

RESEARCH ARTICLE

Verbal and psychological violence against women in Turkey and its determinants

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Abstract

Verbal and psychological violence against women is considered an important sociological and legal problem and a serious threat within the context of basic human rights. The aim of this study was to detect the factors affecting verbal and psychological violence against women in Turkey, a developing country. The micro data set of the National research on domestic violence against women in Turkey, which was conducted by the Hacettepe University Institute of Population Studies, was employed in this study. The factors affecting women's exposure to verbal and psychological violence by their husbands or partners in Turkey were determined using binary logistic and binary probit regression analyses. Women whose husbands or partners cheated and used alcohol were more exposed to verbal and psychological violence compared to others. In addition, women who were exposed to physical, economic, and sexual violence were more exposed to verbal and psychological violence compared to others. Exposure to violence by first-degree relatives increases the possibility of exposure to verbal and psychological violence. More effective results can be achieved by prioritizing women likelier to be exposed to violence in policies aimed at preventing acts of verbal violence against women in our country. There are few studies on verbal and psychological violence against women. Therefore, it will be useful to conduct relevant studies from different perspectives.

Introduction

Violence against women is considered a highly complicated issue and a multidimensional problem [1]. Even though its form differs from one society and culture to another, violence against women has always persisted [2]. It is evident that violent acts are growing more prevalent in today's social lives [3–6]. Violence is an embarrassing phenomenon that is observed in all areas of society, including the streets, schools, workplaces, and homes, and has become

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universal [7]. Violence against women can be defined as gender-based acts of violence that are used by a man, cause only the woman to suffer, and appear as physical, sexual, verbal, psychological and/or economic symptoms. The perpetrators appear to be partners, neighbors, friends, relatives, colleagues, and foreigners. Nevertheless, the family environment is usually the arena where men use most violence against women and girls [8]. A report by the World Health Organization (WHO) indicated that violence against women was widespread on a global level and caused serious health problems. Considering the results included in the report, it is understood that violence against women is not a minor problem that is observed only in a certain part of society but a global public health problem that requires immediate action. Violence against women has many effects on health, from minor physical injuries to traumas that may result in death. Psychological disorders may also lead to severe effects, such as post-traumatic stress disorder (PTSD), depression, and substance use [9]. Approximately 1.3 million adolescents die from infectious diseases, injuries, pregnancy, and childbirth every year worldwide. Moreover, 45 percent (approximately 600,000) of these deaths are among adolescent girls, and violence causes about 10 percent of these deaths [10].

The Centers for Disease Control and Prevention in the United States define intimate partner violence as physical, sexual, and/or emotional violence, abuse, or threats used by people in close contact, including existing or ex-husbands or extramarital partners [11]. Violence against women constitutes a very important problem for societies, and unfortunately, it is still spreading around the world. Nowadays, this issue has been discussed by diverse disciplines, from the social sciences to the juridical sciences, due to mass media and other types of communication [12]. Although violence is a concept that varies with time and sociocultural structure, it has been one of the most crucial issues in recent years. Although domestic violence against women was not an international issue that attracted attention or caused anxiety until half a century ago, this situation changed due to women's rights groups after the 1980s. Violence against women is a significant public health problem and a serious threat to human rights. The United Nations defines violence against women as any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion, or the arbitrary deprivation of liberty, whether in public or in private life [13]. Aggression has a critical effect at the individual and social levels. In general, studies have concluded that men are likelier to be involved in physical aggression than women. Consequently, studies investigating the risk factors for aggressive behavior have largely focused on male populations [14]. The reduction of violence may augment people's well-being and notably reduce public expenditures [15].

Violence can be practiced not only physically but also verbally and psychologically [16–18]. Verbal and psychological violence harms social lives and may include nonverbal threats (shaking fingers, making annoying signs, etc.) or verbal threats (speaking, shouting, swearing, angrily and in an angry tone, etc.). Studies have indicated that women are more vulnerable to violence than men [19]. Nowadays, many studies have been conducted to prevent verbal violence [20]. Studies on nurses working in a profession dominated by women indicated that the risk of nurses being exposed to violence in the workplace was three times higher compared to other occupational groups, and more than one-tenth of nurses have experienced at least one form of violence. The most frequently observed form of violence was reported to be verbal. It has been stated that verbal violence is commonly observed, especially in terms of emergency and intensive care unit employees [21, 22].

The prevalence of psychological and verbal violence against women varies by country [3–5, 23–33]. Violence against women, a global concern, is also one of Turkey's most pressing social issues [34]. Most studies on violence against women in Turkey are based on the testimonies of women subjected to violence [35]. Compared to sexual and physical violence, comparatively

less research has examined psychological and verbal violence [36]. Studies on verbal and emotional violence against women in Turkey have yielded varying outcomes at the provincial and local levels [13, 37–49].

Verbal and psychological violence is associated with many factors. The level of education of women or their partners subjected to violence is one of these factors [31, 32]. Verbal and psychological violence is also associated with the ages of women and their partners [32, 50]. The financial condition of women or their families is another component of verbal and psychological violence [26, 51]. Place of residence is one of the factors related to the verbal and psychological violence to which women are exposed [52, 53]. Stress and anxiety are elements closely associated with verbal and psychological violence [4].

In a study examining the prevalence of childhood violence and intimate partner violence among 18–24-year-old adolescent girls and young women in Namibia, those who had experienced any form of childhood violence, including verbal and psychological violence, were statistically significantly likelier to experience violence [54]. Moreover, alcohol and cigarette use is one of the aspects related to the verbal and psychological violence that women face [55, 56]. Women with smoking partners are also likelier to experience psychological or physical violence [57]. In addition, having a large number of children and being polygamous (married to more than one woman) heighten the chances of psychological and verbal violence against women [48]. Another study found that exposure to verbal and psychological violence during pregnancy is strongly associated with depression [58].

The aim of this study was to detect the socio-demographic and economic factors affecting women's exposure to verbal and psychological violence by their husbands or partners in Turkey. Furthermore, this study will also determine the characteristics of women's husbands or partners regarding verbal and psychological violence.

Methods

Study design

In 2008, a comprehensive report National research on domestic violence against women in Turkey, took place for the first time to define the dimensions of violence against women, identify its causes, and meet the need for data collection on this issue. National research on domestic violence against women in Turkey, conducted in 2014, is significant in its reflection of changes in violence against women since the 2008 study. National research on domestic violence against women in Turkey is one of the most comprehensive studies to understand the magnitude, content, causes, and consequences of domestic violence experienced by women, as well as the risk factors [59, 60].

The research questionnaire was designed by considering the questionnaires used by WHO's Multi-country study on women's health Women's Health and domestic violence against women [61]. New questions were added to the questionnaire according to the needs of the country, with a focus on legal compliance [59, 60].

Setting

Within the scope of the research on violence, Turkey was divided into 30 strata to provide estimates at the national, urban, or rural, 12 regional, and five regional levels. In the research, settlements with a population of 10,000 or more constituted urban strata, and settlements with a population of less than 10,000 were considered rural strata. The research sample consisted of cluster sampling [59, 60].

The field application of the study in 2008 started on July 27, 2008, and was completed on September 29, 2008 [59]. The field application of the study in 2014 started on April 8, 2014, and was completed on July 11, 2014 [60].

Participants

National research on domestic violence against women in Turkey investigated women between the ages of 15–59. In this study, women who are married, in a relationship, or previously in a relationship were included in the analysis. Women who had never been in a relationship were excluded from the study.

Data sources/measurement

This present study was a secondary data analysis. This study used the cross-sectional data of National research on domestic violence against women in Turkey, conducted by the Hacettepe University Institute of Population Studies in 2008 and 2014.

In National research on domestic violence against women in Turkey, the research team administered questionnaires in Turkish. The ethical rules developed by WHO were applied at every stage of the research, and various measures were taken to ensure the safety of both the interviewed women and the research team. Before each interview, the consent of respondents was obtained, and the interviewees signed the questionnaire, indicating that this consent was obtained. The researchers were trained in the Code of Ethics and Safety, and were mindful of the subject's sensitivity at the beginning of the interview, during the interview process, and after the interview. If there was more than one woman in the 15–59 age range in the household, a random selection approach was used to avoid asking the same questions to several women, and interviews took place with a single woman from each household. The research teams were quite careful to ensure that the interviews were administered in an environment with only the subjects. All interviewees received training on interview confidentiality. In addition, respondents were notified that their responses would be kept confidential during the approval and dissemination phases [59, 60].

Study size

In the 2008 study, 12,795 women were interviewed face to face to complete the women's questionnaire, with a rejection rate of 2.1%. The response rate for interviews with women is 86.1% [59]. In the 2014 study, 7,462 women were interviewed face to face, and their questionnaires were filled out, with a rejection rate of 4.4%. The response rate for interviews with women is 83.3% [60]. The computational weights of women were added to these data sets according to the research sample design. Each cluster was assigned a different weight; the reasons for this can be summarized as follows: 1) differential selection probabilities at the cluster level; 2) the non-proportional distribution of the sample size, and 3) differential response rates in each stratum [59, 60].

Measures and variables

In the National research on domestic violence against women in Turkey, women were asked the following questions: "Did your husband/partner make you sad by swearing at you?", "Did he insult or humiliate you in front of others?", "Did he scare or threaten you? (for instance, by gazing, shouting or breaking things down)?", and "Did he threaten you or your relatives with harm?". The status of exposure to violence measured by these questions was used to generate the dependent variable. The women in the study were exposed to verbal and psychological

violence by their husbands or partners if they experienced at least one of the above-mentioned conditions, and they were not exposed to verbal and psychological violence if they did not experience any of them. In conclusion, the dependent variable of the study was the status of exposure to verbal and psychological violence of the women who received a code 1 if they were exposed to verbal and psychological violence and a code 0 if they were not exposed to it.

The independent variables in this study were detected from variables included in the National research on domestic violence against women in Turkey. The variables related to the socio-demographic and economic characteristics of women were survey year (2008, 2014), region (West, South, Middle, North, East), woman's place of residence (rural, urban), age (15–24, 25–34, 35–44, 45–54, 55+), educational level (illiterate, elementary school, secondary school, high school, university), individual earning and income status (yes, no), health insurance status (yes, no), marital status (never married, once, two and more), number of children owned (has no child, one child, two and more), status of exposure to violence by first-degree relatives (no, yes), and health status (excellent/good, reasonable, bad/very bad).

The factors related to women's husbands or partners were husband or partner's education (illiterate, elementary school, secondary school, high school, university), husband or partner's employment status (no, yes), husband or partner's alcohol use status (no, yes), husband or partner's gambling status (no, yes), husband or partner's drug use status (no, yes), whether husband or partner had cheated (no, yes), status of exposure to husband or partner's economic violence at any point in her life (no, yes), status of exposure to husband or partner's physical violence at any point in her life (no, yes), and status of exposure to husband or partner's sexual violence at any point in her life (no, yes).

Statistical analysis

Survey statistics in Stata 15 (Stata Corporation) were used to consider the complex sampling design and weights. A weighted analysis was performed [62]. Firstly, the frequency and percentages were obtained according to the status of the exposure to verbal and psychological violence of women participating in the study. Additionally, bivariate analyses determined the relationships between the outcome variable (exposure to verbal and psychological violence) and various factors. We estimated bivariate relationships by evaluating significant differences between categorical variables using Pearson's chi-square test. The Pearson chi-square (χ^2) not only gives information regarding the importance of observed distinctions, but also the categories from which any observed differences originate [63].

Subsequently, the risk factors affecting women's exposure to verbal and psychological violence were detected by employing binary logistic and binary probit regression analyses [64]. Binary logit and binary probit models are discrete choice models used when the outcome variable is binary or dichotomous and only takes 0 or 1 [65]. The statistical significance of each independent variable as a risk factor and the ability to calculate the odds ratio were evaluated in binary logistic regression. The cumulative logistic distribution function is used in the binary logit model, and the cumulative normal distribution function (CDF) is used in the probit model. The fact that normal CDF contains integral calculations is cited as a factor leading to a more widespread use of logistic CDF in practice [66].

Ordinal and nominal variables were defined as dummy variables with the aim of observing the effects of the categories belonging to all variables to be taken into logistic and probit regression models [67, 68]. The problem of multicollinearity in the models was considered while identifying the reference category for ordinal and nominal variables with more than two categories. In this regard, the best model was estimated. Therefore, a consistent criterion cannot be selected [69, 70].

Whether there was multicollinearity between the independent variables in the models was also tested. Those with a variance inflation factor (VIF) value of 5 and above were considered to lead to moderate multicollinearity, while those with a value of 10 and above led to high multicollinearity [71].

Results

Descriptive statistics and bivariate analysis

The results of the socio-demographic and economic factors that may affect the status of the women's exposure to verbal and psychological violence of the women in Turkey are presented in [Table 1](#). According to the results of the Chi-square test of independence, a significant relationship was found between individuals' exposure to verbal and psychological violence and the socio-demographic and economic variables (except place of residence, individual earning and income) in the study. According to the results of the chi-square test of independence, a significant relationship was found between individuals' exposure to verbal and psychological violence and the factors related to husband or partner in the study.

According to [Table 1](#), while the prevalence of women who participated in the National research on domestic violence against women in Turkey in 2008 was 63.3%, the ratio of those who took part in it in 2014 was 36.7%. Out of 72.1% of women in the study, lived in cities. Most individuals reside in the Western region. The majority of women (78.6%) had no individual earning and income. Most women (85.4) had health insurance. It was detected that 88.8% of women were married only once, and that 69.8% of them had two and more children. While 48.5% of women were elementary school graduates, 9.3% of were university graduates. A total of 11.6% of women were exposed to violence by their first-degree relatives.

It was found that while 72.6% of women who were exposed to verbal and psychological violence by their husbands or partners resided in urban areas, 28.9% of them were from the Eastern Region, 51% of them were elementary school graduates, 78.3% of them had no individual earning and income, 84.1% of them had health insurance, 89.5% of them were married once, 75.6% of them had two and more children, and 16.4% of them were exposed to violence by their first-degree relatives.

While 42.2% of women's husbands or partners were elementary school graduates, 15% of them were university graduates. [Table 1](#) demonstrates that 81.5% of women's husbands or partners were employed, 20.7% of their husbands or partners used alcohol, 2.1% of their husbands or partners gambled, 8.9% of women's husbands or partners cheated, 27.7% of them were exposed to economic violence, 36.7% of them were exposed to physical violence, and 14.1% of them were exposed to sexual violence.

The data proved that the husbands or partners of 45.3% of those who were exposed to verbal and psychological violence by their husbands or partners, were elementary school graduates. The husbands or partners of 80.6% of them were employed, the husbands or partners of 26.4% of them used alcohol, the husbands or partners of 3.8% of them gambled, 15.7% of them had husbands or partners who cheated, 41.2% of them were exposed to economic violence, 65.1% of them were exposed to physical violence by their husbands or partners, and 14.1% of them were exposed to sexual violence by their husbands or partners.

Estimation of models

Binary logistic regression and binary probit regression models were employed to detect the factors affecting the status of women's exposure to verbal and psychological violence. The estimated model binary logistic and binary probit regression model results are presented in [Table 2](#) and [S1 Appendix](#).

Table 1. Findings related factors affecting women's exposure to verbal and psychological violence.

Variables	Exposure to verbal and psychological violence		n (%)	χ^2	P	
	No	Yes				
Survey year						
	2008	6,528 (62.1)	5,194 (64.8)	11,722 (63.3)	14.178	< 0.0001
	2014	3,978 (37.9)	2,818 (35.2)	6,796 (36.7)		
Region						
	West	3,213 (30.6)	2,088 (26.1)	5,301 (28.6)	96.945	< 0.0001
	South	908 (8.6)	710 (8.9)	1,618 (8.7)		
	Middle	2,206 (21.0)	1,975 (24.7)	4,181 (22.6)		
	North	1,471 (14.0)	925 (11.5)	2,396 (12.9)		
	East	2,708 (25.8)	2,314 (28.9)	5,022 (27.1)		
Place of residence						
	Urban	7,538 (71.7)	5,820 (72.6)	13,358 (72.1)	1.798	0.180
	Rural	2,968 (28.3)	2,192 (27.4)	5,160 (27.9)		
Age						
	15–24	1,831 (17.4)	964 (12.0)	2,795 (15.1)	118.274	< 0.0001
	25–34	3,313 (31.5)	2,544 (31.8)	5,857 (31.6)		
	35–44	2,726 (25.9)	2,165 (27.0)	4,891 (26.4)		
	45–54	1,922 (18.3)	1,711 (21.4)	3,633 (19.6)		
	55+	714 (6.8)	628 (7.8)	1,342 (7.2)		
Educational level						
	Illiterate	1,590 (15.1)	1,424 (17.8)	3,014 (16.3)	158.667	< 0.0001
	Elementary school	4,905 (46.7)	4,081 (51.0)	8,986 (48.5)		
	Secondary school	1,017 (9.7)	803 (10.0)	1,820 (9.8)		
	High school	1,814 (17.3)	1,164 (14.5)	2,978 (16.1)		
	University	1,180 (11.2)	537 (6.7)	1,717 (9.3)		
Individual earning/income						
	No	8,281 (78.8)	6,271 (78.3)	14,552 (78.6)	0.773	0.379
	Yes	2,222 (21.2)	1,737 (21.7)	3,969 (21.4)		
Health insurance status						
	No	1,425 (13.6)	1,276 (15.9)	2,701 (14.6)	20.299	< 0.0001
	Yes	9,077 (86.4)	6,735 (84.1)	15,812 (85.4)		
Marital status						
	Never married	1,045 (9.9)	388 (4.8)	1,433 (7.7)	365.775	< 0.0001
	Once	9,283 (88.4)	7,168 (89.5)	16,451 (88.8)		
	Two and more	178 (1.7)	456 (5.7)	634 (3.4)		
Number of children						
	Has no child	1,896 (17.8)	823 (10.3)	2,692 (14.5)	266.768	< 0.0001
	One	1,770 (16.8)	1,131 (14.1)	2,901 (15.7)		
	Two and more	6,867 (65.4)	6,058 (75.6)	12,925 (69.8)		
Exposure to violence by first-degree relatives						
	No	9,672 (92.1)	6,696 (83.6)	16,368 (88.4)	317.725	< 0.0001
	Yes	833 (7.9)	1,313 (16.4)	2,146 (11.6)		
Health status						
	Excellent/good	5,286 (50.3)	2,782 (34.7)	8,068 (43.6)	530.750	< 0.0001
	Reasonable	4,055 (38.6)	3,658 (45.7)	7,713 (41.7)		
	Bad/very bad	1,163 (11.1)	1,568 (19.6)	2,731 (14.8)		

(Continued)

Table 1. (Continued)

Variables	Exposure to verbal and psychological violence		n (%)	χ^2	P
	No	Yes			
Husband or partner's educational level					
Illiterate	364 (3.5)	367 (4.6)	731 (4.0)	180.858	< 0.0001
Elementary school	4,184 (39.9)	3,630 (45.3)	7,814 (42.2)		
Secondary school	1,437 (13.7)	1,255 (15.7)	2,692 (14.5)		
High school	2,659 (25.3)	1,824 (22.8)	4,483 (24.2)		
University	1,852 (17.6)	930 (11.6)	2,782 (15.0)		
Husband or partner's employment status					
No	1,861 (17.7)	1,553 (19.4)	3,414 (18.5)	8.368	< 0.01
Yes	8,635 (82.3)	6,454 (80.6)	15,089 (81.5)		
Husband or partner's alcohol use status					
No	8,778 (83.6)	5,893 (73.6)	14,671 (79.3)	277.567	< 0.0001
Yes	1,723 (16.4)	2,117 (26.4)	3,840 (20.7)		
Husband or partner's gambling status					
No	10,419 (99.2)	7,705 (96.2)	18,124 (97.9)	201.773	< 0.0001
Yes	81 (0.8)	302 (3.8)	383 (2.1)		
Husband or partner's drug use status					
No	10,480 (99.8)	7,934 (99.2)	18,414 (99.6)	46.526	< 0.0001
Yes	16 (0.2)	66 (0.8)	82 (0.4)		
Husband or partner's cheating status					
No	10,109 (96.3)	6,743 (84.3)	16,852 (91.1)	817.102	< 0.0001
Yes	385 (3.7)	1,260 (15.7)	1,645 (8.9)		
Status of women's exposure to husband or partner's economic violence					
No	8,515 (82.8)	4,666 (58.8)	13,181 (72.3)	1,293.769	< 0.0001
Yes	1,769 (17.2)	3,275 (41.2)	5,044 (27.7)		
Status of exposure to husband or partner's physical violence					
No	8,934 (85.0)	2,796 (34.9)	11,730 (63.3)	4,921.428	< 0.0001
Yes	1,572 (15.0)	5,216 (65.1)	6,788 (36.7)		
Status of exposure to husband or partner's sexual violence					
No	10,141 (96.5)	5,756 (71.9)	15,897 (85.9)	2,270.962	< 0.0001
Yes	365 (3.5)	2,249 (28.1)	2,614 (14.1)		

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When Table 2 was examined, it was observed that the variables were significant concerning the survey year, region (middle), age (25–24), educational level (elementary school, high school, university), health insurance status, marital status (never married, once), health status (reasonable, bad/very bad), number of children (two and more), and status of exposure to violence by first-degree relatives. It was observed that the variables were significant regarding the husband or partner's educational level (secondary school, high school), husband or partner's alcohol use status, husband or partner's gambling status, husband or partner's cheating status, status of exposure to husband or partner's economic violence, status of exposure to husband or partner's physical violence and status of exposure to husband or partner's sexual violence were significant.

According to the binary logistic regression model presented in Table 2, the odds of exposure to verbal and psychological violence by her husband or partner was 1.20 times higher among 2014 participants as compared to 2008. The odds of exposure to verbal and psychological violence was 1.11 times higher for those living in the Central Region compared to those

Table 2. Estimated binary logistic regression model results and marginal effects related to factors affecting women's exposure to verbal and psychological violence.

Variables	OR	Std. Error	95% CI		Elasticity (%)	Std. Error	VIF	
			Lower	Upper				
Survey year (reference: 2008)								
2014	1.150 ^a	0.054	1.049	1.260	7.98 ^a	0.027	1.05	
Region (reference: West)								
South	0.982	0.072	0.851	1.133	-1.08	0.042	1.20	
Middle	1.109 ^c	0.067	0.986	1.248	5.92 ^c	0.034	1.43	
South	0.890	0.064	0.772	1.025	-6.89	0.043	1.30	
East	1.076	0.069	0.949	1.221	4.22	0.037	1.70	
Place of residence (reference: rural)								
Urban	0.987	0.050	0.894	1.089	-0.78	0.029	1.13	
Age (reference: 55+)								
15–24	1.040	0.129	0.816	1.325	2.30	0.073	3.63	
25–34	1.212 ^c	0.120	0.999	1.472	11.13 ^c	0.058	4.29	
35–44	1.105	0.106	0.915	1.334	5.85	0.057	3.71	
45–54	1.100	0.105	0.912	1.328	5.60	0.057	3.04	
Educational level (reference: illiterate)								
Elementary school	1.152 ^c	0.087	0.994	1.335	8.36 ^c	0.045	2.51	
Secondary school	1.180	0.126	0.956	1.455	9.72	0.063	1.84	
High school	1.314 ^a	0.135	1.074	1.608	15.84 ^a	0.057	2.56	
University	1.354 ^b	0.172	1.055	1.738	17.50 ^b	0.073	2.69	
Individual earning/income (reference: no)								
Yes	0.970	0.058	0.863	1.090	-1.78	0.035	1.19	
Health insurance status (reference: no)								
Yes	0.873 ^b	0.059	0.765	0.997	-7.69 ^b	0.038	1.06	
Marital status (reference: two and more)								
Never married	0.624 ^b	0.117	0.433	0.901	-24.77 ^b	0.098	3.84	
Once	0.576 ^a	0.080	0.438	0.757	-29.37 ^a	0.068	2.80	
Health status (reference: excellent/good)								
Reasonable	1.292 ^a	0.065	1.170	1.426	14.86 ^a	0.029	1.25	
Bad/very bad	1.505 ^a	0.120	1.288	1.759	23.22 ^a	0.044	1.37	
Number of children (reference: has no child)								
One child	1.169	0.121	0.954	1.433	9.34	0.062	2.82	
Two and more	1.314 ^a	0.128	1.085	1.590	16.04 ^a	0.059	3.78	
Exposure to violence by first-degree relatives (reference: no)								
Yes	1.788 ^a	0.138	1.536	2.080	31.22 ^a	0.039	1.04	
Husband or partner's educational level (reference: elementary school)								
Illiterate	0.924	0.117	0.720	1.185	-4.70	0.076	1.16	
Secondary school	1.196 ^b	0.086	1.038	1.378	10.20 ^b	0.041	1.23	
High school	1.176 ^b	0.077	1.035	1.336	9.28 ^b	0.037	1.50	
University	0.961	0.086	0.806	1.146	-2.34	0.053	1.92	
Husband or partner's employment status (reference: no)								
Yes	0.984	0.061	0.872	1.111	-0.92	0.036	1.14	
Husband or partner's alcohol use status (reference: no)								
Yes	1.447 ^a	0.085	1.290	1.625	20.65 ^a	0.032	1.16	
Husband or partner's gambling status (reference: no)								
Yes	1.583 ^a	0.273	1.129	2.220	24.71 ^a	0.086	1.07	
Husband or partner's drug use status (reference: no)								

(Continued)

Table 2. (Continued)

Variables	OR	Std. Error	95% CI		Elasticity (%)	Std. Error	VIF
			Lower	Upper			
Yes	1.733	0.798	0.703	4.272	29.11	0.222	1.03
Husband or partner's cheating status (reference: no)							
Yes	2.329 ^a	0.217	1.941	2.795	43.29 ^a	0.042	1.13
Status of exposure to husband or partner's economic violence (reference: no)							
Yes	1.870 ^a	0.101	1.683	2.078	34.42 ^a	0.028	1.15
Status of exposure to husband or partner's physical violence (reference: no)							
Yes	1.902 ^a	0.050	1.803	2.001	97.20 ^a	0.024	1.34
Status of exposure to husband or partner's sexual violence (reference: no)							
Yes	1.369 ^a	0.087	1.198	1.539	64.88 ^a	0.032	1.26
Constant	-1.659	0.205	-2.061	-1.257			

^ap < .01;^bp < .05;^cp < .10; VIF: Variance Inflation Factor

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living in the Western Region. The fact that the women in the study were 25–34 years old increased odds of exposure to expected verbal and psychological violence by 1.21 times compared to women who were 55 years and older. Elementary school and high school graduate women had higher odds of exposure to verbal and psychological violence by 1.15 and 1.31 times, respectively, compared to illiterate women. According to the study it's expected that the women who had poor health were likely to have a higher chance to be exposed to verbal and psychological violence by 1.51 times among the women who contributed to the study. A woman with one child had higher odds of exposure to verbal and psychological violence by 1.31 times compared to women with two and more children. Women who were exposed to violence by their first-degree relatives had higher possibility of exposure to verbal and psychological violence by 1.79 times compared to others.

A woman whose husband or partner was a secondary school graduate had a 1.20 times higher odds of exposure to verbal and psychological violence compared to a woman whose husband or partner was an elementary school graduate. A woman whose husband or partner was a high school graduate had a 1.18 times higher odds of exposure to verbal and psychological violence relative to a woman whose husband or partner was an elementary school graduate. A woman whose husband or partner used alcohol had a 1.45 times higher odds of exposure to verbal and psychological violence than others. A woman whose husband or partner was gambling had a 1.58 times higher odds of exposure to verbal and psychological violence than others. A woman whose husband or partner cheated on her had a 2.33 times higher odds of exposure to verbal and psychological violence than others. According to Table 2, a woman exposed to economic violence by her husband or partner had a higher possibility of exposure to verbal and psychological violence by 1.87 times. It was observed that a woman subjected to physical violence by her husband or partner had a 1.90 times higher odds of exposure to verbal and psychological violence. Similarly, it was witnessed that a woman exposed to sexual violence by her husband or partner had a 1.37 times higher odds of exposure to verbal and psychological violence.

According to the VIF results presented in Table 2, no variable led to multicollinearity problem between the variables. Furthermore, the marginal effects of the factors affecting women's exposure to verbal and psychological violence are presented in Table 2.

When the goodness of fit of the estimated models was examined, it was observed that the results obtained from the two models were similar.

The marginal effects of factors affecting women's exposure to verbal and psychological violence are presented in [Table 2](#) and [S1 Appendix](#). According to the binary logistic regression model presented in [Table 2](#), while other variables were fixed, a woman who participated in the study in 2014 had higher possibility of exposure to verbal and psychological violence by her husband or partner by 7.98% compared to a woman who took part in the study in 2008. A woman living in the Central Region had higher possibility of exposure to verbal and psychological violence by 5.92% compared to those living in the Western Region. The fact that the women in the study were 25–34 years old increased the possibility of exposure to expected verbal and psychological violence by 11.13% compared to women who were 55 years and older. According to binary logistic regression analysis results, elementary school and high school graduate women had higher possibility of exposure to verbal and psychological violence by 8.36% and 15.84%, respectively, compared to illiterate women. A woman with health insurance had a lower possibility of exposure to verbal and psychological violence by 7.69% compared to others. An unmarried woman had a 29.37% lower possibility of exposure to verbal and psychological violence compared to a woman who was married twice or more. The fact that women who contributed to the study had bad health increased the possibility of exposure to expected verbal and psychological violence by 23.22%. A woman with one child had higher possibility of exposure to verbal and psychological violence by 16.04% compared to women with two and more children. Women who were exposed to violence by their first-degree relatives had higher possibility of exposure to verbal and psychological violence by their husbands or partners by 31.22%, compared to others.

A woman whose husband or partner was a secondary school graduate had a 10.20% higher possibility of exposure to verbal and psychological violence compared to a woman whose husband or partner was an elementary school graduate. A woman whose husband or partner was a high school graduate had a 9.28% higher possibility of exposure to verbal and psychological violence relative to a woman whose husband or partner was an elementary school graduate. A woman whose husband or partner used alcohol had a 20.65% higher possibility of exposure to verbal and psychological violence than others. A woman whose husband or partner was gambling had a 24.71% higher possibility of exposure to verbal and psychological violence than others. A woman whose husband or partner cheated on her had a 43.29% higher possibility of exposure to verbal and psychological violence than others. According to [Table 2](#), a woman exposed to economic violence by her husband or partner had a higher possibility of exposure to verbal and psychological violence by 34.42%. It was observed that a woman subjected to physical violence by her husband or partner had a 97.20% higher possibility of exposure to verbal and psychological violence. Similarly, it was witnessed that a woman exposed to sexual violence by her husband or partner had a 64.88% higher possibility of exposure to verbal and psychological violence.

Discussion

Violence against women is considered an important public health problem and a significant threat to human rights. Although violence is a concept that varies with time and socio-cultural structure, it has become one of the most remarked-upon issues in the world in recent years. Violence can be used not only physically but also verbally and psychologically. In fact, many studies emphasize that verbal and psychological violence is a much more serious problem than other forms of violence [[16](#), [21](#), [72](#)]. The development of policies on violence against women and the serious implementation of these policies may reduce violence against women.

Determining the factors affecting violence against women may help those implementing control policies about which issues should be given more attention in reducing and eliminating violence against women. This work determined the socio-demographic, economic, and husband- or partner-related factors affecting women's exposure to verbal and psychological violence in various regions of Turkey. Binary logistic and binary probit regression models were employed to detect these factors.

Within the scope of this study, this work aims to identify the factors that affect verbal and psychological violence against women in Turkey, an emerging country, and to determine the effectiveness of these factors. It is recognized that there are numerous studies on violence against women, primarily focusing on physical violence, and it is acknowledged that there is a need for more in-depth research on verbal and psychological violence against women, depending on various factors [6, 27, 73]. Disparate studies emphasize the need for additional studies to prevent cases for a range of reasons, including the difficulty of defining verbal and psychological violence and the failure to disclose this sort of violence owing to customs, traditions, or the desire to keep it a secret [31, 74]. The purpose of this study was to discern the main determinants of developing successful strategies to prevent exposure to verbal and psychological violence in Turkey. The micro data set obtained from National research on domestic violence against women in Turkey was used in this study. The reason for using these data is that they reflect the country in general, and this study allows international comparisons and illuminates national issues.

It was found that women who completed the survey in 2014 had a higher possibility of exposure to verbal and psychological violence compared to those from 2008. Studies in the literature have investigated this situation, with diverse results [75, 76]. Correspondingly, it would be beneficial to conduct research aimed at reducing verbal and psychological violence behaviors in the coming years by taking intensive precautions regarding the issue.

Women living in the Central Region of Turkey have a higher possibility of exposure to expected verbal and psychological violence compared to those living in the Western Region. Women residing in relatively prosperous and low-income regions are likelier to be exposed to verbal and psychological violence than women residing in other regions, even though different results might be found in similar studies [26, 31]. Even though income and welfare levels are notable causes of these regional disparities, it might be important to study these differences through in-depth research, as the literature indicates that violence is more prevalent in northern and agriculture-dominated regions [16, 77].

When the age range of women who were exposed to verbal and psychological violence was examined, the fact that they were in the age range of 25–34 increased the possibility of exposure to expected verbal and psychological violence compared to the reference group. This result corroborates the findings of previous research in the literature, and women in this age group are more prone to encounter verbal and psychological violence [18, 19, 72, 78]. Considering these results, it is evident that it would be beneficial to develop policies and take measures for the relevant age groups.

Educational level is another factor affecting women's exposure to verbal and psychological violence. In this study, the possibility of exposure to verbal and psychological violence increased as the educational level increased. Contrary to the findings of this study, other studies reported that women with lower levels of education are likelier to encounter verbal and psychological violence [79, 80]. Furthermore, this work revealed studies that could not find a significant relationship [75]. Notably, the conclusion regarding education achieved in this study may have been reached for a variety of reasons, and it would be beneficial to conduct in-depth research in other countries. In the literature, it is emphasized that there are studies with contradictory findings regarding whether an increase in the education level of women reduces

the likelihood of being exposed to violence, but it is emphasized that the expected situation is that a higher education level can reduce the likelihood of exposure to violence [81, 82].

Women's lack of health insurance increases the possibility of exposure to verbal and psychological violence. There are many studies with similar results [83–85]. Women's bad health status exacerbates the possibility of exposure to expected verbal and psychological violence. In similar studies, it was indicated that strong women with good health had less possibility of exposure to violence [83–85].

The fact that the woman had never been married or had been married once decreased the possibility of exposure to expected verbal and psychological violence. In another study, unlike this one, it was stated that unattached women aged between 15–49 had a higher possibility of exposure to psychological violence [85]. Women with one child had a higher possibility of exposure to expected verbal and psychological violence compared to women with two and more children. In another study, it was stated more children may heighten the possibility of exposure to violence [86]. Women's exposure to violence by first-degree relatives increased the possibility of exposure to verbal and psychological violence. A similar result was obtained in another study [87].

The fact that the woman's husband or partner was a secondary school graduate increased the possibility of exposure to expected verbal and psychological violence. One study found that an increase in the educational level of the husbands of women who were exposed to violence decreased the possibility of exposure to violence [79]. The research determined that the woman's husband or partner's alcohol use increased the possibility of exposure to expected verbal and psychological violence. Similar results were obtained in the studies administered in different countries [88, 89]. The fact that a woman is cheated on by her husband/partner increased the possibility of exposure to expected verbal and psychological violence. This result is consistent with that of other studies in the literature [88].

Women's exposure to economic violence raises the possibility of exposure to verbal and psychological violence. In similar studies, it has been emphasized that financial dependency heightens the likelihood of exposure to violence [51, 80]. Likewise, women who experience physical violence are likelier to be exposed to verbal and psychological violence. According to research, after exposure to partner-on-partner violence, victims experience psychological distress. Serious consequences can be encountered to the extent of suicide attempts [4, 72, 90].

Studies investigating violence against women mainly focus on physical violence. Studies on verbal violence have generally focused on healthcare professionals. The studies indicated that healthcare professionals were more exposed to verbal violence than to physical violence. Studies have shown that healthcare professionals are more frequently subjected to verbal violence than to physical violence [7, 22, 91]. Today, it is acknowledged that some instances of violence against women are kept secret and are not disclosed. In many studies, it has been determined that women and girls do not admit the instances of domestic violence they have suffered. Traditional, cultural, and psychological factors are among the causes [31, 74, 92, 93].

An individual's exposure to sexual violence also increases the possibility of exposure to verbal and psychological violence. According to the literature, women exposed to sexual violence are likelier to experience verbal and psychological violence [72, 83]. Although most studies have analyzed the prevalence and consequences of physical and sexual violence, women often think that psychological or emotional abuse may be even more harmful [94]. It is understood that this situation can lead to serious psychological consequences [29]. Studies have revealed that prenatal exposure to verbal, psychological and sexual violence has negative effects on newborns [33, 58].

Diverse forms of violence are frequently interconnected and continuous, as opposed to being isolated incidents, and form "systemic violence" [95]. It is important to recognize that

there are various forms of partner or spouse violence against women, and that there is a cause-and-effect relationship between them. Environments that nurture and witness violence will exacerbate violent behavior, and these effects will determine the direction of efforts against violence [34].

Studies have highlighted that women can adopt a wide variety of coping methods to deal with abuse, including silence, nonresponse, leaving their spouse or partner permanently or temporarily, submission, appeasement, and minimization of violence [96]. In similar studies, it has been determined that women exposed to verbal and psychological violence need training that will help them prevent and manage the violence in question, and such training can aid in the prevention of violence [7, 20].

Conclusion

As emphasized within the scope of the study, there is a need for urgent measures to prevent this violence. More effective results can be achieved by prioritizing women in the 25–34 age group with a high possibility of exposure to violence, no health insurance, exposure to violence by first-degree relatives, exposure to physical, economic, and sexual violence, poor health status, and a husband or partner who uses alcohol in policies aimed at preventing acts of verbal violence against women in our country.

Limitations of the study

This study has several limitations. First, the data in this study were secondary data. The variables required for statistical analysis consisted of the variables in the dataset. However, some variables, such as occupation and home ownership, that were not included in the data set could not be included in the analysis. Second, because the data are cross-sectional, the definite causal relationship between verbal violations and related socio-economic factors cannot be inferred. Third, the data on individuals' exposure to verbal and psychological violence were the individuals' own answers. Therefore, the data obtained in this data collection method may be biased. Finally, the data in the study consist of women between the ages of 15–59. Since a sample will be created across Turkey, women aged 60 and over were excluded from the study because the likelihood of women aged 15–59 in the houses visited was higher [60].

Directions/suggestions for future research

There are few studies on verbal and psychological violence against women. Therefore, it will be useful to conduct relevant studies from different perspectives. Furthermore, after pandemics such as COVID-19, which caused people to lock themselves in their houses for days, the effect of the pandemic on violence against women can also be examined. In our world, where much will not be the same as it was, regional differences in verbal and psychological violence against women before and after the pandemic can be investigated.

Supporting information

S1 Appendix.
(PDF)

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References

1. Al-Badayneh DM. Violence against women in Jordan. *Journal of Family Violence*. 2012; 27(5):369–79.
2. Ali PA, Gavino MIB. Violence against women in Pakistan: a framework for analysis. *Journal-Pakistan Medical Association*. 2008; 58(4):198–203. PMID: [18655430](https://pubmed.ncbi.nlm.nih.gov/18655430/)
3. Corrêa IT, Faria ER, editors. An analysis of violence against women based on victims' reports. XVII Brazilian Symposium on Information Systems; 2021 June 7–10, 2021; Uberlândia, Brazil.
4. Drotning KJ, Doan L, Sayer LC, Fish JN, Rinderknecht RG. Not all homes are safe: family violence following the onset of the Covid-19 pandemic. *Journal of Family Violence*. 2022:1–13. <https://doi.org/10.1007/s10896-022-00372-y> PMID: [35221467](https://pubmed.ncbi.nlm.nih.gov/35221467/)
5. Emilio Garcia-Batista Z, Sofia Moretti L, Franco P, Adrian Medrano L, Elisabeth Mustaca A. Validity and reliability of the aggression questionnaire (AQ) for Argentine adults. *Revista Iberoamericana De Diagnostico Y Evaluacion-E Avaliacao Psicologica*. 2022; 1(62):17–28.
6. Aizpurua E, O'Connell C. Men's Psychological Violence against Women. In: Shackelford TK, editor. *The SAGE Handbook of Domestic Violence*. 1. California: SAGE Publications; 2020. p. 98–112.
7. Pinar R, Ucmak F. Verbal and physical violence in emergency departments: a survey of nurses in Istanbul, Turkey. *Journal of Clinical Nursing*. 2011; 20(3-4):510–7. <https://doi.org/10.1111/j.1365-2702.2010.03520.x> PMID: [20969652](https://pubmed.ncbi.nlm.nih.gov/20969652/)
8. Tani F, Peterson C, Smorti M. The words of violence: Autobiographical narratives of abused women. *Journal of Family Violence*. 2016; 31(7):885–96.
9. García-Moreno C, Pallitto C, Devries K, Stöckl H, Watts C, Abrahams N. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva, Switzerland: World Health Organization; 2013.
10. Nigam S, Soperna N. A study of the understated violence within social contexts against adolescent girls. *Journal of Education Culture and Society*. 2017; 8(2):29–41.
11. Han K-M, Jee H-J, An H, Shin C, Yoon H-K, Ko Y-H, et al. Intimate partner violence and incidence of depression in married women: A longitudinal study of a nationally representative sample. *Journal of Affective Disorders*. 2019; 245:305–11. <https://doi.org/10.1016/j.jad.2018.11.041> PMID: [30419530](https://pubmed.ncbi.nlm.nih.gov/30419530/)
12. Cherecheş A. "Little bride, you will drink your own blood": Verbal and physical violence against women in Romanian oral literature. *Philobiblon: Transylvanian Journal of Multidisciplinary Research in Humanities*. 2019; 24(1):25–60.
13. Özcan NK, Günaydin S, Çitil ET. Domestic violence against women in Turkey: a systematic review and meta analysis. *Archives of Psychiatric Nursing*. 2016; 30(5):620–9. <https://doi.org/10.1016/j.apnu.2016.04.013> PMID: [27654248](https://pubmed.ncbi.nlm.nih.gov/27654248/)
14. Thomson ND, Bozgunov K, Psederska E, Vassileva J. Sex differences on the four-facet model of psychopathy predict physical, verbal, and indirect aggression. *Aggressive Behavior*. 2019; 45(3):265–74. <https://doi.org/10.1002/ab.21816> PMID: [30699249](https://pubmed.ncbi.nlm.nih.gov/30699249/)
15. Hollin C. *Reducing Interpersonal Violence: A Psychological Perspective*. New York: Routledge; 2018.
16. Muluneh MD, Stulz V, Francis L, Agho K. Gender based violence against women in Sub-Saharan africa: a systematic review and meta-analysis of cross-sectional studies. *International Journal of Environmental Research and Public Health*. 2020; 17(3):903. <https://doi.org/10.3390/ijerph17030903> PMID: [32024080](https://pubmed.ncbi.nlm.nih.gov/32024080/)

17. Winstok Z, Enosh G. Distribution of verbal and physical violence for same and opposite genders among adolescents. *American Journal of Men's Health*. 2008; 2(3):272–80. <https://doi.org/10.1177/1557988308319035> PMID: 19477790
18. Chernet AG, Cherie KT. Prevalence of intimate partner violence against women and associated factors in Ethiopia. *BMC Women's Health*. 2020; 20:22:1–7. <https://doi.org/10.1186/s12905-020-0892-1> PMID: 32028961
19. Shohan M, Noori G, Mohammadyari E, Vasigh A, Kazeminezhad B, Tavan H. Effects of verbal and physical violence by patient companions on female nurses and their health. *Shiraz E-Medical Journal*. 2017; 18(12):e14431.
20. Touzet S, Occelli P, Denis A, Cornut P-L, Fassier J-B, Le Pogam M-A, et al. Impact of a comprehensive prevention programme aimed at reducing incivility and verbal violence against healthcare workers in a French ophthalmic emergency department: an interrupted time-series study. *BMJ Open*. 2019; 9:e031054. <https://doi.org/10.1136/bmjopen-2019-031054> PMID: 31492791
21. Aksakal FNB, Kardeşin EF, Dikmen AU, Avci E, Özkan S. Workplace physical violence, verbal violence, and mobbing experienced by nurses at a university hospital. *Turkish Journal of Medical Sciences*. 2015; 45(6):1360–8. <https://doi.org/10.3906/sag-1405-65> PMID: 26775395
22. Wang P-Y, Fang P-H, Wu C-L, Hsu H-C, Lin C-H. Workplace violence in Asian emergency medical services: a pilot study. *International Journal of Environmental Research and Public Health*. 2019; 16(20):3936. <https://doi.org/10.3390/ijerph16203936> PMID: 31623179
23. D'Angelo DV, Bombard JM, Lee RD, Kortsmitt K, Kapaya M, Fasula A. Prevalence of experiencing physical, emotional, and sexual violence by a current intimate partner during pregnancy: population-based estimates from the pregnancy risk assessment monitoring system. *Journal of Family Violence*. 2022:1–10. <https://doi.org/10.1007/s10896-022-00356-y>
24. Aizpurua E, Copp J, Ricarte JJ, Vázquez D. Controlling behaviors and intimate partner violence among women in Spain: an examination of individual, partner, and relationship risk factors for physical and psychological abuse. *Journal of Interpersonal Violence*. 2021; 36(1–2):231–54. <https://doi.org/10.1177/0886260517723744> PMID: 29294888
25. Delgado A, Huamani BBA, editors. Applying Shannon Entropy to Analyse Violence Against Women by Departments in Peru. 2018 IEEE Sciences and Humanities International Research Conference (SHIRCON); 2018 20–22 Nov. 2018; Piscataway, USA IEEE.
26. Liyew AM, Alem AZ, Ayalew HG. Magnitude and factors associated with intimate partner violence against pregnant women in Ethiopia: a multilevel analysis of 2016 Ethiopian demographic and health survey. *BMC Public Health*. 2022; 22:284:1–10. <https://doi.org/10.1186/s12889-022-12720-0> PMID: 35148725
27. Zerihun T, Tesfaye M, Deyessa N, Bekele D. Intimate partner violence among reproductive-age women with chronic mental illness attending a psychiatry outpatient department: cross-sectional facility-based study, Addis Ababa, Ethiopia. *BMJ Open*. 2021; 11(12):e045251. <https://doi.org/10.1136/bmjopen-2020-045251> PMID: 34880005
28. Akombi-Inyang B, Ghimire PR, Archibong E, Woolley E, Razee H. Association between intimate partner violence and male alcohol use and the receipt of perinatal care: evidence from Nepal demographic and health survey 2011–2016. *PloS One*. 2021; 16(12):e0259980. <https://doi.org/10.1371/journal.pone.0259980> PMID: 34874942
29. Hassan FM, Khalifa FN, El Desouky ED, Salem MR, Ali MM. Cyber violence pattern and related factors: online survey of females in Egypt. *Egyptian Journal of Forensic Sciences*. 2020; 10:6:1–7.
30. Yaya S, Hudani A, Buh A, Bishwajit G. Prevalence and predictors of intimate partner violence among married women in Egypt. *Journal of Interpersonal Violence*. 2021; 36(21–22):10686–704. <https://doi.org/10.1177/0886260519888196> PMID: 31718407
31. LaBore K, Ahmed T, Rizwan-ur-Rashid, Ahmed R. Prevalence and predictors of violence against women in Pakistan. *Journal of Interpersonal Violence*. 2021; 36(13–14):NP7246–NP63.
32. Rayhan I, Akter K. Prevalence and associated factors of intimate partner violence (IPV) against women in Bangladesh amid COVID-19 pandemic. *Heliyon*. 2021; 7(3):e06619. <https://doi.org/10.1016/j.heliyon.2021.e06619> PMID: 33869852
33. Chan KL, Lo CK, Ho FK, Leung WC, Yee BK, Ip P. The association between intimate partner violence against women and newborn telomere length. *Translational Psychiatry*. 2019; 9(1):1–8.
34. Alkan Ö, Özar Ş, Ünver Ş. Economic violence against women: a case in Turkey. *PLoS One*. 2021; 16(3):e0248630. <https://doi.org/10.1371/journal.pone.0248630> PMID: 33720990
35. Guvenc G, Akyuz A, Cesario SK. Intimate partner violence against women in Turkey: A synthesis of the literature. *Journal of Family Violence*. 2014; 29(3):333–41.
36. Beyarslan SD, Uzer T. Psychological control and indulgent parenting predict emotional-abuse victimization in romantic relationships. *Current Psychology*. 2020:1–14. <https://doi.org/10.1007/s12144-020-01072-w>

37. Kaymaz HE, Öztürk A, Bağcıoğlu E. Psychiatric evaluation of married women who exposed to domestic violence. *Gaziantep Medical Journal*. 2014; 20(1):15–9.
38. Akar T, Aksakal FN, Demirel B, Durukan E, Özkan S. The prevalence of domestic violence against women among a group woman: Ankara, Turkey. *Journal of Family Violence*. 2010; 25(5):449–60.
39. Odabaşı AB, Şahinoğlu S, Yasemin G, Bilge Y. The experiences of violence and occupational health risks of sex workers working in brothels in Ankara. *Balkan Medical Journal*. 2012; 2012(2):153–9. <https://doi.org/10.5152/balkanmedj.2011.018> PMID: 25206986
40. Gokler ME, Arslantas D, Unsal A. Prevalence of domestic violence and associated factors among married women in a semi-rural area of western Turkey. *Pakistan Journal of Medical Sciences*. 2014; 30(5):1088–93. <https://doi.org/10.12669/pjms.305.5504> PMID: 25225532
41. Boyacıoğlu NE, Günaydın S, Özcan NK, Dinç Kaya H. Intimate partner violence during pregnancy in Turkey: a systematic review and meta-analysis. *Perspectives in Psychiatric Care*. 2021; 57(3):1515–27. <https://doi.org/10.1111/ppc.12879> PMID: 34076899
42. Alan H, Koc G, Taskin L, Eroglu K, Terzioglu F. Exposure of pregnant women to violence by partners and affecting factors in Turkey. *Sexuality Research and Social Policy*. 2016; 13(2):173–81.
43. Dikmen HA, Munevver GI. The relationship between domestic violence and the attitudes of women towards honor, gender roles, and wife-beating in Turkey. *Archives of Psychiatric Nursing*. 2020; 34(5):421–6. <https://doi.org/10.1016/j.apnu.2020.07.012> PMID: 33032768
44. Arabaci LB, Dikec G, Buyukbayram A, Uzunoglu G, Ozan E. Traumatic growth and psychological resilience status of female victims of violence inpatients in a district psychiatric hospital. *Archives of Psychiatric Nursing*. 2018; 32(4):568–73.
45. Basar F, Demirci N. Domestic violence against women in Turkey. *Pakistan Journal of Medical Sciences*. 2018; 34(3):660–5. <https://doi.org/10.12669/pjms.343.15139> PMID: 30034434
46. Çam HH, Ustuner Top F. Workplace violence against nurses working in the public hospitals in Giresun, Turkey: prevalence, risk factors, and quality of life consequences. *Perspectives in Psychiatric Care*. 2021. <https://doi.org/10.1111/ppc.12978> PMID: 34860413
47. Kocacik F, Dogan O. Domestic violence against women in Sivas, Turkey: survey study. *Croatian Medical Journal*. 2006; 47(5):742–9. PMID: 17042066
48. Uskun E, Çelik A, Ersoy P, Sönmez Y, Kişioğlu A. Isparta’da kadının statüsü: evli kadınlara yönelik ev içi şiddet parametreleri. *SDÜ Tıp Fakültesi Dergisi*. 2021; 28(1):115–25.
49. Dönmez G, Şimşek H, Günay T. Evli erkeklerde eşlerine yönelik şiddet ve ilişkili etmenler. *Turkish Journal of Public Health*. 2012; 10(3):151–9.
50. Torres Munguía JA, Martínez-Zarzoso I. Determinants of emotional intimate partner violence against women and girls with children in Mexican households: an ecological framework. *Journal of Interpersonal Violence*. 2022. <https://doi.org/10.1177/08862605211072179> PMID: 35135364
51. Kurt E, Küpeli NY, Sönmez E, Bulut NS, Akvardar Y. Domestic violence among women attending to psychiatric outpatient clinic. *Archives of Neuropsychiatry*. 2018; 55(1):22–8. <https://doi.org/10.29399/npa.14812> PMID: 30042637
52. Nieto B, Portela I, López E, Domínguez V. Verbal violence in students of compulsory secondary education. *European Journal of Investigation in Health, Psychology and Education*. 2018; 8(1):5–14.
53. Kizilgol OA, Ipek E. An analysis on domestic violence against women in Turkey: Multinomial Logit Model. *Business and Economics Research Journal*. 2018; 9(3):715–34.
54. Velloza J, Davies LD, Ensminger AL, Theofelus FM, Andjamba H, Kamuingona R, et al. Cycles of violence among young women in Namibia: exploring the links between childhood violence and adult intimate partner violence from the Violence Against Children and Youth Survey. *Journal of Interpersonal Violence*. 2022. <https://doi.org/10.1177/08862605211073107> PMID: 35156448
55. Hsu LC. The timing of welfare payments and intimate partner violence. *Economic Inquiry*. 2017; 55(2):1017–31.
56. Lencha B, Ameya G, Baresa G, Minda Z, Ganfure G. Intimate partner violence and its associated factors among pregnant women in Bale Zone, Southeast Ethiopia: A cross-sectional study. *PloS One*. 2019; 14(5):e0214962. <https://doi.org/10.1371/journal.pone.0214962> PMID: 31042713
57. Selek S, Vural M, Cakmak I. Abused nurses take no legal steps—a domestic violence study carried out in eastern Turkey. *Psychiatria Danubina*. 2012; 24(4):386–91. PMID: 23132190
58. Ghoneim HM, Elprince M, Ali TYM, Gharieb WF, Ahmed AA. Violence and depression among pregnant women in Egypt. *BMC Pregnancy and Childbirth*. 2021; 21:502 1–7. <https://doi.org/10.1186/s12884-021-03932-0> PMID: 34247570

59. DGSW. National Research on Domestic Violence against Women in Turkey. Hacettepe University Institute of Population studies, ICON-Institute Public Sector GmbH and BNB: Turkish Republic Prime Ministry Directorate General on the Status of Women (DGSW), 2009.
60. DGSW. National Research on Domestic Violence against Women in Turkey. Hacettepe University Institute of Population studies, ICON-Institute Public Sector GmbH and BNB: Turkish Republic Prime Ministry Directorate General on the Status of Women (DGSW), 2014.
61. García-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts C. WHO multi-country study on women's health and domestic violence against women. Geneva/Switzerland: World Health Organization; 2005.
62. Alkan Ö, Abar H, Gençer Ö. Analysis of factors affecting alcohol and tobacco concurrent use by bivariate probit model in Turkey. *Environmental Science and Pollution Research*. 2021; 28(23):30168–75. <https://doi.org/10.1007/s11356-021-12849-2> PMID: 33586099
63. Alkan Ö, Güney E. Investigation of factors that affect the frequency of alcohol use of employees in Turkey. *Journal of Substance Use*. 2021; 26(5):468–74.
64. Alkan Ö, Ünver Ş. Secondhand smoke exposure for different education levels: findings from a large, nationally representative survey in Turkey. *BMJ Open*. 2022; 12(2):e057360. <https://doi.org/10.1136/bmjopen-2021-057360> PMID: 35177464
65. Çebi-Karaaslan K, Oktay E, Alkan Ö. Determinants of household saving behaviour in Turkey. *Sosyoekonomi*. 2022; 30(51):71–90.
66. Alkan Ö, Tekmanlı HH. Determination of the factors affecting sexual violence against women in Turkey: a population-based analysis. *BMC Women's Health*. 2021; 21(188):1–15. <https://doi.org/10.1186/s12905-021-01333-1> PMID: 33952220
67. Alkan Ö, Oktay E, Ünver Ş, Gerni E. Determination of factors affecting the financial literacy of university students in Eastern Anatolia using ordered regression models. *Asian Economic and Financial Review*. 2020; 10(5):536–46.
68. Alkan Ö, Ünver Ş. Tobacco smoke exposure among women in Turkey and determinants. *Journal of Substance Use*. 2022; 27(1):43–9.
69. Demir A, Alkan Ö, Bilgiç A, Florkowski WJ, Karaaslan A. Determinants of Turkish households' out-of-pocket expenditures on three categories of health care services: A multivariate probit approach. *The International Journal of Health Planning and Management*. 2022. <https://doi.org/10.1002/hpm.3470> PMID: 35365938
70. Güney E, Alkan Ö, Genç A, Kabakuş AK. Gambling behavior of husbands of married women living in Turkey and risk factors. *Journal of Substance Use*. 2022:1–7. <https://doi.org/10.1080/14659891.2022.2084785>
71. Ünver Ş, Alkan Ö. Determinants of e-commerce use at different educational levels: empirical evidence from Turkey *International Journal of Advanced Computer Science and Applications*. 2021; 12(3):40–9.
72. Fedina L, Mushonga DR, Bessaha ML, Jun H-J, Narita Z, DeVlyder J. Moderating effects of perceived neighborhood factors on intimate partner violence, psychological distress, and suicide risk. *Journal of Interpersonal Violence*. 2019. <https://doi.org/10.1177/0886260519884687> PMID: 31686578
73. Svetlana B, Javad M, Lotfi KT. From isolation to violence: changes of the domestic environment in the Iranian family under COVID-19. *Russian Sociological Review*. 2021; 20(4):86–110.
74. Mshana G, Peter E, Malibwa D, Aloyce D, Kapiga S, Stöckl H. Masculinity, power and structural constraints: Men's conceptualization of emotional abuse in Mwanza, Tanzania. *Social Science & Medicine*. 2022; 292:114606. <https://doi.org/10.1016/j.socscimed.2021.114606> PMID: 34861570
75. Mukamana Jli, Machakanja P, Adjei NK. Trends in prevalence and correlates of intimate partner violence against women in Zimbabwe, 2005–2015. *BMC International Health and Human Rights*. 2020; 20:2:1–11.
76. Ogum Alangea D, Addo-Lartey AA, Chirwa ED, Sikweyiya Y, Coker-Appiah D, Jewkes R, et al. Evaluation of the rural response system intervention to prevent violence against women: findings from a community-randomised controlled trial in the Central Region of Ghana. *Global Health Action*. 2020; 13(1). <https://doi.org/10.1080/16549716.2019.1711336> PMID: 31935166
77. Martín-Fernández M, Gracia E, Lila M. Psychological intimate partner violence against women in the European Union: a cross-national invariance study. *BMC Public Health*. 2019; 19(1):1–11.
78. Memiah P, Bond T, Opanga Y, Kingori C, Cook C, Mwangi M, et al. Neonatal, infant, and child mortality among women exposed to intimate partner violence in East Africa: a multi-country analysis. *BMC Women's Health*. 2020; 20:10:1–16.
79. Dickson KS, Ameyaw EK, Darteh EKM. Understanding the endorsement of wife beating in Ghana: evidence of the 2014 Ghana Demographic and Health Survey. *BMC Women's Health*. 2020; 20:25:1–7. <https://doi.org/10.1186/s12905-020-00897-8> PMID: 32046703

80. Mahapatro M, Singh SP. Coping strategies of women survivors of domestic violence residing with an abusive partner after registered complaint with the family counseling center at Alwar, India. *Journal of Community Psychology*. 2019. <https://doi.org/10.1002/jcop.22297> PMID: 31816108
81. Weitzman A. Does increasing women's education reduce their risk of intimate partner violence? evidence from an education policy reform. *Criminology*. 2018; 56(3):574–607. <https://doi.org/10.1111/1745-9125.12181> PMID: 31592177
82. Bhuwania P, Heymann J. Tuition-free secondary education and women's attitudes toward intimate partner violence: evidence from Sub-Saharan Africa. *SSM-Population Health*. 2022; 17:101046:1–10. <https://doi.org/10.1016/j.ssmph.2022.101046> PMID: 35242994
83. Dessie S, Bekele Y, Bilgeri M. Sexual violence against girls and young women with disabilities in Ethiopia. Including a capability perspective. *Journal of Global Ethics*. 2019; 15(3):325–43.
84. Cruz MS, Irfi G. What is the effect of violence against Brazilian women on their self-perception of health? *Ciencia & Saude Coletiva*. 2019; 24(7):2531–42.
85. Coll CV, Ewerling F, García-Moreno C, Hellwig F, Barros AJ. Intimate partner violence in 46 low-income and middle-income countries: an appraisal of the most vulnerable groups of women using national health surveys. *BMJ Global Health*. 2020; 5:e002208. <https://doi.org/10.1136/bmjgh-2019-002208> PMID: 32133178
86. Awang H, Hariharan S. Determinants of domestic violence: Evidence from Malaysia. *Journal of Family Violence*. 2011; 26(6):459–64.
87. Gebara CFdP, Ferri CP, Bhona FMdC, Vieira MdT, Lourenço LM, Noto AR. Violence between different members in the family system: A household survey in a Brazilian city. *Journal of Family Issues*. 2019. <https://doi.org/10.1177/0192513X19887415>.
88. Mohapatra I, Mistry C. Domestic violence among ever married women of reproductive age group in a slum area of Bhubaneswar. *Journal of Medical Science and Clinical research*. 2017; 5(3):19593–8.
89. Carlson C, Namy S, Pala AN, Wainberg ML, Michau L, Nakuti J, et al. Violence against children and intimate partner violence against women: overlap and common contributing factors among caregiver-adolescent dyads. *BMC Public Health*. 2020; 20:124:1–13. <https://doi.org/10.1186/s12889-019-8115-0> PMID: 31996179
90. Park Y, Sullivan K, Riviere LA, Merrill JC, Clarke-Walper K. Intimate partner violence perpetration among military spouses. *Journal of Interpersonal Violence*. 2021. <https://doi.org/10.1177/08862605211004139> PMID: 33832357
91. Rahman L, Du Mont J, O'Campo P, Einstein G. Currently married women's present experiences of male intimate partner physical violence in Bangladesh: An intercategory intersectional approach. *Global Public Health*. 2020; 15(1):121–36. <https://doi.org/10.1080/17441692.2019.1649447> PMID: 31392927
92. Bifftu BB, Dachew BA, Tiruneh BT, Gezie LD, Guracho YD. Domestic violence related disclosure among women and girls in Ethiopia: a systematic review and meta-analysis. *Reproductive Health*. 2019; 16(1):1–10.
93. Arboit J, de Mello Padoin SM, Vieira LB. Violence against women in primary health care: Potentialities and limitations to identification. *Atencion Primaria*. 2020; 52(1):14–21. <https://doi.org/10.1016/j.aprim.2018.09.008> PMID: 31153667
94. Heise L, Pallitto C, García-Moreno C, Clark CJ. Measuring psychological abuse by intimate partners: Constructing a cross-cultural indicator for the Sustainable Development Goals. *SSM-Population Health*. 2019;9. <https://doi.org/10.1016/j.ssmph.2019.100377> PMID: 31993478
95. Grigaitė U, Karalius M, Jankauskaitė M. Between experience and social 'norms', identification and compliance: economic and sexual intimate partner violence against women in Lithuania. *Journal of Gender-Based Violence*. 2019; 3(3):303–21.
96. Both LM, Favaretto TC, Freitas LHM. Cycle of violence in women victims of domestic violence: Qualitative analysis of OPD 2 interview. *Brain and Behavior*. 2019; 9(11):e01430. <https://doi.org/10.1002/brb3.1430> PMID: 31588692