



**Prevalence and determinants of physical
violence among ever-partnered
Women in South Africa: A multilevel analysis**

D Nkoane



orcid.org/0000-0001-8810-221X

Mini-dissertation accepted in partial fulfilment of the requirements for the degree *Master of Social Science in Population Studies and Sustainable Development* at the North-West University

Supervisor: Dr M Tsawe

Co-supervisor: Dr GN Osuafor

Graduation: May 2023

Student number: 29156947

ABSTRACT

Background: IPV is a vital public health concern; globally women have been exposed to physical violence. As a result, it has also been related to femicide, particularly in South Africa. The micro (individual), mezzo (family), and macro (community) level factors all play a significant effect in IPV exposure on a multilayer basis. The main aim of this study is to determine the determinants of physical violence among ever-partnered women in South Africa.

Methods: The study used data obtained from the SADHS collected in 2016. Data analysis was done in three stages – univariate, bivariate, and multivariate. At the bivariate analysis level, a chi-square test was utilized to explore the association between physical violence and selected background characteristics. At the multivariate level, the study used logistic regression to analyse the association between experiencing physical violence and the selected background characteristics.

Results: Women with primary education attainment had the highest prevalence of physical violence, with 30.8%, compared to women who had secondary+ education. Again, women who were employed had a higher prevalence of physical violence compared to those who were unemployed. Moreover, women who had witnessed inter-parental violence had a 41.2% prevalence of being physically abused compared to those who had never witnessed inter-parental violence. Furthermore, women whose partners drink and are often drunk had the highest prevalence of physical violence, more than those whose partners do not drink. Women from households with poor wealth status had the highest prevalence of experiencing physical violence compared to those from rich households. Those who were better educated than their partners had the highest prevalence of experiencing physical violence than respondents who were as equally educated as their partners. Women who resided in Eastern Cape were more likely to experience physical violence as compared to women who resided in Gauteng.

Conclusion: Physical violence is a problem in South Africa that needs to be addressed. Women should be urged to join social clubs that will advance their knowledge and sense of empowerment, since this might be a powerful instrument in lessening the impact of IPV on our society. Women who have ever witnessed inter-parental violence should be offered support through counselling. Partners who are often drunk are most often perpetrators of physical violence, therefore they should be taken to rehabilitation centres.

Keywords: physical violence; intimate partner violence; ever-partnered women; multilevel analysis

DECLARATION

I, Dikago Nkoane (29156947), declare that this work titled “Prevalence and determinants of physical violence among ever-partnered women in South Africa: A multilevel analysis” is my original research work, and has never been submitted for any degree or examination in any other university or institution. I declare that the information contained in this document is a true copy of my thesis and has been approved for submission by my thesis supervisor. This work was supervised by Dr Mluleki Tsawe, and co-supervised by Dr Osuafor, from the Department of Population Studies and Demography. This work is submitted in partial fulfilment of the requirements for the degree Master of Social Science in Population Studies and Sustainable Development at the North-West University, Mafikeng Campus, South Africa.

Name (student): Dikago Nkoane

Signature: D. Nkoane

Date: April 2023

Name (supervisor): Dr Mluleki Tsawe

Signature: M. Tsawe

Date: April 2023

Name (co-supervisor): Dr Godswill Osuafor

Signature: G. Osuafor

Date: April 2023

ACKNOWLEDGEMENTS

All glory, honour and thanks go to our Lord God Almighty, for giving me the courage, wisdom, and strength to complete this thesis. I thank God for granting me good health and seeing me through this journey. Faith has been my companion and God my Guide. It has been a long arduous journey with detours. You also put some amazing people in my life that, at different times during this process, played very significant roles.

I would like to express my gratitude to my supervisor Dr Mluleki Tsawe, as well as my co-supervisor, Dr Godswill Osuafor, without your useful comments, remarks and expert skills, this master's thesis would not have been possible. Your dedication to this thesis has been truly inspiring. I would like to thank my parent, Salome Mary Nkoane, who has been a constant source of love, concern, support, and strength throughout the journey. You played a pivotal role in the success of this thesis.

To my siblings (Lerato and Onkabetse), and all my family and friends who have encouraged me to continue in sometimes the most difficult times. Your support is appreciated and cherished always. Last, but by no means least, to my amazing husband Tumisang Puoeng. You have been my support system, my strength, and my motivation to reach for my academic dreams. You believed in me even when I doubted myself. Thank you so much!

I thank the staff of the Demography and Population Studies programme for their encouragement during my candidature. I would like to acknowledge the encouragement and support by masters' students too many to mention by name. I am very grateful to the North-West University for granting me a Special Research Fellowship to undertake my studies at the North-West University, South Africa. Again, I am also grateful to the North-West University for financial support through the Postgraduate master's bursary and NRF. I am grateful for all the support.

TABLE OF CONTENTS

ABSTRACT	I
DECLARATION.....	II
ACKNOWLEDGEMENTS	III
LIST OF FIGURES.....	V
LIST OF TABLES	VI
LIST OF APPENDICES	VII
ABBREVIATIONS/ACRONYMS	VIII
CHAPTER 1: INTRODUCTION.....	1
1.1 Background to the study.....	1
1.2 Statement of the problem.....	2
1.3 Main objective of the study	3
1.3.1 Specific objectives of the study	3
1.4 Research questions	3
1.5 Significance and rationale of the study	3
1.6 Definition of concepts	4
1.7 Organisation of the study.....	4
CHAPTER 2: LITERATURE REVIEW.....	5
2.1 Introduction	5
2.2 Literature on IPV: a brief global review.....	5
2.3 Determinants of intimate partner violence	6
2.4 Theoretical framework	10
2.5 Conceptual framework	11
CHAPTER 3: METHODOLOGY.....	13
3.1 Study setting.....	13
3.2 Research design.....	13
3.3 Data source	13
3.4 Study population and inclusion and exclusion criteria.....	14
3.4.1 Study population.....	14
3.4.2 Study inclusion and exclusion criteria.....	14
3.5 Description of study variables	14
3.6 Method of analysis	15
3.7 Limitations.....	17
3.8 Ethical considerations.....	18
CHAPTER 4: DATA ANALYSIS AND RESULTS	19
4.1 Introduction	19
4.2 Characteristics of the study population	19
4.3 Prevalence of physical violence among ever-partnered women.....	21
4.4 Multilevel determinants of physical violence among ever-partnered women.....	23
CHAPTER 5: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS	27
5.1 Introduction	27
5.2 Discussions.....	27
5.3 Conclusion.....	29
5.4 Recommendations	30
REFERENCES.....	31
APPENDICES	37

LIST OF FIGURES

Figure 2.1: Conceptual framework showing the relationship between physical violence and various factors..... 12

Figure 4.1: Percentage distribution of ever-partnered women experiencing physical violence 21

LIST OF TABLES

Table 3.1: Description of the independent variables	15
Table 4.1: Background characteristics of the study by participants	20
Table 4.2: Prevalence of experiencing physical violence by explanatory factors among women	22
Table 4.3: Multilevel logistic regression results for the determinants of physical violence among ever-partnered women in South Africa	25
Table 4.4: Random effects and model fit statistics for physical violence among ever-partnered women in South Africa	26

LIST OF APPENDICES

Figure A1: Ethics approval letter	37
Figure A2: Map of prevalence of physical violence among ever-partnered women in South Africa	39

ABBREVIATIONS/ACRONYMS

BaSSREC	-	Basic and Social Sciences Research Ethics Committee
DUs	-	Dwelling Units
IPV	-	Intimate Partner Violence
NDoH	-	National Department of Health
NDP	-	National Development Plan
PSU	-	Primary Sampling Unit
SADHS	-	South Africa Demographic Health Surveys
WHO	-	World Health Organization

CHAPTER 1: INTRODUCTION

1.1 Background to the study

Globally, around 33% women have been exposed to physical and sexual intimate violence. Recent studies presented that the prevalence of intimate partner violence (IPV) was 29.40% emotional, 25.87% physical and 18.75% sexual violence in sub-Saharan Africa Chung-Ya *et al.* (2021); (Jabbi *et al.*, 2020; Muluneh *et al.*, 2020). In Africa, about 40% of ever-partnered women had experienced physical and/or sexual IPV at some point (Pallitto *et al.*, 2013). Physical violence by their current husband or cohabiting partner was reported by 18% of ever-partnered women in Cambodia, and 48% of ever-partnered women in Zambia, while sexual violence was reported by between 4% and 17% of ever-partnered women (Kebede *et al.*, 2022). Ethiopia is one African country with a high IPV prevalence, with lifetime prevalence estimates ranging from 20% to 78% in various places (Semahegn & Mengistie, 2015). According to statistics, in Ghana 40% of women who have ever married have been subjected to physical abuse, 35% have been exposed to sexual assault, and 58% have been subjected to psychological violence (Tenkorang, 2019). In Uganda, the prevalence of IPV is at 44% (Zegeye *et al.*, 2022).

IPV has been related to femicide, particularly in South Africa. Between 2017 and 2018, 15.2 per 100 000 women in South Africa died as a result of IPV (Enaifoghe *et al.*, 2021). In South Africa, over a fifth of adult women say they have ever been a victim of assault (Merten, 2017). According to recent reports, femicide in South Africa is five times greater than the global norm. Furthermore, up to 51% of South African women have suffered intimate partner abuse at some point in their lives (Statistics South Africa, 2020). The prevalence of IPV in South Africa was, and continues to be, frighteningly high. Given that the prevalence of IPV varies substantially by location, we might conclude that complex and deeply nested socio-cultural and economic factors encourage and sustain the act in distinct socio-spatial environments. On a multilayer basis, micro (individual), mezzo (family), and macro (community) level factors all have a substantial impact on IPV exposure (World Health Organization, 2013).

In the context of South Africa, there is a dearth of knowledge related to the determinants of physical violence among ever-partnered women, especially from a demography point-of-view. A few studies have been conducted around IPV looking at other factors such as psychological issues, protective issues, and mortality due to the violence (Abrahams *et al.*, 2009; Peltzer *et al.*, 2013).

Mokgatle and Menoe (2014) conducted a study on physical violence and socio-demographic factors including educational attainment and employment status. However, the study setting was in Gauteng province. Thus, very limited to account for physical violence, and other aspects of IPV in the whole of South Africa. Bonner *et al.* (2019) also conducted a study on violence which only examined the association between physical and sexual and HIV infection. With all the studies conducted there is still little knowledge on IPV among ever-partnered women. This study aims to fill the gap between intimate partner violence and ever-partnered women. In addition, what makes this study different from previous conducted studies is that the study uses multilevel logistic regression analysis.

1.2 Statement of the problem

IPV, specifically physical violence is a serious issue in South Africa. Women turns to die in the hands of their partners due to physical violence and these deaths have been at the forefront of various GBV awareness campaigns in South Africa. IPV remains high because there are certain barriers that stop women from reporting IPV (Mahlangu *et al.*, 2022). It has been reported that the following are barriers for women to report IPV, including stigma, financial hurdles, a lack of awareness of available resources, a fear of retaliation, a lack of law enforcement action, and views about violence as a normal part of life (Palermo *et al.*, 2014). As a result, there is underreporting and difficulty in exactly assessing the prevalence of IPV (Palermo *et al.*, 2014). There are varying figures on the extent of physical violence in South Africa. According to statistics, the Gauteng province has the highest prevalence of IPV, at 44.8%, followed by KwaZulu-Natal and the Eastern Cape, both of which have a prevalence of 13.3% (Mthembu *et al.*, 2021). These figures are slightly different from those published in the South Africa Demographic and Health Survey (SADHS) report. The SADHS report shows that 20.6% of ever-partnered women aged 18-49 years have experienced physical violence in their lifetime, with the highest percentage shown in Eastern Cape province, while the lowest was in KwaZulu-Natal province (National Department of Health & ICF, 2019). Based on the magnitude of the problem this study will examine factors contributing to the issue and therefore, policy makers will have an opportunity to strengthen or create more policies or regulations to eliminate the problem

1.3 Main objective of the study

The main aim of this study is to determine the determinants of physical violence among ever-partnered women in South Africa.

1.3.1 Specific objectives of the study

- To examine the prevalence of physical violence among ever-partnered women in South Africa by background individual and contextual factors.
- To investigate the individual and contextual factors associated with physical violence among ever-partnered women in South Africa.

1.4 Research questions

The study aims to answer the following research questions:

- What is the prevalence of physical violence among ever-partnered women in South Africa by background of individual and contextual factors?
- What are the associations between individual and contextual factors with physical violence among ever-partnered women in South Africa?

1.5 Significance and rationale of the study

IPV is a big and current problem in South Africa. The findings of this study will aim to raise awareness around IPV and develop educational programmes on gender equality, autonomy, and gender-based violence in relation to the achievement of goals outlined in the National Development Plan (NDP). Even though the NDP does not directly address IPV, this study will help to enhance social protection and the development of safer communities (National Planning Commission, 2021) . IPV is a social problem and should be put at the forefront of the national policy and in the NDP, so that it becomes noted in all the spheres of the government. The researcher hopes that the findings of this research will also contribute to the current debates and information surrounding Sustainable Development Goal (SDG) target 5.2; this SDG target denounces all forms of violence against women in both the private and public realms, and investigating the factors that cause violence (Yount *et al.*, 2022) . Having current information on

this important social issue will enable multiple stakeholders (such as government, civil society, and the private sector) to adopt and implement multi-sectoral methods to tackle any form of IPV.

In South Africa, several studies have been conducted around violence in relation to sociodemographic factors. However, very few studies account for physical violence and other aspects of IPV at the national level in South Africa (Pengpid & Peltzer, 2014). Other studies have looked into other aspects of gender-based violence, or a combination of different aspects of gender-based violence (i.e. a combination of emotional and sexual violence) (Mahlangu *et al.*, 2022; Wood *et al.*, 2008). Bonner *et al.* (2019) conducted a study on IPV which only examined the association between physical and sexual IPV and HIV infection, leaving out background factors from the individual level and the community level. There seems to be a deficit of quantitative studies on physical violence among women in South Africa, especially at the national level. This study aims to fill the gap on research around the determinants of physical violence among ever-partnered women in South Africa.

1.6 Definition of concepts

Intimate partner violence – refers to a wide range of types of gender-based violence, such as physical, sexual, and emotional violence, which are meant to cause harm to the intimate partner.

Physical violence – refers to the physical force perpetrated on another person. It involves a wide range of actions such as slapping, punching, etc (World Health Organization, 2013).

1.7 Organisation of the study

The mini-dissertation is divided into five chapters. The first chapter looks at the background of the study, the statement of the problem, study objectives, research questions, the significance of the study and the rationale. Chapter 2 presents the literature review, and the theoretical and conceptual framework. Moreover, chapter 3 describes the setting of the study and the methodology. Furthermore, chapter 4 is the presentation of the findings of the study. Lastly, chapter 5 is about the discussion on the findings, the conclusion, and recommendations.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents the determinants of IPV. Additionally, it presents the theoretical framework and the conceptual framework.

2.2 Literature on IPV: a brief global review

Chinese society has always been firmly patriarchal, and ideas of female inferiority and male preference are still widely held, particularly in rural regions (Li & Jiang, 2019). Home violence is still frequently seen as a personal issue that should be handled inside the family (Yuan & Hesketh, 2021). According to one study conducted in China, women are hesitant to report IPV because they lack knowledge about what is appropriate behavior, are afraid of their partners' retaliation, and feel ashamed (Hu *et al.*, 2021). Furthermore, significant risk factors to IPV were low occupational status, residence in western provinces, having an income lower than the partner's, economic pressure, and having two children or more (Yuan & Hesketh, 2021). IPV is a significant issue in Canada, where it accounts for 25% of all violent crimes recorded to the police (Jayasuriya-Illesinghe, 2018). In Canada, 69 women are typically murdered by intimate partners per year (Moffitt *et al.*, 2022).

In Namibia, more than one-third of women have reported experiencing physical or sexual abuse at the hands of an intimate partner (Bikinesi *et al.*, 2017). This violence happens to pregnant women as well as women of all ages. Between one-fourth and one-half of pregnant women experienced severe violence, and in more than 90% of cases, IPV was committed by the partner who was in charge of the pregnancy (Rose, 2016). In Uganda, women experience physical abuse from intimate partners at a rate of 45% (Nnyombi *et al.*, 2022). In addition, severe intimate partner violence is more likely to be reported by low-income women than by high-income women. Women with primary school education are more likely to experience violence than those who had higher education. According to a study by Nnyombi *et al.* (2022), intimate partner violence in Uganda is connected with norms, some people who had ever been married or in a committed relationship thought that assaulting the wife physically was a sign of the husband's affection and devotion for her.

In Ethiopia, 59% and 42%, respectively, of women experienced physical and sexual abuse at the hands of intimate partners (Angaw *et al.*, 2021). Moreover, IPV is intimately linked to poor women's education and women's empowerment (Angaw *et al.*, 2021). Intimate partner violence against women is a serious issue in Pakistan, and it's linked to a frightening array of mental health problems (Ali *et al.*, 2021). In Pakistan, there is a severe absence of mental health education and a high level of acceptance of violence against women (Amir-ud-Din *et al.*, 2021). Most women work in low-paying positions that sustain them financially but do not grant them social or economic independence, forcing them to balance conflicting responsibilities at work and at home (Ali *et al.*, 2021).

IPV is also a result of cultural norms, weak community protections against partner abuse, and political-religious pressures that uphold patriarchy and gender dominance (Nadeem & Malik, 2021). In Bangladesh, rural dwellers and women from lower socioeconomic classes who face additional difficulties, low levels of education, and other risks are more vulnerable than their urban counterparts (Hossain *et al.*, 2022). A study in Nepal found a correlation between IPV and female illiteracy, low socioeconomic position, violent family history, and a lack of decision-making autonomy (Atteraya *et al.*, 2015). Considering the husband's history, whether or not he was an alcoholic, his level of education, and having more kids were risk factors for IPV (Atteraya *et al.*, 2015).

2.3 Determinants of intimate partner violence

2.3.1 Age

Women aged 25-64 are more exposed to IPV than women younger or older than this age group (National Department of Health & ICF, 2019). In a study conducted by Angaw *et al.* (2021) older women experienced IPV more than women aged less than 20 years. Again, a study of a non-clinical sample of young women stated that, of women aged 13 to 23, 42% of them had been physically abused by their intimate partners (Makongoza & Nduna, 2021). On the other hand, (Chernet & Cherie, 2020) found that IPV is more likely to affect women between the ages of 25 and 39 than those between the ages of 15 and 19. Furthermore, when compared to older women, women aged 15 to 19 are less likely to have experienced physical abuse (Ahinkorah *et al.*, 2018). Similar results were found in Nepal, where younger women (15–19) are less likely than older women to report ever having suffered physical abuse (Warren, 2015).

2.3.2 Educational status

Wang *et al.* (2019) affirmed that respondents with lower educational attainment are more accepting of IPV, whereas those with higher educational attainment are not. In addition, (Tran *et al.*, 2016) stated that poorly-educated women are most likely to justify IPV. Kreager *et al.* (2013) also affirmed that lower education attainment is a risk factor for IPV. This demonstrates that education is one of the most important determinants of IPV acceptance. Women who are protected from partner abuse are those who are more educated, as are women who are also economically stable and socially empowered (Désilets, 2019). However, research on the relationship between education and IPV have shown contradictory results. According to certain study, women who have more education than their spouses are more likely to be aggressive, whereas those who have less education than their partners are more likely to be violent (Waltermaurer *et al.*, 2013).

2.3.3 Employment status

The fact that some women work may be a threat to men, because it gives women economic independence from their male spouses. Tenkorang (2018) stated that by limiting women's economic autonomy, males increase the likelihood that their spouses will remain dependent on them, allowing them to exert control over their partners' behaviour inside the relationship. Unemployment has been associated with an increase in the risk of IPV in numerous Latin American nations, including Brazil (Esquivel-Santoveña *et al.*, 2013). The association between women's paid employment and experience of abuse of women is also influenced by the type of work they are involved in (Vyas *et al.*, 2015). Women who work in irregular, low-paying, and low-quality jobs are more likely to encounter abuse, whereas women in better-paying, higher-quality employment are less likely to experience it because they have more means and options to oppose it (Sanders, 2015). Violence towards women is intensified when employed, because when women gain more power, they become more resistant to patriarchal standards, and gain access to financial resources that can help them escape abusive relationships (Biswas, 2017; Terrazas-Carrillo & McWhirter, 2015).

2.3.4 Witness to inter-parental violence

Men's opinions are similarly shaped by parental IPV, increasing their likelihood of perpetrating IPV. According to a Pakistan study, women who reported that their mothers had been beaten by their fathers were more likely than those who had not been exposed to familial IPV to believe that

violence is justifiable if a woman opposes her husband (Kanwal Aslam *et al.*, 2015). Women who said that their mothers were abused by their partners were around 39%, and those women were more exposed to violence committed by their own husbands. Those who said that their mothers did not suffer such abuse were around 18%, and were expected to experience less physical violence by their partners compared to their counterparts (National Department of Health & ICF, 2019).

A risk factor for physical violence in Turkey was seeing one's mother endure physical abuse from their partner (Yuksel-Kaptanoglu & Adali, 2021). Findings by Afe *et al.* (2016) indicated that physical violence is more likely to occur when a woman had witnessed parental abuse in the past. The long-term effects of witnessing a violent assault as a child have been linked to issues of interpersonal interaction (Tu & Lou, 2017). Children's exposure to parental IPV puts them at risk for psychiatric problems and a lack of resilience to psychological trauma, which can lead to violent arguments in intimate relationships (Jabbi *et al.*, 2020). Women who witnessed inter-parental violence as children had a higher risk of experiencing IPV as adults (Tiruye *et al.*, 2020). According to Tiruye *et al.* (2020), women who experience violence early in life develop attitudes of acceptance and a normative interpretation of violence.

2.3.5 Household wealth

According to a study done in Ethiopia, women who fall into the rich and middle-class wealth groups are respectively 31.2% and 30.7% less likely to encounter IPV than women who fall into the poor wealth category (34.5%) (Chernet & Cherie, 2020). IPV is correlated with wealth. Compared to their counterparts in poor households, women who belonged to the rich households reported physical IPV less frequently. A study linked wealth to a woman's autonomy, which lowers her risk of IPV (Madden *et al.*, 2016). Due to rules limiting woman's behaviour in the home and greater community as well as rising normative shifts in gender relations, women in the richest quartile of households have more control over resources and decision-making authority. Men's attitudes and behaviour regarding issues pertaining to women's empowerment may shift in line with these advancements, leading to a decrease in violence. According to the evidence, increasing household wealth reduces the likelihood of IPV (Adebowale, 2018).

2.3.6 Women's decision-making autonomy

According to Ahinkorah *et al.* (2018), engagement in household decision-making increases the possibility of physical violence. Ahinkorah *et al.* (2018) states that women with decision-making capacity are more likely to face physical violence than those without decision-making competence. A study conducted by Cools and Kotsadam (2017) confirms the positive relationship between women's decision-making capacity and physical violence. Women in Nepal who could refuse sex with their husband, or request that he use a condom, had nearly half the rate of IPV victimization as their counterparts who could not (Koustuv *et al.*, 2014). According to a study conducted in Nigeria, women's sexual decision-making autonomy, which includes the freedom to ask for a condom during sex, and to refuse intercourse, is linked with a higher risk of women encountering IPV (Sunmola *et al.*, 2021). Women's sexual autonomy is inversely related to IPV exposure.

2.3.7 Partner's drinking habits

It has been established that alcohol misuse is a risk factor for IPV (Wagman *et al.*, 2018). According to Kiss *et al.* (2015), the majority of men who admitted to drinking also admitted to committing IPV. Men who abuse alcohol when they are angry have exploited the combined energy and emotions of rage and alcohol to commit acts of violence (Sprunger *et al.*, 2015). IPV increased in direct proportion to the amount of alcohol consumed by the husband. This outcome is consistent with research done in Gambia, Ethiopia, Ghana, and Malawi (Chilanga *et al.*, 2020; Jabbi *et al.*, 2020; Lencha *et al.*, 2019; Ogum Alangea *et al.*, 2018) The effect of alcohol on cognitive abilities, producing reduced self-control, decreased inhibitions, and heightened patriarchal ideas, thereby triggering dominating toxic masculinities, could be one explanation. Excessive drinking can also increase financial troubles, children's issues, and other family stressors. This can increase the likelihood of violence by causing marital strain and conflict (Bengesai & Khan, 2021).

2.3.8 Educational difference

Research from Saudi Arabia and Egypt indicates that a lower education level of the spouses has an impact on violence (Alzahrani *et al.*, 2016; Yaya & Ghose, 2019). The level of education of the husband has a considerable impact on physical violence, which may be related to the idea that

a higher level of education would increase the husband's capacity for amicable conflict resolution. Education is crucial for enhancing partner communication (Gautam & Jeong, 2019).

Masa'Deh *et al.* (2022) also stated that the husband's education level is a strong predictor of physical violence, and a lower level of the partners' education is a high risk for physical violence. Very educated partners may be more exposed to instruction and information, which has led them to believe in and value the need to respect their partners' rights and freedoms. Additionally, the education women receive encourages them to reject some social norms that limit women's value (Jabbi *et al.*, 2020). The findings of the research by (Tiruye *et al.*, 2020) demonstrate that the education of neither the women nor their spouses had a significant impact on IPV. However, the study did discover that women with the same or a lower degree of education than their spouses had a lower risk of IPV.

2.3.9 Place of residence

Women, particularly in urban slums, are the most vulnerable to physical violence (Chant, 2013). In a variety of countries, women in rural areas are more likely than women in urban areas to believe that their husbands are justified in beating or slapping their wives (McIlwaine, 2013). According to a study conducted by Chernet and Cherie (2020), place of residence is a significant predictor for physical violence. IPV is less likely to affect urban women than rural women. This high rate of IPV on rural women could be attributed to cultural perceptions, or a lack of knowledge or information in rural societies, where beating, insulting, and other forms of abuse are seen as a way of moulding a wife's behaviour (Chernet & Cherie, 2020). Other studies, such as one conducted in Nigeria (Benebo *et al.*, 2018), found that rural women were more likely to be a victim of IPV. However, Edwards (2015) discovered no substantial variation in IPV between rural and urban women.

2.4 Theoretical framework

Social Ecological Model (SEM)

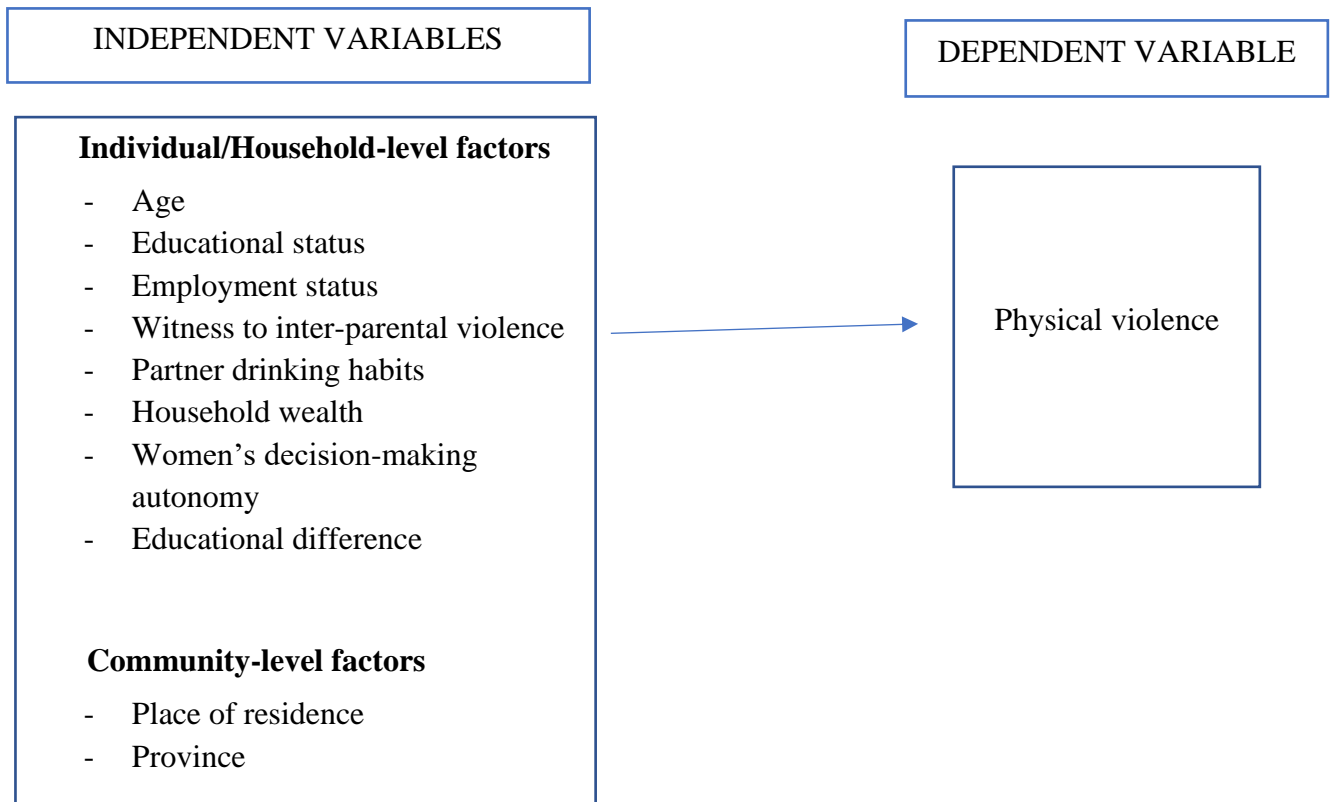
The research is based on the Social Ecological Model, which helps researchers understand the impact of a variety of factors (individual, relationship, community, and society) on negative behavioural outcomes such as IPV (Shinwari *et al.*, 2022; Tekkas Kerman & Betrus, 2020). The Model states that the individual/household level consists of factors that increase an individual's

risk of being a victim or perpetrator of violence, and the variables that are usually used are age, level of education, employment status, substance use, etc. (Contreras-Urbina *et al.*, 2016) . The community level is the settings in which social relationships occur, and the variables used are employment opportunities, economic status of women etc (World Health Organization, 2012). Lastly the societal level looks at the laws and statutes (national, provincial, and local government) that allow or discourage abusive behaviour towards women are addressed (Ungar *et al.*, 2013). In this study this theory will be applied as an analytical framework to guide the multilevel logistic regression analysis.

2.5 Conceptual framework

IPV results from a combination of multiple influences. The study will use the SEM model as it allows the researcher to relate IPV to multiple influences. As inspired by this Social Ecological Model, the study will adopt two levels from the Model. The study will consider the individual/household (combined), and the community factors. The individual/household factors are age, educational status, employment status, witness to inter-parental violence, partner drinks alcohol, household wealth index, women's decision making, and educational difference. The community factors include place of residence and province.

Figure 2.1: Conceptual framework showing the relationship between physical violence and various factors



CHAPTER 3: METHODOLOGY

3.1 Study setting

This study was conducted in South Africa. According to Statistics South Africa, the mid-year population for 2021 is estimated at 58,8 million (Statistics South Africa, 2021). The country comprises of a greater Black South African population, with approximately 81%, followed by the coloured population (8.8%), white population (7.9%) and lastly Indian/Asian, with 2.6%. On that note the country's population growth rate increased from 1.0% to 1.4% between 2002 and 2019 (Statistics South Africa, 2021). Over 30 million of the population are females. Life expectancy of females ranges from 61.3 in the Free State to 71.1 years in the Western Cape. For males, it is lowest in the Free State at 54.6 and highest in the Western Cape at 65.7 years (Statistics South Africa, 2021).

3.2 Research design

This study's research design is a descriptive research design. A descriptive research design is a study that addresses the following questions: what, who, where, how, and when (Erickson, 2017). This research methodology is frequently used to understand health factors, describe demographic characteristics, and determine the prevalence of health outcomes (Wang & Cheng, 2020). The study follows a cross-sectional study design; a total of 8 720 women aged 18 and older were chosen. The focus, however, is on 4 169 ever-partnered women aged 18-49 years (Alexander *et al.*, 2015). This research design is suitable for this study because it helps the researcher to characterize the prevalence of physical violence within a specified population.

3.3 Data source

This study will use secondary data obtained from the SADHS which was collected in 2016. The SADHS used the census 2011 Master Sample Frame (MSF) to select the sampled areas (National Department of Health & ICF, 2019). The data was collected using a two-stage stratified sampling approach (National Department of Health & ICF, 2019). In the first stage, probability proportional to size sampling (PPS) of primary sampling units (PSUs) was completed, and in the second stage, the systematic sampling of dwelling units (DUs) was completed (National Department of Health & ICF, 2019). Overall, the response rate in the SADHS was 83% (National Department of Health & ICF, 2019).

3.4 Study population and inclusion and exclusion criteria

3.4.1 Study population

This study focuses on ever-partnered women aged 18-49 years. There were 4169 ever-partnered women who fit this criterion in the SADHS.

3.4.2 Study inclusion and exclusion criteria

This study excludes all women who do not fall within the age range of 18-49 years. In this study, only women who responded to the domestic violence module were taken into consideration.

3.5 Description of study variables

Dependent variable

The dependent variable for the study is physical violence. This variable is created from five variables asking questions on (i) “ever been pushed, shook or had something thrown by husband/partner,” (ii) “ever been kicked or dragged by husband/partner,” (iii) “ever been strangled or burnt by husband/partner,” (iv) “ever been threatened with knife/gun or other weapon by husband/partner,” and (v) “previous husband: ever hit, slap, kick or physically hurt respondent”. Women who responded with ‘often’, ‘sometimes’, ‘yes, but not in the last 12 months’, or ‘yes, but frequency in last 12 months missing’ to any of the five variables was coded as 1=Yes, or 0=No otherwise. The dependent variable was created from variables labelled d105a, d105d, d105e, d105f, and d130a in the women’s dataset.

Independent variables

The independent variables selected for this study were age, educational status, employment status, witness to inter-parental violence, partner drinks alcohol, household wealth index, women’s decision-making autonomy, education difference, place of residence, and province.

Table 3.1: Description of the independent variables

Independent variable	Description	Coding
<i>Individual/household-level factors</i>		
Age group	Age of respondent	1= 18-19 2= 20-24 3= 25-29 4= 30-39 5= 40-49
Educational status	Highest level of education attained by the respondent	0=No education 1=Primary 2=Secondary+
Employment status	Current employment status of the respondent	0=Unemployed 1=Employed
Witness to inter-parental violence	Respondents were asked whether or not they ever witnessed their father beat their mother	0=No/DNK 1=Yes
Partners' drinking habits	Respondents were asked whether or not their partners drank alcohol	0=Does not drink 1=Drinks, never drunk 2=Drinks, sometimes drunk 3=Drinks, often drunk 8=DNK
Household wealth	Household socioeconomic status	1=Poor 2=Average 3=Rich
Women's making-decision autonomy	Respondent were asked if they make their own decisions in certain instances	0= No 1=Yes
Educational difference	Education difference between the respondents and their partners	1=Partner better educated 2=Respondent better educated 3=Partner and respondent equally educated 4=Neither educated/cannot be determined
<i>Community-level factors</i>		
Place of residence	Respondent's place of residence	1=Urban 2=Rural
Province	Respondent's province of residence	1=Western Cape 2=Eastern Cape 3=Northern Cape 4=Free State 5=KwaZulu-Natal 6=North West 7=Gauteng 8=Mpumalanga 9=Limpopo

3.6 Method of analysis

This study used Stata version 14 software package for analysis. Univariate, bivariate and multivariate analyses were used in this study. Firstly, univariate analysis was used to describe the study participants. Secondly, bivariate analysis, with a chi-square test (χ^2), was used to test the association between the dependent and independent variables. Lastly, multivariate analysis, based on multilevel logistic regression approach, was used to measure the relationship between the multilevel factors and physical violence. The dissemination of results will be mainly through publishing at least one academic paper based on this study.

Multivariate multilevel logistic regression

The study used multilevel methods of analysis to take into consideration the dichotomous nature of the dependent variable and the hierarchical structure of the data from the Demographic and Health Survey. In this study, a two-tiered model was used, with level 1 individuals/households nested within level 2 communities (level 2). While the level 2 model investigates the impact of community-level factors on physical violence among ever-partnered women, the level 1 model studies the relationships between individual/household-level variables and physical violence among women. The likelihood that an intimate partner will ever physically harm you can be approximated as follows:

$$\text{Log} \left[\frac{\pi_{ij}}{1 - \pi_{ij}} \right] = \beta_0 + \beta_1 X_{ij} + \beta_2 Z_{ij} + \ddot{E}_j + e_{ij}$$

In this equation, i stands for the individual unit and j for the community units. The possibility that the i th woman in the j th neighbourhood may ever experience physical violence is represented by π_{ij} . The probability of avoiding physical violence is represented by $[1 - \pi_{ij}]$. Individual and community-level factors are denoted respectively, by the letters X and Z . In the absence of the independent variables, the influence on the likelihood of ever encountering physical violence is shown by the intercept (β_0). The fixed coefficients are shown in β 's. The community's j th likelihood of ever encountering physical violence is shown in π_j . The individual-level random errors are indicated by the notation e_{ij} . In this study, four models were fitted. The null model, or model 0, was developed to examine community variability without including a research variable. For the individual/household-level factors, Model 1 was modified. For factors at the community level, Model 2 was modified. Model 3 was modified to account for factors at the individual/household and community levels.

The level of homogeneity within units like families or communities must be assessed using the ICC. An ICC near to zero indicates that individual and community-level factors have little impact on physical violence, while a large ICC suggests that household and community factors are significant in understanding physical violence (López *et al.*, 2017). A sign of outstanding or great reliability is sometimes considered to be an ICC rating above 0.8 or 0.9 (Koo & Li, 2016).

$$ICC = \frac{V_a}{V_a + \frac{\pi^2}{3}}$$

The median odds ratio (MOR) is defined as the median value of the odds ratios between the areas with the highest and lowest risk when two areas are randomly selected, and it is directly proportional to the area-level variation (Tenny & Hoffman, 2017). An MOR greater than one indicates that the odds of exposure are connected with the adverse result, as compared to the odds of not being exposed. An MOR of 1 indicates that the odds of exposure are inversely related to the probability of undesirable outcomes when compared to the odds of not being exposed. Basically, the precision of the OR is estimated by the 95% CI (Kalra & Paddock, 2016). If the 95% CI does not overlap the null value, it is frequently used as a proxy for the presence of statistical significance (e.g., OR = 1). The MOR can be calculated using the following formula:

$$MOR = (\exp\sqrt{2 \times V_a \times 0.6745}) \approx \exp(0.95 \sqrt{V_a})$$

On the PCV, V_{n-1} is the community variance in the empty model, while V_{n-2} is the community variance in models that include individual or community characteristics.

$$PCV = \frac{V_{n-1} - V_{n-2}}{V_{n-1}}$$

The results shows that there is collinearity between the variables, with the minimum VIF and maximum VIF being less than 10. There was a minimum VIF of 1.02, and maximum VIF was 1.49; the mean VIF was 1.23.

3.7 Limitations

The study has some limitations. It is possible that IPV survivors may under-report their IPV experiences due to fear or stigma. Respondents may be hesitant to disclose their true experience of IPV since domestic violence is a sensitive problem with a societal stigma associated with it; consequently, there may be some social desirability bias or reporting bias. Again, the cross-

sectional nature of this research limits the application of causal inferences (e.g., one cannot claim that alcohol consumption causes physical violence but can only state a statistical relationship between the two variables).

3.8 Ethical considerations

The study used secondary data, which the researcher applied for and was granted permission by DHS Programme to use for the purposes of this study. The SADHS received ethical clearance from the South African Medical Research Council (EC008-2/2015) before the survey was conducted. In this study, the researcher will not have any contact with the participants. As such, the research team does not foresee any ethical implications that may rise from this study in relation to harm to participants. We are, however, aware that due to the sensitive nature of this topic, the findings of this study may invoke some past experiences in some readers once the findings are disseminated, especially in women who have been abused in the past. But we feel that this is a valuable topic that speaks to current issues around domestic abuse in the country, and hopefully, this will open up many debates that will steer conversations around ways of abolishing domestic violence. Respondent information was kept private, because the data was anonymized at the collection stage, and no personal names or other identifiers were obtained. Nevertheless, the researcher applied for ethical clearance from the North-West University and was granted ethical clearance before proceeding with this study (ethics number: NWU-01019-22-A7).

CHAPTER 4: DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter presents analysis of the determinants of physical violence among ever-partnered women in South Africa using the 2016 SADHS (South Africa Demographic Health Survey) dataset. The first section of the chapter presents the results of univariate analysis. Then the second part, which is the bivariate analysis, shows the relationship between physical violence and the independent variables. The last part presents the results of the binary logistic regression.

4.2 Characteristics of the study population

Table 4.1 presents the descriptive analysis of the study participants. The findings showed that the majority (32.2%) of participants were aged 30-39, followed by those aged 40-49 (23.1%). Regarding education, 8.7% had primary education, those with no education were 2.1%, and most respondents had secondary education (89.1%). The majority (58.9%) of the women were unemployed and only 41.1% of the women were employed. The findings showed that 85.5% of the women had not witnessed inter-parental violence, and 14.5% of the women stated that they had witnessed inter-parental violence. About the partners' drinking habits, most partners (56.4%) were reported not to be drinking. Partners who drink and were sometimes drunk were 34.9%, followed by those who drink and are often drunk (7.5%), then those who drink and are never drunk (1.1%). Lastly, 0.2% reported that they did not know whether their partner drinks. Most (39.9%) of the women were from poor households, followed by 38.9% from rich households; and the lowest percentage was those who were from the average wealth households, at 21.3%. Findings show that women who could not make their own decisions had the highest share, (61.9%), and women who made their own decisions were 38.1%.

Furthermore, regarding educational difference, findings showed that 71.1% of the partners were better educated. Respondents who were better educated were 14.8%, followed by partners and respondents who were equally educated (13.2%). The least category was that where neither respondent nor partner is educated (0.9%). Place of residence shows that 67.9% of women reported they were residing in urban areas, and 32.1% in rural areas. Most of the respondents were from Gauteng (28.3%), followed by women from KwaZulu-Natal (18.0%) then Western Cape and Eastern Cape province, equally at 10.8%. Respondents from Limpopo were 9.27% followed

by Mpumalanga (8.4%), and the North West with 7.1%. Respondents from the Free State were 5.3%, and the province with the least respondents was Northern Cape (2.0%).

Table 4.1: Background characteristics of the study by participants

Characteristics	Number	Percent
<i>Individual/household-level factors</i>		
<i>Age</i>		
18-19	236	5.7
20-24	805	19.3
25-29	831	19.9
30-39	1336	32.0
40-49	962	23.1
<i>Educational status</i>		
No education	89	2.1
Primary	364	8.7
Secondary+	3716	89.1
<i>Employment status</i>		
Not employed	2457	58.9
Employed	1712	41.1
<i>Witness to inter-parental violence</i>		
No/DNK	3566	85.5
Yes	603	14.5
<i>Partner's drinking habits</i>		
Does not drink	2350	56.4
Drinks, never drunk	44	1.1
Drinks, sometimes drunk	1454	34.9
Drinks, often drunk	311	7.5
DNK	10	0.2
<i>Household wealth</i>		
Poor	1662	39.9
Average	887	21.3
Rich	1620	38.9
<i>Decision-making autonomy</i>		
No	2580	61.9
Yes	1589	38.1
<i>Education difference</i>		
Partner is better educated	2963	71.1
Respondent is better educated	615	14.8
Partner and respondent are equally educated	552	13.2
Neither educated/Cannot be determined	39	0.9
<i>Community level factors</i>		
<i>Place of residence</i>		
Urban	2831	67.9
Rural	1338	32.1
<i>Province</i>		
Western Cape	452	10.8
Eastern Cape	450	10.8
Northern Cape	83	2.0
Free State	223	5.3
KwaZulu-Natal	750	18.0

Characteristics	Number	Percent
North West	297	7.1
Gauteng	1179	28.3
Mpumalanga	350	8.4
Limpopo	385	9.2
Total	4169	100.0

4.3 Prevalence of physical violence among ever-partnered women

Figure 4.1 presents the percentage distribution of physical violence among ever-partnered women. 79.4% of women reported that they did not experience physical violence, and 20.6% reported that they had experienced physical partner violence.

Figure 4.1: Percentage distribution of ever-partnered women experiencing physical violence

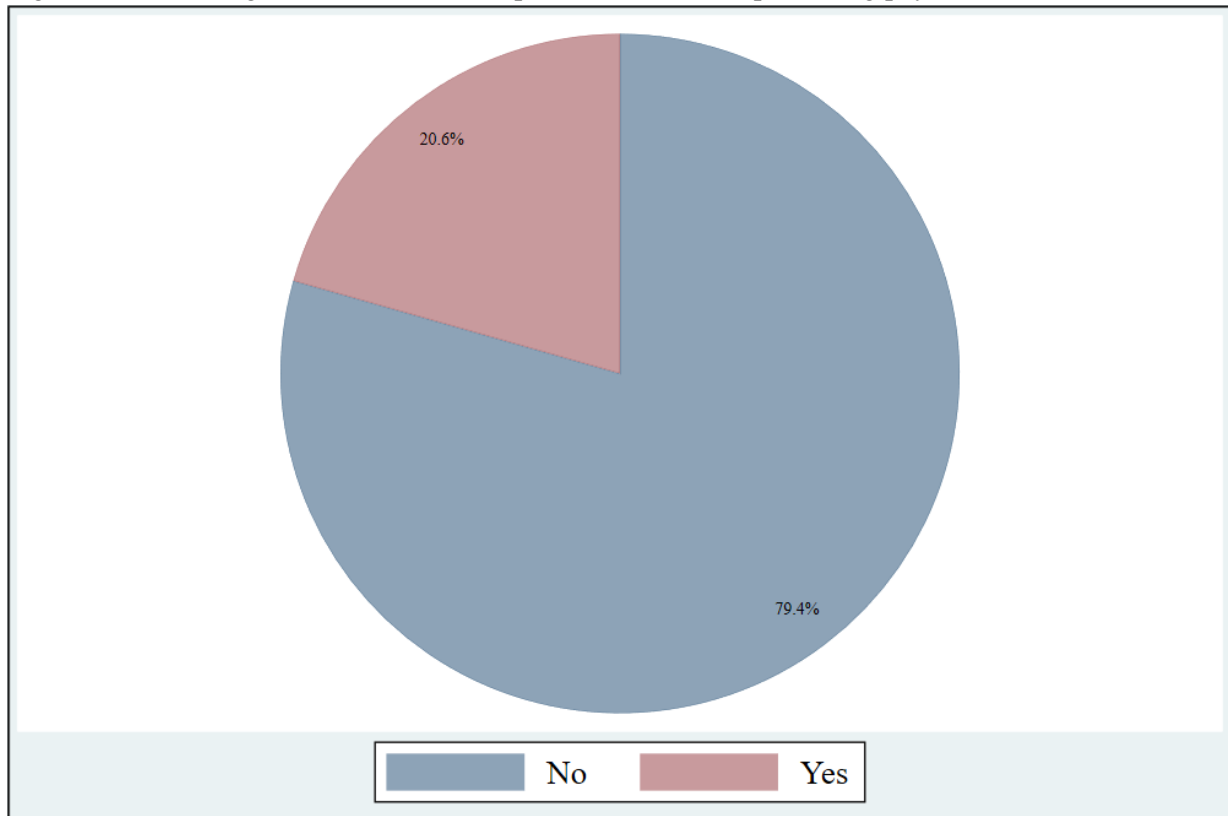


Table 4.2 shows the prevalence of experiencing physical violence among women by explanatory factors. The findings show that educational status, employment status, witness to inter-parental violence, partner's drinking habits, household wealth, education difference, and province, were factors that were significantly associated with physical violence ($p < 0.05$). Based on the results, physical violence was more prevalent among women aged 30-39 (22.2%), followed by those aged

25-29 (21.6%). The prevalence of physical violence was lower among women below the age of 25. Regarding educational status, women who had attained primary education had a higher prevalence (30.8%) of physical violence. Moreover, the findings showed that there was a higher prevalence of physical violence among women who were employed (22.1%). Women who witnessed inter-parental violence had a higher prevalence of physical violence (41.2%). Physical violence increased with partner's drinking habits. Women who reported that their partner drinks alcohol and is often drunk had a higher prevalence of physical violence.

The experience of physical violence by women decreased with household wealth. The results show that more women from a poor household (23.8%) experienced physical violence compared to women from a rich household (17.4%). In addition, physical violence also decreased with decision-making autonomy. More (21.3%) women who could not decide for themselves reported physical violence than women who were able to make their own decisions (19.5%). Physical violence was more prevalent among women who were better educated (23.8%) than their partners, followed by women whose partners were better educated (20.9%). Those where neither was educated or which cannot be determined were 17.2%, and the lowest category to experience physical violence were those who were equally educated with their partners (15.4%). There was a higher prevalence among women from rural areas (21.1%) and a lower prevalence of physical violence among women from urban areas (20.3%). Women from the Eastern Cape province had a higher prevalence of physical violence (33.7%), followed by those from North West province (29.5%), and Mpumalanga province (27.2%). The prevalence of physical violence was lower than 20% in Limpopo, Gauteng, and KwaZulu-Natal.

Table 4.2: Prevalence of experiencing physical violence by explanatory factors among women

Variable	Experienced physical violence				Chi-square	
	No		Yes		Value	P-value
	%	CI	%	CI		
<i>Individual/household-level factors</i>						
<i>Age</i>					9.0	0.062
18-19	81.5	[72.8-87.9]	18.5	[12.1-27.2]		
20-24	82.7	[79.0-85.8]	17.3	[14.2-21.0]		
25-29	78.4	[74.2-82.1]	21.6	[17.9-25.8]		
30-39	77.8	[74.5-80.7]	22.2	[19.3-25.5]		
40-49	79.2	[75.4-82.7]	20.8	[17.3-24.6]		
<i>Educational status</i>					22.2	0.000
No education	80.4	[69.4-88.1]	19.6	[11.9-30.6]		
Primary	69.2	[62.7-75.1]	30.8	[24.9-37.3]		
Secondary+	80.4	[78.2-82.4]	19.6	[17.6-21.8]		

Variable	Experienced physical violence				Chi-square	
	No		Yes		Value	P-value
	%	CI	%	CI		
<i>Employment status</i>					5.7	0.017
Not employed	80.4	[78.2-82.5]	19.6	[17.5-21.8]		
Employed	77.9	[74.4-81.0]	22.1	[19.0-25.6]		
<i>Witness to inter-parental violence</i>					149.8	0.000
No/DNK	82.9	[81.0-84.6]	17.1	[15.4-19.0]		
Yes	58.8	[52.7-64.6]	41.2	[35.4-47.3]		
<i>Partner's drinking habits</i>					232.7	0.000
Does not drink	86.3	[84.1-88.2]	13.7	[11.8-15.9]		
Drinks, never drunk	82.7	[64.0-92.8]	17.3	[7.2-36.0]		
Drinks, sometimes drunk	74.3	[71.0-77.4]	25.7	[22.6-29.0]		
Drinks, often drunk	50.2	[42.2-58.2]	49.8	[41.8-57.8]		
DNK	91.8	[68.4-98.3]	8.2	[1.7-31.6]		
<i>Household wealth</i>					23.0	0.000
Poor	76.2	[73.2-79.0]	23.8	[21.0-26.8]		
Average	79.5	[75.5-83.1]	20.5	[16.9-24.5]		
Rich	82.6	[79.5-85.3]	17.4	[14.7-20.5]		
<i>Decision-making autonomy</i>					1.4	0.236
No	78.7	[76.2-81.0]	21.3	[19.0-23.8]		
Yes	80.5	[77.8-82.9]	19.5	[17.1-22.2]		
<i>Education difference</i>					11.5	0.009
Partner is better educated	79.1	[76.8-81.2]	20.9	[18.8-23.2]		
Respondent is better educated	76.2	[71.5-80.4]	23.8	[19.6-28.5]		
Partner and respondent are equally educated	84.6	[79.7-88.5]	15.4	[11.5-20.3]		
Neither educated/Cannot be determined	82.8	[63.4-93.1]	17.2	[6.9-36.6]		
<i>Community level factors</i>						
<i>Place of residence</i>					0.3	0.558
Urban	79.7	[77.1-82.0]	20.3	[18.0-22.9]		
Rural	78.9	[75.4-81.9]	21.1	[18.1-24.6]		
<i>Province</i>					105.3	0.000
Western Cape	75.6	[69.4-80.9]	24.4	[19.1-30.6]		
Eastern Cape	66.3	[61.2-71.0]	33.7	[29.0-38.8]		
Northern Cape	78.8	[73.2-83.5]	21.2	[16.5-26.8]		
Free State	78.0	[72.8-82.5]	22.0	[17.5-27.2]		
KwaZulu-Natal	84.8	[80.8-88.1]	15.2	[11.9-19.2]		
North West	70.5	[61.6-78.1]	29.5	[21.9-38.4]		
Gauteng	85.0	[80.0-89.0]	15.0	[11.0-20.0]		
Mpumalanga	72.8	[68.2-77.0]	27.2	[23.0-31.8]		
Limpopo	85.2	[80.8-88.7]	14.8	[11.3-19.2]		
Total	79.4	[77.4-81.3]	20.6	[18.7-22.6]		

Note: CI = confidence interval; DNK =Do not know

4.4 Multilevel determinants of physical violence among ever-partnered women

Table 4.3 presents the multilevel logistic regression results for the determinants of physical violence among ever-partnered women in South Africa. The findings show that women aged 25-29 years were 1.30 [0.69-1.73] times more likely to experience physical violence compared to those aged 40-49. In addition, women between ages 30-39 were 1.30 [1.05-1.61] times more likely

to experience physical violence than those aged 40-49. In terms of educational status, women who attained secondary education were 0.72 [0.56-0.94] less likely to experience physical violence than those with primary education. Women who were employed were 1.21 [1.02-1.44] times more likely to experience physical violence than women who are not employed. Additionally, women who have ever witnessed inter-parental violence were 2.74 [2.24-3.37] times more likely to experience physical violence than women who have never witnessed inter-parental violence.

The findings further show that women whose partners do not drink alcohol were 0.52 [0.44-0.62] times less likely to experience physical violence compared to those whose partners drink and were sometimes drunk. Moreover, those whose partners drink and are often drunk were 2.60 [1.99-3.39] times more likely to experience physical violence than those whose partners drink but were only sometimes drunk. Moreover, the findings showed that experiencing physical violence decreased with household wealth status. Women from average-wealth households were 0.75 [0.6-0.93] times less likely to experience physical violence than those from poor households. Furthermore, women from rich households were 0.55 [0.43-0.69] times less likely to experience physical violence compared to women from poor households. Moreover, women who were equally educated as their partners were 0.68 [0.5-0.93] times less likely to experience physical violence than women who were better educated than their partners.

Furthermore, women from urban areas were 1.42 [1.14-1.78] times more likely to experience physical violence than women from rural areas. In terms of province, women who resided in Western Cape were 1.88 [1.23-2.8] times more likely to experience physical violence than those who resided in Gauteng. Women who resided in Eastern Cape were 2.71 [1.84-3.98] times more likely to experience physical violence compared to women from Gauteng. Moreover, those who resided in Free State were 1.86 [1.25-2.79] times more likely to experience physical violence than women who are from Gauteng. Women from North West were 1.79 [1.19-2.69] times more likely to experience physical violence than women from Gauteng. Furthermore, women from Mpumalanga were 2.54 [1.72-3.74] times more likely to also experience physical violence compared to women who resided in Gauteng.

Table 4.3: Multilevel logistic regression results for the determinants of physical violence among ever-partnered women in South Africa

Characteristics	Model 1		Model 2		Model 3	
	AOR	95% CI	AOR	95% CI	AOR	95% CI
<i>Individual/household-level factors</i>						
<i>Age</i>						
18-19	1.12	[0.71-1.77]			1.09	[0.69-1.73]
20-24	1.00	[0.76-1.33]			1.00	[0.75-1.32]
25-29	1.31	[1.01-1.69]			1.30*	[1.01-1.68]
30-39	1.28	[1.03-1.6]			1.30*	[1.05-1.61]
40-49 [®]	1.00				1.00	
<i>Educational status</i>						
No education	0.61	[0.33-1.12]			0.61	[0.33-1.12]
Primary [®]	1.00				1.00	
Secondary+	0.70	[0.54-0.91]			0.72*	[0.56-0.94]
<i>Employment status</i>						
Not employed [®]	1.00				1.00	
Employed	1.21	[1.02-1.44]			1.21*	[1.02-1.44]
<i>Witness to inter-parental violence</i>						
No/DNK [®]	1.00				1.00	
Yes	2.93	[2.38-3.59]			2.74***	[2.24-3.37]
<i>Partner's drinking habits</i>						
Does not drink	0.49	[0.41-0.59]			0.52***	[0.44-0.62]
Drinks, never drunk	0.79	[0.33-1.89]			0.72	[0.3-1.73]
Drinks, sometimes drunk [®]	1.00				1.00	
Drinks, often drunk	2.63	[2.01-3.45]			2.60***	[1.99-3.39]
DNK	0.47	[0.09-2.4]			0.50	[0.1-2.57]
<i>Household wealth</i>						
Poor [®]	1.00				1.00	
Average	0.81	[0.66-1]			0.75**	[0.6-0.93]
Rich	0.63	[0.51-0.78]			0.55***	[0.43-0.69]
<i>Decision-making autonomy</i>						
No [®]	1.00				1.00	
Yes	1.04	[0.84-1.29]			1.03	[0.84-1.28]
<i>Education difference</i>						
Partner is better educated	0.92	[0.71-1.18]			0.93	[0.72-1.2]
Respondent is better educated [®]	1.00				1.00	
Partner and responded are equally educated	0.68	[0.5-0.92]			0.68*	[0.5-0.93]
Neither educated/Cannot be determined	0.70	[0.25-1.97]			0.69	[0.24-1.94]
<i>Community level factors</i>						
<i>Place of residence</i>						
Urban			1.08	[0.89-1.33]	1.42*	[1.14-1.78]
Rural [®]			1.00		1.00	
<i>Province</i>						
Western Cape			1.78	[1.17-2.7]	1.88*	[1.23-2.87]
Eastern Cape			3.35	[2.29-4.9]	2.71***	[1.84-3.98]
Northern Cape			1.60	[1.05-2.42]	1.51	[0.99-2.31]
Free State			1.89	[1.27-2.82]	1.86*	[1.25-2.79]
KwaZulu-Natal			1.19	[0.8-1.78]	1.27	[0.85-1.91]
North West			2.18	[1.46-3.26]	1.79***	[1.19-2.69]
Gauteng [®]			1.00		1.00	
Mpumalanga			2.73	[1.86-4.02]	2.54***	[1.72-3.74]

Characteristics	Model 1		Model 2		Model 3	
	AOR	95% CI	AOR	95% CI	AOR	95% CI
Limpopo			1.10	[0.72-1.67]	1.32	[0.86-2.03]

Note: * = p<0.05; ** = p<0.01; *** = p<0.001; ® = reference category; AOR = adjusted odds ratio; CI = confidence interval; DNK =Do not know

Table 4.4 presents the random effects and model fit statistics for physical violence among ever-partnered women in South Africa. The empty model (model 0) shows some variations in the prevalence of physical violence among ever-partnered women in South Africa (variance = 0.407 [95% CI 0.27 to 0.62]). The empty model was attributed between-cluster variations (ICC 11.01%). The between-cluster variations decreased from 11.01% in model 0 to 4.61% in model 3. There was about 60.93% (PCV) variability in physical violence as explained by the full model. The result from the MOR shows that the community factors contribute to the odds of physical violence. The full model was the best-fitted model because it had the lowest deviance (-2LL) and AIC.

Table 4.4: Random effects and model fit statistics for physical violence among ever-partnered women in South Africa

Random effects result	Model 0 (<i>empty model</i>)	Model 1	Model 2	Model 3
PSU variance (95% CI)	0.407 [0.27-0.62]	0.252 [0.14-0.46]	0.235 [0.13-0.43]	0.159 [0.07-0.37]
ICC %	11.01	7.11	6.67	4.61
MOR	1.84	1.61	1.59	1.46
PCV %	Ref	38.08	42.26	60.93
Model fitness				
-2LL	4212	3860	4133	3803
AIC	4216	3900	4155	3861
PSU	704	704	704	704

CHAPTER 5: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on firstly, the main findings of the results from chapter four, secondly the conclusion, and lastly it highlights the recommendations which provide fundamental suggestions and opinions in order to improve and enhance the awareness of and protect women against physical violence within the regions and the country as well.

5.2 Discussions

The findings revealed that level of education, employment status, witness to inter-parental violence, partners' drinking habits, household wealth, education difference, and province, were associated with physical violence among ever-partnered women. Other similar studies have also found associations between these factors and intimate partner violence (Ahinkorah *et al.*, 2018; Jabbi *et al.*, 2020; Kebede *et al.*, 2022; Muluneh *et al.*, 2021; Tenkorang, 2019; Tiruye *et al.*, 2020). This study found that women in their thirties had higher odds of experiencing physical violence. This result is consistent with the research from other developing nations that revealed that women between the ages of 35 and 64 were more likely to experience severe physical violence from a spouse (Chernet & Cherie, 2020; Lacey *et al.*, 2016). However, there are other studies which have found different results, in that it is younger women who tend to experience more physical violence (Ahinkorah *et al.*, 2018; Issahaku, 2017; Warren, 2015). This conclusion may be explained by the fact that younger women are exposed to the danger of spousal violence for a shorter period of time than older women. The likelihood of them experiencing IPV is therefore minimal.

This study found that women with secondary education or more had lower odds of experiencing physical violence compared to those with primary education. The likelihood of being physically abused decreased as women's education levels increased. The results are in line with research done by (Ahinkorah *et al.*, 2018), who found that because of the exposure that comes with education, women are able to advocate for their rights and the rights of other underprivileged women in their communities, thus leading to a decrease in physical violence. Once again, a study by (Kapiga *et al.*, 2017) found that there is a higher prevalence of physical violence among less educated women. The explanation might be that less educated women might not be familiar with putting violence prevention strategies into action. Additionally, they are more likely to have little

experience with legal support and promote permissive views on physical violence. Since most women in sub-Saharan Africa lack education, they are more likely to be exposed to the patriarchal male dominance that permeates their communities and raises the likelihood that they may experience physical abuse (Muluneh *et al.*, 2021).

Moreover, the study found that employed women were more likely to experience physical violence than unemployed women. Women who work are more self-sufficient and less willing to conform to the social conventions that require women to be subordinate to their husbands (Jabbi *et al.*, 2020). The traditional gender power dynamics in the family are altered by this condition, which makes their relation violent (Jabbi *et al.*, 2020). Additionally, employed women are more likely to be educated and to reject traditional gender roles, which might be seen as a transgression in a society where men predominate (Khan & Klasen, 2018). Our findings are consistent with those from sub-Saharan Africa, where employed women were linked with physical violence (Ahinkorah *et al.*, 2018; Gage & Thomas, 2017). Conversely, women who are unemployed are more likely to keep their experiences of violence a secret out of concern for family discord, tolerance for abuse, and dependence on their husband for financial support (Biswas, 2017; Tenkorang, 2018).

The study also showed a relation between physical violence and having witnessed parental abuse. The long-term effects of witnessing a severe attack as a child have been linked to interpersonal interaction issues (Afe *et al.*, 2016; Tu & Lou, 2017). Children's experience with parental IPV puts them at risk for psychiatric problems, a lack of resilience to psychological trauma, poor verbal communication abilities, and poor conflict resolution skills, which can lead to violent arguments in intimate relationships (Tenkorang, 2018). Women whose partners drink alcohol and are often drunk had higher odds of experiencing physical violence, South African women who are in committed relationships report that their partners' drinking habits are associated with physical abuse. According to several researchers (Adebowale, 2018; Greene *et al.*, 2017; Tanimu *et al.*, 2016), women who have alcoholic spouses are more prone to report physical violence. Alcohol is known to affect cognition and behaviour, such as behavioural disinhibition, which directly increases aggression (Parrott & Eckhardt, 2018). A study conducted by (Mthembu *et al.*, 2021) discovered that drinking more alcohol is associated with intimate partner violence in South Africa.

The study demonstrates that household affluence has a considerable impact on physical violence. Particularly, women with a lower household wealth status were more likely to encounter IPV than women with a higher household wealth status. The findings showed that physical violence declines as household wealth status increases. This could be explained by the fact that wealthier women have more decision-making independence, whereas poorer women are more likely to be victims of intimate relationship abuse due to their financial dependence on a partner providing for their basic needs (Angaw *et al.*, 2021). Another important conclusion of the study revealed that educational disparities are strongly associated with physical violence among ever-partnered women. Women who were as equally educated as their partners had lower odds of experiencing physical violence. The findings are consistent with a study which found the level of education of the husband to have a considerable impact on physical violence, which can be related to the idea that a higher level of education increases the husband's capacity for amicable conflict resolution (Gautam & Jeong, 2019).

Furthermore, women from urban areas as well as women from Eastern Cape, Mpumalanga, Western Cape, Free State, and North West had higher odds of experiencing physical violence than women from Gauteng province. Studies in other developing countries have also found considerable provincial and regional differences in the prevalence and odds of experiencing intimate partner violence (Mshweshwe, 2020; Ross *et al.*, 2021). This finding could be explained by these women residing far from available resources and the effect of the rule of law outlawing gender-based violence, making the enforcement of severe anti-violence legislation extremely difficult (Michau *et al.*, 2015). The findings of this study relate to the Social Ecological Model because not only individual factors contribute to physical violence but also relationship and community-level characteristics.

5.3 Conclusion

The study sought to identify the factors that determine physical violence among ever-partnered women in South Africa. The study's findings revealed that physical violence is a problem in South Africa that must be addressed. The study found that educational status, employment status, being a witness to inter-parental violence, partner's drinking habits, household wealth, education difference and province of residence were statistically related with physical violence among ever-partnered women South African. In addition, women who had attained lower levels of education

and were from poor households had a higher prevalence of and were more likely to be physically violated. Therefore, the findings of the study suggest that women, particularly those from poor families, should be empowered in order to reduce physical violence.

5.4 Recommendations

In accordance with the SDG aim to reduce all kinds of violence in sub-Saharan African nations by 2030, the requirement for an integrated mitigation mechanism to minimize physical violence needs to be taken into consideration as a top priority. Therefore, the issue of physical violence needs to be understood and addressed by both the government and private organizations. To ensure that social support is offered to women in an effort to end physical violence, all organizations can allocate resources to all women from urban areas, and those from Eastern Cape, Mpumalanga, Western Cape, Free State and North West, where the odd of experiencing physical violence is high. Organizations should create suitable interventions, including law enforcement. Additionally, greater research on IPV in sub-Saharan Africa is needed, particularly in regions with rising political unrest and armed conflict. Therefore, there should be more activism for women's rights and sexual freedom. Women should be urged to join social clubs that will advance their knowledge and sense of empowerment, since this might be a powerful instrument in lessening the impact of IPV on our society. Women who have ever witnessed inter-parental violence should be offered support through counselling. Partners who are often drunk are most often the perpetrators of physical violence, therefore they should be taken to rehabilitation centres.

REFERENCES

- Abrahams, N., Jewkes, R., Martin, L.J., Mathews, S., Vetten, L. & Lombard, C. 2009. Mortality of women from intimate partner violence in south africa: A national epidemiological study. *Violence and victims*, 24(4):546-556.
- Adebowale, A.S. 2018. Spousal age difference and associated predictors of intimate partner violence in nigeria. *BMC Public Health*, 18(1):212. <https://www.ncbi.nlm.nih.gov/pubmed/29394924> 10.1186/s12889-018-5118-1
- Afe, T.O., Emedoh, T.C., Ogunsemi, O. & Adegbohun, A.A. 2016. Intimate partner violence, psychopathology and the women with schizophrenia in an outpatient clinic south-south, nigeria. *BMC psychiatry*, 16(1):1-8.
- Ahinkorah, B.O., Dickson, K.S. & Seidu, A.A. 2018. Women decision-making capacity and intimate partner violence among women in sub-saharan africa. *Arch Public Health*, 76:5. <https://www.ncbi.nlm.nih.gov/pubmed/29423218> 10.1186/s13690-018-0253-9
- Alexander, L., Lopes, B., Ricchetti-Masterson, K., Yeatts, K.B. & ERIC, N. 2015. Cross-sectional studies. *Eric Notebook*, 2(6):1-5.
- Ali, T.S., Karmaliani, R., Farhan, R., Hussain, S. & Jawad, F. 2021. Intimate partner violence against women: A comprehensive depiction of pakistani literature.
- Alzahrani, T.A., Abaalkhail, B.A. & Ramadan, I.K. 2016. Prevalence of intimate partner violence and its associated risk factors among saudi female patients attending the primary healthcare centers in western saudi arabia. *Saudi medical journal*, 37(1):96.
- Amir-ud-Din, R., Fatima, S. & Aziz, S. 2021. Is attitudinal acceptance of violence a risk factor? An analysis of domestic violence against women in pakistan. *Journal of interpersonal violence*, 36(7-8):NP4514-NP4541.
- Angaw, D.A., Melesse, A.W., Geremew, B.M. & Tesema, G.A. 2021. Spatial distribution and determinants of intimate partner violence among reproductive-age women in ethiopia: Spatial and multilevel analysis. *BMC Womens Health*, 21(1):81. <https://www.ncbi.nlm.nih.gov/pubmed/33632206> 10.1186/s12905-021-01218-3
- Atteraya, M.S., Gnawali, S. & Song, I.H. 2015. Factors associated with intimate partner violence against married women in nepal. *Journal of interpersonal violence*, 30(7):1226-1246.
- Benebo, F.O., Schumann, B. & Vaezghasemi, M. 2018. Intimate partner violence against women in nigeria: A multilevel study investigating the effect of women's status and community norms. *BMC Womens Health*, 18(1):136. <https://www.ncbi.nlm.nih.gov/pubmed/30092785> 10.1186/s12905-018-0628-7
- Bengesai, A.V. & Khan, H.T. 2021. Female autonomy and intimate partner violence: Findings from the zimbabwe demographic and health survey, 2015. *Culture, Health & Sexuality*, 23(7):927-944.
- Bikinesi, L.T., Mash, R. & Joyner, K. 2017. Prevalence of intimate partner violence and associated factors amongst women attending antenatal care at outapi clinic, namibia: A descriptive survey. *African journal of primary health care & family medicine*, 9(1):1-6.
- Biswas, C.S. 2017. Spousal violence against working women in india. *Journal of family violence*, 32(1):55-67.
- Bonner, C.P., Browne, F.A., Ndirangu, J.W., Howard, B., Zule, W.A., Speizer, I.S., ... Wechsberg, W.M. 2019. Exploring the associations between physical and sexual gender-based violence and hiv among women who use substances in south africa: The role of agency and alcohol. *AIDS care*, 31(11):1369-1375.
- Chant, S. 2013. Cities through a "gender lens": A golden "urban age" for women in the global south? *Environment and urbanization*, 25(1):9-29.
- Chernet, A.G. & Cherie, K.T. 2020. Prevalence of intimate partner violence against women and associated factors in ethiopia. *BMC women's health*, 20(1):1-7.
- Chilanga, E., Collin-Vezina, D., Khan, M.N. & Riley, L. 2020. Prevalence and determinants of intimate partner violence against mothers of children under-five years in central malawi. *BMC public health*, 20(1):1-14.

Chung-Ya, O., Masuma, Y., Gainel, U., Ming-Shinn, L. & Koustuv, D. 2021. Prevalence of intimate partner violence against women in republic of benin. *African Journal of Reproductive Health*, 25(4),

Contreras-Urbina, M., Heilman, B., Von Au, A.K., Hill, A., Puerto Gómez, M., Zelaya, J. & Arango, D.J. 2016. Community-based approaches to intimate partner violence: A review of evidence and essential steps to adaptation. *Disclosure*,

Cools, S. & Kotsadam, A. 2017. Resources and intimate partner violence in sub-saharan africa. *World Development*, 95:211-230.

Désilets, L. 2019. Explorer les effets des initiatives d'autonomisation économique des femmes sur la violence domestique.

Edwards, K.M. 2015. Intimate partner violence and the rural–urban–suburban divide: Myth or reality? A critical review of the literature. *Trauma, Violence, & Abuse*, 16(3):359-373.

Enaifoghe, A., Dlelana, M., Durokifa, A.A. & Dlamini, N.P. 2021. The prevalence of gender-based violence against women in south africa: A call for action. *African Journal of Gender, Society & Development*, 10(1):117.

Erickson, G.S. 2017. Descriptive research design. In. *New methods of market research and analysis*: Edward Elgar Publishing. pp. 51-77.

Esquivel-Santoveña, E.E., Lambert, T.L. & Hamel, J. 2013. Partner abuse worldwide. *Partner Abuse*, 4(1):6-75.

Gage, A.J. & Thomas, N.J. 2017. Women's work, gender roles, and intimate partner violence in nigeria. *Archives of sexual behavior*, 46(7):1923-1938.

Gautam, S. & Jeong, H.-S. 2019. Intimate partner violence in relation to husband characteristics and women empowerment: Evidence from nepal. *International journal of environmental research and public health*, 16(5):709.

Greene, M.C., Kane, J. & Tol, W.A. 2017. Alcohol use and intimate partner violence among women and their partners in sub-saharan africa. *Global Mental Health*, 4,

Hossain, M.M., Abdulla, F., Rahman, A. & Khan, H.T. 2022. Prevalence and determinants of wife-beating in bangladesh: Evidence from a nationwide survey. *BMC psychiatry*, 22(1):9.

Hu, R., Xue, J., Lin, K., Sun, I.Y., Wu, Y. & Wang, X. 2021. The patterns and influencing factors of help-seeking decisions among women survivors of intimate partner violence in china. *Journal of family violence*, 36:669-681.

Issahaku, P.A. 2017. Correlates of intimate partner violence in ghana. *Sage open*, 7(2):2158244017709861.

Jabbi, A., Ndow, B., Senghore, T., Sanyang, E., Kargbo, J.C. & Bass, P. 2020. Prevalence and factors associated with intimate partner violence against women in the gambia: A population-based analysis. *Women & Health*, 60(8):912-928.

Jayasuriya-Illesinghe, V. 2018. Immigration policies and immigrant women's vulnerability to intimate partner violence in canada. *Journal of International Migration and Integration*, 19:339-348.

Kalra, N. & Paddock, S.M. 2016. Driving to safety: How many miles of driving would it take to demonstrate autonomous vehicle reliability? *Transportation Research Part A: Policy and Practice*, 94:182-193.

Kanwal Aslam, S., Zaheer, S. & Shafique, K. 2015. Is spousal violence being "vertically transmitted" through victims? Findings from the pakistan demographic and health survey 2012-13. *PLoS one*, 10(6):e0129790.

Kapiga, S., Harvey, S., Muhammad, A.K., Stöckl, H., Mshana, G., Hashim, R., ... Watts, C. 2017. Prevalence of intimate partner violence and abuse and associated factors among women enrolled into a cluster randomised trial in northwestern tanzania. *BMC public health*, 17(1):1-11.

Kebede, S.A., Weldesenbet, A.B. & Tusa, B.S. 2022. Magnitude and determinants of intimate partner violence against women in east africa: Multilevel analysis of recent demographic and health survey. *BMC Womens Health*, 22(1):74. <https://www.ncbi.nlm.nih.gov/pubmed/35300675>
10.1186/s12905-022-01656-7

Khan, S. & Klasen, S. 2018. *Female employment and spousal abuse: A parallel cross-country analysis of developing countries*.

Kiss, L., Schraiber, L.B., Hossain, M., Watts, C. & Zimmerman, C. 2015. The link between community-based violence and intimate partner violence: The effect of crime and male aggression on intimate partner violence against women. *Prevention Science*, 16(6):881-889.

Koo, T.K. & Li, M.Y. 2016. A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of chiropractic medicine*, 15(2):155-163.

Koustuv, D., Shumei, W. & Leif, S. 2014. Intimate partner violence against women in nepal: An analysis through individual, empowerment, family and societal level factors.

Kreager, D.A., Felson, R.B., Warner, C. & Wenger, M.R. 2013. Women's education, marital violence, and divorce: A social exchange perspective. *Journal of marriage and family*, 75(3):565-581.

Lacey, K.K., West, C.M., Matusko, N. & Jackson, J.S. 2016. Prevalence and factors associated with severe physical intimate partner violence among us black women: A comparison of african american and caribbean blacks. *Violence against women*, 22(6):651-670.

Lencha, B., Ameya, G., Baresa, G., Minda, Z. & Ganfure, G. 2019. Intimate partner violence and its associated factors among pregnant women in bale zone, southeast ethiopia: A cross-sectional study. *PloS one*, 14(5):e0214962.

Li, Y. & Jiang, Q. 2019. Women's gender role attitudes and fertility intentions of having a second child: Survey findings from shaanxi province of china. *Asian Population Studies*. Vol. 15. pp. 66-86.

López, V., Torres-Vallejos, J., Villalobos-Parada, B., Gilreath, T.D., Ascorra, P., Bilbao, M., ... Carrasco, C. 2017. School and community factors involved in chilean students' perception of school safety. *Psychology in the Schools*, 54(9):991-1003.

Madden, K., Scott, T., Sholapur, N. & Bhandari, M. 2016. Prevalence of intimate partner violence among south asian women living in southern ontario. *Journal of immigrant and minority health*, 18(4):913-920.

Mahlangu, P., Gibbs, A., Shai, N., Machisa, M., Nunze, N. & Sikweyiya, Y. 2022. Impact of covid-19 lockdown and link to women and children's experiences of violence in the home in south africa. *BMC Public Health*, 22(1):1029. <https://www.ncbi.nlm.nih.gov/pubmed/35597933> 10.1186/s12889-022-13422-3

Makongoza, M. & Nduna, M. 2021. Awareness and rejection accounts of intimate partner violence by young women in soweto, johannesburg, south africa. *Journal of interpersonal violence*, 36(1-2):7-32.

Masa'Deh, R., AlMomani, M.M., Masadeh, O.M., Jarrah, S. & Al Ali, N. 2022. Determinants of husbands' violence against women in jordan. *Nurs Forum*, 57(3):421-428. <https://www.ncbi.nlm.nih.gov/pubmed/35106765> 10.1111/nuf.12700

McIlwaine, C. 2013. Urbanization and gender-based violence: Exploring the paradoxes in the global south. *Environment and Urbanization*, 25(1):65-79.

Merten, M. 2017. Statistics sa: One in five sa women experience physical violence, young women hard-hit by hiv/aids. *Daily Maverick*, 15,

Michau, L., Horn, J., Bank, A., Dutt, M. & Zimmerman, C. 2015. Prevention of violence against women and girls: Lessons from practice. *The Lancet*, 385(9978):1672-1684.

Moffitt, P., Aujla, W., Giesbrecht, C.J., Grant, I. & Straatman, A.-L. 2022. Intimate partner violence and covid-19 in rural, remote, and northern canada: Relationship, vulnerability and risk. *Journal of family violence*, 37(5):775-786.

Mokgatle, M. & Menoe, B. 2014. Prevalence of sexual coercion among students in an institution of higher learning in gauteng province, south africa: Sexual behaviour. *African Journal for Physical Health Education, Recreation and Dance*, 20(sup-1):301-312.

Mshweshwe, L. 2020. Understanding domestic violence: Masculinity, culture, traditions. *Heliyon*, 6(10):e05334.

Mthembu, J., Mabaso, M., Reis, S., Zuma, K. & Zungu, N. 2021. Prevalence and factors associated with intimate partner violence among the adolescent girls and young women in south africa: Findings the 2017 population based cross-sectional survey. *BMC Public Health*, 21(1):1160. <https://www.ncbi.nlm.nih.gov/pubmed/34134666> 10.1186/s12889-021-11183-z

Muluneh, M.D., Stulz, V., Francis, L. & Agho, K. 2020. Gender based violence against women in sub-saharan africa: A systematic review and meta-analysis of cross-sectional studies. *Int J*

Environ Res Public Health, 17(3), <https://www.ncbi.nlm.nih.gov/pubmed/32024080>
10.3390/ijerph17030903

Muluneh, M.D., Francis, L., Agho, K. & Stulz, V. 2021. A systematic review and meta-analysis of associated factors of gender-based violence against women in sub-saharan africa. *Int J Environ Res Public Health*, 18(9), <https://www.ncbi.nlm.nih.gov/pubmed/33919171>
10.3390/ijerph18094407

Nadeem, M. & Malik, M.I. 2021. The role of social norm in acceptability attitude of women toward intimate partner violence in punjab, pakistan. *Journal of interpersonal violence*, 36(21-22):NP11717-NP11735.

National Department of Health & ICF. 2019. South africa demographic and health survey 2016. Pretoria, South Africa and Rockville, Maryland, USA,

National Planning Commission. 2021. <technical paper on women and gender for the ndp review_03 march 2021.Pdf>.

Nnyombi, A., Bukuluki, P., Besigwa, S., Ocaya-Irama, J., Namara, C. & Cislighi, B. 2022. How social norms contribute to physical violence among ever-partnered women in uganda: A qualitative study. *Frontiers in Sociology*, 7:867024-.

Ogum Alangea, D., Addo-Lartey, A.A., Sikweyiya, Y., Chirwa, E.D., Coker-Appiah, D., Jewkes, R. & Adanu, R.M.K. 2018. Prevalence and risk factors of intimate partner violence among women in four districts of the central region of ghana: Baseline findings from a cluster randomised controlled trial. *PloS one*, 13(7):e0200874.

Organization, W.H. 2012. *Understanding and addressing violence against women: Intimate partner violence*.

Palermo, T., Bleck, J. & Peterman, A. 2014. Tip of the iceberg: Reporting and gender-based violence in developing countries. *American journal of epidemiology*, 179(5):602-612.

Pallitto, C.C., García-Moreno, C., Jansen, H.A., Heise, L., Ellsberg, M. & Watts, C. 2013. Intimate partner violence, abortion, and unintended pregnancy: Results from the who multi-country study on women's health and domestic violence. *International Journal of Gynecology & Obstetrics*, 120(1):3-9.

Parrott, D.J. & Eckhardt, C.I. 2018. Effects of alcohol on human aggression. *Current Opinion in Psychology*, 19:1-5.

Peltzer, K., Pengpid, S., McFarlane, J. & Banyini, M. 2013. Evaluation of the effectiveness of protection orders for female victims of intimate partner violence in vhembe district of south africa. *Journal of Psychology in Africa*, 23(3):489-493.

Pengpid, S. & Peltzer, K. 2014. Sexual assault and other types of intimate partner violence in women with protection orders in vhembe district, south africa. *Violence and Victims*, 29(5):857-871.

Rose, S. 2016. *Challenging global gender violence: The global clothesline project*. Springer.

Ross, C., Smith, J.G., Manenzhe, T., Netshiongolwe, R., Johnson, T., Caldwell, A., ... Ingersoll, K.S. 2021. South african university women's perspectives on intimate partner violence: A qualitative study of reactions to a tailored vignette. *Cult Health Sex*:1-17. <https://www.ncbi.nlm.nih.gov/pubmed/34524073> 10.1080/13691058.2021.1970813

Sanders, C.K. 2015. Economic abuse in the lives of women abused by an intimate partner: A qualitative study. *Violence against women*, 21(1):3-29.

Semahegn, A. & Mengistie, B. 2015. Domestic violence against women and associated factors in ethiopia; systematic review. *Reproductive health*, 12(1):1-12.

Shinwari, R., Wilson, M.L., Abiodun, O. & Shaikh, M.A. 2022. Intimate partner violence among ever-married afghan women: Patterns, associations and attitudinal acceptance. *Arch Womens Ment Health*, 25(1):95-105. <https://www.ncbi.nlm.nih.gov/pubmed/34254191> 10.1007/s00737-021-01143-2

Sprunger, J.G., Eckhardt, C.I. & Parrott, D.J. 2015. Anger, problematic alcohol use, and intimate partner violence victimisation and perpetration. *Criminal Behaviour and Mental Health*, 25(4):273-286.

Statistics South Africa. 2020. Mid-year population estimates. 2020. *Statistics South Africa*, Department of Statistics SA

Pretoria, South Africa.

Statistics South Africa. 2021. Mid-year population estimates. Department of Statistics SA

Pretoria, South Africa.

Sunmola, A.M., Sambo, M.N., Mayungbo, O.A. & Morakinyo, L.A. 2021. Moderating effect of husband's controlling attitudes on the relation between women's household decision-making autonomy and intimate partner violence experience in nigeria. *Journal of interpersonal violence*, 36(21-22):NP12125-NP12154.

Tanimu, T.S., Yohanna, S. & Omeiza, S.Y. 2016. The pattern and correlates of intimate partner violence among women in kano, nigeria. *African journal of primary health care and family medicine*, 8(1):1-6.

Tekkas Kerman, K. & Betrus, P. 2020. Violence against women in turkey: A social ecological framework of determinants and prevention strategies. *Trauma Violence Abuse*, 21(3):510-526. <https://www.ncbi.nlm.nih.gov/pubmed/29888680> 10.1177/1524838018781104

Tenkorang, E.Y. 2018. Women's autonomy and intimate partner violence in ghana. *International perspectives on sexual and reproductive health*, 44(2):51-61.

Tenkorang, E.Y. 2019. Intimate partner violence and the sexual and reproductive health outcomes of women in ghana. *Health Education & Behavior*, 46(6):969-980.

Tenny, S. & Hoffman, M.R. 2017. Odds ratio.

Terrazas-Carrillo, E.C. & McWhirter, P.T. 2015. Employment status and intimate partner violence among mexican women. *Journal of interpersonal violence*, 30(7):1128-1152.

Tiruye, T.Y., Harris, M.L., Chojenta, C., Holliday, E. & Loxton, D. 2020. Determinants of intimate partner violence against women in ethiopia: A multi-level analysis. *PLoS One*, 15(4):e0232217. <https://www.ncbi.nlm.nih.gov/pubmed/32330193> 10.1371/journal.pone.0232217

Tran, T.D., Nguyen, H. & Fisher, J. 2016. Attitudes towards intimate partner violence against women among women and men in 39 low-and middle-income countries. *PloS one*, 11(11):e0167438.

Tu, X. & Lou, C. 2017. Risk factors associated with current intimate partner violence at individual and relationship levels: A cross-sectional study among married rural migrant women in shanghai, china. *BMJ open*, 7(4):e012264.

Ungar, M., Ghazinour, M. & Richter, J. 2013. Annual research review: What is resilience within the social ecology of human development? *Journal of child psychology and psychiatry*, 54(4):348-366.

Vyas, S., Mbwambo, J. & Heise, L. 2015. Women's paid work and intimate partner violence: Insights from tanzania. *Feminist Economics*, 21(1):35-58.

Wagman, J.A., Donta, B., Ritter, J., Naik, D., Nair, S., Saggurti, N., ... Silverman, J.G. 2018. Husband's alcohol use, intimate partner violence, and family maltreatment of low-income postpartum women in mumbai, india. *Journal of interpersonal violence*, 33(14):2241-2267.

Waltermauer, E., Butsashvili, M., Avaliani, N., Samuels, S. & McNutt, L.-A. 2013. An examination of domestic partner violence and its justification in the republic of georgia. *BMC women's health*, 13(1):1-9.

Wang, T.W., Gentzke, A.S., Creamer, M.R., Cullen, K.A., Holder-Hayes, E., Sawdey, M.D., ... Homa, D.M. 2019. Tobacco product use and associated factors among middle and high school students—united states, 2019. *MMWR Surveillance Summaries*, 68(12):1.

Wang, X. & Cheng, Z. 2020. Cross-sectional studies: Strengths, weaknesses, and recommendations. *Chest*, 158(1):S65-S71.

Warren, P. 2015. *The relationship between religiousness and intimate partner violence risk and protective factors*. University of South Carolina.

Wood, K., Lambert, H. & Jewkes, R. 2008. "Injuries are beyond love": Physical violence in young south africans' sexual relationships. *Med Anthropol*, 27(1):43-69. <https://www.ncbi.nlm.nih.gov/pubmed/18266171> 10.1080/01459740701831427

World Health Organization. 2013. *Responding to intimate partner violence and sexual violence against women: Who clinical and policy guidelines*. World Health Organization.

Yaya, S. & Ghose, B. 2019. Alcohol drinking by husbands/partners is associated with higher intimate partner violence against women in angola. *Safety*, 5(1), 10.3390/safety5010005

Yount, K.M., Cheong, Y.F., Khan, Z., Bergenfeld, I., Kaslow, N. & Clark, C.J. 2022. Global measurement of intimate partner violence to monitor sustainable development goal 5. *BMC*

Public Health, 22(1):465. <https://www.ncbi.nlm.nih.gov/pubmed/35260134> 10.1186/s12889-022-12822-9


Yuan, W. & Hesketh, T. 2021. Intimate partner violence and depression in women in china. *Journal of interpersonal violence*, 36(21-22):NP12016-NP12040.

Yuksel-Kaptanoglu, I. & Adali, T. 2021. Intimate partner violence during pregnancy in turkey: Determinants from nationwide surveys. *J Interpers Violence*, 36(15-16):7802-7831. <https://www.ncbi.nlm.nih.gov/pubmed/30913951> 10.1177/0886260519837652

Zegeye, B., Idriss-Wheeler, D., Ahinkorah, B.O., Ameyaw, E.K., Seidu, A.A., Keetile, M. & Yaya, S. 2022. Individual, household, and community-level predictors of modern contraceptive use among married women in cameroon: A multilevel analysis. *Int Health*, 14(6):648-659. <https://www.ncbi.nlm.nih.gov/pubmed/35024848> 10.1093/inthealth/ihab092

APPENDICES

Figure A1: Ethics approval letter



NWU®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITHI YA BOKONE-BOPHIRIMA

South Africa 2520

Private Bag X1290, Potchefstroom

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: <http://www.nwu.ac.za>

Senate Committee

for Research Ethics

Tel: 016 103 4446
Email: Feziwe.Mseleni@nwu.ac.za

14 November 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Basic and Social Sciences Research Ethics Committee (BaSSREC)** on **24/08/2022**, the Basic and Social Sciences Research Ethics Committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWUSERC) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Prevalence and determinants of physical violence among ever-partnered women in South Africa: A multilevel analysis																
Study Leader/Supervisor (Principal Investigator)/Researcher: Dr Mluleki Tsawe Student/Research Team: D Nkoane																
Ethics number:	N	W	U	-	0	1	0	1	9	-	2	2	-	A	7	Institution
	Study Number						Year	Status								
	Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation															
Application Type: Single study																
Commencement date: 29/08/2022	Risk:				No risk											
Expiry date: 29/08/2023																
Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.																

Special in process conditions of the research for approval (if applicable):

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

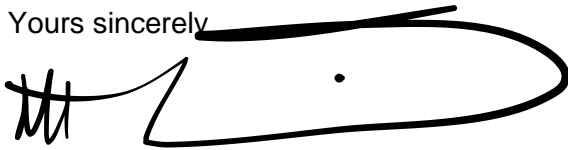
- *The study leader/supervisor (principal investigator)/researcher must report in the prescribed format to the BaSSREC:
 - *annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and*
 - *without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.**
- *The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the BaSSREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.*
- *Annually a number of studies may be randomly selected for an external audit.*
- *The date of approval indicates the first date that the study may be started.*

1

- *In the interest of ethical responsibility, the NWU-SCRE and BaSSREC reserves the right to:
 - *request access to any information or data at any time during the course or after completion of the study;*
 - *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process; – withdraw or postpone approval if:
 - *any unethical principles or practices of the study are revealed or suspected;*
 - *it becomes apparent that any relevant information was withheld from the BaSSREC or that information has been false or misrepresented;*
 - *submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or*
 - *new institutional rules, national legislation or international conventions deem it necessary.***
- *BaSSREC can be contacted for further information or any report templates via BaSSRECAAdmin@nwu.ac.za.*

The BaSSREC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the BaSSREC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely



Prof E. Idemudia

Chairperson NWU Basic and Social Sciences Research Ethics Committee

Original details: (22351930) C:\Users\22351930\Desktop\ETHICS APPROVAL LETTER OF STUDY.docm 8 November 2018

File reference: 9.1.5.4.2

Figure A2: Map of prevalence of physical violence among ever-partnered women in South Africa

