, participants with regular partners but living apart were less likely to experience emotional violence [OR=0.71 95%CI (0.35; 1.46), p-value=0.35]. These associations were however not statistically significant. No association between marital status and emotional violence was observed in the rural site.

4.6.1.5 Childhood experiences

There was a statistically significant association between emotional violence and previous history of sexual violence in the urban site. Participants with no previous history of sexual abuse before age 15 years were less likely to experience emotional violence [OR=0.29, 95% CI (0.11; 0.79), p-value=0.02]. However, this association was not observed in the rural site.

Table 9: Factors associated with emotional IPV in the previous year in pregnant women in Kgabo and Soshanguve CHC (2012)

	Kgabo (rural)		Soshanguve(urban)	
Category	**Odds ratio (95% CI)**	**p-value**	**Odds ratio (95% CI)**	**p-value**
Participants' age				
18-24	-	-	1	
25-35	-	-	0.48(0.25;0.95)	*0.03
35+	-	-	0.44(0.14;1.36)	0.15
Marital status				
Currently married	-	-	1	
Not married but living with partner (cohabiting)	-	-	1.90(0.86;4.23)	0.12
Regular partner, living apart	-	-	0.71(0.35;1.46)	0.35
Respondent drinking frequency				
Occasionally (<1 a month)	1		1	
Never	0.26(0.09;0.80)	*0.019	0.88(0.48;1.62)	0.68
Partner's education level				
Primary/less	1		-	-
Secondary	0.33(0.09;1.23)	0.09	-	-
Higher	0.36(0.07;1.90)	0.23	-	-
Don't know	1.33(0.23;7.61)	0.75	-	-
Partners' drinking frequency				
Once or more a week	1		1	
1-3 times a month	0.28(0.06;1.20)	0.09	0.94(0.32;2.71)	0.91
Occasionally (<1 a month)	0.17(0.04;0.81)	*0.03	0.83(0.36;1.88)	0.65
Never	0.55(0.19;1.63)	0.29	0.68(0.35;1.31)	0.25
Don't know	-	-	1.93(0.11;32.7)	0.65
Respondent sexually abused before age 15 years				
Yes	-	-	1	
No	-	-	0.29(0.11;0.79)	*0.02

4.6.2 Economic intimate partner violence

Table 10 presents results from multivariate logistic regression analysis. As before, all the variables which had a p-value ≤0.2 were included in the regression model and the adjusted odds ratios were obtained.

4.6.2.1 Marital status

Across both sites, Kgabo [0.26, 95% CI (0.07; 0.99), p-value=0.05] and Soshanguve [0.64, 95% CI (0.62; 2.51), p-value=0.52], participants who had regular partners but living apart were less likely to experience

economic violence. However, this association was found to be statistically significant only for women who visited the rural site, Kgabo CHC.

4.6.2.2 Age

Age was found to be associated with economic violence, but the association was not to statistically significant. Older women at the rural site were less likely to experience economic violence [0.89, 95% CI (0.85; 2.85), p-value=0.85]. For women visiting Soshanguve CHC, having an older intimate partner was associated with a higher risk of experiencing economic abuse [2.69, 95% CI (0.24; 29.9), p-value=0.42].

4.6.2.3 Alcohol

Although not statistically significant, not using alcohol was found to be associated with a lesser risk of experiencing economic violence for women using the CHC in the rural site (Kgabo) [OR=0.52, 95% CI (0.17; 1.57), p-value=0.25].

4.6.2.4 Employment status

For women using the CHC in the rural site, both unemployment and studying were associated with economic violence, but the association was not statistically significant. Unemployed women were at a higher risk of experiencing economic violence than employed women [OR=5.00, 95% CI (0.59; 42.3), p-value=0.14].

Women who were studying were also at a higher risk of experiencing economic violence compared to employed women [OR=2.77, 95% CI (0.14; 56.4), p-value=0.51].

4.6.2.5 Education

There was an association between the educational level and economic violence experienced by participants from the urban site, Soshanguve CHC. Although this association was not statistically significant, having secondary education [0.81, 95% CI (0.12; 5.56), p-value=0.83] and having

a higher education [OR=0.39, 95% CI (0.03; 4.85), p-value=0.47] was found to be protective against economic violence.

4.6.2.6 Childhood experiences

There was a significant association between childhood experiences and economic violence. Participants who were not exposed to sexual abuse in childhood before the age of 15, were less likely to experience economic IPV than participants who had a previous history of sexual abuse before the age of 15 years [OR=0.18, 95% CI (0.04-0.82), p-value=0.03].

Table 10: Factors associated with economic IPV in the previous year in pregnant women in Kgabo and Soshanguve CHC (2012)

Category	Kgabo CHC		Soshanguve CHC	
	Odds ratio(95% CI)	p-value	Odds ratio(95% CI)	p-value
Age of respondent				
18-24	1		-	-
25-34	0.89(0.85;2.85)	0.85	-	-
Participants' education level				
Primary/less	-	-	1	1
Secondary	-	-	0.81(0.12; 5.56)	0.83
Higher	-	-	0.39(0.03;4.85)	0.47
Participants' employment status				
Employed	1		1	1
Unemployed	5.00(0.59;42.30)	0.14	1.08(0.27;4.23	0.92
Retired	-	-	-	-
Studying	2.77(0.14;56.38)	0.51	-	-
Marital Status				
Currently married	1		1	1
Not married but living with partner (cohabiting)	0.59(0.19;1.82)	0.36	1.61(0.04;6.44)	0.50
Regular partner, living apart	0.26(0.07;0.99)	0.05	0.64(0.62;2.51)	0.52
Not married/not living with partner	-	-	-	-
Participants' drinking frequency				
Occasionally (<1 a month)	1		-	-
Never	0.52(0.17;1.57)	0.25	-	-
Partner's age				
18-24			1	1
25-34			1.66(0.16;16.95)	0.67
35+			2.69(0.24;29.86)	0.42
Partner's education level				
Primary/less	-	-	1	1
Secondary	-	-	0.35(0.05;2.37)	0.29
Higher	-	-	2.51(0.17;37.70)	0.51
Don't know	-	-	0.61(0.08;4.784)	0.64
Partner's occupation				
Skilled	-	-	1	1
Semiskilled	-	-	1.67(0.17;16.21)	0.67
Unskilled	-	-	9.6(0.66;139.93)	0.09
Military/Police	-	-	-	-
Partners' drinking frequency				
Once or more a week	-	-	1	1
1-3 times a month	-	-	0.40(0.039;4.01)	0.44
Occasionally (<1 a month)	-	-	0.22(0.02;2.34)	0.208
Never	-	-	1.085(0.34;3.51)	0.891
Don't know	-	-	-	-
Sexually abused before age 15years				
Yes	-	-	1	1
No	-	-	0.18(0.04;0.82)	*0.03
Witnessed mother being abused				
Yes	1		-	-
No	0.31(0.03;3.46)	0.34	-	-

4.6.3 Physical intimate partner violence

Table 11 presents results from multivariate logistic regression analysis on physical violence exposure in women visiting either the Kgabo or Soshanguve CHCs. All the variables which had a p-value ≤0.2 were included in the regression model to obtain the adjusted odds ratios listed below.

4.6.3.1 Age

Across both sites being older than 24 years was found to be a protective element against physical IPV. At the rural site women aged 25 - 35 years [OR=0.69, 95%CI (0.25; 1.93), p-value=0.48] and women aged over 35 years [OR=0.15, 95%CI (0.02; 1.36), p-value=0.09] were less likely to experience physical violence than women aged 18 - 24 years. At the urban CHC, Soshanguve women aged 25-35 years [OR=0.56, 95%CI (0.19; 1.66), p-value=0.29] and women aged over 35 years [OR=0.41, 95%CI (0.06; 2.95), p-value=0.38] were also protected from physical violence when compared with younger women. However, no significant association was found across both sites.

4.6.3.2 Alcohol use

There was an association found between the frequency of alcohol use and physical violence across both sites. Participants from the rural site (Kgabo CHC) who never used alcohol [OR=0.37, 95% CI (0.13; 1.05), p-value=0.06] were less likely to experience physical violence compared with women who used alcohol on a regular basis. This association was however not statistically significant.

Participants from the urban CHC who were in an intimate relationship with a partner who did not consume alcohol [OR=0.31, 95% CI (0.05; 1.81), p-value=0.01] were less likely to experience physical IPV compared with those who had a partner who frequently consumed alcohol i.e. once or more a week.

4.6.3.3 Childhood experiences

Women who had not been exposed to violence in childhood were less likely to experience physical violence. Women from the rural site (Kgabo CHC), who had no past history of sexual abuse before age 15 years [OR=0.33, 95% CI (0.08; 1.33), p-value=0.06] and those who had never witnessed their mothers or female guardian being abused before age 15 years [OR=0.48, 95% CI (0.02; 1.58), p-value=0.23] were less likely to experience physical violence compared to those who had been exposed to violence in childhood.

Similarly, participants from the urban site (Soshanguve CHC) who had no past history of sexual abuse before age 15 years [OR=0.14, 95% CI (0.05; 0.43), p-value=0.001] and those who never witnessed their mothers or a female guardian being abused before age 15 years [OR=0.48, 95% CI (0.21; 1.11), p-value=0.09] were less likely to experience physical violence compared to those who had been exposed to violence as childhood.

Table 11: Factors associated with physical IPV in the previous year in pregnant women in Kgabo and Soshanguve CHC (2012)

Category	Kgabo CHC		Soshanguve CHC	
	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Respondent's age				
18-24	1		1	
25-34	0.69(0.245;1,933)	0.48	0.56(0.19;1.66)	0.29
35+	0.15(0.165;1.358)	0.09	0.41(0.06;2.96)	0.38
Respondent's education level				
Primary/less	-		1	
Secondary	-		0.50(0.080;3.05)	0.45
Higher	-		0.25(0.032;1.896)	0.18
Respondent's drinking frequency				
Occasionally (<1 a month)	1		1	
Never	0.37(0.130;1.051)	0.06	0.95(0.386;2.262)	0.882
Partner's drinking frequency				
Once or more a week	-		1	1
1-3 times a month	-		0.82(0.271;22.459)	0.19
Occasionally (<1 a month)	-		0.22(0.079;0.670)	0.72
Never			0.31(0.053;0.814)	*0.01
Don't know				
Respondent sexually abused before age 15years				
Yes	1	1	1	1
No	0.33(0.08;1.33)	0.06	0.14(0.05;0.43)	*0.001
Respondent witnessed mother/guardian being abused before age 15 years				
Yes	1	1	1	1
No	0.48(0.15;1.58)	0.23	0.48(0.205;1.11)	0.09

4.6.4 Sexual intimate partner violence

Table 12 presents results from multivariate logistic regression analysis to determine potential predictors of, or preventive factors for sexual violence among participants from the two clinics. All the variables which had a p-value ≤0.2 were included in the regression model to obtain the listed adjusted odds ratios.

4.6.4.1 Childhood experiences

As depicted in Table 12, across both study sites, Kgabo CHC [OR=0.34, 95% CI (0.10; 1.12), p-value=0.08] and Soshanguve [OR=0.09, 95% CI (0.20; 0.46), p-value=0.03], participants who had no past history of sexual abuse before age 15 years were less likely to experience sexual violence. However, the association was statistically significant for the urban site only.

4.6.4.2 Alcohol use

Although not statistically significant, participants from the urban site (Soshanguve CHC) who were in an intimate relationship with a partner who did not use alcohol [OR=0.41, 95% CI (0.13; 1.30), p-value=0.13] were less likely to experience physical violence compared to those who had a partner who frequently consumed alcohol i.e. once or more a week.

Table12: Factors associated with sexual IPV in the previous year in pregnant women in Kgabo and Soshanguve CHC (2012)

	Kgabo CHC		Soshanguve CHC	
Category	**Odds ratio (95% CI)**	**p-value**	**Odds ratio (95% CI)**	**p-value**
Marital Status				
Currently married	-		1	
Not married but living with partner	-		0.57(0.13;2.59)	0.47
Regular partner, living apart	-		0.30(0.08;1.12)	0.07
Not married/not living with partner	-		-	-
Respondent a member of a social club				
Yes	-		1	
No	-		1.23(0.39;3.87)	0.72
Respondent's drinking frequency				
Occasionally (<1 a month)	1		1	
Never	0.35(0.11;1.06)	0.06	1.71(0.51;5.74)	0.39
Partner's education level				
Primary/less	-		1	
Secondary	-		0.48(0.07;3.04)	0.43
Higher	-		0.24(0.02;3.34)	0.29
Don't know	-		0.14(0.01;2.21)	0.16
Partner's occupation type				
Skilled	-		1	
Semiskilled	-		0.12(0.01;1.16)	0.07
Unskilled	-		0.33(0.04;3.07)	0.33
Military/police	-		0.36(0.20;0.46)	0.43
Partner's drinking frequency				
Once or more a week	1		-	-
1-3 times a month	0.11(0.01;1.07)	0.06	-	-
Occasionally (<1 a month)	0.29(0.06;1.49)	0.14	-	-
Never	0.41(0.13;1.30)	0.13	-	-
Don't know	-	-	-	-
Partner's drinking in the past year				
Once or more a week	-		1	
1-3 times a month	-		0.09(0.004;1.76)	0.11
Occasionally(<1 a month)	-		0.45(0.09;2.31)	0.34
Never	-		0.34(1.00;1.17)	0.09
Respondent sexually abused before age 15 years				
Yes	1		1	
No	0.34(0.10;1.12)	0.06	0.09(020;0.46)	*0.003
Witnessed mother/guardian being abused before age 15years				
Yes	-		1	
No	-		0.41(0.15;1.14)	0.089

In summary, the number of women who participated in the study was 361(giving a response rate of 94%). The estimated overall past 12 months' prevalence of IPV for the rural site Kgabo CHC is 59% (95%CI: 0.49; 0.69) and for the urban site Soshanguve CHC is 43% (95%CI: 0.37; 0.49). Across both sites the most common form of IPV reported was emotional violence.

The results from the regression analyses demonstrated that older women were protected from emotional, economic and physical violence compared with younger women (those in the age range 18-24 years). A secondary level of education was found to be a preventive factor against emotional, economic and physical IPV. Marital status was found to be associated with IPV, with participants who were cohabiting having a greater risk of experiencing economic IPV; and having a regular partner but living apart being protective against economic IPV. The regression analyses further show that the frequency of alcohol use is associated with all the types of IPV (emotional, economic, physical and sexual abuse). Not using alcohol and being in an intimate relationship with a partner who does not use alcohol or a partner who uses alcohol less frequently is also protective of IPV.

CHAPTER 5: DISCUSSION

This was a cross-sectional study based at two facilities: Kgabo CHC, a facility that serves the rural population of Winterveldt, and Soshanguve CHC, which serves the urban population of the Soshanguve Township. The study aimed to determine the occurrence of IPV amongst pregnant women seeking antenatal care in one urban and one rural CHC, and to explore the risk factors associated with IPV in pregnant women seeking antenatal care at these facilities. This chapter gives an overview of the main results, and study limitations are also discussed.

5.1 Prevalence of intimate partner violence

The study findings show that the prevalence of IPV is high; and confirms that IPV is a global public health issue that needs urgent attention. The results of this study estimate past 12 months' prevalence of IPV for the rural site to be 59% (95%CI: 0.49; 0.69) and for the urban site to be 43% (95%CI: 0.37; 0.49). These findings are in agreement with international and national literature. Although the findings of this study show that the prevalence of IPV is high, it is highly likely that the prevalence is underestimated given the sensitive nature of the subject. Moreover, research studies have shown that some abused women are prevented from accessing healthcare services by their intimate partners[26]. It is therefore possible that those women were missed in this study.

In comparison with data from other parts of Africa, the prevalence of IPV reported in this study is higher than in studies conducted previously. In 2005 the WHO's multi-country study on health and domestic violence against women established that the prevalence of IPV during at least one pregnancy ranged from 1% to 28% for the ten participating countries, with the highest prevalence reported from Ethiopia and Tanzania[5]. In 2010 a systematic review of African studies on intimate partner violence against pregnant women identified IPV prevalence in Africa to be the highest reported globally, with the prevalence ranging from 2% to 57%, and meta-analysis yielding an overall prevalence of 15% (95% CI: 14; 16) [17]. It must however be pointed out that in the above mentioned studies, the prevalence that was reported was lifetime

prevalence and not past twelve months' prevalence, as was the case in our study.

In a separate study conducted in a district in Uganda in 2003, the lifetime IPV prevalence was estimated to be 54% (95% CI: 48; 60)[13].

In a study conducted in 2006 on intimate partner violence against pregnant women in Rwanda, an estimated 35% of pregnant women experienced IPV in the past year[26].

Other studies conducted in South Africa also reported high levels of violence. However, compared to the prevalence reported in our study, their prevalence estimates were still low. The Kwa-Zulu Natal (KZN) study on prevalence and experience of domestic violence among rural pregnant women reported an overall domestic violence of prevalence of 31% (95% CI 26; 36)[25].

Although the study is consistent with international and national literature in that the prevalence of IPV is high there are marked differences in the reported prevalence. The higher prevalence levels within this study could be a product of the levels of violence in these communities, the high levels of migration patterns that these populations experience and additional stressors of poverty etc., plus different methods and tools used to collect the data.

This study also unpacked IPV by type: emotional, economic, physical and sexual. The estimated past 12 months' prevalence of emotional, economic, physical, sexual violence for Kgabo CHC was 53%, 28%, 28% and 19% respectively. For Soshanguve however, the study estimates the past 12 months' prevalence of emotional, economic, physical, sexual violence to be 38%, 12%, 14% and 16% respectively. From these findings it is evident that emotional IPV is by far the most common form of IPV experienced by participants from both sites; followed by physical and or sexual violence, and economical violence.

There is limited published data for comparison with these findings as the majority of IPV studies focus on physical and sexual violence. However, similar findings have been reported in a study conducted in South Africa[25].The Kwa-Zulu Natal (KZN) study on prevalence and experience of domestic violence among rural pregnant women showed that emotional

violence (49%) was the most common type of violence perpetrated by men against their intimate partners[25]. This is comparable to our findings of emotional violence prevalence of 53% among participants from the rural site, Kgabo CHC.

In our study the prevalence of physical violence was 28% and 14% for Kgabo and Soshanguve CHC respectively; this is higher than previously reported by other South African studies. In a study on prevalence and patterns of gender-based violence and re-victimization among women attending antenatal clinics in Soweto, 21.8% of women seeking antenatal care experienced physical violence in the past 12 months[11]. The study conducted across three South African provinces reported physical violence among pregnant women as 9.1% (EC), 6.7(MP) and 4.7% (NP). The past year physical violence prevalence was estimated to be 14% (95% CI: 11-16) among pregnant women[13]. However, a study conducted the Kwa-Zulu Natal (KZN) study on prevalence and experience of domestic violence among rural pregnant women showed a higher prevalence of physical violence (36%)[25].

When looking at similarities and differences in the levels and types of IPV experienced by women seeking antenatal care by site, the findings of our study show that IPV prevalence is higher among participants using the rural Kgabo site (59%) than those using the urban Soshanguve site (43%). These findings are in keeping with previous reported findings from other studies[5,13,26]. A study conducted in 2003 on intimate partner violence against women in eastern Uganda; and a study conducted in 2006 on intimate partner violence against pregnant women in Rwanda reported that participants residing in rural settings were more likely to experience IPV compared to participants residing in urban areas. The 2005 WHO's multi-country study on health and domestic violence against women also reported that participants residing in rural settings were more likely to experience IPV compared to participants residing in urban areas

This finding is not surprising, particularly as women living in rural areas are among the most disadvantaged in our societies. People living in rural areas, when compared with their urban counterparts; generally have lower socioeconomic status, higher unemployment rates, poorer access to essential

services and sociocultural norms supportive of gender-based violence. Our findings support this with the pregnant women from rural Kgabo CHC (77%) reporting higher levels of unemployment compared to those from the urban Soshanguve CHC (58%). Although the education levels varied slightly the rural site had the lowest percentage (9%) of people with a higher education compared to the urban site (26%).

In addition activities aimed at raising awareness are increasingly conducted in urban areas compared to rural areas.

5.2 Factors associated with intimate partner violence

5.2.1 Socio-demographic factors

5.2.1.1 Age

Across both sites, there was an association between the risk of experiencing different types of IPV (economic, emotional, and physical) and the age of the respondent. Across the three different types of IPV, the findings show that older age is a preventive factor, with women older than 18 - 24 years being less likely to experience the above mentioned forms of IPV. These findings are consistent with findings from previous studies which reported that age was associated with IPV and that in some settings younger women in particular are at a higher risk of experiencing IPV[37-38]. However, some studies conducted in the past have found no association between IPV and age[21,40].

5.2.1.2 Educational level

There was a consistent pattern of association between IPV and educational level for participants from Soshanguve CHC, although it was not statistically significant. Participants who had secondary level of education were less likely to experience any emotional, economic and physical violence compared to participants who had primary education or less.

These findings are in keeping with previous results from studies conducted in other countries[5,18,36]. The 2005 WHO multi-country study on women's health and domestic violence against women reported that a secondary

educational level is associated with a reduced IPV risk for both men and women[5]. A study conducted in 2006 in Rwanda on intimate partner violence among pregnant women reported that participants with some level of education and above were less likely to have experienced IPV compared with those with no formal education[26]. Other studies have reported that less educated women are more likely to experience violence by intimate partners compared with more educated women[2,13,39,41].

5.2.1.3 Marital status

There was a consistent association found between economic IPV and marital status for participants from both CHC's. Participants from both sites that had regular intimate partners but living apart were less likely to experience economic violence. Moreover the Soshanguve CHC participants were more likely to experience economic and emotional violence if they were cohabiting compared to those who were formally married.

The findings of this study are in keeping with previous studies which have reported that highest occurrences of IPV were observed in unmarried women who were cohabiting. In contrast women who had regular intimate partners but living apart were less likely to experience IPV[2,36].

5.2.2 Alcohol consumption

There was a consistent pattern of association between emotional violence and the alcohol use of participants and their intimate partners from Kgabo and Soshanguve CHC. In terms of the different types of violence, participants from both CHCs who did not use alcohol were less likely to experience emotional violence compared with participants who did use alcohol. Moreover, participants from both sites who had a partner who did not use alcohol or a partner who used alcohol less frequently were less likely to experience all forms of IPV.

Previous studies have repeatedly demonstrated that alcohol use by intimate partners and their participants is associated with an increased risk of experiencing IPV[21]. The WHO's multi-country study on women's health and domestic violence reported that in all sites the odds of IPV were higher in relationships where one or both partners used alcohol. It has also been reported that the risk of experiencing IPV is higher if the male intimate partner drinks frequently compared to the female intimate partner [2-3,13,26,36].

Researchers have reported that the connections between violence and alcohol consumption and drunkenness are socially learnt[3]. It has also been reported that some individuals intentionally consume alcohol in order to engage in unbecoming behaviour[3]. Thus, primary interventions aimed at addressing IPV should extend beyond the health sector to include interventions that will address and change cultural norms supportive of excessive alcohol use.

5.2.3 Childhood violence experiences

Across both sites, previous exposure to violence in childhood was consistently associated with experiencing IPV during pregnancy. Participants from Soshanguve and Kgabo who had no past history of sexual abuse were less likely to experience physical violence, and participants who had never witnessed a mother or female guardian being abused were also less likely to become victims of physical violence at both the Soshanguve and Kgabo CHCs. Participants from both CHCs who had no previous history of sexual abuse before age 15 years were less likely to experience sexual abuse.

These findings are in agreement with prior research studies that have reported that women who have been sexually abused in childhood were at high risk of being victims of intimate partner violence[11,24,26,36]; and that participants who have witnessed a mother being abused in childhood were at high risk of being victims of intimate partner violence; and of becoming perpetrators of violence later in their lives[31,41].

It is reported that men who have witnessed their mothers being abused tend to engage in public violent behaviour[38]. It is important, therefore, to take

note that interventions targeting childhood experiences will not only help to prevent intimate partner violence but will also serve to minimize public violence as well.

5.3 Limitations of the study

Although the findings of this study substantiate what has been previously reported there are several limitations to this study that should be considered:

First, this was not a population based study. It was a facility-based study limited to two public health facilities. The participants in this study were pregnant women attending public health facilities therefore findings of this study may not be representative as women attending private health facilities may be different from those attending government facilities. Hence, the results of this study cannot be generalised to the populations where these facilities are located. However this was the most practical method to conduct this study given its sensitive nature.

Second, it has been reported that women who are victims of IPV experience barriers to accessing healthcare[3] which suggests that there is possibility that these women may be under-represented in healthcare settings. On the other hand, it has been reported that abused women are more likely to visit healthcare facilities than non–abused women[10]. In this study there is no evidence to support which of the two scenarios predominates, but because of the very high prevalence of IPV reported and the fact that we differentiate between the four types of abuse we are likely to have included more reported cases than in other studies. .

Third, IPV is a sensitive subject and it is possible that some participants might have responded to particular questions with the answers that they considered being ‘socially acceptable’ or deliberately misreporting which may have affected the accuracy of the self-reported data resulting in information bias. Recall bias cannot be overruled because the study is self-reported and retrospective. However we do not believe that the participants of this study may have exaggerated their experiences.

Fourth, because of the nature of the study design (cross sectional) it is impossible to determine causality because exposure and outcomes were measured at the same time. However, the plausibility of the findings is based on previous studies.

Finally the communities were categorised as rural (Kgabo) and urban (Soshanguve) based on the type of housing, accessibility to basic services such as reticulated water supply and sanitation to individual housing units, electricity supply, and public transportation system. , However there are likely to be other factors at play – e.g. poverty, migration patterns, family dynamics etc. which may be important. Even in Soshanguve there are likely to be people who have 'rural' characteristics which may be confounding factors in IPV.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusion and recommendations.

6.1 Conclusion

Although this was a facility-based study and can only be generalised to similar populations where these facilities are located, the study suggests extremely high levels of IPV among pregnant women residing in rural Winterveldt and urban Soshanguve Township. The findings of this study are consistent with the reported high levels of gender-based violence reported in South Africa.

In addition, the findings of this study are in agreement with prior national and international research studies that have repeatedly demonstrated that childhood exposure to sexual violence; and alcohol use by one or both partners are significantly associated with IPV. These risk factors are preventable and could be avoided.

IPV has received attention from the government and the private sector in South Africa including policymakers, NGOs, societies etc. In addition, awareness campaigns and prevention strategies have been implemented, but IPV still remains unacceptably high. This study confirms that IPV is a major public health issue and shows that there is an urgent need to institute effective preventive strategies.

6.2 Recommendations

IPV is a preventable problem that is on the increase and will aggravate the burden of diseases of public health importance and which threaten an already struggling health system in South Africa. The causes of IPV are complex and multifactorial; however, IPV can be prevented and controlled through comprehensive and integrated actions. Government and private sector initiatives to promote gender equity and equality, and women's rights appear to have made little progress in reducing levels of gender-based of violence.

This persistently growing burden of IPV may be due to the fact that the focus of prevention efforts has been mainly on secondary prevention with the development of service responses[10]. It is important, therefore, to promote

primary prevention. This must include the development, implementation, monitoring and evaluation of programmes aimed at effective prevention of IPV at an individual, relationship, community and societal level. However, government needs to realise first that IPV is a multi-sectoral issue requiring multi-sectoral responses and a strong referral network. Together with civil society, the South African government needs to develop and implement a national violence prevention strategy that will outline a coordinated response.

Studies have shown that risk factors associated with IPV such as alcohol use by one or both partners; and demographic characteristics of women are not necessarily the primary causes of IPV. Root causes of IPV include community and societal risk factors such as poverty, sociocultural norms supportive of violence, and early childhood factors (such as exposure to adverse violent experiences during childhood)[3]. South African policymakers and intervention developers therefore need to develop an evidence-based response that takes into account these root causes of IPV as well as risk factors associated with IPV.

As secondary prevention still plays an important role it is important therefore to strengthen all systems that support secondary prevention. The health care system in South Africa needs to be strengthened at all levels. Initiatives such as screening for IPV during antenatal care and other appropriate interventions should be instituted. Implementation of Community Oriented Primary Health Care (COPC) which is aimed at increasing access to healthcare in South Africa provides an opportunity for the public health sector to identify women who are in abusive relationships and to provide the necessary intervention. Recently a systematic review to update the U.S. Preventive Services Task Force (USPSTF) on screening women for IPV reported that Screening women for IPV could reduce IPV and improve health outcomes, depending on the population screened and outcome measured, although effectiveness trials have pointed out important limitations[52].

Strengthening of the South African justice system is also important to ensure that the outcomes of criminal investigations are successful. This can be accomplished by ensuring that the system has the essential resources in terms of equipment, finances and appropriately trained and competent staff.

Furthermore, the currently existing laws must be enforced and perpetrators must be given harsher punishment, to send a message that violence cannot be tolerated.

Harmful use of alcohol has been identified as an important risk factor for IPV; and our study findings indicated that there is a consistent pattern of association between IPV and excessive alcohol use by participants and their intimate partners. South Africa urgently needs comprehensive strategies and policies on reducing the harmful use of alcohol at a population level. In the literature there is evidence that support population level interventions to reduce alcohol consumption and alcohol-related harm. However, such interventions can have unintended consequences such as an increase in illegal trade and this need to be carefully considered during policymaking.

This study unpacked IPV by type: emotional, economic, physical and sexual and it was established that in terms of type, emotional IPV is by far the most common form of IPV experienced by participants from both sites. There is however limited published data for comparison with these findings, as the majority of IPV studies focus on physical and sexual violence. It is important therefore to recommend that further research be conducted to determine the different types of IPV and associated risk factors.

Health system based intimate partner violence prevention efforts are mainly secondary and they will have limited impact. On that account the recommendations made on this report are mainly directed to the government.

CHAPTER 7: PRESENTATION TO AN AUDIENCE

I presented the findings of this study at the:

- Tshwane PHC District Research Conference 2013 (12 September 2013, Pretoria)
- 9th Public Health Association of South Africa conference (24-27 September 2013, Cape Town)

Description of the presentations:

Tshwane PHC District Research Conference 2013

I delivered a 12 minute PowerPoint presentation on the results of the study on 12 September 2013. This was followed by an interactive discussion. The audience included representatives of the Gauteng Department of Health, Gauteng Department of Social Development, Tshwane municipality, University of Pretoria, and University of Limpopo.

Public Health Association of South Africa (PHASA) conference

I delivered a 5 minute poster presentation on the 26 September 2013. This was followed by a question and answer discussion of approximately 3 minutes. The audience included international and national public health medicine specialists, public health practitioners, researchers and students.

[A letter from the Head of Department confirming that these presentations were done is attached as appendix 5. A power point presentation from the Tshwane District Research Conference 2013 is attached as appendix 6. The poster presentation is however not attached as it was too big to compress to an A4 size]

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APPENDICES

Appendix 1:

PARTICIPANT INFORMATION LEAFLET, CONSENT AND QUESTIONNAIRE

Dr Sindile Mabunda
Student Number: 10479008
Department of Public Health
University of Pretoria

Dear patient

Study Title: Intimate Partner Violence amongst pregnant women seeking antenatal care in urban and rural public healthcare facilities in Tshwane

I am a Masters student in Public Health in the Department of Public Health Medicine, University of Pretoria. You are invited to take part in our research project on Intimate Partner Violence amongst pregnant women.

The letter gives you information to help you decide if you want to take part in this study. Before you agree you should know what it is about. If there is something that is not clear, or if you have any other questions, please do not hesitate to ask me. You should not agree to take part unless you are happy about what is expected from you.

The purpose of this study is to get information about women's health and life experiences, particularly the burden of intimate partner violence amongst women seeking antenatal care in public health care facilities. This information may help enable the district to understand the problem, improve and plan the delivery of services to its communities.

As part of this study, I would like to know how many women have experiencedviolence from their husbands or boyfriends and what causes this violence.

I am asking pregnant women seeking antenatal care public health care facilities to take part in a face to face interview with the researcher during which a questionnaire will be completed. I will not be collecting blood for any tests.

To ensure the protection and safety of all women participating in this study, I suggest that you do not tell others about what has been discussed in these interviews.

Completing the questionnaire may take about 20 minutes. There is a sealed drop off box in which I will put your questionnaire once it has been completed. I will not put any identifying information, like your name or address in the questionnaire.

I am aware that some of the questions may be sensitive and may make you feel uncomfortable, and you do not have to answer any of these questions if you do not want to. Please note that all the information I put on the questionnaire will be kept strictly confidential. As I do not write your name on the questionnaire, you give me the information anonymously. Once the questionnaire has been completed and it is inside the box, you cannot recall your consent. It will not be possible to find your questionnaire because there is no personal identifying information that appears on the questionnaire.

The Research Ethics Committee of the University of Pretoria, Faculty of Health Sciences and the Tshwane Department of Health district office has granted written approval for this study. I can provide you with the permission letters if you wish to have them.

Participation in this survey is voluntary. It is entirely up to you if you want to take part in the study or not. **There is no penalty for not taking part in the study.** You have the right to stop the interview at any time but we would appreciate your participation in this survey.

I thank you for your help.

Yours sincerely,

Dr S. Mabunda……Date……

Intimate Partner Violence amongst pregnant women seeking antenatal care in urban and rural public healthcare facilities in Tshwane

Department of Public Health

University of Pretoria

Questionnaire Number	

General instructions for completing the questionnaire:

It is important that you read the instructions before completing the questionnaire

1. Please note that there are no right or wrong answers
2. Do not put any personal details such as the patient's name in this questionnaire
3. If there are questions the patient prefers not to answer you can leave them out and please tick(√) on the questionnaire to indicate that the question was skipped
4. Circle the appropriate number which represents the patient's response

Thank the patient for agreeing to take part in the survey!

Section 1:

no.	Questions		Skip
	Socio demographic characteristics of respondent		
1	How old were you on your last birthday?	Age in years	
2	Have you ever attended school?	Yes ..... 1 No 2	
3	What is the highest level of education that you have achieved?	Primary/less ..... 1 Secondary ..... 2 Higher ..... 3 Don't know 8	
4	Are you currently working, looking for work or unemployed, retired or studying?	Working ..... 1 Looking for work or unemployed ..... 2 Retired ..... 3 Studying 4	
5	What is your current marital status?	Currently married ..... 1 Living with a partner, not married ..... 2 Have a regular partner, living apart ..... 3 Not currently married or living with a partner (divorced, widowed etc.) 4	
6	Do you belong to any social club e.g. stokvel, women's groups in church etc.	Yes ..... 1 No 2	
7	Have you ever been prevented by your current husband or partner from attending these clubs or from seeing your friends and family?	Yes ..... 1 No 2	
8	How often do you drink? 1. Daily/almost daily 2. Once or twice a week 3. 1-3 times a month 4. Occasionally(<1 a month) 5. Never 6. Don't know	Daily/almost daily ..... 1 Once or twice a week ..... 2 1-3 times a month ..... 3 Occasionally(<1 a month) ..... 4 Never ..... 5 Don't know 8	
	Socio demographic characteristics of current or most recent partner		
9	How old was your husband or partner on his last birthday	Age in years	
10	Did he attend school?	Yes ..... 1 No 2	
11	What is the highest level of education that he achieved?	Primary/less ..... 1 Secondary ..... 2 Higher ..... 3 Don't know 8	
12	If currently with partner: Is he currently working, looking for work or unemployed, retired or studying?	Working ..... 1 Looking for work or unemployed ..... 2 Retired ..... 3 Studying 4	
13	What kind of work does he do? (be specific)	Professional/skilled ..... 1 Semi-skilled ..... 2 Unskilled/manual ..... 3 Military /police 4	
14	How often does/did he drink? 1. Daily/almost daily 2. Once or twice a week 3. 1-3 times a month	Daily/almost daily ..... 1 Once or twice a week ..... 2 1-3 times a month ..... 3 Occasionally(<1 a month) 4	

	4. Occasionally(<1 a month) 5. Never 6. Don't know	Never ..... 5 Don't know 8	
15	In the past twelve months how often have you seen your partner drunk? Most days, weekly, once a month, less than once a month, or never.	Most days ..... 1 Weekly ..... 2 Once a month ..... 3 Less than once a month ..... 4 Never 5	
	Emotional abuse **In any relationship there are good times and bad times. I now want to ask you about some of the bad times we have in relationships and what has happened. Remember there are no right or wrong answers and anything you say will be kept confidential.**		
16	Has your current husband or boyfriend ever insulted you or made you feel bad about yourself? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
17	Has your current husband or boyfriend ever belittled or humiliated you in front of other people? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
18	Has your current husband or boyfriend ever done things to scare or intimidate you on purpose for example by the way he looked at you, by yelling and smashing things? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
19	Has your current husband or boyfriend ever threatened to hurt you? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
20	Has your current husband or boyfriend ever stopped you from seeing any of your friends? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
21	Has your current husband or boyfriend ever boasted about or brought home girlfriends? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
22	Have any of these things happened in the past 12 months?	Yes ..... 1 No 2	
	Economic abuse **Sometimes the man controls the finances in relationship. I would like to discuss some of the economic issues within our relationships. I want you to speak freely and remember that everything you say will be confidential.**		
23	Has your current husband or boyfriend ever prohibited you from getting a job, going to work, trading, earning money or participating in income generation projects? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
24	If you have had any income, has	Never 1	

	your current husband or any boyfriend ever taken your earnings from you? Did this happen many times, a few times, once or did it not happen?	Once ..... 2 Few ..... 3 Many 4	
25	Has your current husband or boyfriend ever forced you or your children to leave the house where you were living? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
26	Has your current husband or boyfriend ever not provided money to run the house or look after the children, but has money for other things? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
27	Have any of these things happened in the past 12 months?	Yes ..... 1 No 2	
	Physical abuse **Men often fight with their girlfriends and often these fights get physical. I am going to ask some questions about this because we want to learn more about what women experience in their lives. I want you to speak freely and remember that everything you say will be confidential.**		
28	Has your current husband or partner ever slapped you or threw something at you which could hurt you? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
29	Has your current husband or partner ever pushed or shoved you? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
30	Has your current husband or partner ever hit you with a fist or with something else which could hurt you? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
31	Has your current husband or partner ever kicked, dragged, beat, choke or burnt you? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
32	Has your current husband or partner ever threatened to use or actually use a gun, knife or other weapon against you? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
33	Have any of these things happened in the past 12 months?	Yes ..... 1 No 2	
	Sexual abuse		
34	Has your husband or partner ever physically forced you to have sexual intercourse when you did not want to? Did this happen many times, a	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	

	few times, once or did it not happen?		
35	Have you ever had sexual intercourse with your husband or partner when you did not want to because you were afraid of what he might do? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
36	Has your husband or boyfriend ever forced you to do something sexual that you found degrading or humiliating? Did this happen many times, a few times, once or did it not happen?	Never ..... 1 Once ..... 2 Few ..... 3 Many 4	
	Other experiences		
37	Before the age of 15 years do you remember if anyone ever touched you sexually, or made you do something sexual that you did not want to?	Yes ..... 1 No 2	
38	Before age 15 do you remember hearing or seeing your mother/female being hit by her husband or boyfriend?	Yes ..... 1 No 2	
39	As far as you know, was your (most recent) partner's mother beaten by her husband or boyfriend?	Yes ..... 1 No ..... 2 Don't know 8	
40	Did your partner hear or see his mother being beaten up?	Yes ..... 1 No ..... 2 Don't know 8	

Appendix 2:

The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- **FWA** 00002567, Approved dd 22 May 2002 and Expires 20 Oct 2016.
- **IRB** 0000 2235 IORG0001762 Approved dd 13/04/2011 and Expires 13/04/2014.

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Faculty of Health Sciences Research Ethics Committee
Fakulteit Gesondheidswetenskappe Navorsingsetiekkomitee

DATE: 28/06/2012

NUMBER	**113/2012**
TITLE OF THE PROTOCOL	Intimate partner violence amongst pregnant women seeking antenatal care in urban and rural public healthcare facilities in Tshwane district
PRINCIPAL INVESTIGATOR	Dr Sidile Mabunda **Dept:** Public Health Medicine; SHSPH; University of Pretoria **Cell:** 083 414 9816 **E-Mail:** sindile.mabunda@up.ac.za
SUPERVISOR (ONLY when STUDENTS)	Prof Maila John Matjila **E-Mail:** john.matjila@up.ac.za
STUDY DEGREE	MMed
SPONSOR COMPANY	I have applied for funding from RESCOM but I have not received any feedback yet. Their next meeting is on 17-07-2012
MEETING DATE	27/06/2012

The Protocol and Informed Consent Document were approved on 27/06/2012 by a properly constituted meeting of the Ethics Committee subject to the following conditions:

1. The approval is valid for 2 years period [till the end of December 2014], and
2. The approval is conditional on the receipt of 6 monthly written Progress Reports, and
3. The approval is conditional on the research being conducted as stipulated by the details of the documents submitted to and approved by the Committee. In the event that a need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

Members of the Research Ethics Committee:

Prof M J Bester	(female)BSc (Chemistry and Biochemistry); BSc (Hons)(Biochemistry); MSc(Biochemistry); PhD (Medical Biochemistry)
Prof R Delport	(female)BA et Scien, B Curationis (Hons) (Intensive care Nursing), M Sc (Physiology), PhD (Medicine), M Ed Computer Assisted Education
Dr NK Likibi	MBB HM – Representing Gauteng Department of Health) MPH
Dr MP Mathebula	(female)Deputy CEO: Steve Biko Academic Hospital; MBChB, PDM, HM
Prof A Nienaber	(female) BA(Hons)(Wits); LLB; LLM; LLD(UP); PhD; Dipl.Datametrics(UNISA) – Legal advisor
Mrs MC Nzeku	(female) BSc(NUL); MSc(Biochem)(UCL, UK) – Community representative
Prof L M Ntlhe	MbChB (Natal) FCS (SA)
Snr Sr J Phatoli	(female) BCur(Eet.A); BTec(Oncology Nursing Science) – Nursing representative
Dr R Reynders	MBChB (Pret), FCPaed (CMSA) MRCPCH (Lon) Cert Med. Onc (CMSA)

2013/06/21MS: dd 2013/06/21: C:\Documents and Settings\user\My Documents\Protokolle\2-Grade briewe\Letters 2012\113.2012.doc

Appendix 3:

Referral to Counseling and Psychological Services

Date of Referral: _____

Patient Information

Patient's Name: _____
ID#: _____
Home Address_____
Telephone /Cell#: _____

Referring Facility Information

Name of Referring
Professional:_____
Office Phone: _____
Address:_____

Reason for Referral:

(Multiple categories may be checked)
____ Patient requests help for psychological distress ____ Professional perceives patient need for help
____ Request for assessment of psychological issues pertaining to exposure to intimate partner violence
____ Substance abuse assessment
____ Referral for: ____ assessment and recommendations, ____ follow-up tx and/or case management
Other referral issues and/or comments about above items: _____
_____
_____
_____

_____ /_____ / _____

Health Professional Signature | **Health Professional Registration #** | **Date**

Appendix 4:

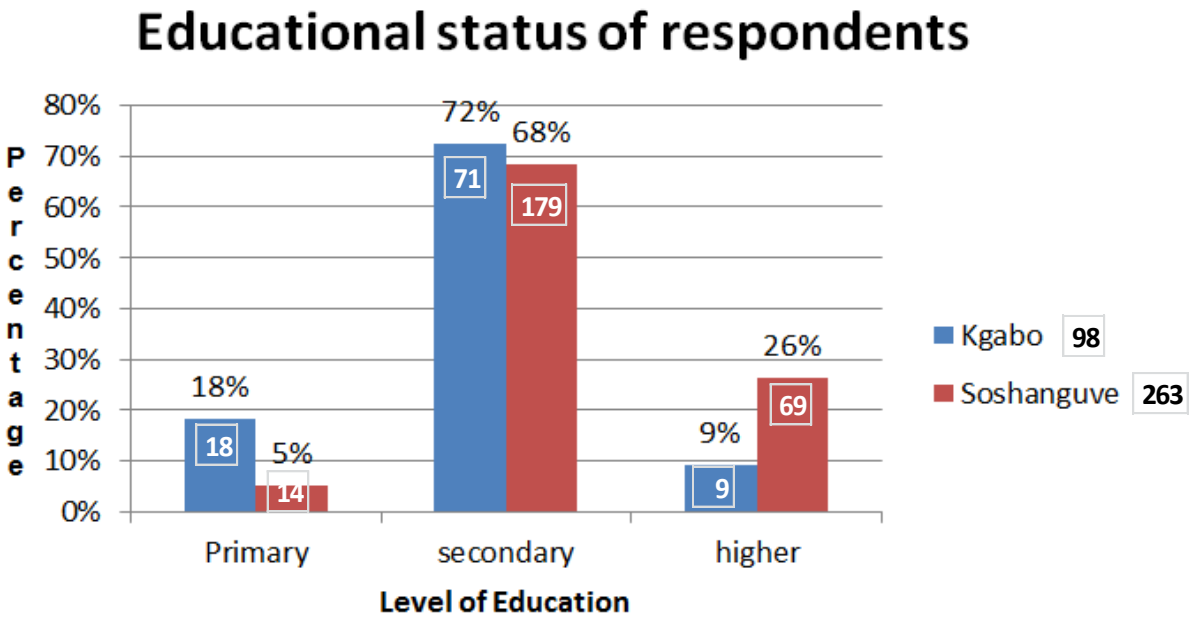

Figure 2: The frequency distribution of the participants' educational status

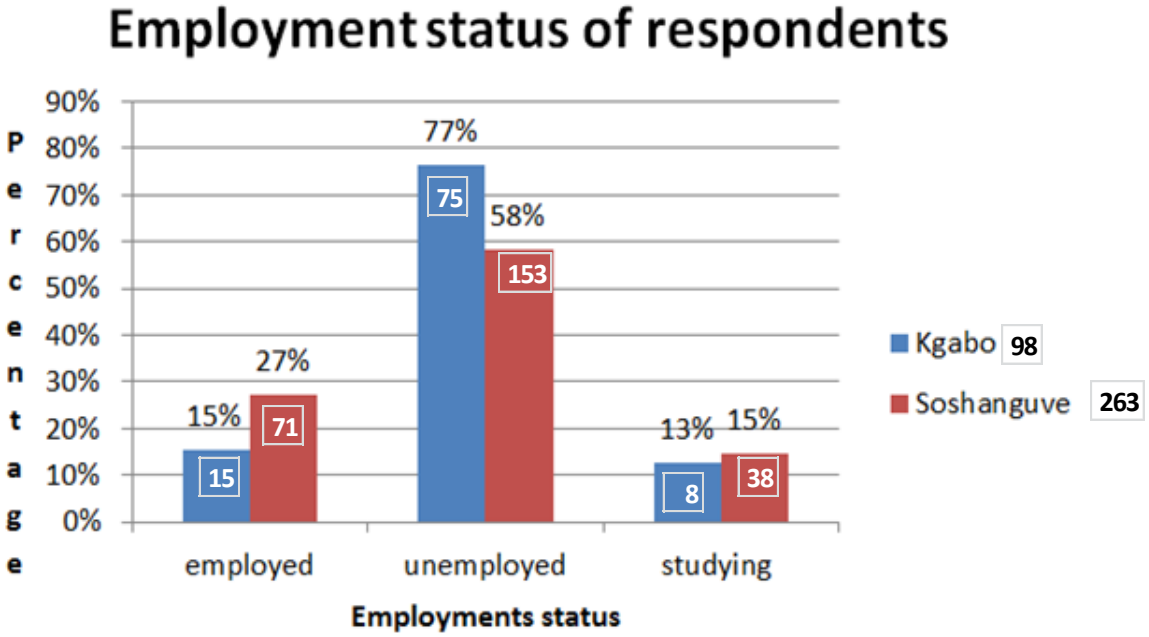

Figure 3: Frequency distribution of the participants' employment status

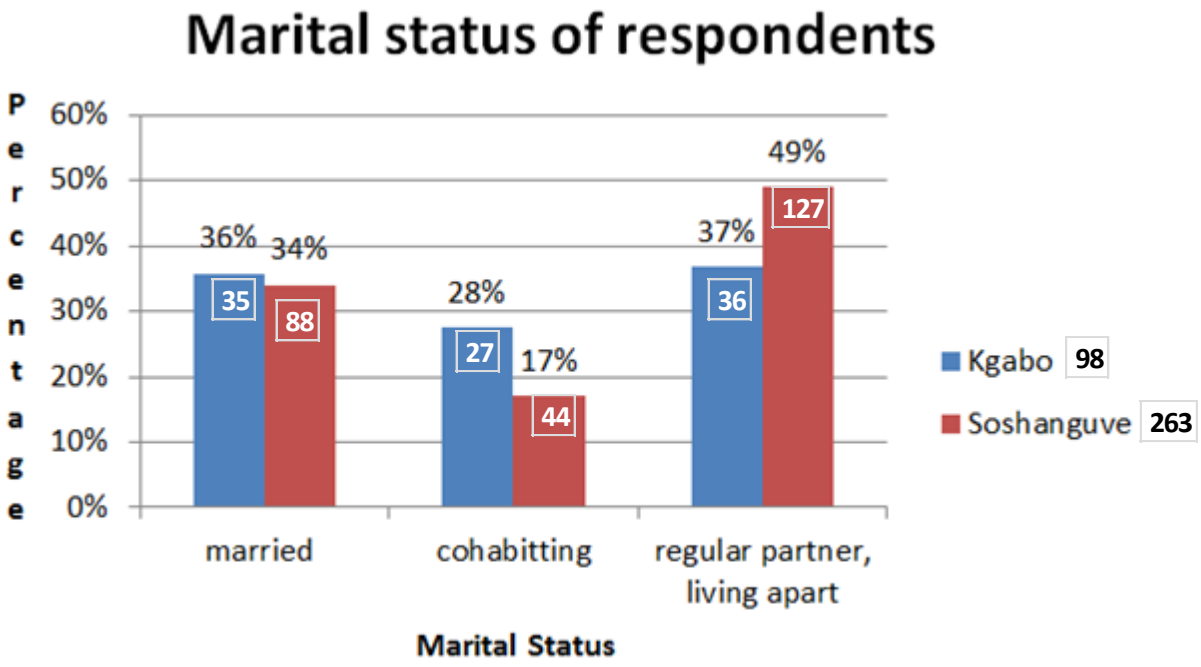

Figure 4: The frequency distribution of the participants' marital status

Appendix 5:

Intimate partner violence among pregnant women seeking antenatal care in urban and rural public healthcare facilities in Tshwane District

Dr. Sindile Mabunda
Public Health Medicine Registrar
University of Pretoria (UP)

GAUTENG PROVINCE

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Outline

- Background
- Aim of the study
- Methodology
- Ethical issues
- Results
- Discussion
- Limitations
- Conclusion
- Recommendations

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Background

- Intimate partner violence (IPV) is recognised as a global public health and human rights concern with profound health implications[1].
  - **most prevalent type of violence that is perpetrated by men against their intimate partners.**
- Studies have shown that South Africa has one of the highest rates of IPV in the world[2].
  - **responses by government to IPV are ad hoc, limited and fractured.**
- IPV greatly undermines the potential for South Africa to attain the Millennium Development Goals (MDG's), particularly goals 3, 4 and 6
- IPV impacts negatively on the economic development of South Africa

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Study aim

- To estimate the occurrence of IPV amongst pregnant women seeking antenatal care in one urban (Soshanguve) and one rural (Kgabo) Community Health Centre (CHC);
- and to explore risk factors associated with IPV in pregnant women seeking antenatal care at these facilities.

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Methods

- A cross-sectional facility-based study was conducted at two conveniently sampled CHC's.
- 361 pregnant women administered a questionnaire
  - selected for study by means of systematic random sampling.
- The number of study subjects from each of the selected CHC's
  - proportional to the average monthly antenatal attendances in that clinic.
- A standardized questionnaire recommended by the WHO
  - modified and validated by the Medical Research Council (MRC) of South Africa, to suit SA's setting
- Both univariate and multivariate odds of IPV exposure were estimated using logistic regression analysis.

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Ethics

- Authorisation was granted by the
  - Department of Health (Tshwane District Office's Research Committee)
  - Facility Managers of the two CHCs involved in the study.
- Ethical clearance granted by the
  - University of Pretoria's Faculty of Health Sciences' Ethics Committee
- Written consent was obtained from those who agreed to participate
- The WHO's standard ethical guidelines on conducting gender based violence studies and the recommendations prescribed in the Ethical and Safe Guidelines for Research in Domestic Violence were followed when conducting this survey

GAUTENG PROVINCE

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General information and characteristics of the participants

Parameter	Kgabo "Rural" Number (%)	Soshanguve "Urban" Number (%)	Total Number (%)
Total number of participants	98	263	361
Age			
18-24	42(42.86)	127(48.29)	169(46.81)
25-34	43(43.86)	72.61(43.35)	157(43.49)
35+	13(13.27)	22(8.37)	35(9.70)
Educational level			
Primary	18(18.37)	14(5.3)	32(0.3)
Secondary	71(72.45)	179(68.12)	250(69.3)
Higher	9(9.18)	69(26.34)	78(21.6)
Employment status			
Employed	15(15.31)	71(27.10)	86(23.89)
Unemployed	75(76.53)	153(58.40)	228(63.2)
Studying	8(8.16)	38(14.50)	46(12.7)
Marital status			
Married	35(35.7)	88(33.98)	123(34.1)
Cohabiting	27(27.55)	44(16.99)	71(19.7)
Regular partner, living apart	36(36.73)	127(49.03)	163(45.2)
Alcohol intake frequency			
1-2 times a week	2(2.04)	10(3.80)	12(3.3)
1-3 times a month	4(4.08)	13(4.94)	17(4.7)
<1 month	23(23.47)	58(22.05)	81 (22.4)
Never	69(70.41)	182(69.20)	251(69.5)
Sexually assaulted before age 15			
Yes	17(17.71)	22(8.46)	39(10.96)
No	79(82.29)	238(91.54)	317(89.4)
Witnessed mother being abused			
Yes	33(34.02)	70(26.72)	103(28.68)
No	64(65.98)	192(73.28)	256(71.31)

Prevalence of IPV

- The proportion of reported IPV was 59.38% and 42.97% for the participants attending the rural Kgabo and urban Soshanguve CHC respectively

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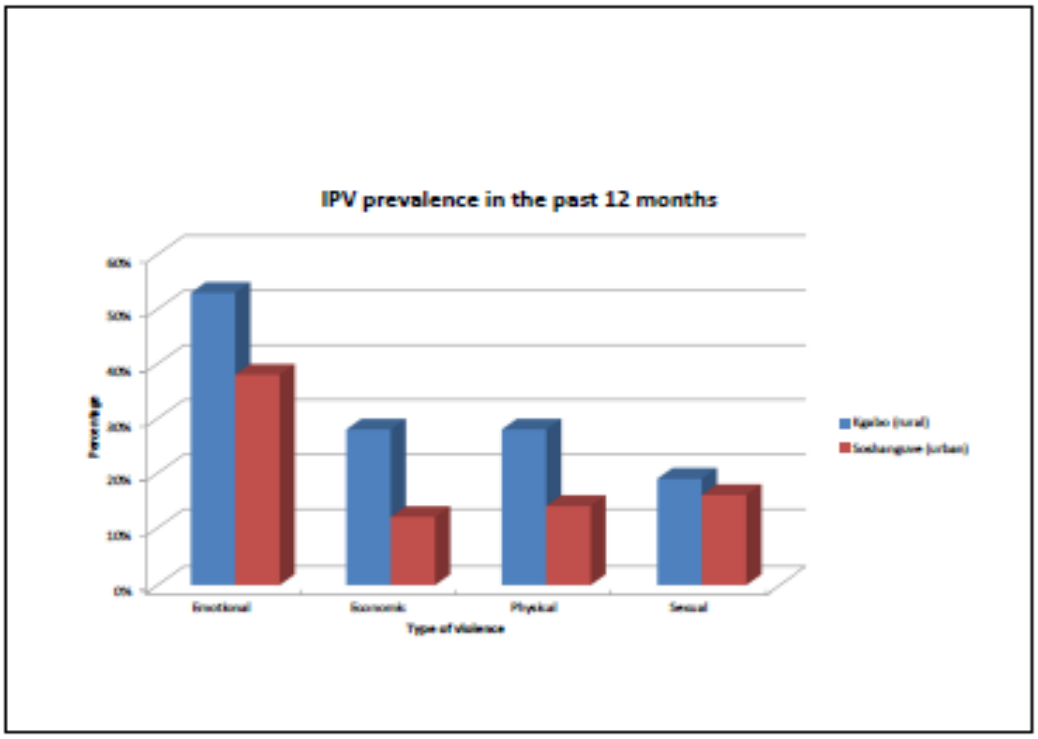

Risk factors associated with IPV

- The study further shows that:
  - age,
  - alcohol use
  - and previous childhood exposure to sexual violence
- are significantly associated with IPV

OR for emotional violence

	Kgabo (rural)		Soshanguve (urban)	
Category	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Participants' age				
18-24	-	-	1	
25-35	-	-	0.48(0.252;0.946)	*0.034
35+	-	-	0.44(0.143;1.358)	0.154
Respondent drinking frequency				
Occasionally (<1 a month)	1		1	
Never	0.26(0.086;0.803)	*0.019	0.88(0.478;1.621)	0.684
Partners' drinking frequency				
Once or more a week	1		1	
1-3 times a month	0.28(0.06;1.202)	0.086	0.94(0.32;2.712)	0.912
Occasionally (<1 a month)	0.17(0.037;0.805)	*0.025	0.83(0.362;1.88)	0.651
Never	0.55(0.192;1.634)	0.288	0.68(0.350;1.311)	0.248
Don't know	-	-	1.93(0.113;32;7)	0.650
Respondent sexually abused before age 15 years				
Yes	-	-	1	
No	-	-	0.29(0.109;0.789)	*0.015

OR for economic violence

	Kgabo (rural)		Soshanguve (urban)	
Category	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Respondent sexually abused before age 15years				
Yes	-	-	1	1
No	-	-	0.18(0.041;0.817)	*0.026

OR for physical violence

Category	Ngabo (rural)		Soshanguve (urban)	
	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Partner's drinking frequency				
Once or more a week	-		1	1
1-3 times a month	-		0.82(0.271;22.459)	0.185
Occasionally (<1 a month)	-		0.22(0.079;0.670)	0.720
Never			0.31(0.053-0.814)	*0.008
Don't know				
Respondent sexually abused before age 15 years				
Yes	1	1	1	1
No	0.33(0.080;1.334)	0.062	0.14(0.045;0.428)	*0.001

OR for sexual violence

	Ngabo (rural)		Soshanguve(Urban)	
Category	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Respondent sexually abused before age 15 years				
Yes	1		1	
No	0.34(0.101;1.117)	0.075	0.096(0.020;0.463)	*0.003

Discussion

- The findings of this study are in agreement with prior national and international research studies
  - IPV prevalence is higher among women residing in rural settings[3].
  - demonstrated that previous childhood exposure to sexual violence; and alcohol use by one or both partners are prominently associated with IPV[2, 4-5].

Limitations

- Facility-based study, therefore its findings cannot be generalised to the populations where these facilities are located
  - However this was the most practical method to conduct this study given its sensitive nature.
- Furthermore, recall bias cannot be overruled as study was self-reported and retrospective

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Conclusion

- The study confirms that IPV is of public health importance
- Although this was a facility based study and its findings cannot be generalised to the populations where these facilities are located,
  - **the study suggests extremely high levels of IPV among pregnant women residing in rural Winterveldt and Soshanguve urban township.**
- The findings of this study are consistent with the reported high rates of intimate partner violence in South Africa

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Recommendations

- It is important; therefore, that the South African government and civil society organizations
  - develop and implement a national violence prevention strategy that will outline a coordinated response,
  - with a focus on effective primary prevention efforts that are informed by a better understanding on this form of violence and the associated risk factors.

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Recommendations

- As secondary prevention still plays an important role it is important therefore to strengthen all systems that support secondary prevention.
- Strengthening of the health care system at all levels;
  - fast tracking of the re- engeneering of PHC
  - introduction initiatives such as screening for IPV during antenatal care consultations
- Strengthening of the South African justice system
- Develop and implement comprehensive policies on reducing the harmful use of alcohol.

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- The staff and facility managers of Soshanguve and Kgabo Community
- Tshwane District Health
- Prof MJ Matjila
- Prof R Jewkes
- Ms E Dartnall
- Ms L Masenyete

Appendix 6:

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11 October 2013

College of Medicine of SA
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2193
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Dear Sir/Madam

RE: PRESENTATION OF REPORT TO AN AUDIENCE

This is to confirm that Dr Sindile Mabunda was invited and presented findings of her study at the following conferences:

- Tshwane PHC District Research Conference 2013 (12 September 2013, Pretoria)
- 9th Public Health Association of South Africa conference (24-27 September 2013, Cape Town)

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