Original Research Article

Determinants of Physical Violence Against Women Aged 15-49 in Zambia: Evidence from Zambia Demographic and Health Survey 2018

Tyson Chipokoso[1], Lubona S. Kampango[2], Taurai Makwalu[3], Eustarckio Kazonga[4]

[1]Department of Population Studies, School of Humanities and Social Sciences, University of Zambia, Lusaka, Zambia
[2]Ministry of Education, Mporokoso District Education Board, Mporokoso, Zambia,
[3]Clinton Health Access Initiative, Lusaka, Zambia,
[4]Department of Public Health, School of Medicine and Health Sciences, University of Lusaka, Zambia,

Corresponding Author: Tyson Chipokoso

ABSTRACT

Background: Physical violence occurs in many forms such as when someone pushes you, shakes you, or throws something at you, slaps you, twists your arm or pulls your hair, punches you with his fist or threatens or attacks you with a knife, gun or any other weapon. The main objective of this study was to establish the determinants of physical violence against women aged 15-49 in Zambia.

Method: The number of women aged 15-49 selected and interviewed for domestic violence (9,503) allowed for determination of the association between demographic and socioeconomic factors and physical violence using Pearson chi-square test, with further analysis using multiple binary logistic regression analysis to determine the likelihood of experiencing physical violence.

Results: Women in the age groups 25-29 and 40-44 had increased odds of experiencing physical violence at 54 percent and 57 percent, (AOR=1.57, p-value 0.05) and (AOR=1.54, p-value 0.03) respectively, compared to those in the age group 15-19. Further, divorced/separated/widowed were 3 times more likely to experience physical violence compared to the never married (AOR=3.42, p-value <0.05). Fifty percent of women who experienced physical violence never sought help, and never told someone.

Conclusion: Physical violence was more prevalent among the divorced/separated/widowed women and among women in the age groups 25-29 and 40-44 years. This indicates that more research is needed to determine the consequences of physical violence against women aged 15-49.

Keywords: Physical Violence, Women, Gender inequality, Determinants, Demographic and Health Survey

INTRODUCTION

Violence has always been part of the human experience, its impact can be seen, in various forms, in all parts of the world. Violence against women (VAW) is a violation of human rights, is rooted in gender inequality, is a public health problem, and an impediment to sustainable development.[1] Violence can broadly be defined into five categories; sexual, physical, emotional,

economic, and harmful traditional practices. This violence against women is present in every country.

The Caribbean Community (CARICOM) Research Brief 5, defines physical violence as "being slapped; having something thrown at them; being pushed, cornered, or pulled by the hair; punched or hit with something that could cause injury; kicked, dragged, or beaten; choked, or intentionally burned; or being threatened by or assaulted using a gun, knife or any other weapon.' [2] Globally, prevalence of physical violence more than 1 out of 4 or 29 per cent of ever-partnered women aged 15-64 have experienced physical Intimate Partner Violence (IPV) in their lifetime.[3]

In 2021, the World Health Organization projected that one in every three (30%) women in the world had experienced physical and/or sexual IPV or non-partner sexual violence at some point in their lives. The WHO studies also showed that between 55 and 95 percent of women who had been physically abused by their partner had never sought help from formal services, or individuals' position of authority.[4]

In Zambia 36 percent of women aged 15-49 have experienced physical violence since age 15 in 2018, and 18 percent has experienced physical violence in the 12 months prior to the Zambia Demographic and Health Survey in 2018 [5]. There has been a reduction in the prevalence rate of physical violence, However, numbers are still high. The World Bank's Zambia Gender-Based Violence Assessment identifies a variety of Gender-Based Violence (GBV) prevention and response programmes in the country, including hospital-based and village-led one-stop centres and shelters, counseling services, and fast-track courts. It, however, notes that these efforts are often under-funded, poorly coordinated, and geographically limited, failing to reach many of the country's GBV survivors. [6]

Physical violence against women has major consequences which extend to children and other family members. It also has health costs on women because they risk injury as well as gynecological problem. Therefore, this study aimed to identify the determinants of physical violence against women aged 15 to 49 in Zambia and recommend some solutions to what can be done to address the problems.

Specific objectives
The following were the specific research objectives of this research:
1. To determine the relationship between demographic characteristics and physical violence against women aged 15-49 in Zambia.
2. To determine the extent to which socio-economic status of individual contribute to physical violence against women 15-49 aged.
3. To evaluate help-seeking behavior on physical violence cases among women aged 15-49.

MATERIALS & METHODS
Research design
The research adopted a cross-sectional design. A cross-sectional research design presents information about a population at a single point in time. This research aimed to obtain immediate information on the social, economic, and demographic factors which may influence physical violence against women aged 15-49.

Population sample size
The sample size that was used in this study consisted of 9,503 women aged 15-49 who were selected and interviewed for domestic violence. This 2018 ZDHS survey sample was representative at the national and provincial levels, and for urban and rural areas.

Sampling design and procedures
The sampling frame used for the 2018 ZDHS was the Census of Population and Housing (CPH) of the Republic of Zambia, conducted in 2010 by ZamStats. Zambia is divided into 10 provinces. Each province is subdivided into districts, each district into constituencies, and each constituency into wards. In addition to these administrative units, during the 2010 CPH, each ward was

divided into convenient areas called census supervisory areas (CSAs), and in turn, each CSA was divided into enumeration areas (EAs). According to the Zambian census frame, each EA consists of an average of 110 households.

The 2018 ZDHS followed a stratified two-stage sample design. The first stage involved selecting sample points (clusters) consisting of EAs. EAs were selected with a probability proportional to their size within each sampling stratum. A total of 545 clusters were selected. The second stage involved a systematic sampling of households. During the listing, an average of 133 households was found in each cluster, from which a fixed number of 25 households were selected through an equal probability systematic selection process, to obtain a total sample size of 13,625 households. Results from this sample are representative at the national, urban and rural, and provincial levels. All women aged 15-49 who were either permanent residents of the selected households or visitors who stayed in the households the night before the survey were eligible to be interviewed.

STATISTICAL ANALYSIS

The analysis of this study used secondary data. STATA/SE 14.0 was used for data analysis. The dataset for women aged 15-49 (ZMIR71FL) was weighted to adjust for sampling design, stratification and clustering. The relationship between physical violence and age, wealth status, place of residence, women's age, women's education status, employment status, and religion were analyzed using the Chi-square test at 5% level of significance. Further, the risk factors that were statistically significant were further analysed using multivariable binary logistic regression analysis to establish the magnitude (odds ratio) of association of physical violence.

The study used the following binary multivariable logistic regression model:

$$\text{logit}(\pi/1\text{-}\pi) = \alpha_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots\ldots\ldots\ldots \beta_n x_n$$

Where: $(\pi/1\text{-}\pi)$ represents the binary outcome (physical violence), α_0 represents the constant, $\beta_n x_n$ represents the coefficients of the covariates which include: age, religion, place of residence, education level, marital status, wealth index, and employment status. The dependent variable (physical violence) was treated as dichotomous for it has only two outcomes either no or yes coded as 0 or 1, respectively. In this case, a woman can either experienced physical violence or not.

Ethical issues

The secondary dataset was kept on the DHS program site where accessibility is restricted to users with accounts to use the datasets for a specified purpose with authority from the DHS program. The authority to use the dataset for women recode (ZMIR71FL.DTA) was approved.

RESULT

Background characteristics of respondents who were selected and interviewed for domestic violence module.

Respondents in the age group 15-19 had the highest proportion (21 percent) while those in age group 45-49 had the lowest proportion (7 percent). The majority of the respondents were Protestant with 81 percent distribution and the lowest were Muslim women with 0.5 percent. More than half of the married/living together women (57 percent) were selected and interviewed for domestic violence module. The least proportion of respondents (13 percent) were divorced/separated/widowed.

Slightly more than half of the women aged 15-49 (54 percent) were from rural areas, while only 46 percent of women were from urban areas. By province, the majority of women were from Lusaka province (20 percent) followed by Copperbelt province (16 percent) and the least were from Muchinga province (6 percent) and Western province (6 percent).

The highest proportion (44 percent) of the respondents had attained primary education, and the lowest were those who had higher

education at 6 percent. The majority of the respondents (46 percent) were those from rich households while the lowest proportion were from middle wealth index at18 percent.

Bivariate Analysis
Relationship between demographic and socioeconomic characteristics, and physical violenceexperience among women aged 15-49 (Pearson Chi-square Analysis)

Table 2 shows the demographic and socioeconomic characteristics of women aged 15-49 who experienced physical violence. Experience of physical violence among women aged 15-49 increases with increasing age, from 21 percent among women aged 15-19 to 45 percent among women aged 45-49. Further, the *p*-value<0.001, indicates that there was a significant relationship between women's age and physical violence. By marital status, more than half of the divorced or separated or widowed women experienced physical violence (52 percent) and lowest among the never-married women (19 percent). The observed (*p*-value<0.001), indicates a significant association between marital status and physical violence. The percent distribution of women who experienced

physical violence was slightly higher in rural areas (37 percent) than in urban areas (34 percent). However, the difference was not statisticallysignificant (*p* –value=0.080).

According to women's religion, Muslim women had higher experience of physical violence (39 percent) compared to those who belonged to other religion (34 percent). The results showed that there was no significant association between religion and physical violence (*p*-value=0.886). Women who had no education significantly experienced more physical violence (44 percent) than those who had attained higher education (27 percent), (*p*-value <0.001). Further, women from the poor households significantly experienced the most physical violence (41 percent) and those from the rich households (32 percent) experienced the least physical violence (*p*-value <0.001). There was a slight difference in percent distribution of women who experienced physical violence by employment status. Employed women not paid (39 percent) while those paid in cash (40 percent) experienced physical violence. Similarly, those paid in cash and kind (48 percent) while those paid in kind were slightly more than half (51 percent). The differences were statistically significant (*p*-value=0.005).

Table 2: Relationship between demographic and socioeconomic characteristics and physical violence

Percentage distribution of women age 15-49 who experienced physical violence		
Demographic characteristics	**Percentage who experienced physical violence since age 15**	***p*-value**
Age		**<0.001**
15-19	20.9	
20-24	34.2	
25-29	40.1	
30-34	40.4	
35-39	42.3	
40-44	44.2	
45-49	45.3	
Marital status		
Never married	19.4	<0.001
Married/living together	41	
Divorced/separated/widowed	52.3	
Residence		
Urban	34.2	0.080
Rural	37.2	
Socioeconomic characteristics		
Religion		
Catholic	36.9	
Protestant	35.7	

Muslim	39.2	0.886
Other	33.9	
Education attainment		
No education	43.7	
Primary	40.6	<0.001
Secondary	30.7	
Higher	27	
Wealth index		
Poor	41.2	
Middle	34.6	<0.001
Rich	32.2	
Employment		
Not paid	39.2	
Paid in cash	39.5	0.005
Paid in cash and in-kind	48	
Paid in-kind	50.7	

Source: **ZDHS 2018**

Help-seeking behaviour to stop violence among women aged 15-49 in Zambia

Half of the women who experienced physical violence (50 percent) never sought help, and never told someone. Thirty- seven percent sought help to stop physical violence, and 0nly 12 percent of women never sought help but told someone.

Sources for help to stop physical violence

Majority of women who ever experienced physical violence sought help from their own family (77 percent), while the minority (1 percent) of women who experienced physical violence sought help from social service organizations.

Binary logistic regression analysis between Physical violence and Demographic and socioeconomic characteristics

Table 3 presents the likelihood of experiencing physical violence against women aged 15-49. Women in the age groups 40-44 and 25-29 had significantly increased odds of experiencing physical violence at 57 percent and 54 percent

(AOR=1.57; *p*-value=0.03 and AOR=1.54; *p*-value=0.05), respectively, compared to those in the age group 15-19. According to women's marital status, for married/living together women the odds ratio of 2.25 shows that married women were 2 times more likely to experience physical violence than never married (AOR=2.25; *p*-value<0.001). The odds of physical violence experience were 3.42 times among the separated/divorced/widowed women compared to the never married women (AOR=3.42; *p*-value<0.001). By place of residence, there was no significant difference between rural and urban residents experiencing physical violence. By wealth index, the rich were 31 percent less likely to experience physical violence compared to those from poor households (AOR=0.69; *p*-value=0.16). Among all the employed women, no relationship was statistically significant with the experience of physical violence, among those paid in cash, in kind and those paid both in cash and in kind.

Table 3: Likelihood of experience of physical violence by demographic and socioeconomic factors

Demographic and socio-economic variables and Physical Violence		
Variable	**AOR**	***p*-value**
Constant	1.00	0.05
Age (REF=15-19)		
20-24	1.37	0.08
25-29	1.54	0.05
30-34	1.39	0.11
35-39	1.32	0.14
40-44	1.57	0.03

45-49	1.36	0.15
Religion (REF=Catholic)		
Protestant	0.99	0.92
Muslim	0.85	0.67
Other	0.89	0.69
Marital Status (REF=Never Married)		
Married/living together	2.25	<0.001
Divorced/separated/widowed	3.42	<0.001
Residence (REF=Urban)		
Rural	0.84	0.13
Education (REF=No Education)		
Primary	1.05	0.72
Secondary	0.97	0.82
Higher	0.67	0.07
Wealth Index (REF=Poor)		
Middle	0.78	0.16
Rich	0.69	0.16
Employment (REF=Not Paid)		
Paid in Cash	1.01	0.98
Paid in Cash and in Kind	1.17	0.21
Paid in Kind	1.71	0.06
Obs	5,251	
Prob>chi2	0.00	

Source: ZDHS 2018

DISCUSSION

Experience of physical violence among women aged 15-49 increases with increasing age. It was observed that women in the age groups 45-49 and 25-29 had increased odds of experiencing physical violence at 57 percent and 54 percent, respectively, higher compared to those in the age group 15-19. A likely explanation is that young women duration of exposure to the risk of physical violence experience especially spousal violence is less than that of older women.

It was further found that there was no statistical significance between women who reside in rural areas, and those in urban areas and experience of physical violence. However, a recent study conducted by Phiri *et al.* indicates that individual and community-level characteristics significantly influence spousal violence against women in Zambia. The study reported that the prevalence of spousal physical violence was 21.1%, with factors such as low decision-making power among women in communities being associated with higher rates of violence. This suggests that while urban and rural settings may not differ significantly in reported experiences of violence, the fundamental community dynamics play a crucial role in shaping women's vulnerability to violence.[7]

This study showed that there was an association between level of education and experience of physical violence against women aged 15-49 in Zambia. In contrast, a study conducted in Ghana suggested that Ghanaian women with a higher level of education were less likely to justify IPV than women with no formal education were less likely to justify intimate partner violence.[8] The inverse relationship between education and physical violence among women could be attributed to the fact that educated women perceive physical violence as a negative phenomenon which could have physical and psychological harm on the victim.

There was no statistically significant relationship between women's religion affiliation and experience of physical violence. Contrary, a study carried out in Ghana showed that with religion, those who are Muslims had higher odds of justifying intimate partner violence compared with those who are Christians.[8]

There was an association between the wealth status of women and experience of physical

violence among women aged 15-49, as shown in the study. A study by Daniel *et. al* (2023) highlights that women from lower socioeconomic backgrounds were significantly more likely to experience gender-based violence (GBV). The study emphasizes that economic dependence on male partners increases vulnerability to violence. This could be due to higher approval of physical violence in women who are poor, whereas the rich women are less likely to approve of physical violence. [9] This is because women who are poor are more dependent on their husbands/partners than those who are rich. This finding suggests that improving the standards of living of women could influence women's perception of domestic violence against wives.

According to women's marital status, divorced/separated/widowed women had the highest odds of experiencing physical violence compared to never married. This could be because married women would be less likely to disclose experience of physical violence by their partners/ husband compared to never married women. In a study conducted in Zambia by Simona *et al.* [10] found that women who were divorced or separated reported higher rates of intimate partner violence, with significant associations between marital status and experiences of violence.

Among all the employed women, there was no statistical significance relationship between experience of physical violence, and among women paid in cash, in kind and those paid both in cash and in kind. Those employed and paid in cash were less likely to experience physical violence, this could be because money helps earn some sort of respect from the society, hence even those women in marriage earn that respect from their partner. The situation is different from those employed and paid in kind, they are more likely to experience physical violence because they lack money which helps gain some sort of respect and power to control certain things both in society and in the home. Similarly, findings in a study conducted in Tanzania show that women in areas with a higher proportion of paid work, women's risk of partner violence is significantly reduced. [11]

This study found that, majority of women who ever experienced physical violence sought help from their own family (77 percent), while the minority (1 percent) sought help from social service organizations. Most women seek help from close relatives for confidentiality's sake. Similarly, the findings were supported by a study conducted in sub-Saharan countries, physically abused women most commonly sought help from informal sources, such as relatives from own side (57 percent). A very few women (4 percent) sought help from relatively formal sources, such as legal service providers. [12]

CONCLUSION
The determinants of physical violence such as; age, marital status, education attainment, wealth index, and employment have a direct influence on the experience of physical violence among women aged 15-49. However, some background characteristics such as, place of residence, and religion do not have an influence on physical violence. Furthermore, women who experienced physical violence adopted different coping strategies to reduce the experience. The significant coping strategy reviewed in the study was that, most women sought help from their own families.

Limitations
This study is limited by its cross-sectional nature and hence causal inferences cannot be made. Furthermore, the study relied on self-report measures, which could be affected by social desirability bias or memory bias. Future research is also needed to ascertain which social as well as cultural factors are influencing women's justification of physical violence against women. Despite these shortcomings, the study has compelling strengths. First, the large sample size gave the study sufficient power. Additionally, the representativeness of the sampling strategy as well as the nationwide nature of the data

boosts the study's generalizability to other settings.

Recommendations

Based on the results of the study, the following recommendations were suggested for combating physical violence against women: The government should ensure that employment, and safety, anti-discrimination laws give adequate protection to women affected by physical violence, and provide resources to guarantee training, information and monitoring of these laws. Prevention should start early in life, by educating and working with young boys and girls promoting respectful relationships and gender equality. Ensuring that high quality help-seeking services are made available, accessible, affordable and acceptable while ensuring that they are supported by the communities.

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