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## Domestic violence and affecting factors among married women aged between 15-49 Years

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### Abstract

Domestic violence against women is an important public health problem commonly encountered in all societies, manifesting itself as a negative outcome of gender inequality. This study has been carried out in Mardin province to determine the prevalence of exposure to domestic violence among women aged between 15-49 years and the affecting factors. The population of the study consisted of the women aged between 15-49 years living in Mardin and 1111 people were selected for sampling. Through repeated visits, 1064 people were included in the study (the responsiveness rate was 95.8%).  $\chi^2$  (chi-square) test was used in the statistical analysis. The average age of women was  $32.5 \pm 8.2$ . 29.4% of them were illiterate. 47.5% of them were married by prearrangement. 25.9% of them were subjected to physical violence by their father and 37.6% by their mother in the past. The women were exposed to physical (44.5%), verbal/emotional (56.4%), economic (37.7%), and sexual violence (14.8%) at least once in their lifetime. 13.2% of them are still exposed to domestic physical violence, 15.8% to verbal/emotional violence, and 7.3% to sexual violence. As the educational levels, socioeconomic status, and monthly income of women and their husbands decrease, the rate of exposure to violence increases ( $p < 0.05$ ). The factors such as being married by bride exchange and bride price, having a familial history of honor killing, living with a co-wife, experiencing childhood violence, having an alcoholic and gambling husband increase the rate of exposure of women to violence ( $p < 0.05$ ). Domestic violence against women was found to be significantly high in Mardin province. Considering the socio-economic and cultural conditions of the region, legal and social regulations should be enforced in cooperation with non-governmental organizations, public institutions as well as local and national press.

**Keywords:** Domestic violence, Mardin, women,

### Introduction

Violence against women refers to a type of violence directed to the women only because they are women, or affect them for some reason based on gender discrimination that cannot be legitimized with no social, cultural, political or religious justification that is intended to harm women physically and psychologically, leading to a violation of women's basic human rights, and including any attitudes and behaviors defined as violence in the law<sup>9</sup> [1,2]. Domestic violence against women involve violent behaviors that are inflicted on them by the family members (usually their husbands) with whom the woman lives, by hurting, abusing or mutilating the woman which may result in physical, sexual, and mental damage, and exerting pressure on women in social or private life and arbitrarily restricting their freedom [3,4]. Spousal violence against women in the family includes physical, sexual, psychological, and economic violence and abuse.

These types of violence affect women's health negatively, resulting in long-term physical, mental, and emotional health problems among victimized women [5]. Many studies show that domestic violence against women is a widespread global phenomenon as well as in our country. For example, in a study conducted in 10 different countries between 2000 and 2004, it was revealed that women in the 15-49 age group were constantly exposed to physical or sexual violence from their spouse, ranging from the rates of 13% to 61% [6].

In a study conducted in the USA, one out of every four women was found to have been subjected to physical or sexual violence by their husband or boyfriend [7]. A study conducted in rural areas of Nepal indicates that almost half (48%) of women have been exposed to violence at some point in their lives and 28% have experienced violence in the past 12 months. It has also been revealed in the same study that the women have been most frequently the victim of emotional violence (40.4%), which was followed by physical (26.8%), sexual (15.3%), and economic abuse/violence (8%) [8].

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The report issued by the World Health Organization in 2013 has shown that one out of every three women in the world has been subjected to violence by their husbands. Considering the violence experienced by the women aged between 15-49 years by their husbands is examined, it was found that between 13% and 61% of the women were exposed to physical violence at least once in their lifetime while between 6% and 59% of them were forced to have sexual intercourse and between 1% and 28% of them were exposed to violence during pregnancy [9]. It is reported by the studies conducted in Turkey that women suffer from domestic violence at varying rates from 32.4% to 61.4%. It is striking that the rate of exposure to physical violence among the women by their spouses ranges from 38.3% to 64.8% while the exposure to sexual violence ranges from 6.3% to 36.4% [10]. It was also revealed that 38% of the women subjected to domestic violence were suffered from physical violence, 12% from sexual violence, and 44% from emotional violence [11].

Violence against women is a global public health problem that occurs in numerous contexts, and domestic violence is considered the most widespread issue. The failure to properly enforce laws enacted to prevent violence against women causes this phenomenon to persist to a larger extent. The first step to understand violence is to uncover its underlying causes. It is important to increase social sensitivity and awareness of violence. This study was conducted to determine the prevalence of exposure to domestic violence among women aged between 15-49 years and the affecting factors.

## Material and Method

The population of this cross-sectional study consisted of the women aged between 15-49 years living in Mardin city center and its districts. According to the data in 2010, the total population of the women aged between 15-49 years living in Mardin city center and its districts is 164.140. If the prevalence of the incident is to be examined to calculate the number of people to be sampled and the number of individuals in the population is known, the formula ( $n = Nt2pq / d2 (N-1) + t2pq$ ) is used to determine the number of individuals to be sampled [12]. In the present study, the number of people to be sampled by using this formula was calculated as 1.111. The proportional selection was made using a stratified random sampling method and the individuals to be sampled were represented in the sample in proportion to the population of the city center and districts. The individuals were randomly selected by making use of the lists of married women taken from the Mardin Provincial Health Directorate. The criteria for inclusion in the study group is to be a married woman. Exclusion criteria in the study include having a physical illness that hampers cooperation, suffering from any hearing, seeing, and cognitive dysfunction enough to prevent communication and not being contacted and/or rejecting the interview despite visits made three times. Through repeated visits, 1,064 of these people were included in the study. The responsiveness rate was 95.8%. A questionnaire prepared by the researchers and based on the literature was administered to the women who met the inclusion criteria [13,14]. The survey is composed of three sections. The first section included questions related to the socio-demographic characteristics of the participants and the social structure of the family. The second section included past experiences of violence, and the third one included questions used to identify the types of physical, verbal, emotional, financial,

and/or sexual violence that women have experienced at any time in their lives. The answer "yes" to any of the questions related to the types of violence included in the questionnaire was accepted as violence. The questionnaire was administered by the face-to-face interviewing method by the researchers. The verbal consent of the participants was obtained before the interview. The questions were read aloud to each person individually and clearly, and their responses were recorded. Before the study procedure, ethical permission was obtained from the Ethics Evaluation Commission of Firat University Faculty of Medicine with decision number 09 and dated 20.09.2010. Legal permissions from Firat University Faculty of Medicine Ethical Evaluation Commission and Mardin Governorate, the field study was completed in four months between October 2010 and January 2011. The data obtained during the field study were recorded in the SPSS 11 statistical package program. Then error checks, tables, and statistical analyzes were carried out through this program. The data were evaluated using the Chi-square test and logistic regression method at 0.05 significance level. The mean scores were presented with standard deviations.

## Result

The average age of women (n= 1064) included in the study was  $32.5 \pm 8.2$  (min: 17; max: 49). The distribution of the women included in the study according to some demographic characteristics is shown in Table 1.

Marriage and some traditional characteristics of women included in the study are given in Table 2.

The average age of marriage of the women included in the study is  $19.65 \pm 3.77$  (min: 12; max: 35), and the average marriage length is  $12.67 \pm 8.97$  (min: 1; max: 37). The distribution of the women included in the study according to the types of domestic violence they have been exposed to in any period of their lives is presented in Table 3.

44.5% of the women in the study received physical, verbal 56.4%, 37.7% stated that their economic life, and sexual violence, 14.8% were exposed in any period.

The distribution of physical violence cases in the past within the families of the women and their husbands who were included in the study are presented in Table 4.

25.9% of the women included in the study stated that they were exposed to violence by their father, and 35.8% stated that their mother was exposed to domestic violence Table 5.

The results of logistic regression analysis have shown that the involuntary marriage on part of the women increases the probability of being exposed to violence by 1.4 times ( $P>0.05$ ). Exposure to paternal violence as a child increases the risk of violence by 2.6 times ( $P<0.05$ ). The fact that the woman's husband was exposed to domestic violence as a child increases the risk of the woman to be exposed to violence by 3 times ( $P<0.05$ ), and the alcoholism on part of the husband increases that by 7.8 times ( $P>0.05$ ). Having a co-wife also increases the risk of violence by 4.6 times ( $P<0.05$ ). Table 6.

**Table 1.** Distribution of some sociodemographic characteristics of the sample

<b>Sociodemographic Characteristics</b>	<b>n</b>	<b>%</b>
<b>Age Groups (n=1064)</b>		
15-19	39	3.7
20-24	155	14.6
25-29	237	22.3
30-34	181	17.0
35-39	207	19.5
40-44	132	12.4
45-49	113	10.6
<b>Educational Status (n=1064)</b>		
Illiterate	313	29.4
Literate	81	7.6
Primary / Secondary School	406	38.2
High School	142	13.3
College /University	122	11.5
<b>Social Security Status (n=1064)</b>		
Yes	971	91.3
No	93	8.7
<b>Family Type (n=1064)</b>		
Nuclear Family	787	74.0
Extended Family	277	26.0
<b>Socioeconomic Status (n=1050) *</b>		
Low (poor-bad)	650	61.9
Moderate	246	23.4
High (fairly good)	154	14.7
<b>Husband Educational Status (n=1064)</b>		
Illiterate	85	8.0
Literate	83	7.8
Primary / Secondary School	462	43.4
High School	249	23.4
College /University	185	17.4
<b>Husband Occupation (n=1064)</b>		
High-Ranking Official	4	0.4
Civil Servant	225	21.1
Freelancer	289	27.2
Temporary Worker	371	34.9
Farmer	16	1.5
Retired	37	3.5
Permanent Worker	61	5.7
Unemployed	61	5.7
<b>Husband Working Status (n=1064)</b>		
Working	1003	94.3
Non-working	61	5.7

\*Those who do not report their monthly income are excluded.

**Table 2.** Distribution of marital and some traditional characteristics of the sample

<b>Marital and Traditional Characteristics (n=1064)</b>	<b>n</b>	<b>%</b>
I Decided to Get Married	481	45.2
My Parents Decided For Me to Get Married	583	54.8
<b>Marriage Age</b>		
Under 18 Years	326	30.6
Above 18 Years	738	69.4
<b>Marital Order</b>		
First Marriage	1037	97.5
Second Marriage	27	2.5
<b>Legal Status of Marriage (N=1031)*</b>		
Only Religious Marriage	63	6.1
Both Religious and Civil Marriage	968	93.9
<b>Marital Status</b>		
Married	1031	96.9
Widow	33	3.1
<b>Bride Price</b>		
Yes	325	30.5
No	739	69.5
<b>Co-Wife</b>		
Yes	68	6.4
No	996	93.6
<b>Living Together With a Co-Wife</b>		
Yes	42	61.8
No	26	38.2
<b>Being a Tribal Member</b>		
Yes	159	14.9
No	905	85.1
<b>Honour Killing</b>		
Yes	78	7.3
No	986	92.7
<b>Bride Exchange</b>		
Yes	363	34.1
No	701	65.9
<b>Betrothed in The Cradle / Bride Price</b>		
Yes	441	41.4
No	623	58.6

\*Those who did not respond to the questionnaire were excluded

**Table 3.** The distribution of the women included in the study according to the types of domestic violence they have been exposed to in any period of their lives

The State of Exposure to Domestic Violence in any Period of Their Lives	Yes		No		Total	
	n	%	n	%	n	%
<b>Exposure to Any Type of Violence</b>	652	61.3	412	38.7	1064	100.0
Physical Violence	473	44.5	591	55.5	1064	100.0
Manhandling	253	23.8	811	76.2	1064	100.0
Pulling hair	190	17.9	874	82.1	1064	100.0
Bending arm	230	21.6	834	78.4	1064	100.0
Beating	292	27.4	772	72.6	1064	100.0
Slapping in the face	276	25.9	788	74.1	1064	100.0
Kicking	174	16.4	890	83.6	1064	100.0
Throwing objects	237	22.3	827	77.7	1064	100.0
Attempting to suffocate	60	5.6	1004	94.4	1064	100.0
Fisting / Blowing	113	10.6	951	89.4	1064	100.0
Burning one's various body parts	11	1.0	1053	99.0	1064	100.0
Injuring with a weapon ( with knife, bat, gun etc)	48	4.5	1016	95.5	1064	100.0
<b>Emotional / Verbal Violence</b>	600	56.4	464	43.6	1064	100.0
Walk all over her in anger	394	37.0	670	63.0	1064	100.0
Kicking or hitting the door, the walls or furniture	228	21.4	836	78.6	1064	100.0
Breaking objects	293	27.5	771	72.5	1064	100.0
Threatening by showing finger	303	28.5	761	71.5	1064	100.0
Raising one's hand to hit or blow	376	35.3	688	64.1	1064	100.0
Threatening	126	11.8	938	88.2	1064	100.0
Intimidation via angry looks	183	17.2	881	82.8	1064	100.0
Kicking out of the house	195	18.3	869	81.7	1064	100.0
Humiliation in presence of others	250	23.5	814	76.5	1064	100.0
Non-support in the event of illness or pregnancy	850	79.9	214	20.1	1064	100.0
Swearing / Insulting	389	36.9	664	63.1	1064	100.0
Threatening not to meet one's relatives or family	150	14.1	914	85.9	1064	100.0
Threatening to hurt or injure one's relatives	74	7.0	990	93.0	1064	100.0
<b>Economic Violence</b>	401	37.7	663	62.3	1064	100.0
Not meeting financial needs / Threatening not to give any money	147	13.8	917	86.2	1064	100.0
Seizing pay data card by force	10	0.9	1054	99.1	1064	100.0
Not giving enough money to meet the needs	266	25.0	798	75.0	1064	100.0
Not giving money without being asked	403	37.9	661	62.1	1064	100.0
<b>Sexual Violence</b>	158	14.8	906	85.2	1064	100.0
Has your husband ever got angry with you or beaten you when you reject sexual intercourse?	112	10.5	952	89.5	1064	100.0
Has your husband ever forced you to have the kind of sex you do not want to do? (Oral etc.)	89.5	89.5	89.5	89.5	1064	100.0

**Table 4.** The distribution of physical violence cases in the past within the families of the women and their husbands who were included in the study

Exposure to violence	Yes		No		Unknown/ forgotten	Total
	N	(%)	N	(%)	N (%)	N (%)
Did Your Father Beat You in the Past?	276	(25.9)	697	(65.5)	91 (8.6)	1064 (100.0)
Did Your Mother Beat You in the Past?	400	(37.6)	598	(56.2)	66 (6.2)	1064 (100.0)
Did Your Father Beat Your Mother in the Past?	381	(35.8)	571	(53.7)	112 (10.5)	1064 (100.0)
Did Your Father-in-Law Beat Your Mother-in-Law in the Past?	346	(32.5)	257	(24.2)	461 (43.3)	1064 (100.0)
The Situation of Maternal Violence Against Children	496	(49.9)	498	(50.1)		994 (100.0)
The Situation of Paternal Violence Against Children	320	(32.7)	658	(67.3)		978 (100.0)

**Table 5.** The distribution of the status of exposure to any type of violence according to demographic variables among the women who were included in the study

Demographic Variables		Exposed to Violence (N=652)		Non-Exposed to Violence (N=412)		X <sup>2</sup>	P
		N	%	N	%		
<b>Women's Educational Status</b>	Illiterate	234	74.8	779	25.2	39.73	0.0001
	Literate	52	64.2	29	35.8		
	Primary / Secondary School	231	56.9	175	43.1		
	High School	76	53.5	66	46.5		
	College /University	59	48.5	63	51.6		
	<b>Total</b>	652	61.3	412	38.7		
<b>Husband's Educational Status</b>	Illiterate	65	76.5	20	23.05	22.59	0.0001
	Literate	61	73.5	22	26.5		
	Primary / Secondary School	273	59.1	189	40.9		
	High School	158	63.5	91	36.5		
	College /University	95	51.4	90	48.6		
	<b>Total</b>	652	61.3	412	38.7		
<b>The tradition of Bride Exchange</b>	Yes	283	78.0	80	22.0	64.62	0.0001
	No	369	52.9	332	47.4		
	<b>Total</b>	652	61.3	412	38.7		
<b>Honour Killing in The Family</b>	Yes	61	78.2	17	21.8	10.16	0.0001
	No	591	59.9	395	40.1		
	<b>Total</b>	652	61.3	412	38.7		
<b>Presence of a Cowife</b>	Yes	59	86.8	9	13.2	19.88	0.0001
	No	593	59.5	403	40.5		
	<b>Total</b>	652	61.3	412	38.7		
<b>Bride Price</b>	Yes	240	73.8	85	26.2	31.14	0.0001
	No	412	55.8	327	44.2		
	<b>Total</b>	652	61.3	412	38.7		
<b>Marriage Age</b>	Under 18 Years	216	66.3	110	33.7	4.91	0.016
	Above 18 Years	436	59.1	302	40.9		
	<b>Total</b>	652	61.3	412	38.7		
<b>Marriage Type</b>	Voluntary	247	53.3	216	46.7	22.79	0.0001
	Involuntary	405	67.4	196	32.6		
	<b>Total</b>	652	61.3	412	38.7		
<b>Consultation in Making Decision</b>	Never	116	86.6	18	3.4	1.25	0.0001
	Occasionally	331	72.6	125	27.4		
	Always	205	43.2	269	56.8		
	<b>Total</b>	652	61.3	412	38.7		
<b>Physical Violence to the Child</b>	Yes	368	74.2	128	25.8	58.92	0.0001
	No	252	50.6	246	49.4		
	<b>Total</b>	620	62.4	374	37.6		
<b>Socioeconomic Level</b>	Low	438	67.4	212	32.6	25.94	0.0001
	Moderate	163	52.6	147	47.4		
	High	44	48.9	46	51.1		
	<b>Total</b>	645	61.4	405	38.6		
<b>Exposure to Paternal Physical Violence as Child</b>	Yes	228	82.6	48	17.4	1.01	0.0001
	No	362	51.9	335	48.1		
	<b>Total</b>	590	60.6	383	39.4		



<b>Exposure to Domestic Violence in the Childhood of the Spouse</b>	Yes	263	78.5	72	21.5	78.37	0.0001
	No	138	44.7	171	55.3		
	<b>Total</b>	401	62.3	243	37.7	644	100.0
<b>Alcoholism on Part of the Husband</b>	Yes	50	92.6	4	7.4	23.50	0.0001
	No	602	59.6	408	40.4		
	<b>Total</b>	652	61.3	412	38.7	1064	100.0
<b>Gambling on Part of the Husband</b>	Yes	56	96.6	2	3.4	32.16	0.0001
	No	596	59.2	410	40.68		
	<b>Total</b>	652	61.3	412	38.7	1064	100.0

**Table 6.** Logistic Regression Analysis of the Factors That Affect Exposure to Violence by Their Husbands Among the Women Who Were Included in the Study

Variables	B	Wald	P	OR	% 95 C.I.	
					Lower	Upper
Marriage type	0,346	1,209	0,272	1,414	0,763	2,620
Exposure to Paternal Physical Violence as a Child	0,965	12,712	0,000	2,625	1,544	4,461
Exposure to Domestic Violence as Child on Part of the Husband	1,119	26,578	0,000	3,061	2,001	4,684
Presence of a Co-wife	1,542	5,308	0,021	4,674	1,259	17,352
Alcoholism On Part Of The Husband	2,060	3,340	0,068	7,848	0,861	71,516
Age of Marriage	0,038	0,026	0,873	1,039	0,651	1,658

Voluntarily =0, involuntarily=1; exposure to domestic violence as a child on part of the husband: no=0, yes=1; Exposure to Paternal Physical Violence as a child: no=0, yes=1. Alcoholism On Part Of The Husband no=0, yes=1; Presence of a Co-wife no=0, yes=1;

## Discussion

Domestic violence against women is a global public health and social problem, where several factors in mutual action contribute to the victimization of women. 61.3% of the women stated that they were exposed to violence at any time in their lifetime (see Table 3). Some studies were done on the subject in Turkey, the proportion of women exposed to violence when examined has been shown that up to 62%. For example, the rate of women exposed to violence was 62% in Elazığ, 40.7% in Sivas, and 53.8% in İstanbul [15,16]. Similar studies conducted in different countries around the world are not very different from those in Turkey. For example, the rate of women exposed to violence is 49.4% in Iran, 67% in Japan, and 36% in the USA [15-19]. The differences across these rates may be closely related to the place where the study was conducted and the way the participants defined the type of violence, but the common point in all the studies lies in the fact that domestic violence against women is a common but alarming issue all around the world.

In the present study, it was found that 44.5% of the women were exposed to at least one of the physical violence types inflicted by their husbands (see Table 3). According to the report of the Survey on Violence Against Women in Turkey issued in 2014, it was stated that 36% of the women were exposed to violence at any time in their lifetime [11]. In the "Multinational Women's Health and Violence against Women in the Family" report issued by WHO in 2005 and conducted among over 24000 women in 10 countries, exposure to lifetime physical violence among women varied between 13% and 61% [20]. A study by Altınay and Arat throughout Turkey showed that the rate of women subjected to physical violence was 35% in other parts of Turkey while this rate was 40% in the eastern provinces [14]. In studies conducted in

different places indicated that the rate was 30.4% in Edirne, 36% in İstanbul, and 14% in Central Anatolia [16,21,22]. Since the rate of the women exposed to physical violence in the studies conducted all around the world was similar to those in Turkey, it can be concluded that there persists a male-dominated society in general and physical violence is regarded as a common way of coping with the problems both in the family and in the community. The women's perception of violence also changes in communities and sociocultural environments. Different societies may narrow down the definition of violence and manipulate the results of studies.

The emotional/verbal violence to which the women were exposed was found to be 56.4% (see Table 3). In several studies conducted in different provinces, the rate of emotional / verbal violence was found to be 58.28% in İstanbul, 93% in İzmir, 51.8% in Denizli, 25.9% in Central Anatolia and 51.3% in Elâzığ [15,16,22-24]. All these studies suggest that women are exposed to verbal/emotional violence at similar rates in different regions of Turkey. It is thought that socio-economic levels, family structure, and traditional conceptions have a deep impact on the patterns of violent behaviors. Besides, low education levels, family conflicts due to financial deficiencies, age differences between spouses, and intercultural differences are also thought to affect women's exposure to verbal/emotional violence.

14.8% of the women stated that they were exposed to sexual violence inflicted by their husbands (see Table 3). In the WHO study in 2005, the rate of women forced to have sexual intercourse varied between 4% and 46% [20]. In the 2014 report of the European Union Agency for Fundamental Rights, the prevalence of women subjected to sexual or physical violence at least once from the age of 15 was investigated. The results of this study revealed

that the country with the highest rate of violence was Denmark (52%) and the country with the lowest rate of violence was Poland (19%). Considering the average rate of all the member countries in the EU, 33% of the women in the EU have been exposed to sexual, psychological, and/or physical violence by their husbands or partners. [25]. In the study by Altınay and Arat, 14% of women stated that they were forced to have sexual intercourse when they did not want [14]. In studies conducted in different places in Turkey the rate varies between 5% and 24.28% [13,15,21,22]. Continuing the patriarchal structure in society can be thought to have an impact on women's exposure to sexual violence.

37.7% of the women included in the study stated that they were exposed to economic violence (see Table 3). In a study conducted in Istanbul, this rate was found to be 40.28% and 19.3% in Edirne in another study [16,26]. According to some overseas studies, the working women's husbands decide about spending the money earned by them [27,28]. Economic violence is another form of abuse, causing social inequality. Poverty is both a cause and an output of financial violence. Lack of control over healthcare, employment, education and agricultural resources, inability to decide on financial matters, getting paid less than men despite working in the same way as men, and disinheritance and deprivation of property rights are just a few types of financial violence against the women.

As the educational levels of women and their husbands decreases, the rate of violence the women are exposed to tend to increase ( $p < 0.05$ ; see Table 5). In several studies conducted at home and abroad, it has been revealed that the tendency of the women to be subjected to violence increases as the educational level of the woman and her husband decreases [18,29-32]. It is thought that the violence culture embraced by society has an indelible impact on the persistence of violence among women with different education levels. It is also considered that violence is perceived by women as a part of their lives because of their style of upbringing. In parallel with the increase in the educational level of the husbands, the rate of violence experienced by the women continues to decrease.

It was determined that 78.0% of the women with a bride exchange tradition in their family were exposed to violence ( $p < 0.05$ ; see Table 5). The fact that most of the bride exchange marriages were due to murder or poverty caused the women to get married involuntarily, thus leading themselves to be subjected to more violence [31]. Bride exchange as a traditional form of marriage has been found to have a significant impact on the prevalence of women's violence. It was determined that 78.2% of women whose family had a history of honor killings were exposed to violence ( $p < 0.05$ ; see Table 5). The honor killings are the most striking example of the desire to keep women under control [32]. The persistent contradiction between traditional social structure and universal law and justice in male-dominated societies is thought to play a crucial role in continuing honor killings, the most horrible dimension of violence against women. It was found that 86.8% of the women living with a co-wife were exposed to violence ( $p < 0.05$ ; see Table 5). The phenomenon of having a co-wife is an important factor affecting exposure to violence. It is thought that factors such as jealousy, inability to share a spouse, living in the same house, the ambition of power and age differences have a significant impact on the prevalence of violence against women.

Having a co-wife is a factor that increases the risk of violence (see Table 6). While the prevalence of violence was 73.8% among the women participating in the study and who got married by paying the bride price, the prevalence of violence among the women who got married without bride price was 55.8% ( $p < 0.05$ ; see Table 5). It is thought that the idea that men who got married by paying the bride price will have certain rights over women is related to violence.

While the prevalence of violence was 66.3% among the women who got married under the age of 18, the prevalence of violence among the women who got married at the age of 18 was 59.1% ( $p < 0.05$ ; see Table 5). The studies conducted at home and abroad reveal that the rate of exposure to violence increases as the age of marriage decreases [11,16,20,30,35]. It is thought that the marriage of women before they reach a certain level of maturity, their inability to take part in decision-making processes within the family, and living in extended families as a bride is associated with the prevalence of violence.

While the prevalence of exposure to violence was 53.3% among the women who got married voluntarily, the prevalence of violence among the women who got married involuntarily was 67.4% ( $p < 0.05$ ; see Table 5). It was found that involuntary marriage on part of the women increases the tendency of being exposed to violence by 1.4 times (see Table 6). In a study, it was stated that violence by the husband among the women who married through prearrangement was 2.5 times higher than those who agreed to get married [26]. It is thought that one of the main reasons for the prevalence of violence among the women who got married by the prearranged manner was that the spouses marry without knowing each other.

It was revealed that 86.6% of women who were never consulted in-family decisions were exposed to violence while 43.2% of women who were always consulted were exposed to violence ( $p < 0.05$ ; see Table 5). Although there is an inverse proportion here, the acts of violence continue to exist. However, the role of the women in the decision-making processes may have a positive effect on the status of the family, leading to less exposure to violence.

It was determined that 74.2% of women who were exposed to any type of violence also exerted physical violence on their children ( $p < 0.05$ ; see Table 5). In a study conducted in Eskişehir in 2010, it was found that 27% of the women who were subjected to violence had exerted physical violence on their children [36]. In a study, 51% of the women who were admitted to the psychiatry outpatient clinic and subjected to violence stated that they also applied physical violence to their children [37]. It is thought that the women who have been subjected to violence by their husbands tend to direct their anger towards their children

In the present study, the prevalence of violence among women with a low socioeconomic level was 67.4% whereas it was 48.9% among those with high socioeconomic levels ( $p < 0.05$ ; see Table 5). The findings obtained from the present study support the studies reporting that socioeconomic level is an important risk factor in domestic violence against women [15,16,26-28,36]. The high socioeconomic level is thought to have a positive effect on the approach to the traditions within the society, the perspectives



of men of women, and the solution of domestic problems that may arise through democratic and/or legal means.

In the present study, it was found that 82.6% of the women who were exposed to paternal physical violence as a child were exposed to the violence of their husbands after marriage ( $p < 0.05$ ; see Table 5). Exposure to paternal violence as a child increases the risk of husband violence by 2.6 times (see Table 6). In the study by Hidiroğlu et al, 63.7% of the women stated that they were physically hit and beaten by their parents [38]. In a study conducted abroad, it was found that there was a correlation between being subjected to violence as a child and experiencing violence from one's husband [30]. These studies show that exposure to physical violence during childhood is a common phenomenon. It is thought that the internalization of the democratic culture and the awareness of the fundamental rights and freedom for women can prevent the transmission of the violence which is accepted as a normal situation to the next generations. The cases of domestic violence have been linked to domestic violence in later life, and many studies have shown that exposure to violence affects children's capabilities, continuing to hand down intergenerational violence.

It was determined that 78.5% of the women's husbands who were included in the study were exposed to violence in their childhood ( $p < 0.05$ ; see Table 5). The wives of the men who witnessed or were victimized by violence as a child have a 3 times higher risk of being exposed to violence (see Table 6). It was also found that men who perpetrate violence witnessed or were exposed to violence during childhood [29,35]. It is believed that the main reason for exerting violence after marriage by the men who were exposed to violence during their childhood lies in the idea of solving problems through violence and oppression rather than by discussing and persuading and taking the father as a model.

92.6% of women whose husbands drink alcohol and disrupt their family order were found to be exposed to violence ( $p < 0.05$ , see Table 5). Having an alcoholic husband increases the risk of women's exposure to violence by 7.8 times (see Table 6). The studies conducted at home and abroad have proven that there is a correlation between alcoholism and the phenomenon of violence [29,35,39,40]. The fact that men who drink alcohol exert more violence to their wives may be arising from the fact that they cannot think reasonably and control their emotions while drinking.

96.6% of women the women who had a husband with a habit of gambling disrupting the family order were exposed to violence ( $p < 0.05$ , see Table 5). In a study conducted in Eskişehir, 11.4% of the women who were exposed to violence stated that their husband had a gambling habit [34]. Considering that gamblers often lose money and time, it is thought that their economic status will be poor and they will not be able to allocate enough time to their wives and children, communicate effectively within the family, thus more likely to resort to domestic violence.

## Conclusion and Recommendations

It was determined that the women were exposed to physical (44.4%), economic (37.7%), and sexual (14.8%) violence, especially verbal/emotional violence at most, and most of the violence was committed by their husbands. Many factors such as

the low educational status of the woman and / or her husband, low socioeconomic status of the family, the involuntary marriage, the marriage at a young age, the presence of the co-wife, the tradition of bridal exchange in the family, the marriage through the bridal price, past experiences of violence and bad habits on part of the husband play a crucial role in the emergence of violence against women. In the light of the results obtained from the study, it is recommended that families should be informed and educated and legal regulations must be enforced for the women and girls to participate more effectively in business life and in decision-making stages, thus gain their financial independence. The principle of positive discrimination in supporting girls' education should be further developed and made widespread. Lifelong education and school-based programs aimed at preventing domestic violence should be designed, and these programs developed especially for men and boys should be used to promote non-violence and gender equality. Domestic violence should be made visible, thereby being prevented from being more destructive. To create an environment in which violence in the family is not tolerated, sensitivity and awareness levels should be raised in the society by supporting mass media, hopefully reducing domestic violence against women. As long as the opportunity of expressing themselves on part of the women is promoted, such social practices as the morals, honor, bridal exchange, and bridal price that are persistent in our society are thought to be eliminated. For this purpose, necessary opportunities should be provided to the women at all levels of administration, starting from non-governmental organizations

In the patient group, all our RA patients received daily treatment of vitamin Ca / D in the routine, and this could be the reason for no correlation. Also, the mean vitamin D level in both groups was below normal, that is, the average vitamin D level of patients and the healthy group was within the limits of osteomalacia. This may be because patients cannot be grouped in terms of vitamin D.

An ideal 'disease indicator' should be able to reflect ongoing active inflammation, even in patients who take medication that can change the course of the disease. Therefore, we think that sclerostin and Dkk-1 can give more accurate results, especially in patients with early RA that have not yet received any treatment. It may reflect disease activity, radiographic progression of sclerostin and Dkk-1, and may be a useful marker for predicting aggressive destructive disease and osteoporosis. In addition, new treatment approaches for osteoporosis can be developed and thus an increased bone formation can be achieved in RA with sclerostin and Dkk-1 antibodies.

The goal of this case-control study was to investigate serum sclerostin and Dkk-1 levels in RA patients and evaluate the association between sclerostin and Dkk-1 with other disease activation parameters. The patients were separated into two groups receiving anti-TNF and DMARD, and the effect of anti-TNF treatment on sclerostin and Dkk-1 level was investigated.

Based on the findings of our study, the following conclusions can be drawn. Serum sclerostin and Dkk-1 level is higher in RA patients than healthy controls. There is no significant difference in sclerostin and Dkk-1 levels between the group receiving DMARD and anti-TNF. Erosion scores are lower and BMD measurements are higher in the group receiving anti-TNF. Dkk-1 levels were

suppressed in the group receiving anti-TNF. As a result, Sclerost and Dkk-1 levels play an important role in the etiopathogenesis and joint damage of osteoporosis in RA, and their neutralization may be a new approach to stop joint damage and osteoporosis in RA.

#### Conflict of interests

The authors declare that they have no competing interests.

#### Financial Disclosure

Ethics committee approval was received.

#### Ethical approval

Before the study procedure, ethical permission was obtained from the Ethics Evaluation Commission of Firat University Faculty of Medicine with decision number 09 and dated 20.09.2010.

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