

Research Article

Determinants of Ethiopian Men's Attitudes Toward Wife Emotional Abuse Using Logistic Regression

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Abstract

The purpose of this study was to determine the contributing elements to emotional abuse against women. The data was analyzed using binary logistic regression and descriptive statistics, with women's emotional violence serving as the response variable. In order to achieve the goal, 4720 women between the ages of 15 and 49 who were acquired from the 2016 Ethiopian Demographic and Health Survey were included. The Hosmer and Lemeshow test indicates that the model matches the data quite well. Descriptive statistics show that, out of the 4720 women respondents who participated in the survey, 3667 (77.69%) were not subjected to emotional violence, while 1053 (22.31%) were. Based on the outcome of the binary logistic regression study indicates that the variable level of education, marital status, smoking cigarette, drink alcohol, chat chewing and religion are statistically significant factors on emotional violence. The variable level of education is one of significance variable on emotional violence. Therefore, the concerned body should include topics elimination of violence against women in the education system.

Keywords

Women Emotional Abuse, Binary Logistic Regression, Ethiopia

1. Introduction

1.1. Background of the Study

Emotional abuse is a technique used to exert power over another person by criticizing, humiliating, blaming, or otherwise manipulating them with their emotions. In general, a relationship is considered emotionally abusive when a pattern of abusive language and bullying actions wears down a person's self-esteem and jeopardizes their mental health. Additionally, while mental or emotional abuse is most prevalent

in dating and married relationships, it can occur in any relationship, including those between friends, relatives, and coworkers [1].

Avoid the temptation to rationalize their actions by telling yourself "it's not that bad." Bear in mind that everyone needs to be treated with dignity and kindness. If you often experience feelings of being hurt, irritated, confused, misunderstood, depressed, nervous, or useless in your interactions, the likelihood is that your relationship is emotionally [2].

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Being formed to feel inferior or humiliated was among the most commonly reported type of psychological harm. The most impacted groups are those who don't work for pay; those who are divorced, separated, or widowed; those with only a high school degree; those in the middle quintile of wealth; those whose husbands abuse alcohol frequently; and those whose fathers physically abuse their moms. Cuts, bruises, and aches were the most frequent injuries sustained by victims of spousal violence, followed by burns, sprains, dislocations, and eye injuries [3].

Emotional abuse expressed as insults, continuous degradation, calling of names and withholding family support. One survivor of violence identified that her husband used to say he should not have marital a prostitute and that hurt her a great deal. A young woman in the women's group also indicated that it always upsets her when her husband called her a dependent (Tiwir). Many women found with holding of money tormenting shouldering the domestic tasks women suffers when men fail to provide money for the family and squander their property. The problem gets worse if the woman does not have her individual income which is often the case. Men also use the fact that they are the breadwinners to shut women up when they ask for money, resource were said to be under the control of the husband.

Abuse towards women remains a serious problem and a threat to women's empowerment in Ethiopia. Sexual, emotional, and physical abuse of women ruins their upbringing and education, threatens their health and capacity to work, and upends their social networks and connections [4].

Emotional abuse typically targets people with the least resources and influence, just like other forms of abuse. When someone abuses someone emotionally, they are trying to make the victim feel less valuable and respectable [5].

Domestic violence in Ethiopia is widely acknowledged to be a serious concern from the perspectives of economics, health, and human rights. Ethiopia's government rewrote the country's criminal code in 2005, family law in 2000, and constitution in 2005 to uphold and defend women's and children's rights and advance gender parity.

Report for EDHS 2016 ever married women age 15-49 more than one-third of ever married women (35%) report that they have experienced physical, emotional or sexual violence from their husband or partner at some point in time. 24% that they experienced emotional violence of women reported .25, 11% physical and sexual violence respectively.

Experience of physical, emotional or sexual violence from a husband or partner is higher among older women 40-49(38%), formal married women (45%) living rural area (36%), and women in Oromia (39%), Harari (38%) and Amhara (37%). Experience of spousal violence decreases with increase education level and household wealth .34% ever married women age 15-49 have ever experienced physical, sexual, or emotional violence by their current husband /partner if currently married or most resent husband /partner formerly married

In Ethiopia many studies studied on the domestic violence in general, that is physical violence, sexual violence and emotional violence many researchers focus on physical violence few on sexual violence there is no work on depending on emotional violence in a particular pattern.

At the previous study studied on in 12 months period interval to determine the factor of domestic violence, but the present study is based on in 12 months period and at the past.

1.2. Objectives

1.2.1. General Objective

The general objective of this study is the determinants of Ethiopian men's Attitudes toward Wife emotional abuse using logistic regression analysis

1.2.2. Specific Objectives

The specific goals of the study are to:

- (i) Identify the major causes and contributing factors of men's attitude towards wife emotional abuse
- (ii) Examine the association between socio-demographic factors with Ethiopian men's attitude towards wife emotional abuse.

1.3. Significance of the Study

Domestic violence against women has affected major psychological trauma disability and heart smiting deaths among women of reproductive age in both developed and developing countries in which the enigma in developing countries like Ethiopia is estimated to account for 5% for their healthy years life loss [6]. It also has serious repercussions on children life which has resulted in poor performance in schools increased probability of delinquency leaving homes early, risk of abuse and joining street life, engagement in substance abuse, attempting to commit suicide and disturbing the family [7]. So, the finding of the study will make to change attitudes of the people, prevent harm, to show readers the severity of the problem, literatures to enrich emotional violence and give information to governmental and non-governmental organization in setting policies strategies and further investigation for understanding emotional abuse.

2. Methods

2.1. Study Population and Period

The Ethiopian Population and Health Survey (EDHS 2016) was used in the study. This is Ethiopia's fourth Population and Health Survey. The Ethiopian Statistics Services (ESS) carried it out between January 18, 2016, and June 27, 2016.

2.2. Data

We use secondary data from EDHS and extract data by using EDHS Guidelines.

2.3. Sampling Design

The sampling frame used for the 2016 EDHS is that the Ethiopia Population and Housing Census (PHC), which was conducted in 2007 by the Ethiopia Central Statistical Agency. The census frame may be a complete list of 84,915 enumeration areas (EAs) created for the 2007 PHC. An EA may be a geographical area covering on the average 181 households.

Ethiopia splits administratively into two administration cities and nine countries. Two steps went into stratifying and choosing from the 2016 EDHS sample. Twenty-one sampling strata were produced by stratifying each region into urban and rural areas.

EA sample were chosen in two stages, individually, for each stratum. By sorting the sampling frame within each sampling stratum prior to sample selection, consistent with administrative units in multiple levels, and by using a probability proportional to size selection at the primary stage of sampling, implicit stratification and proportional allocation were achieved at each of the lower administrative levels. A total of 645 EAs—202 in urban areas and 443 in rural areas—were chosen independently in each sampling stratum and with a probability corresponding to the size of the EA (based on the 2007 PHC) in the initial stage of the process.

The households on the generated lists were selected for the final stage using them as a sampling frame.

Using an equal probability systematic selection method, a fixed number of 28 households per cluster were chosen from the newly formed household listing in the second stage of selection.

Interviews were available for all females aged 15 to 49 and all males age 15 to 59 who were either long-term inhabitants of the selected homes or guests who spent the night before the survey. Thus, this study has extracted 4720 women's selected to the total of 15683 eligible women in the EDHS-2016 data.

As there's no missing value within the studied variables, the analysis is carried on all 4720 women. This study is predicated on a complete of dataset 4720 women aged 15-49 were selected [8].

2.4. Data Analysis Method

In this work, binary logistic regression, the chi square test and descriptive statistics were employed to

analysis the determinants of women emotional violence in Ethiopia. Finding the value of the chi-square is given by:

$$\chi^2 = \sum \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad [9].$$

Where O_{ij} is the observed frequency E_{ij} is the expected

value with degree of freedom $r-1(c-1)$ the level of significance is 0.05. In this study, the variable of interest (Men's Attitudes toward Wife emotional abuse) is dichotomous variable. When the response variable is a dichotomous it is appropriate to use Binary logistic regression to describe the relationship between the outcome variable and a set of predictor variables.

Suppose $X_i = (X_{1i}, X_{2i}, \dots, X_{ki})'$, denotes the vector of predictor variables for the i^{th} individual, $i=(1,2,\dots,4720)$.

The probability of success of the i^{th} individual (that is the probability that the i^{th} men's attitude towards wife emotional abuse) given his background characteristics X_i is given by:

$$Y_i = \begin{cases} 1, \text{mens attitude towards wife emotional abuse} \\ 0, \text{not mens attitude towards wife emotional abuse} \end{cases}$$

$$p_i = \text{prob} (y_i = 1 / X_i) = \frac{e^{x_i' \beta}}{1 + e^{x_i' \beta}} \text{ and } p_i = \text{prob} (y_i = 0 / X_i) = 1 - \frac{e^{x_i' \beta}}{1 + e^{x_i' \beta}}, \text{ where } \beta = (\beta_0, \beta_1, \beta_2, \dots, \beta_k)' \text{ is a vector of unknown parameters. } x_i \text{ is row vector}$$

$$\text{Logistic regression model: } p_i = \frac{e^{\beta_0 + x_{1i}\beta_1 + x_{2i}\beta_2 + \dots + x_{ki}\beta_k}}{1 + e^{\beta_0 + x_{1i}\beta_1 + x_{2i}\beta_2 + \dots + x_{ki}\beta_k}} = \frac{e^{x_i' \beta}}{1 + e^{x_i' \beta}} \quad (1)$$

$$\text{logit}(p_i) = \ln\left[\frac{p_i}{1-p_i}\right] = X_i' \beta = \beta_0 + x_{1i}\beta_1 + x_{2i}\beta_2 + \dots + x_{ki}\beta_k \quad (2)$$

Generally, Binary logistic regression is a type of logistic regression that is used when the dependent variable is dichotomous and the predictor variables are of any type [10].

3. Result and Discussion

3.1. Descriptive Statistics

Table 1's results showed that, at the 0.05 level of significance, there is a significant relationship between emotional aggression and the following factors: age, chat chewing, religion, smoking status, married status, educational attainment, occupation, and length of cohabitation (Table 1).

From 4720 women who participated in the study 3667(77.69%) are not exposed for emotional violence and 1053(22.31%) are exposed emotional violence. Emotional violence is also differs by location of the residence. The highest prevalence rate of emotional aggression was observed on mothers living in rural area so, 22.74% emotional abuse was observed on mothers living in rural area. In the wealth index, middle category is the highest percentage emotional violence than the other wealth indexes (Table 1).

The proportion of emotional violence with age group 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49 were 15.29%, 19.31%, 20.52%, 22.78%, 26.47%, 22.7%, 30.38% respec-

tively. The age group 25-29 had the highest percentage of emotional abuse than other age groups. Similarly, the proportion of emotional violence with cohabitation duration 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, >30 were 17.11%, 20.39%, 22.18%, 24.24%, 26.50%, 26.78%, 28.58% respectively. The

(duration of married) group 10-14 years had the highest percentage of emotional abuse than other cohabitation durations. Compared to other marital status categories, married women had the highest percentage of emotional aggression (Table 1).

Table 1. Frequency, percentage and chi-square test of association factor of emotional violence in Ethiopia.

Explanatory variable		Emotional Violence					Chi-sq.(sig)	
		Not emotional violence		Emotional Violence				
Variables	Categories	Number	Percent	Number	Percent	Total%	Df	
Resident	Urban	956	78.94	255	21.06	1211	1	1.474(0.225)
	Rural	2,711	77.26	798	22.74	3509		
Religion	Orthodox	1,368	75.79	437	24.21	1805	3	32.608(0.00)
	protestant	625	74.85	210	25.15	835		
	Muslim	1,619	81.23	374	18.77	1993		
	Others	55	63.21	32	36.79	87		
Wealth index	Poorest	1,149	79.02	305	20.98	1454	4	7.933(0.094)
	Poorer	656	76.10	206	23.89	862		
	Middle	676	75.78	216	24.22	892		
	Richer	599	76.70	182	23.30	781		
	Richest	587	80.3	144	19.7	731		
Smoking	No	3,635	77.92	1030	22.08	4665	1	12.219(0.00)
	Yes	32	58.18	23	41.82	55		
Marital status	Married	3,171	78.65	861	21.35	4032	4	33.074(0.00)
	Living with partner	68	74.72	23	25.28	91		
	Widowed	137	82.53	29	17.47	166		
	Divorced	224	65.88	116	34.12	340		
Education	Separated	67	73.63	24	26.37	91	3	15.39(0.002)
	Noeducation	2,097	76.67	638	23.33	2735		
	Primary	1,016	76.97	304	23.03	1320		
	Secondary	355	81.98	78	18.02	433		
Occupation	Higher	199	85.77	33	14.23	232	1	14.009(0.00)
	Non- working	1,901	80.10	477	19.89	2378		
	Working	1766	75.4	576	24.6	2342		
Drinking	No	2,535	79.51	653	20.49	3188	1	18.90(0.00)
	Yes	1,132	73.89	400	26.11	1532		
Chat chewing	No	3,251	78.31	900	21.69	4151	1	7.83(0.005)
	Yes	416	73.11	153	26.89	569		
Age	15-19	255	84.71	46	15.29	301	6	35.6(0.00)

Explanatory variable		Emotional Violence					Chi-sq.(sig)
		Not emotional violence		Emotional Violence		Total%	
Variables	Categories	Number	Percent	Number	Percent	Total%	Df
Cohabitation duration (marital duration)	20-24	677	80.69	162	19.31	839	6
	25-29	856	79.48	221	20.52	1077	
	30-34	722	77.22	213	22.78	935	
	35-39	553	73.53	199	26.47	752	
	40-45	361	77.30	106	22.70	467	
	45-49	243	69.62	106	30.38	349	
	0-4	761	82.89	157	17.11	918	32.29(0.00)
	5-9	742	79.61	190	20.39	932	
	10-14	751	77.82	214	22.18	965	
	15-19	600	75.76	192	24.24	792	
	20-24	405	73.50	146	26.50	551	
	25-29	268	73.22	98	26.78	366	
	>30	140	71.42	56	28.58	196	

3.2. Model of Binary Logistic Regression

3.2.1. Hosmer and Lemeshow Test

A chi-square test is used to check whether there is an interaction between the regressors and response variables. The result presented on (Table 2) showed that the value of $X^2(8)$ is 5.411, it is insignificant at alpha 0.05 (p-value 0.713 > 0.05). We can conclude that the fitted logistic regression model is good fit of the data.

Table 2. Hosmer and Lemeshow Test.

Chi-square	Degree of freedom	Sig.
5.411	8	.0713

3.2.2. Binary Logistic Regression Model

From Table 3 shows that for predicting wife emotional violence. The factors level of education; smoking cigarette, marital status, drinking alcohol, chat chewing, and religion are factors of the outcome variable.

Based on the result likelihood of women emotional abuse were lower for primary education as compared to higher level of education, while the other variable are constant in the model. The emotional violence of women with primary level

of education was about 39.5% lower than those with higher level of education. This result is inconsistent with [11].

The other factor that has a significant association with women emotional abuse is smoking cigarettes. The odds of emotional violence are increased by 2.1 times with smoker women as compared to the non-smoker ones. This support evidence from [12].

The finding of this study also revealed that the likelihood of emotional abuse were higher for divorced women that marrieds. Windowed women are about 39.5% vulnerable to emotional violence than married women.

The result of this study also shows that women with chewing chat were about 57.9% more likely exposed to emotional violence as compared to those who did not chew chat. A study by [13] also reports a positive association between chewing chat and women emotional violence.

Drinking alcohol is the other significant factor for women emotional violence. The likelihood of emotional violence for drunk women is 30.4% higher than women that didn't drink alcohol. This finding is in agreement with [14].

The result of this study also revealed that religious is the other significant factor of women emotional violence. The odds of emotional violence for protestant women are 1.4 times higher than an orthodox. Muslims are less likely to be encountered with emotional violence as compared to Orthodox Christian. A study [15] also shows a similar result.

Table 3. Emotional abuse for binary logistic regression model.

Factor	Category	β	S.E	Exp (β)	Sig.	95% CI of β xp (β)	
						Lower	upper
Education	(Higher)						
	No education	-0.0119	0.0872	0.988	0.8908	0.832	1.172
Level	Primary	-0.3698	0.1428	0.691	0.0096*	0.519	0.910
	Secondary	-0.7173	0.2052	0.488	0.0004*	0.322	0.721
Cigarette	(Nonsmoking)						
	Smoking	0.7829	0.2862	2.188	0.0062*	1.235	3.815
Marital Status	(Married)						
	Live with partner	0.2040	0.2517	1.226	0.4176	0.734	1.979
	Widowed	-0.5018	0.2152	0.605	0.0197*	0.390	0.910
	Divorced	0.6016	0.1263	1.825	1.9e-0*	1.421	2.333
Alcohol	Separated	0.1634	0.2477	1.178	0.5094	0.711	1.887
	(Not drink) Drank	0.2651	0.1155	1.304	0.0217*	1.041	1.637
Chat	(Not chewing)						
	Chewing chat	0.4566	0.1120	1.579	4.6e-05*	1.265	1.964
Religion	(orthodox)						
	Muslim	-0.1779	0.1266	0.837	0.1598	0.654	1.074
	Protestant	0.3327	0.1285	1.395	0.0096*	1.084	1.796
	Other	0.7087	0.2413	2.031	0.0033*	1.255	3.242
Constant	Constant	-1.9055	0.2079	0.149	< 2e-16*	0.098	0.222

Reference categories are in parenthesis

4. Conclusion and Recommendation

4.1. Conclusion

Descriptive statistics, Binary logistic regression model were used to identify the determinant of Ethiopian men's attitude towards wife emotional abuse. Out of 4720 women respondents include in the study 3667(77.69%) are not emotional violence and 1053(22.31%) are emotional violence.

From the output of binary logistic regression analysis indicates that the variable education level, marital status, smoking cigarette, drink alcohol, chat chewing and religion are statistically significant factors on emotional violence.

Emotional violence with primary and secondary education level was more affected to violence than compare to higher education level. Education level increase, the violence of emotional abuse is decrease. The result of this study indicated that marital status is significant predictor of emotional

violence. Emotional violence with widowed and divorced marital status more affected emotional abuse than compared to married marital status.

4.2. Recommendations

Based on the result of this study the following recommendations are announced.

The concerned body should create awareness for low education level. The result shows that as education level increase; the violence of emotional abuse is decrease. Therefore, the concerned body should include topics elimination of emotional abuse in education system.

The current revealed study that marital status was significantly associated with the likelihood of emotional abuse. In particular, women with divorced were more affected to emotional violence than compare to married women. Therefore recommends reducing divorce rate the government should to create proclamation and punishment based on marital status.

The result revealed that addiction substances were posi-

tively associated with the likelihood of emotional violence. In particular, women with addiction substances were more affected to emotional abuse than compare to non-addiction. Thus the concerned body should increase tax on the addiction substances like smoking cigarette, drink alcohol and chat chewing.

Abbreviations

ESS	Ethiopian Statistics Service
DHS	Demographic and Health Survey
EAs	Enumeration Areas
EDHS	Ethiopian Demographic and Health Survey
EPHC	Ethiopian Population and Housing Census

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Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research.

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