

## Risk Factors for Domestic Violence in Women and Predictors of Development of Mental Disorders in These Women

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### ABSTRACT

**Introduction:** Based on the hypothesis that women who exposed to physical violence had lower education and income levels than those who did not, and those who got married earlier and had marriage with unwanted people had higher psychiatric disorders, the aims of this study were to determine risk factors for domestic violence and predictors of psychiatric impairment in women exposed to domestic violence.

**Methods:** We used random selection method and included 400 married women above 18 years of age living in Adiyaman province. Socio-demographic data and exposure to physical violence and sexual coercion for participants were evaluated by a structured questionnaire. Depression scores of the women were evaluated by Beck Depression Inventory (BDI) and anxiety scores were evaluated by Beck Anxiety Inventory (BAI). Suicidal ideas of the subjects were evaluated by 17 item Suicide Intent Scale and their suicide plans, attempts, thoughts, and risk of recurrence were evaluated by 4 item Suicidal Behavior Questionnaire.

**Results:** 65,5% of the women (n=262) reported no violence, 19,3% (n=77) reported violence only from their spouses, 5,2% (n=21) reported violence from people other than spouse, and 10% (n=40) reported

physical violence from both their spouses and other people. Logistic regression analysis showed that employment status of spouses, presence of medical/psychiatric illness in spouses, the acceptance of the view that 'Husbands can sometimes beat' by women and presence of psychiatric illness in women predicted domestic violence against these women from their spouses. Logistic regression analysis also revealed that education level, and presence of physical or sexual violence from their spouses predicted development of psychiatric disorders in women survivors of domestic violence.

**Conclusion:** This study showed that opinion of women about domestic violence, presence of a psychiatric disorder in women, employment status of spouse, and presence of a medical/psychiatric illness in spouse predicted physical violence against these women. In addition, education level of women, and presence of domestic violence from their spouses predicted development of psychiatric disorder. Knowing the factors that trigger physical violence and related psychiatric impairments is really important for development of preventive and therapeutic interventions.

**Key Words:** Domestic violence, mental disorder, women

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### INTRODUCTION

Violence was defined by World Health Organization as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, which either results in or has a high likelihood of resulting in injury, death, psychological harm, mal development, or deprivation" (1). In this WHO report published in 2002, violence was most common in domestic situations, and against women (1). Domestic violence can be defined as "any act of force or coercion that gravely jeopardizes the life, body, psychological integrity, or freedom of a person in a family or kinship" (2).

Women can be victimized by one or more of physical, sexual, economical, or psychological violence (3). In physical violence, force is used as a way

of threatening, suppressing, or punishing someone. Sexual violence can be defined as use of sexuality as a way of threatening, suppressing, or controlling someone. Psychological violence can be defined as verbal or behavioral acts for threatening, suppressing, punishing, or controlling someone. Economical violence can be defined as use of economical resources and money as a way of threat or control against a woman (4, 5).

Domestic violence is known to be associated with many factors including psychosocial, cultural, mental, and economical factors (6). Socioeconomic conditions, education, substance use disorder or a mental disorder in the spouse, history of domestic violence during childhood, and family structure are known to increase violence risk (7-10). Alcohol

and substance use of the male was found to be highly associated with domestic violence, and divorced or separated partners reported 2-3 times more violence than married ones (5).

Exposure to violence causes disturbance in mental health and life quality of women, increases use of medical services, and even impairs long term mental development of their children who are also exposed (11, 12). According to some others, after women who are survivors of domestic violence get over shock and denial period they start to use violence against violence, and then they start self-blaming and feel depressed. Post-traumatic stress disorder, depression, suicide attempts, alcohol and substance abuse, and violent behavior against their children are frequently seen in women exposed to domestic violence (13). Violence initially causes shock and numbness but then it causes fear due to possibility of recurrence of violence. If violence persists for a long period of time decrease in self-confidence, sense of losing control, self blaming and decrease in self-esteem, and feelings of despair and hopelessness occur (2, 14). Psychological effects of violence on women varies according to type, duration, and severity of violence, life cycle at which violence has occurred, coping mechanisms the woman have, and presence of social support (2).

Results of studies that used questionnaires in various regions of the World demonstrated that 10-69% of women were victimized by their husbands due to domestic violence in some period in their lives (1). Large variation in these numbers also demonstrated that rates of violence against women differs between countries, and even from one city to another in the same country.

In the beginning of this study, our hypothesis was that women who are exposed to physical violence had lower education and income levels than those who did not, and those who got married earlier and had marriage with unwanted people had higher psychiatric disorders.

The aim of this study was to detect socio-demographic variables that can trigger domestic violence; association of depression, anxiety, suicidal thoughts, and attempts with violence; and risk factors to develop mental disorders in the women that were exposed to domestic violence.

## METHODS

### Participants and Sample Size

This study included randomly selected voluntary women with improbable sampling method above 18 years of age living in Adiyaman province. We obtained the names and phone numbers of women above 18 years of age from family health centers of 3 districts at the city center. Voluntary women among ones who could be reached by us formed the study sample.

The study universe was approximately 250,000 women above 18 years of age in Adiyaman with a population of 600,000. The smallest sample size in a universe of 250,000 with 95% confidence interval, and  $\pm 5\%$  sampling error was 373.77. Number of questionnaires to make a universe generalization and sampling was found to be 374. This study included 400 voluntary women above 18 years of age.

### Procedure

This study was approved by the Ethics Committee of Adiyaman University with the decision no. 2015/1-13 dated 28.01.2015. Psychiatric interviews were performed by a psychiatrist to all subjects. Socio-demographic data and frequencies of exposure to physical violence, and sexual coercion and variables associated with violence for participants were evaluated by a psychiatrist with structured questionnaire. For illiterate women, forms were filled by the psychiatrist after reading the question and taking her

answer. Scores for depression, anxiety, suicidal thoughts, and suicidal behaviors were obtained using several scales by a psychiatrist.

## Measures

### Socio-demographic data

Mean age, working status, number of children, age of marriage, education level, and type of marriage of the subjects and their spouses were also obtained by questionnaires.

### Data of Violence and Parameters associated with violence

Physical violence from their spouses and other people and sexual coercion by their spouses, frequency of domestic violence during their and their spouses' childhood, thoughts of seeking-help if they are exposed to violence, thoughts of divorce, opinions about violence, and presence of physical and mental disorders in their spouses were evaluated by structured questionnaires.

### Diagnostic psychiatric interview

Psychiatric diagnoses were assessed by a psychiatrist using The Structured Clinical Interview for DSM-IV (SCID-1).

Depression scores were assessed by Beck Depression Inventory (BDI) and anxiety scores were assessed by Beck Anxiety Inventory (BAI).

Severity of suicidal thoughts were assessed by 17-item Suicidal Ideation Questionnaire (15). Suicide plans, attempts, gestures, and recurrence potential of suicidal attempts were assessed using 4-item Suicidal Behavior Questionnaire (16).

### Statistical Analysis

SPSS version 20.0 was used. Descriptive statistics were given as percentage, mean, and standard deviation. Categorical variables were compared using chi-square test. For normally distributed continuous variables, 2 groups were compared using independent samples T test, and more than 2 groups were compared using ANOVA. For non-normally distributed continuous variables, 2 groups were compared using Mann-Whitney U test, and more than 2 groups were compared by Kruskal-Wallis test. Correlation between violence scores, and depression, anxiety and suicide scores were measured using Spearman's test. Factors that predict violence from spouse or development of mental disorder in women that exposed to violence were measured using logistic regression. Confidence interval was defined as 95% and significance level was defined as  $p < 0.05$ .

## RESULTS

### Socio-demographic Variables

Mean age of the women included in this study was  $36.42 \pm 9.21$  years and mean age of their spouses was  $40.91 \pm 10.05$  years. Other socio-demographic variables are present in Table 1.

### Women's rates of violence

65.5% of the women ( $n=262$ ) did not report any violence, 19.3% ( $n=77$ ) reported violence only from their husbands, 5.2% ( $n=21$ ) reported violence only from people other than their spouses, and 10% ( $n=40$ ) reported violence both from their spouses and other people. Sexual violence as coercive sexual act was reported to have occurred only once by 2.5% ( $n=10$ ), a few times by 7.25% ( $n=29$ ), sometimes by 7.5% ( $n=30$ ), and frequently by 4.25% ( $n=17$ ) of the women.

### Psychiatric diagnoses

Semi-structured psychiatric interviews with SCID-1 yielded diagnoses of post-traumatic stress disorder in 8.7% ( $n=12$ ), anxiety disorders in 12.3% ( $n=17$ ), depressive mood disorder in 8% ( $n=11$ ), anxiety disorders and

**Table 1.** Physical violence according to some variables

	Physical violence		
	Yes N (%) 138 (34.5)	No N (%) 262 (65.5)	
Age, M (SD)	34.6±8.1	39.8±10.1	t=-7.800 p=0.000***
Employment Status			
Housewife	89 (41.4)	126 (58.6)	χ <sup>2</sup> =9.781 p=0.002**
Working	49 (26.5)	136 (73.5)	
Education Level			
Illiterate	18 (51.4)	17 (48.6)	χ <sup>2</sup> =23.681 p=0.000***
Primary-secondary school	68 (45.9)	80 (54.1)	
High school or above	52 (24)	165 (76)	
Psychiatric diagnosis			
Yes	49 (62.8)	29 (37.2)	χ <sup>2</sup> =34.391 p=0.000***
No	89 (27.6)	233 (72.4)	
Childhood physical violence from parents			
Yes	35 (46.1)	41 (53.9)	χ <sup>2</sup> =5.542 p=0.019*
No	103 (31.8)	221 (68.2)	
Marriage type			
Traditional	96 (42.7)	129 (57.3)	χ <sup>2</sup> =14.601 p=0.000***
Love affair	42 (24.3)	131 (75.7)	
Marriage age			
Under 18	28 (46.7)	32 (53.3)	χ <sup>2</sup> =4.624 p=0.034*
Over 18	110 (32.5)	230 (67.5)	
Duration of marriage, M (SD)	12.1±9.2	18.5±11.2	z=-9.911 p=0.000***
Number of children, M (SD)	2.5±1.5	3.2±1.8	z=-5.982 p=0.000***
Spouse's age, M (SD)	38.7±9.0	44.9±10.6	t=-8.908 p=0.000***
Spouse's education level			
Illiterate	8 (72.7)	3 (27.3)	χ <sup>2</sup> =29.861 p=0.000***
Primary-secondary school	66 (49.6)	67 (50.4)	
High school or above	64 (25.3)	189 (74.7)	
Spouse's employment status			
Unemployed	37 (60.7)	24 (39.3)	χ <sup>2</sup> =21.642 p=0.000***
Working	100 (29.9)	235 (70.1)	
Spouse's medical/psychiatric diagnosis			
Yes	31 (60.8)	20 (39.2)	χ <sup>2</sup> =17.243 p=0.000***
No	106 (30.7)	239 (69.3)	
Spouse's alcohol use			
Yes	25 (80.6)	6 (19.4)	χ <sup>2</sup> =27.677 p=0.000***
No	112 (30.7)	253 (69.3)	
Thoughts of divorce			
Yes	93 (58.1)	67 (41.9)	χ <sup>2</sup> =64.516 p=0.000***
No	45 (19)	192 (81)	
Opinion about violence			
No legitimate reason for violence	116 (31.7)	250 (68.3)	χ <sup>2</sup> =13.743 p=0.000***
Husbands can sometimes beat	17 (68)	8 (32)	

\*p&lt;0.05 \*\*p&lt;0.01 \*\*\*p&lt;0.001

depressive mood disorder in 5% (n=7), bipolar mood disorder in 0.7% (n=1), and psychotic disorder in 0.7% (n=1) of the women.

### Association of Socio-demographic Variables with Violence

Association of socio-demographic variables with violence is given in Table 1.

### Association of violence with depression, anxiety, suicidal ideation and suicidal behavior

Depression, anxiety, suicidal behavior, and suicidal ideation scores of women survivors of violence from their spouses were significantly higher than women who did not have violence (p=0.000 for all comparisons).

Bivariate correlation between depression, anxiety, suicidal behavior, suicide ideation scores, and physical violence, sexual coercion by their spouses showed highly positive correlations between all variables (p<0.01) (Table 2).

### Socio-demographic Variables that Affect Physical Violence from Spouse

Logistic regression analysis showed that employment status of spouse, presence of medical/psychiatric illness, opinion of women about violence, and presence of psychiatric disease in women were the factors that affected risk of physical violence of the women from their spouses (Table 3).

### Risk Factors to Develop Psychiatric Disorder in Women Who Exposed to Violence

Mean age of the women who had a psychiatric diagnosis were higher than women who didn't have a psychiatric diagnosis (p=0.02). Rate of psychiatric diagnosis in women decreased with increasing education level (p=0.000). Rate of psychiatric diagnosis in the women who exposed to violence, and sexual coercion by their spouses were higher than the women who didn't have sexual coercion and exposed to physical violence from other people (p=0.000) (Table 4).

Logistic regression analysis revealed that education level of women, and presence of physical and sexual coercion from husbands were factors that affect development of psychiatric disease (Table 5).

## DISCUSSION

The aim of this study was to search frequency of physical violence, predictors of physical violence, and possible mental disorders in women above 18 years of age in an urban province of Southeast Anatolia region in Turkey. In our study, similar to other domestic violence studies conducted in community sample in our country, the frequency of physical violence in women over the age of 18 has been found to be 34.5%, and 85% of women exposed to violence were also exposed to physical violence by their spouses (17, 18). In a study examining the rate of partner violence among women who applied to the psychiatry outpatient clinic, the rate was reported as 62%, but it is higher than our study, and other community-based studies (19). This difference suggests that exposure to domestic violence is one of the main reasons for the need to seek psychiatric support.

We can examine the factors that may be associated with physical violence in three subheadings: woman-related, spouse-related, and marriage-related variables. In our study, it was found that women exposed to physical violence had significantly lower mean age, no job or income of their own, lower education levels, higher rates of psychiatric disorders, possess an idea of accepting violence like 'Husbands can sometimes beat' and suffered physical violence by their parents in childhood at a higher rate compared to nonviolent women.

Logistic regression analysis also showed that presence of psychiatric illness in women, acceptance of the opinion: 'Husbands can sometimes beat' predicted physical violence. Similarly, Lacey et al. showed that having low income and education level of women are important risk factors for exposure to severe physical intimate partner violence (20). In a

**Table 2.** Correlation of physical violence and sexual coercion with anxiety, depression and suicidality scores

	Sexual coercion	Physical violence	Suicidal behavior	Suicidal ideation	Depression	Anxiety
Sexual coercion	1.000					
Physical violence	0.483**	1.000				
Suicidal behavior	0.273**	0.257**	1.000			
Suicidal ideation	0.276**	0.327**	0.423**	1.000		
Depression	0.364**	0.399**	0.349**	0.505**	1.000	
Anxiety	0.249**	0.327**	0.332**	0.499**	0.594**	1.000

\*\* p<0.01 Spearman and Pearson correlation tests

**Table 3.** Factors that affect physical violence from spouse

	B	S. E.	Wald	df	Sig.	Exp (B)
Opinion about violence	1.437	0.542	7.041	1	0.008**	4.209
Presence of psychiatric diagnosis	1.352	0.340	15.839	1	0.000***	3.867
Presence of medical/psychiatric disorder in the spouse	-0.889	0.374	5.664	1	0.017*	.411

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001

**Table 4.** Rates of psychiatric diagnosis according to socio-demographic and violence related variables

	Psychiatric diagnosis		
	No N (%) 89 (64.5)	Yes N (%) 49 (35.5)	
Age, M (SD)	35.7±8.1	38.3±8.7	t=-4.127 p=0.024*
Employment status			
Housewife	56 (61.5)	34 (38.5)	χ2=1.018 p=0.313
Working	33 (70.2)	15 (29.8)	
Education level			
Illiterate	7 (38.9)	11 (61.1)	χ2=16.549 p=0.000***
Primary-secondary school	38 (55.9)	30 (44.1)	
High school or above	44 (84.6)	8 (15.4)	
Marriage age			
Under 18	18 (64.3)	10 (35.7)	χ2=0.001 p=0.980
Over 18	71 (59.8)	39 (40.2)	
Physical violence from spouse			
No	19 (90.5)	2 (9.5)	χ2=7.303 p=0.007**
Yes	70 (64.5)	47 (35.59)	
Sexual coercion			
No	43 (82.7)	9 (17.3)	χ2=12.069 p=0.001**
Yes	46 (53.5)	40 (46.5)	
Physical violence from parents during childhood			
No	71 (68.9)	32 (31.1)	χ2=3.495 p=0.062
Yes	18 (51.4)	17 (48.6)	
Opinion about violence			
No legitimate reason for violence	73 (62.9)	43 (37.1)	χ2=1.190 p=0.275
Husbands can sometimes beat their wives	13 (76.5)	4 (23.5)	

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001

recent review that examines dating and intimate partner violence among young persons ages 15-30, history of depression and suicide attempts, poor educational outcome and socioeconomic status, personality traits, alcohol use/abuse, childhood exposure to violence were shown as risk factors associated with violence (21). Being exposed to violence in childhood, having no own income and low probability to work in any job due to low educational level can cause the acceptance of violence, and the continuity of acceptance as a vicious cycle.

When we examined the variables associated with spouse, we found that the spouses of the women who suffered physical abuse had significantly lower mean age and education level, higher frequency of unemployment, psychiatric and/or medical illness, and alcohol abuse. Of these variables, unemployment of the spouse and medical or psychiatric illness of the spouse were shown as factors that predict physical violence in the results of regression analysis. In a study conducted in our country, it was reported that spousal age was protective against violence towards women (22), while another study emphasized that having a high level of alcohol and tobacco use was associated with comorbid violence (23). These findings suggest that the socioeconomic and educational impossibilities, and impaired mental health of victims as well as of violent person is an important element for domestic violence.

When we examined the variables associated with marriage, in accordance with previous studies, traditional marriage type and marriages before 18 years of age increased frequency of physical violence, and duration of marriage prevented physical violence (22, 23). In this study, another finding is that women who exposed physical violence had the higher thought of leaving their spouses. In our study, although it cannot be shown by regression analysis that marriage-related variables had an effect, previous studies and our other findings suggest that early marriages and unintentional marriages enhance domestic physical violence.

Prevalence of mental disorders among women victimized by domestic violence and domestic violence by spouse being a risk factor for mental health disturbance have been widely discussed in the literature (24). Review of 41 studies showed that partner violence was higher in women with depressive disorder, anxiety disorders, and post-traumatic stress



**Table 5.** Factors that affect presence of psychiatric diagnosis

	<b>B</b>	<b>S. E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp (B)</b>
Sexual coercion from spouse	6.735	1.449	21.610	1	0.000***	841.510
Education level	-5.285	0.870	36.943	1	0.000***	0.005
Physical violence from spouse	3.115	1.231	6.404	1	0.011*	22.523

\*p&lt;0.05 \*\*p&lt;0.01 \*\*\*p&lt;0.001

disorder than women without mental disorders (25). We also detected that depression, anxiety, suicidal behavior, and suicidal ideation scores were higher in women who were victimized by physical violence and sexual coercion from their spouses, and women who were exposed to physical violence had high-rate psychiatric diagnosis, and the most common diagnoses were post-traumatic stress disorder, depression and anxiety disorder, in accordance with literature (19, 25, 26).

In addition to findings that intersected with previous studies, we assessed woman-related, spouse-related and marriage-related factors that predicted mental disturbance in women survivors of violence. We found that education level of women, presence of physical violence, and sexual coercion from their spouses predicted development of psychiatric illness. The impact of physical and sexual violence on mental health alone, independent of all variables, is a striking finding that will lead to the rapid development of strategies to prevent violence.

It is a limitation that the sample of our study is only married women of a province in Southeastern Anatolia region; there is a need for studies that can reflect the wider sampled outcomes of different parts of the country in general.

Like everywhere in the World, domestic violence against women is associated with high levels of depression, anxiety, and posttraumatic stress disorder in Turkey. Therefore, every attempt to decrease domestic violence is critically important to protect women's mental health. So as to change women's understanding that accept violence that predict physical violence, trainings must be organized for women whose level of education is low and who do not have their own income, about adverse effects of violence for them and their children. Additionally, they must be informed about social and consultancy services that they can reach when they are exposed to violence. Unemployment status of spouses is important for triggering physical violence. Increasing employment opportunities across the country can provide primary protection against physical violence, while secondary protection can be provided by job opportunities that can be provided to partners in cases where physical violence continues, and spousal unemployment is the leading cause of violence. Community awareness should be increased that marriages made by couples outside of their will and at an early age trigger domestic violence, and couples' separation ideas.

Psychiatric outpatient clinics, especially those seeking help with anxiety, depression, suicidal thoughts, or behavioral reasons, should be part of the psychiatric examination of domestic violence and encourage the clinician to speak, counsel and support women who are victims of domestic violence. However, Klap et al. reported that only 7% of healthcare workers questioned domestic violence in women who are admitted to healthcare facilities (27).

In conclusion; unemployment of spouse, presence of a medical/psychiatric disorder in spouse, acceptance of women the opinion: 'Husbands can sometimes beat' and presence of a psychiatric diagnosis in women increase risk of domestic physical violence in women. Additionally

in these women, lower level of education, presence of physical violence, and sexual coercion from their spouses were risk factors for developing mental disorder.

In addition to primary prevention programs for violence-inducing factors, interventions for the treatment of negative mental consequences of violence, the development of therapy and social support programs in order to preserve mental health of community, and to prevent affecting future generations from domestic violence are very valuable tools.

**Ethics Committee Approval:** This study was approved by the Ethics Committee of Adiyaman University with the decision no. 2015 / 1-13 dated 28.01.2015.

**Informed Consent:** Written informed consent was obtained from the participants.

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