

**ORIGINAL ARTICLE**

# Factors contributing to physical Gender Based Violence reported at Ndola Central Hospital, Ndola, Zambia: A case control study

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## ABSTRACT

**Objectives:** To determine socio-demographic factors associated with gender-based violence (GBV).

**Design:** A case control study was conducted at Ndola Central Hospital Casualty Department. The study was conducted from December 2015 to July 2016. A sample size of 85 cases and 85 controls was calculated after a pilot study of 30 cases and 30 controls was conducted. Out of the pilot study 60% of people who drink alcohol reported that they experienced GBV- physical assault while 27.6% of people who drink alcohol reported that they did not experience GBV- physical assault. Based on these outcomes the sample size was calculated using Stat. Calc in Epi-Info version 7 with the power at 80%.

**Main outcomes:** From the adjusted odds ratio alcohol drinking increases the likelihood of GBV- physical assault by 2.25 times. Those living in high density areas are 2.23 times more at risk of GBV physical assault. Females are 2.27 times at risk of GBV physical assault unlike males.

**Measures:** The dependant (outcome) variable is GBV-physical assault. The independent (predictor) variables are; alcohol abuse, income level, area of residence and gender. These were chosen because these are some of the risk factors of GBV-physical according to literature.

**Results:** Out of the 179 patients who participated in the study, 93(52%) reported to have experienced GBV-physical assault regardless of age. More females 67(68.4%) experienced GBV physical assault than males 26(32.1%). More than 2/3 of those who reported alcohol drinking 51(69.9%) experienced GBV-physical assault

and only 40(40.0%) among those who did not report the outcome. Those from high density 82(56.9%) reported having experienced more GBV physical assault compared to 5(23.8%) of those from low density areas.

**Conclusion:** There is need for healthy life styles to be encouraged such as control of alcohol consumption in order to reduce GBV – physical assault due to alcohol intake. Sensitization campaigns and educational programmesought to be intensified in order to address factors that make females more prone to GBV-physical assault than males. Living in a high density area is a risk factor of GBV- physical assault as compared to living in a low density area. Therefore more sensitization programmes should be put in place at a societal level to reduce GBV – physical assault in such communities.

## INTRODUCTION

Gender Based Violence (GBV) can include physical, sexual, psychological, or other forms of violence<sup>[1]</sup>. Many forms of violence constitute GBV, this study focused on physical assault or abuse as a form of GBV. Physical assault can be understood to include any behaviour which causes actual physical harm to the victim, is designed to do so, or a threat to do so. Physical assault affects both men and women although it is often synonymous with violence against women due to its unbalanced impact on women.<sup>2</sup>

Many victims choose not to report incidents of physical abuse because they perceive it to be a private matter or an

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**Keywords:** Gender based violence, physical assault, casualty department, victims.

incident that is too minor to warrant police involvement. A domestic violence module was included in the 2013-14 ZDHS, recognizing the seriousness of the problem of gender-based violence in Zambia.<sup>3</sup> The cultural norms that require men to present a strong image means abused men are less likely to verbalize fear of any kind which keeps them from reporting physical abuse.<sup>4</sup>

The various forms of physical abuse share many risk factors in both men and women. Some are psychological and behavioural characteristics such as poor behavioural control, low self-esteem, disorders in personality and conduct. Others are due to experiences, such as lack of emotional bonding and support. Abuse of drugs and alcohol is frequently associated with interpersonal violence, and poverty as well as income disparities and gender inequality stand out as important community and societal factors.<sup>4</sup>

Copperbelt province was chosen as a target because it was ranked second from Lusaka province of reporting cases of assault occasioning bodily harm (OABH), from police quarterly reports.<sup>5</sup> Ndola was chosen because that is where Ndola Central Hospital is located and it been the second largest health institution in Zambia (according to CBU-SOM handbook), it would help capture many cases of physical assault from various parts of Copperbelt.

Despite efforts from government and NGOs to reduce gender based violence, cases of physical assault keep increasing. This is evident from police quarterly reports, 4998 cases of GBV were reported country wide during the first quarter of 2016 compared to 4615 cases reported in the first quarter of 2015, this translates an increase of 383(7.7%) in less than a year.<sup>5</sup> Therefore there is need to mobilize local media, particularly community radios, to inform the community of the legal provisions for obtaining justice regarding physical assault and GBV. There is need to obtain more data about the role that men play in physical assault, and asses in what ways men are themselves victims of GBV.<sup>6</sup> Little published research exists on the prevalence of physical assault cases in males in Zambia. In general, GBV programming in Zambia is in the early stages of development. Despite significant contributions by the government and by the NGOs, large gaps remain in programming across all sectors. There is a

general lack of GBV data collection and management system. It is also necessary to clarify the casual relationship between physical assault and undesirable health consequences including the negative impacts on the economy.<sup>7</sup> The economic impact of assault may extend to losses in men and women's earning potential<sup>[7]</sup>. Working adults who are being assaulted in their homes by their spouses or even their children show a decline in their working capabilities. This affects the work that is being done, relationships with co-workers, and relationships with clients or customers. Direct costs on the economy due to physical assault include; costs incurred by the police, courts and legal services to prosecute perpetrators of assault. Others include the costs of treatment programs for offenders, medical care costs of treating medical consequences of physical assault; and social service costs.<sup>8</sup>

Physical assault can also have impacts on an individual's health; injuries sustained by men and women because of physical assault may be extremely serious and can result in injuries, ranging from bruises and fractures to chronic disabilities. A high percentage of these require medical treatment as evidenced in Papua New Guinea where 18% of all urban married women had to seek hospital treatment following domestic violence.<sup>9</sup>

This study aimed to explore some of these risk factors of victims who come to seek medical attention as a result of GBV assault in a hospital set up.

## **METHODS**

### **Study design and setting**

In a case control study which lasted from December 2015 to July 2016, male and female victims of physical assault were randomly selected in the casualty department at Ndola Central Hospital, Copperbelt province, Zambia.

According to the CBU-SOM handbook, Ndola central hospital is the second largest health institution in Zambia. It is a third level referral centre for the northern part of the country and it serves a population of 503649 in Ndola district. The department has inpatient and outpatient areas. The inpatient areas are the places where patients are admitted for clinical care. The largest of these are the

surgical, obstetrics and gynaecology and medical wards. The outpatient area includes the emergency area (casualty), the emergency theatre and the outpatient clinics. The casualty area has medical and surgical admission wards. Patients admitted after some form of physical trauma and other surgical emergencies will first be seen here. All cases of physical assault are dealt with in the outpatient department. Duration of hospital stay, and assessments made are documented in the registry.

### Data collection methods and tools

Participants were selected by simple random sampling. Written informed consent was obtained from all the participants prior to data collection. Data was collected using a self-administered questionnaire. The questionnaires were handed to the respondents in person and those who could not understand English were assisted to answer the questionnaire by interpreting. To ensure confidentiality, no name was collected; instead codes were used to identify the respondents. Ethical approval for the study was obtained from Tropical disease and Research Centre (TDRRC). Administrative clearance was also obtained from Ndola Central Hospital. A pilot study was also carried out on 30 cases of physical assault and 30 controls (included in the final study).

This study was formulated with the following objectives; to determine social factors such as alcohol intake, education and economic status and their association with physical assault in men and women at Ndola Central Hospital Casualty Department. The sample size was then calculated from the pilot study using Stat Calc in Epi Info version 7.0 (Epi Info™, CDC). The power was at 80% and the variable used was alcohol intake. The proportion of those who took alcohol among the cases of physical assault was 60% and the proportion of those who took alcohol among the controls was 27.6%. Therefore it was calculated that at least 85 cases and controls would be required for the study. The significance level was set at 0.025 and the reason for this is that the analysis would've been conducted twice.

1. When obtaining the 30 cases and 30 controls in order to calculate the sample size.
2. At the end of the study.

### Data analysis

Data from the questionnaire was processed using Epi Info version 7.0 (Epi Info™, CDC) and analysed using statistical package for the social sciences (SPSS) version 16.0 (SPSS Inc., USA). Statistical analysis performed included the Pearson Chi-square test to determine whether there is an association between physical assault and various factors like age, alcohol abuse and socio-economic status. Statistical significance was set at  $P < 0.025$ .

### RESULTS

One hundred and seventy nine (179) patients were randomly selected to participate in the study and they all completed the questionnaires but with a few questions left unattended. The respondents were between 18 and 69 years (mean = 32.19) of age. Among the 179 respondents, 46 (25.7%) were still single while 95(53.1%) were married, 18 (10.1%) divorced, 17(9.5%) widowed and 4 (1.7%) of the participants did not indicate their marital status. Out of the 179 participants, 50(27.9%) experienced physical assault in the past, and 115(64.2%) did not experience any physical assault in the past but it should be noted the 14 participants (7.8%) did not respond to this. Table 1 shows factors associated with gender based violence (GBV) in a bivariate analysis.

In terms of age, more than half of the participants 93(52%) reported to have experienced physical assault in relation to GBV. There was no significant difference of physical assault in relation to GBV by age. For the gender of participants, there is a higher proportion of females 67(68.4%) who experienced physical assault in relation to GBV than among males of which is 26(32.1%). The difference was highly statistically significant with the p-value less than 0.001.

For income and family size, there was no statistical difference of those who experienced physical assault associated with GBV and those who did not experience the outcome. More than two thirds of those who reported alcohol drinking behaviour 51(69.9%) had reported experiencing GBV physical assault of which compared to only 40(40.0%) among those who did not report the outcome. Generally the

difference of GBV physical assault by alcohol drinking behaviour was highly significant with a p-value less than 0.001. Those from high density 82(56.9%) reported having experienced GBV physical assault compared to 5(23.8%) from low

density areas. The association between residence and GBV physical assault is statistically significant because the p-value was less than 0.004.

**Table 1. Factors Associated with GBV physical assault in Bivariate Analysis**

VARIABLE	CATEGORIES	TOTAL N (%)	GBV		STATISTICS	
			YES	NO	$\chi^2$	P- VALUE
Sex	Female	98(100%)	67(68.4%)	31(31.6%)	23.37	0.001
	Male	81(100%)	26(32.1%)	55(67.9%)		
Age (years)	18-28	86(100%)	48(55.8%)	38(44.2%)	0.987	0.199
	Above 28	93(100%)	45(48.4%)	48(51.6%)		
Income	Below minimum wage	75(100%)	45(60.0%)	30(40.0%)	3.347	0.046
	Above minimum wage	104(100%)	48(46.2%)	56(53.8%)		
Alcohol intake	Take alcohol	73(100%)	51(69.9%)	22(30.1%)	15.093	0.001
	Do not take alcohol	100(100%)	40(40.0%)	60(60.0%)		
Residence	High density	144(100%)	82(56.9%)	62(43.1%)	8.073	0.004
	Low density	21(100%)	5(23.8%)	16(76.2%)		
Family size	Big family <5	76(100%)	37(48.7%)	39(51.3%)	0.592	0.269
	Small family >5	99(100%)	54(54.5%)	45(45.5%)		

**Table 2: Independent Factors Associated with GBV Physical Assault**

FACTOR		ADJUSTED ODDS RATIO	(95% C.I)
Alcohol intake	Yes	2.25	(1.52- 3.34)
	No	1	
Residence	High density	2.35	(1.30- 4.27)
	Low density	1	
Sex	Female	2.27	(1.55- 3.31)
	Male	1	

**Comments:** Alcohol drinking behaviour increases the likelihood of GBV physical assault by 2.25 times. Those living in high density areas are 2.23 times more at risk of GBV physical assault. Females are 2.27 times associated with GBV physical assault unlike the males.

## DISCUSSION

Many risk factors are attributed to this. This study explored age, area of residence, income level, gender and alcohol drinking behaviour as some of the individual risk factors.

### Age

In terms of age, more than half of the participants 93(52%) reported to have experienced physical assault in relation to GBV. There was no significant difference of physical assault in relation to GBV by age in this study. Others studies in Zambia however, show that women aged 15-19 are the least likely when compared with other age groups to have experienced physical violence ever (29 percent). The percentage of women who have ever experienced physical or sexual violence increases with age up to the 30-39 age groups, after which it decreases<sup>[3]</sup>. According to a World Health Organization (WHO) report, among women aged 15-44 years, gender violence accounts for more death and disability than cancer, malaria, traffic injuries, and war put together.

### Gender

This study showed that there is a higher proportion of females 67(68.4%) who experienced physical assault in relation to GBV than among males of which is 26(32.1%). This implies the female gender was 2.27 times associated with GBV physical assault unlike the male gender. The root of the problem of gender based violence lies in the gendered nature of society, where society places a higher value on males than females. In addition the unequal relations of power make women and girls vulnerable to violence<sup>[10]</sup>. A factor contributing to the figures shown is acceptance of violence in the community. The 2007 Demographic Health Survey found that significant numbers of both men (48%) and women (62%) believe that a husband is justified in hitting or beating his wife in certain circumstances.<sup>6</sup> This can also be evidence to the fact that women are more likely than men to report domestic violence to police.<sup>2</sup> The primary reason for reporting is to stop the violence, secure protection or get treatment; a much smaller proportion of victims contact police in order to have their partner arrested and/or punished. The figures from the males help explain the fact that men find it difficult to report cases of physical assault

from their spouses for fear of being teased by their friends that they are weak.<sup>11</sup> Cultural norms that require men to present a strong image means abused men are less likely to verbalize fear of any kind which keeps them from reporting physical abuse.<sup>4</sup>

### Income

For income and family size, there was no statistical difference of those who experienced physical assault associated with GBV and those who did not experience the outcome. This was consistent with the studies in Zambia which showed that the relationship between women's experience of violence and wealth is not consistent. Nonetheless, women in the highest wealth quintile are the least likely to experience any form of spousal violence (42 percent) when compared with women in the other quintiles (46-51 percent).<sup>3</sup>

### Alcohol

More than two thirds of those who reported alcohol drinking behaviour 51(69.9%) had reported experiencing GBV physical assault of which compared to only 40(40.0%) among those who did not report the outcome. Generally the difference of GBV physical assault by alcohol drinking behaviour was highly significant. Alcohol drinking behaviour increases the likelihood of GBV physical assault by 2.25 times. This also supports what other studies have done, the odds of domestic violence are about six times higher when the husband gets drunk frequently, compared to not getting drunk at all.<sup>10</sup> Alcohol drinking directly affects cognitive and physical function, reducing self-control and leaving individuals less capable of negotiating a non-violent resolution to conflicts within relationships.<sup>13</sup> There is a strong relationship between the experience of emotional, physical, or sexual violence and husband's alcohol use. Women whose husbands get drunk very often are the notably more likely to experience any form of spousal violence when compared with women whose husbands do not drink or never get drunk (72 percent versus 38 percent).<sup>31</sup> Excessive drinking by one partner can exacerbate financial difficulties, childcare problems and infidelity. This supports the relationships between alcohol and intimate partner violence.<sup>13</sup>



## Residence

Those from high density 82(56.9%) reported having experienced GBV physical assault compared to 5(23.8%). The association between residence and GBV physical assault is statistically significant and those living in high density areas were at 2.23 times more at risk of GBV physical assault.

Although this study brings out some of the risk factors of GBV physical assaults in our community, it also has some limitations which are the result of mistakes made in implementing data, and misunderstanding of the questions on the part of the respondent. Some questions were answered wrongly or left blank and some respondents were not willing to give consent, this made data collection challenging. The study depended on the number of victims who report cases at the hospital and the ability of men and women to recall violent experiences, as well as the age at which they first occurred. This made the study reliant on the participant's willingness to disclose this information. It is likely that physical assault, despite the high observed prevalence, was underreported and that data on age at onset are somewhat imprecise.

## CONCLUSION

This study confirms that both men and women experience GBV physical assault but men report less GBV physical assault compared to women. Alcohol consumption, age, those living in high density areas are risk factors of GBV physical violence in Ndola. These factors can help to create Gender based violence awareness training, prevention and intervention programs targeting the identified risk factors. This also confirms that a solution to GBV requires the effort of the government and Zambians as a whole.

At the level of society more jobs and employment opportunities need to be created to lower unemployment levels in high density areas and the low income levels. At a community level, the ministry of Gender development, church leaders, schools, and village headmen have to work together as a whole to create long term solutions in changing attitudes and behaviours of children, men, and women in the study area. At an individual level sensitization campaigns and educational programmes ought to be intensified in order to change the attitude and

behaviour of men and women in the study area towards risk behaviours in the prevention of GBV in general and physical assault.

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