

Empirical analysis of Domestic violence against women and potential risk factors in Ethiopia

Habtamu Kiros Gebresilassie

Haymanot.kiros20@gmail.com

Department of Statistics, College of Computing and Informatics, Haramaya University,
P.O.Box: 138, Dire Dawa, Ethiopia.

ABSTRACT

Domestic violence against women persists to be a major challenge and a threat to women's empowerment in Ethiopia, while Ethiopia is among the countries which have legal and policy provisions to promote the rights of women and girls. This study was held based on data obtained from 2016 Ethiopia Demographic and Health Survey. The objective of the study was to indicate the level of domestic violence across categories of various socio-demographic variables and identify major risk factors associated with domestic violence against women in Ethiopia. Descriptive analysis result showed that out of 2663 sampled women involved in the study about 765(28.5%) were experienced domestic violence perpetrated by current husband or partner. A total of 191(25%) women were experienced emotional violence only, 143(18.7%) were experienced physical violence only, 37(4.8%) were experienced sexual violence only and about 394(51.5%) women were experienced more than one form of violence committed by current husband or partner. The multivariate logistic regression analysis indicated that husband's or partner's education level, sex composition of living child, alcohol consumption, wealth index and region had statistically significant ($P<0.05$) effect on domestic violence against women. The results of my investigation have demonstrated that higher educational level and better economic status have been identified as protective factors against domestic violence. Domestic violence against women could be mitigated through enhancing access to better education, encouraging school completion, improving the economic status of women and organizing public educational campaigns that focus on changing gender related attitudes.

Keywords: Domestic violence, Odds ratio, Women, Intimate partner, Risk factor

1. INTRODUCTION

Women across the world regardless of income, age or level of education, are subject to physical, sexual, psychological and economic violence. Intimate partner violence accounts for the majority of women's experiences of violence [1]. Violence against women harms families and communities across generations and reinforces other violence prevalent in society. It is also impoverishes women, their families, communities and nations. Violence against women is not confined to a specific culture, region or country, or to particular groups of women within a society [2].

Domestic violence is where one person tries to control and assert power over their partner in an intimate relationship. It can be physical, emotional, financial or sexual abuse [3]. Although domestic violence against women is pervasive worldwide, there is no universally accepted definition or terminology [4]. It has also been used the terms "intimate partner violence," "wife abuse" and "domestic violence" interchangeably to refer to the range of sexually, psychologically, and physically coercive acts used against adult and adolescent women by current or former male intimate partners [5].

According to council of Europe, domestic violence shall mean all acts of physical, sexual, psychological or economic violence that occur within the family or domestic unit or between former or current spouses or partners, whether or not the perpetrator shares or has shared the same residence with the victim. As a result, the adopted definition includes both intimate partner violence and intergenerational violence [6].

Domestic violence has serious adverse consequences for the physical, mental, reproductive health of women and economy [7, 8, 9]. A number of women's advocacy groups around the world have been working to draw more attention to the physical, psychological, and sexual abuse

of women and to stimulate action through supporting abused women, lobbying for legal reforms, and challenging the widespread attitudes and beliefs that encourage violence against women [10]. Many states have adopted or revised legislation on violence against women and, even where legislation exists, it is often limited in scope and coverage, or is not enforced [11]. As United Nation reported, about 119 countries have passed laws on domestic violence, 125 have laws on sexual harassment and 52 have laws on marital rape. However, the existing domestic violence laws are always impractical, or not implemented in ways that help women [1]

Despite all the efforts made by different women advocacy groups, Violence against women and girls continues to be a global epidemic that kills, tortures, and maim physically, psychologically, sexually and economically. It is one of the most pervasive of human rights violations, denying women and girls equality, security, dignity, self-worth, and their right to enjoy fundamental freedoms [12, 13]. As World Health Organization 2013 report indicated, the global prevalence of physical and/or sexual intimate partner violence among all ever-partnered women was 30%. The prevalence was highest in African, Eastern Mediterranean and South-East Asia Regions, where approximately 37% of ever-partnered women reported having experienced physical and/or sexual intimate partner violence at some point in their lives [14]. Moreover, a survey conducted by the European Union across the 28 Member States on 42,000 women, by questioning about their experiences of physical, sexual and psychological violence, including incidents of intimate partner violence. According to the survey report, 22% of women had experienced physical and/or sexual violence by a partner. Overall, 43 % of women had experienced some form of psychological violence by an intimate partner, which includes other forms of abuse alongside psychologically abusive behavior [15].

Domestic violence occurs in all countries but its prevalence differs greatly across the globe and even within sub-Saharan Africa [16, 17]. Regardless of social, economic, religious and cultural groupings, men have been identified as the major actors of domestic violence against women [18]. Ethiopia is among the countries which have legal and policy provisions to promote the rights of women and girls. These rights are enshrined in the Constitution and have direct relevance to the right of women to be protected from domestic violence [19]. Ethiopia has also ratified many of the international and continental agreements that promote and protect women's rights. Furthermore, Ethiopia has established specific legal measures and actions to address violence, including the revised family law in 2000 and the revised criminal code in 2005 [20].

In the presence of all the legal protections for women's right in Ethiopia, violence against women and girls continues to be a major challenge and a threat to women's empowerment. Violence against women is not only extremely rooted but also accepted rather than challenged problem in Ethiopia [21] and about 71% of Ethiopian women experience either physical or sexual violence or both [22].

A handful of studies about domestic violence were conducted in some parts of Ethiopia, in order to demonstrate the prevalence and factors associated with it. Although, all the researches had limitation in scope, or representing the nation and addressing major factors which are believe to be related with domestic violence in the country. However, in the current study I utilized a representative data on domestic violence collected for the first time by central statistical agency (CSA) of Ethiopia. Since, a module of questions on domestic violence and most common form of violence against women were not part of Ethiopia Demographic and Health Survey (EDHS) questionnaires until 2016 [23]. Thus, the objective of current research was to bridge the gaps noticed in previous studies in terms of reporting the level of domestic violence across categories of various socio-demographic variables, and identifying major risk factors associated with domestic violence against women in Ethiopia.

2. MATERIALS AND METHODS

2.1 Data source

This study was carried out based on data obtained from 2016 Ethiopia Demographic and Health Survey. The 2016 Ethiopia Demographic and Health Survey (EDHS) is the fourth Demographic and Health Survey to be conducted in Ethiopia and it is also unique from previous surveys due to the inclusion of domestic violence module. Administratively, Ethiopia is divided into nine geographical regions and two administrative cities. This cross-sectional study was designed to generate nationally representative data out of randomly selected 16,650 households across Ethiopia. The survey was held from January 18, 2016, to June 27, 2016 across the nine regions and the two administrative cities. A total 15,683 female respondents aged 15 to 49 years were involved in the survey and 5,860 women were interviewed regarding violence against women. Three percent of women eligible for the domestic violence module could not be successfully interviewed, mainly due to lack of privacy. Specially constructed weights were used to adjust for the selection of only one woman per household and to ensure that the domestic violence subsample was nationally representative [23].

2.1.1 Study sample

The domestic violence module was intended to be administered on 2750 eligible women selected from each household, but 63 respondents were not interviewed due to privacy concern. Out of 2687 women who were agreed and interviewed with domestic violence module, 24 women were excluded in this study due to missing information on husband's or partner's education level and occupation. So, a sample of 2663 (or $n = 2663$) women with their corresponding explanatory variables were used for the purpose of my research.

2.1.2 Variables in the Study

The dependent or the outcome variable used for the present study was domestic violence, which is defined as violence committed by intimate partner (husband or partner) against woman and manifested through acts of physical, sexual and emotional violence. Violence perpetrated by the current husband or partner was categorized as emotional spousal violence, by asking if her husband or partner ever did the following: say or do something to humiliate you in front of others; threaten to hurt or harm you or someone close to you; insult you or make you feel bad about yourself. Physical spousal violence was measured by asking if her husband or partner ever committed the following: push you, shake you, or throw something at you; slap you; twist your arm or pull your hair; punch you with his/her fist or with something that could hurt you; kick you, drag you, or beat you up; try to choke you or burn you on purpose; or threaten or attack you with a knife, gun, or any other weapon. Similarly, violence perpetrated by current husband or partner was considered as sexual spousal violence, by questioning if her husband or partner did the following: physically force you to have sexual intercourse with him even when you did not want to; physically force you to perform any other sexual acts you did not want to; force you with threats or in any other way to perform sexual acts you did not want to [23]. Finally, if the response provided by the participant for any of acts listed under each categories of violence is “yes”, it was coded as 1 (yes=1) and zero otherwise (no=0).

The outcome variable or domestic violence (Y) was also coded as 1 for women who were experienced at least one form of spousal violence that is physical, sexual or emotional violence and coded 0 for women who were not experience any form of spousal violence. Thus, the outcome for the i^{th} woman is represented by a random variable Y_i ($i = 1, 2, \dots, n$) with two possible values coded as 1 (experienced domestic violence) and 0 (not experienced domestic violence).

The explanatory variables which are included in this study were extracted from various literature reviews and assumed to be factors associated with domestic violence [17, 24 - 27].

2.2 Logistic Regression Analysis

Logistic regression analysis extends the techniques of multiple regression analysis to research situations in which the outcome variable is categorical but it is mathematically flexible and has less number of assumptions need to be met than linear regression model. Logistic regression analysis allows one to predict a discrete outcome, such as group membership, presence or absence, success or failure, from a set of explanatory variables and also it results in a clinically meaningful interpretation [28]. The response variable in my study is dichotomous. Therefore, in order to find out the net effect of the predictors on the response variable (domestic violence), logistic regression analysis method was adopted.

Logistic Regression analysis does not model the outcome variable Y directly, but rather the probabilities associated with the values of Y . Thus, the logistic model is defined as follows:

$$p_i = p(Y_i | X) = \frac{e^{(\beta_0 + \beta_1 x_{i1} + \dots + \beta_p x_{ip})}}{1 + e^{\beta_0 + \beta_1 x_{i1} + \dots + \beta_p x_{ip}}} = \frac{e^{X_i^T \beta}}{1 + e^{X_i^T \beta}}$$

p_i = the probability that the i^{th} woman had experience on domestic violence with her given individual characteristics X_i .

Y_i = the response of the i^{th} woman (experienced domestic violence or not experienced).

$X = n \times (p+1)$ matrix of p covariates with a column of 1s.

β is $(p+1) \times 1$ vector of unknown parameters.

3. RESULTS AND DISCUSSION

3.1 Univariate analysis

The descriptive analysis result on socio-economic and demographic characteristics of study participants, revealed that out of 2663 women involved in the study about 765(28.5%) were experienced domestic violence perpetrated by current husband or partner (Table 1). The prevalence of domestic violence had variation across age distribution of women, that is domestic violence was less prevalent (23.4%) among women age 15 to 24 than women age 25 to 34 and 35 to 49 years old (Table 1). The proportion of domestic violence committed by intimate partner differs from place to place in Ethiopia. The result obtained from nine regions and two administrative cities showed that the percentage of domestic violence was highest in Oromia region (37.1%), Harari region (34.5%) and Gambela region (33.6%). On the contrary, the Somali region was where the lowest figure (7.7%) on domestic violence reported than other regions and city administrations in the country (Table 1).

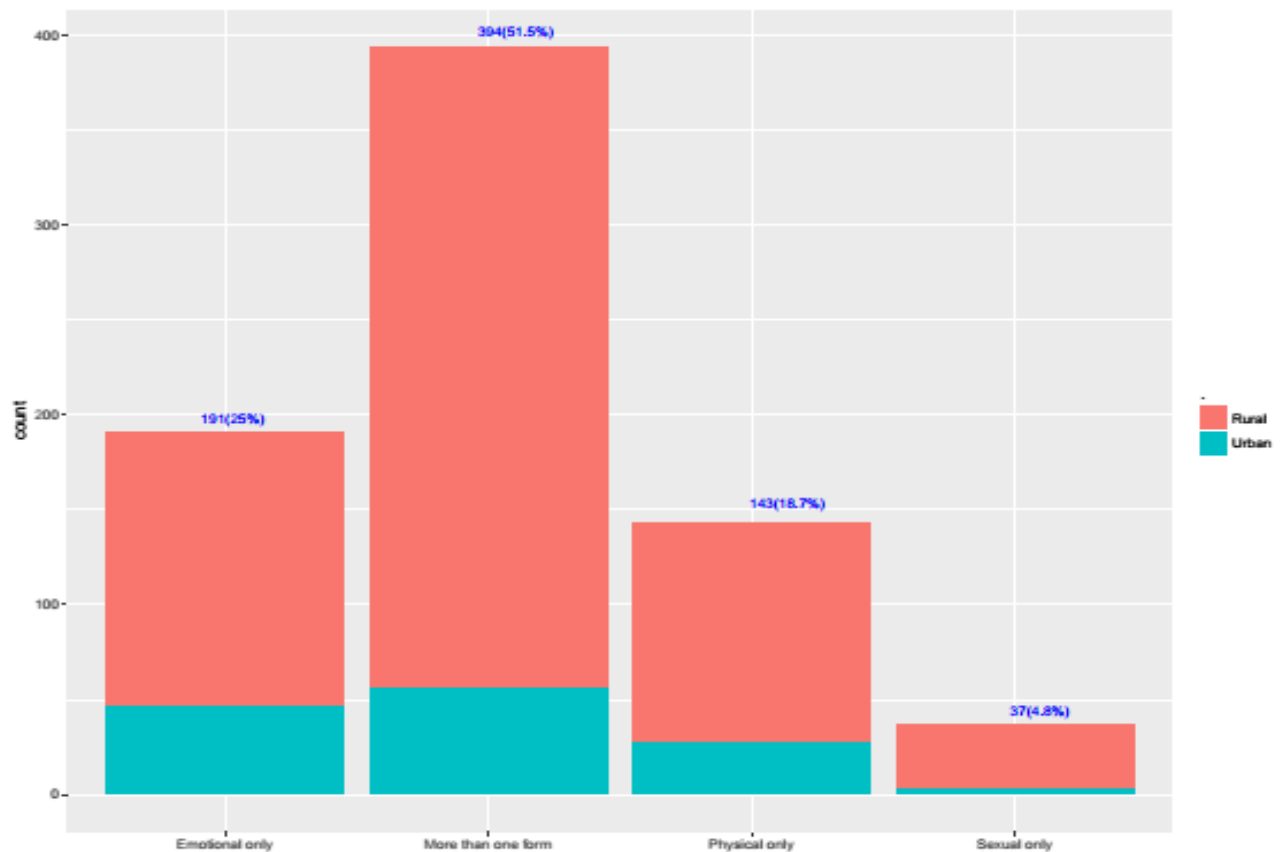


Fig.1. Distribution of forms of domestic violence against women along place of residence in Ethiopia

A woman could experience one or more form of spousal violence, the study illustrated that 191(25%) women were experienced emotional violence only, 143(18.7%) experienced physical violence only, 37(4.8%) experienced sexual violence only and about 394(51.5%) women were experienced more than one form of violence, that is emotional and physical or emotional and sexual or physical and sexual violence (**Fig.1**). The distribution of domestic violence according to women's place of residence indicated that 144(75%) emotional violence, 115(80.4%) physical violence and 34(94.9%) sexual violence victims were urban dwellers (**Fig.1**).

Table 1. Socio-demographic characteristics of sampled women and chi-square test between domestic violence experience and explanatory variables

Variable	Category	Experienced Domestic Violence		Chi-square (p-value)
		No	Yes	
Respondent's age	15-24	513(76.6)	157(23.4)	12.336 (0.002 [†])
	25-34	852(69.7)	370(30.3)	
	35 -49	533(69.1)	238(30.9)	
Marital status	Married	1878(71.4)	754(28.6)	0.699 (0.403)
	Living with partner	20(64.5)	11(35.5)	
Marital duration	0-9 years	801(74.9)	269(25.1)	12.379 (0.002 [†])
	10-19 years	737(69.7)	320(30.3)	
	20+ years	360(67.2)	176(32.8)	
Education Level	No education	1092(70.2)	463(29.8)	6.845 (0.077)
	Primary	546(70.8)	225(29.2)	
	Secondary	167(76.3)	52(23.7)	
	Higher	93(78.8)	25(21.2)	
Husband/Partner's education	No education	837(72.2)	322(27.8)	25.403 (0.000 [†])
	Primary	639(66.3)	325(33.7)	
	Secondary	230(76.7)	70(23.3)	
	Higher	192(80)	48(20)	
Respondent currently employed	Yes	614(69.4)	271(30.6)	2.323 (0.127)
	No	1284(72.2)	494(27.8)	
Husband/Partner currently employed	Yes	1772(71.3)	715(28.7)	0.009 (0.923)
	No	126(71.6)	50(28.4)	
Place of residence	Urban	442(76.6)	135(23.4)	10.221 (0.001 [†])
	Rural	1456(69.8)	630(30.2)	
Husband/partner drinks alcohol	Yes	389(57)	293(43)	90.733 (0.000 [†])
	No	1509(76.2)	472(23.8)	
Wealth index	Poorest	524(73.4)	190(26.6)	19.174 (0.001 [†])
	Poorer	325(68.9)	147(31.1)	
	Middle	272(65.1)	146(34.9)	
	Richer	270(68.9)	122(31.1)	
	Richest	507(76)	160(24)	
Religion	Orthodox	708(69.5)	311(30.5)	24.334 (0.000 [†])
	Catholic	8(57.1)	6(42.9)	
	Protestant	337(67.4)	163(32.6)	
	Muslin	828(75.5)	269(24.5)	
	Traditional	8(42.1)	11(57.9)	
	Other	9(64.3)	5(35.7)	

Region	Tigray	171(71.2)	69(28.8)	
	Afar	124(81.6)	28(18.4)	
	Amhara	262(70.2)	111(29.8)	
	Oromia	264(62.9)	156(37.1)	
	Somali	216(92.3)	18(7.7)	
	Benishangul	179(69.1)	80(30.9)	
	SNNPR	264(69.5)	116(30.5)	
	Gambela	97(66.4)	49(33.6)	80.491
	Harari	95(65.5)	50(34.5)	(0.000 [†])
	Addis Adaba	118(75.6)	38(24.4)	
Number of living children	Dire Dawa	108(68.4)	50(31.6)	
	None	204(81.3)	47(18.7)	
	1-2	631(70.6)	263(29.4)	
	3-4	537(70.8)	222(29.2)	14.014
Sex Composition living of Child	5+	526(69.3)	233(30.7)	(0.003 [†])
	No child	204(81.3)	47(18.7)	
	At least one son	1408(69.8)	609(30.2)	14.629
Age difference	Only daughter	286(72.4)	109(27.6)	(0.001 [†])
	wife is older	69(70.4)	29(29.6)	
	wife is same age	37(56.9)	28(43.1)	
	wife 1-4 years younger	569(72.8)	213(27.2)	7.504
	wife 5-9 years younger	787(71.4)	315(28.6)	(0.112)
	wife 10+ years younger	436(70.8)	180(29.2)	

[†] = Significant at 5% level of significance ($p < 0.05$)

3.2 Bi-variate analysis

Chi-square test was employed to identify the presence of relationship between domestic violence and the explanatory variables included in my study. The chi-square test result revealed that variables such as respondent's age, marital duration, husband/partner's education, place of residence, husband/partner alcohol consumption, wealth index, religion, region, number of living children and sex composition of child had statistically significant ($P < 0.05$) association with dependent variable or domestic violence. Conversely, variables like age difference between couples, marital status, women employment status, women education level and husband/Partner employment status had no statistically significant association with domestic violence ($P > 0.05$) (Table 1).

3.3 Multivariate analysis

Binary logistic model was applied to explore the net effect of socio-economic and demographic factors on domestic violence against women committed by intimate partner (husband or partner). The Hosmer-Lemeshow statistic depicts significance value of 0.569 which is greater than 0.05, this implies that the model adequately fits the data (Table 2). Then, one can conclude that there is no statistically significant difference between the observed number and the number predicted by the logistic regression model adopted in my study [28]. All the explanatory variables involved in the analysis were categorical. As a result, the last category of the variables was taken as reference category to interpret the findings of my analysis. In my analysis five predictor variables were statistically significant ($P < 0.05$), where at least one of their categories could negatively or positively influence domestic violence against women (Table 2). The significant predictors suggested by the model are husband's or partner's education level, sex composition of living child, husband's/partner's alcohol consumption, wealth index and region (Table 2).

My analysis indicated that the odds of experiencing domestic violence were 1.603 times higher among women whose husbands or partners were in primary education than women whose husbands or partners were at higher level of education. This suggests that as level of Education for husband or partner increases the probability of committing violence against wife or partner decreases. The sex composition of children in a family was significant predictor in my study; women who had no child 0.634 times less likely to be exposed for domestic violence perpetrated by husband or partner compare to women who had daughter/s only in the household. Regarding alcohol consumption, the study discovered that the odds of experiencing domestic violence for women whose husbands or partners drink alcohol were 2.861 times higher than their

counterparts. Wealth index is another variable found to be a risk factor for domestic violence. The study pointed out that, the likelihood of experiencing domestic among women who live in poorest and middle income households were 1.53 and 1.609 times higher compare to richest households, respectively. Similarly, region was also identified as a risk factor for domestic violence, where women who live Tigray, Afar, Amhar, Oromia Somali, Benishangul, Southern Nations Nationalities People Region (SNNPR) and Gambela regions were 0.490, 0.425, 0.427, 0.968, 0.162, 0.630, 0.670, 0.799 times less likely to endure domestic violence than women who live in Dire Dawa city administration, respectively (Table 2).

Table 2. Maximum likelihood estimates of the logistic regression model with significant variables in the final model.

Variables	Categories	$\hat{\beta}$	$S.E(\hat{\beta})$	Wald	Df	P-value	Exp($\hat{\beta}$)	95% C.I. for Exp($\hat{\beta}$)	
								Lower	Upper
Husband's/ Partner's education	No education	0.283	0.206	1.895	1	0.169	1.327	0.887	1.987
	Primary	0.472 [†]	0.197	5.723	1	0.017	1.603	1.089	2.360
	Secondary	-0.009	0.222	0.002	1	0.968	0.991	0.642	1.530
	Higher (Ref)								
Sex composition living of child	No child	-0.455 [†]	0.206	4.901	1	0.027	0.634	0.424	0.949
	At least a son	0.129	0.128	1.011	1	0.315	1.138	0.885	1.463
	Only daug. (Ref)								
Husband/ partner drinks alcohol	Yes	1.051	0.110	91.21	1	0.000	2.861	2.306	3.550
	No (Ref)								
Wealth index	Poorest	0.425 [†]	0.163	6.832	1	0.009	1.530	1.112	2.104
	Poorer	0.284	0.166	2.940	1	0.086	1.329	0.960	1.840
	Middle	0.476 [†]	0.169	7.941	1	0.005	1.609	1.156	2.241
	Richer	0.250	0.172	2.101	1	0.147	1.284	0.916	1.800
	Richest (Ref)								
Region	Tigray	-0.714 [†]	0.236	9.119	1	0.003	0.490	0.308	0.778
	Afar	-0.856 [†]	0.285	9.051	1	0.003	0.425	0.243	0.742
	Amhara	-0.850 [†]	0.230	13.70	1	0.000	0.427	0.273	0.670
	Oromia	-0.033	0.210	0.024	1	0.876	0.968	0.642	1.460
	Somali	-1.820 [†]	0.311	34.23	1	0.000	0.162	0.088	0.298
	Benishangul	-0.461 [†]	0.231	3.978	1	0.046	0.630	0.401	0.992
	SNNPR	-0.400	0.218	3.379	1	0.066	0.670	0.437	1.027
	Gambela	-0.225	0.258	0.756	1	0.384	0.799	0.482	1.325
	Harari	0.234	0.251	0.868	1	0.352	1.263	0.773	2.066
	Addis Adaba	-0.427	0.271	2.480	1	0.115	0.652	0.383	1.110
	Dire Dawa (Ref)								
Hosmer and Lemeshow test						Chi-square	Df	Sig.	
						6.705	8	0.569	

Ref = Reference category, [†] = Significant at 5% level of significance (p< 0.05)

In my study EDHS 2016 data was used to explore the potential risk factors associated with domestic violence against women who were currently married or living with someone in Ethiopia. As my analysis result reveals 28.5% (765) of women responded that they were victims of one or more forms of violence perpetrated by husband or partner at some point in their lives. This result is in line with previous study which mentioned that prevalence of domestic violence against women by husband or intimate partner in Ethiopia ranges from 20 to 78 % [29].

The findings of the study showed that as husband's or partner's education level increases the likelihood of committing domestic against intimate partner decreases. This result is in agreement with previous studies by [30,31,25], which stated that the higher the educational level of husband or partner, the lower a woman's risk of ever experiencing domestic violence. The effect of gender composition of children in a family was identified as statistically significant factor for domestic violence in my study, in which women with no child were less probable to encounter domestic violence perpetrated by intimate partner than women who had only daughter/s. Though, this result contradicts study conducted in Nepal [26], where the odds of experiencing domestic violence among childless women were two times higher than women with children.

Another core factor for domestic violence was revealed to be alcohol consumption, the odds of domestic violence was higher among women whose husbands or partners drink alcohol than women whose husband or partner do not. This result is consistent with various studies, which confirmed that alcohol consumption increases propensity of husband's or partner's to commit violent act against intimate partner [24, 25, 32]. Moreover, my study illustrated that the lower the household in wealth strata the higher would be the risk of experiencing domestic violence. This result concur with studies conducted in all 28 Member States of European Union and India, where women who found it difficult to live on their household income were highly

likely to experience physical and/or sexual violence from an intimate partner than women who found their level of household income to be comfortable [15,30].

On the other hand, the formation of regions in Ethiopia was based on ethnicity, where each ethnic group has its own cultural and traditional practices. This study also showed that domestic violence varies across regions of the country; this finding is in line with other studies which indicated that domestic violence could vary due to diversity in culture and tradition across regions [33, 29, 34, 30]

4. CONCLUSION

The prevalence of domestic violence had variation along with socioeconomic and demographic variables in my study. Husband's or partner's education level, sex composition of living child, alcohol consumption, wealth index and region had statistically significant ($P < 0.05$) effect on domestic violence against women. The results of my investigation have depicted that higher education level and better economic status as protective factors against domestic violence. Thus, enhancing access to better education, encouraging school completion, and unwavering support to improve the economic status of women should be prime issues in Ethiopia. Likewise, the study also highlighted the need to focus on specific regions in tackling domestic violence against women and changing gender related attitudes in the country.

Ethical Approval:

As per international standard or university standard ethical approval has been collected and preserved by the author.

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