



## RESEARCH ARTICLE

# Evaluation of domestic physical violence in a male sample in a psychiatric outpatient clinic: a controlled study

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### ABSTRACT

**Objective:** The aim of this study is to determine spousal physical violence (SPV), physical abuse during childhood (exposure [EPVC], witnessing parental violence [WPVC]), the frequency of physical violence against their own child (PVAC) and the relationship between them in a male sample. Also it is aimed to determine the contributing sociodemographic characteristics, to assess the burden of psychiatric morbidity, and to discuss its relationship with SPV.

**Method:** In this study, data of psychiatric outpatients admitted to the psychiatry outpatient clinic of Sisli Etfal Training and Research Hospital consecutively (n=80) and a control group (n=40) who did not meet the psychiatric diagnostic criteria were compared. SCID-I (Structured Clinical Interview Form for DSM-IV Axis I Disorders) and Clinical Interview Form I-II for Domestic Violence were administered to both groups.

**Results:** Although there was no statistically significant difference between the groups, high rates of SPV were detected in both groups (71.3% vs. 60%,  $p=0.215$ ). In the group with a psychiatric diagnosis, EPVC was significantly higher (87.5% vs. 72.5%,  $p=0.041$ ). On the other hand, there was no significant difference in the rates of WPVC (61.3% vs. 47.5%,  $p=0.152$ ) and PVAC (76.1% versus 57.6%,  $p=0.057$ ). In multivariate logistic regression model, a significant predictive factor of SPV was determined as EPVC (Exp[B]: 5.071 95% CI: 1.092-23.549). There was no significant difference between the violence rates of patients with and without specific psychiatric diagnoses.

**Conclusion:** This study conducted with an all-male sample shows that domestic violence is common in both psychiatric diagnoses and control groups. When cross-sectionally evaluated, the results of the study show that the EPVC increases the burden of psychiatric comorbidity and SPV.

**Keywords:** Domestic physical violence, male, psychiatric diagnosis, violence

## INTRODUCTION

Domestic violence is one of the most important public health issues worldwide. While the term is used with

reference to spousal violence in many countries, it can also refer to abuse of children, the elderly, or any other member of the household (1). Domestic violence may include physical, sexual, emotional, and/or

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psychological abuse (2). Apart from cognitive, behavioral, developmental, social, and emotional effects, physical violence is one of the most serious forms of domestic violence and may even endanger the victim's life. Physical violence is defined as any intentional behavior of an actor affecting another person's body (3). Though men as well as women apply physical violence to their spouses in clinical samples, the likelihood of men initiating violent acts during their relationship and resorting to spousal violence is higher (4). Violence perpetrated by a man to a woman is related with more negative health outcomes than violence by a woman against a man (5).

While domestic violence is a common problem occurring at all ages, in all societies, at all levels of education, and in all religious, cultural, and socioeconomic groups, it is more prominent in the psychiatric population. Review findings provide evidence for higher prevalence and increasing rates of domestic violence in men as well as women with any kind of mental disorder compared to individuals with no mental illness (6-8). A meta-analysis by Oram et al. (8) found lifelong prevalence rates of 8-80% for physical partner violence in female outpatients and 2-6% in male outpatients, while high-quality papers had reported a median prevalence in female patients of 43% (IQR 25-51, range 8-60). Studies with psychiatric samples in Turkey reported that 45-62% of women had undergone physical violence at least once in their marriage (9-12).

A number of risk factors at individual, societal, and social levels have been identified for male violence. Among the individual risk factors for domestic violence were young age (13,14), poverty (13-15), low level of education (15-17), risk factors in early life (witnessing domestic violence and abuse as a child, maltreatment in childhood) (18-20), and alcohol/substance abuse (21,22). According to the data from 25 longitudinal studies examining developmental predictors for domestic violence in childhood and adolescence, child abuse, family-related risks, childhood and adolescence behavioral problems, substance use in adolescence, peer risks in adolescence, and less consistently sociodemographic risks were found among the relevant determinants for violence. The most commonly studied and most consistent predictors were child and adolescent abuse experiences and family-related risks (20). In conformity with these results, another review found an increased likelihood for men who had experienced abuse in their childhood to perform violent acts against their spouses due to the intergenerational cycle of violence (23).

Studies on domestic physical violence often focus on women exposed to violence and investigate the correlation between various parameters regarding those women. Therefore, our knowledge about male partners perpetrating violence is far more limited. When investigating the dimensions of this issue in Turkey, we found no study addressing the characteristics of male aggression using a male sample from a clinical environment. Our study was designed to help fill this gap. In the examination of physical violence directed at children and parents, the assessment of parents' patterns of violence with the previous generations, determining the cultural and sociodemographic structures they were living in, and investigating the contributing psychiatric disorders are expected to help us understand the cycle of violence. In our study, we assume that the experience of violence in their own childhood is significantly reflected in the men's violent behavior and the development of psychopathologies. In comparison with healthy controls, the repercussion of childhood traumas in men with a psychopathology in physical partner violence may be different. According to our hypothesis, an experience of childhood physical violence, if it causes a psychopathology in the person, makes it more likely to predict physical partner violence and violence against other family members.

Aim of this study is to research the incidence of spousal physical violence (SPV), physical abuse during childhood (exposure to physical violence [EPVC]; witnessing parental violence [WPVC]), physical violence to own child (PVAC) and the relations between these aspects in a male sample, to determine the sociodemographic characteristics contributing to these behaviors, to establish the burden of psychiatric morbidity and discuss its relation with SPV. In this study, the term SPV will be used for intimate partner violence or physical spousal violence perpetrated by the male.

## METHOD

### Study Sample

The groups in this study were composed of persons attending the psychiatric outpatient clinic at Sisli Etfal Training and Research Hospital between January and March 2010 and patient relatives.

### Study Design and Execution

Participants in this descriptive, cross-sectional case-control study were selected consecutively. A total of 96 individuals presenting for psychiatric examination were

interviewed. Two persons were excluded from the study as they had not completed the clinical interview process. Fourteen persons who currently did not meet any SCID-I (Structured Clinical Interview for DSM-IV Axis I Disorders) psychiatric diagnosis were not included in the study. The remaining 80 male participants meeting the admission criteria constituted the "patient group." To form the control group, 50 persons accompanying outpatients at the psychiatric unit were interviewed. Ten of them currently met at least one psychiatric diagnostic criterion according to SCID-I and were excluded from the study, while the remaining 40 made up the control group.

Both groups were administered the SCID-I form and subsequently interviewed based on the Clinical Interview Form I-II for Domestic Violence.

Ethics committee approval for this study was obtained. All interviews were carried out by a physician. After giving informed consent, each patient was interviewed in a separate room at the outpatient clinic.

**Inclusion Criteria:** Male married patients aged between 18 and 65 years; sufficiently literate in Turkish to understand and respond to the education level scale.

**Exclusion Criteria:** Comorbid mental retardation, primary dementia, or other severe organic diseases, patients too confused, agitated, or obviously psychotic to complete the tests reliably; for the control group: previous psychiatric presentation.

## Measures

**Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I):** Developed in 1997 by First et al. (24), the form was adapted to Turkish and a reliability study carried out (25). The SCID-I is a structured clinical interview form designed to diagnose axis I disorders according to the DSM-IV.

**Clinical Interview Form I-II for Domestic Violence:** A semi-structured clinical interview form to be filled in by the clinician, developed by Doganavsargil and Vahip (26), recording in detail the sociodemographic data, family structure, and physical violence over 3 generations. The interview form consists of 2 sections: The first part includes questions about sociodemographic characteristics and family structure, while the second part focuses on questions about physical violence. To establish the cultural specifics in the clinical interview, family structure, social environment, and views about violence are evaluated in detail and domestic physical violence is investigated not only in the current relationship, but questions cover a total of 3 generations, including the the previous and

the subsequent one. In order to measure male aggression, some questions have been added to the section of the clinical interview form assessing physical spouse violence with the permission of the authors.

## Definitions

**Exposure to Physical Violence During Childhood (EPVC):** Defined as a child under the age of 18 years suffering physical damage from parents or another caregiver to the degree of harming their health, causing injury, or carrying the risk of injury. This harm may be caused by beating with the hand or with an object, pushing, shaking, burning, or biting (27). In our study, we inquired about EPVC during childhood with the question: "In bringing up children, beating, pulling by the ears, hitting, pinching, and other use of brute force is quite common in our society. In your childhood, did you experience any of that?"

**Witnessing parental violence during childhood (WPVC):** Patients were asked if they, at an age below 18 years, had been witnesses of violence between their parents or heard about it through others: "While they were married, did you ever witness brute force between your mother and your father or heard about it from others?"

**Spousal physical violence (SPV):** SPV was investigated with the question: "Marriage has good sides, sharing your lives, but also some difficult sides. In your marriage, when you experienced disagreements or tension, has there ever been brute force used between you and your spouse?" The use of physical violence includes actions like shaking, battering, pushing, pinching, scratching, biting, slapping, kicking, beating, burning, throwing objects at the person, dragging on the floor by the hair, hitting with a stick or a log, chaining hands or arms, injuring the person by using sharp or pointed tools, stabbing, using fire arms, and killing or assaulting their physical integrity (28).

**Physical violence against the own child (PVAC):** To investigate if patients had used violence against their own child, we used the question: "Have you ever used brute force like hitting or pinching your child or pulling him or her by the ear when the child did not listen to you or made a mistake?"

If at least one incident of physical violence had happened, the presence of physical violence in the case was acknowledged.

## Statistical Analysis

For all analyses, SPSS Statistics for Windows, Version 18.0 was used. Data were summarized presenting mean,

standard deviation, and percentage. When assessing normalcy with Kolmogorov-Smirnov test, data were found to be normally distributed ( $p>0.05$ ). For the comparison between groups regarding variables like age, age at marriage, and duration of marriage, Student's t-test was used. Categorical sociodemographic variables and parameters of violence (EPVC, WPVC, SPV, PVAC) were compared by chi-square statistics. Variables predicting SPV (EVPC, own and spouse's level of education, parental status, alcohol consumption at home) were evaluated using logistic regression analysis. For all statistical analyses, p values were 2-tailed and differences with  $p<0.05$  were considered statistically significant.

## RESULTS

**Sociodemographic Data:** Some sociodemographic characteristics for both groups are presented in Table 1.

No significant differences were found between the sociodemographic data evaluated for the groups, such as age of participant and age of spouse, age at marriage, duration of marriage, levels of education, employment status, distribution of professions, income levels, regions of birth, migration status, situation of accommodation, parental status, and factors regarding marriage (type of marriage, consanguineous marriage, elopement, dowry). The groups can be compared on the basis of homogeneous sociodemographic characteristics.

**Correlation Between Psychiatric Diagnoses and Parameters of Domestic Physical Violence:** The spread of diagnoses in the patient group is shown in Table 2. The most common diagnosis was depressive disorders with 56.6%, but depression and anxiety disorders together were encountered in 82.5% of patients. In order of frequency, anxiety disorders were distributed into social anxiety disorder (18.8%), panic

**Table 1: Comparison between groups for sociodemographic characteristics**

	Patient group (n=80)		Control group (n=40)		t	df	p
	Mean	SD	Mean	SD			
<b>Own age</b>	42.35	10.82	42.48	12.23	0.057	118	0.955
<b>Age of spouse</b>	38.89	11.68	39.03	11.55	0.061	118	0.951
<b>Age at marriage</b>	23.39	4.08	24.80	3.86	1.820	118	0.071
<b>Duration of marriage</b>	18.81	12.59	17.80	13.79	-0.402	118	0.688
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	$\chi^2$	<b>df</b>	<b>p</b>
<b>Own education level</b>					5.661	3	0.129
No education	2	2.5	0	0			
Primary	44	55.0	15	37.5			
Secondary	30	37.5	20	50.0			
Higher education	4	5.0	5	12.5			
<b>Spouse's education level</b>					1.608	3	0.657
No education	8	10.0	5	12.5			
Primary	49	61.3	20	50.0			
Secondary	21	26.3	13	32.5			
Higher education	2	2.5	2	5.0			
<b>Own employment status</b>					0.019	1	0.892
Working	53	66.3	26	65.0			
<b>Spouse's employment status</b>					0.445	1	0.505
Working	16	20.0	6	15.0			
<b>Type of marriage</b>					2.406	1	0.121
Arranged	42	52.5	15	37.5			
Love marriage	38	47.5	25	62.5			
<b>Consanguineous marriage</b>	19	23.8	12	30.0	0.544	1	0.461
<b>Parental status</b>	67	83.3	33	82.5	0.030	1	0.862

SD: Standard deviation, df: Degrees of freedom

**Table 2: Distribution of psychiatric diagnoses in patient group**

Psychiatric diagnosis	n=80	%
Depressive disorders <sup>1</sup>	45	56.3
Anxiety disorders <sup>2</sup>	40	50.0
Depression+anxiety disorder	66	82.5
Bipolar disorder <sup>3</sup>	11	13.8
Psychotic disorders <sup>4</sup>	4	5.0
Disorders related to alcohol and substance use <sup>5</sup>	6	7.6
Somatoform disorders	7	8.8
Adjustment disorder	4	5.0
Past diagnoses	52	65
<b>Number of psychiatric diagnoses</b>		
One	47	58.8
Two	19	23.8
More than two	14	17.4

<sup>1</sup>Major depressive disorder: 43, dysthymic disorder: 6

<sup>2</sup>Panic disorder: 12, Obsessive-compulsive disorder: 4, Post-traumatic stress disorder: 2, Social phobia: 15, Specific phobia: 7, General anxiety disorder: 7, Anxiety disorder not otherwise specified: 4

<sup>3</sup>Bipolar I disorder: 7, Bipolar II disorder: 4

<sup>4</sup>Schizophrenia: 1, Paranoid disorder: 1, Psychotic disorder not otherwise specified: 2

<sup>5</sup>Alcohol use disorder: 5, Substance use disorders: 2, Alcohol/substance-induced mood disorders: 1 Alcohol/substance-induced anxiety disorder: 1

disorder (15%), general anxiety disorder (8.8%), specific phobia (8.8%), obsessive-compulsive disorder (5%), and post-traumatic stress disorder (2.5%), and 12.6% of patients were diagnosed with more than one type of anxiety disorder. The rate of patients with more than 1 psychiatric diagnosis was 41.2%. A past psychiatric history was found in 65% of patients. While persons with a psychiatric diagnosis were excluded from the control group, 20% of participants had a past psychiatric history.

We examined the relation between psychiatric diagnoses and parameters of violence. No significant difference in EPVC, WPVC, SPV, and PVAC rates was found for any of the psychiatric diagnostic groups.

### Domestic Physical Violence Rates in Different Generations:

Differences in parameters of violence between patient and control group were examined using chi-square analysis. The EPVC, WPVC, SPV, and PVAC rates for both groups are presented in Table 3. The EPVC rate was statistically significantly higher in the patient group compared to the controls (87.5% vs. 72.5%,  $p=0.041$ ). The other violence parameters (WPVC, SPV, and PVAC) were also higher in the patient group, but the difference was not statistically significant.

We assessed who of the participants had perpetrated SPV. In the patient group, there was no person stating to have suffered unidirectional violence from his wife; 38.6% reported mutual violence, while 61.4% spoke of violence by the man directed towards the woman. In the control group, these rates were 4.2%, 25%, and 70.8%, respectively.

**Predictive Factors Related to SPV:** In the patient and control groups, factors predicting SPV were evaluated in logistic regression analysis. In pairwise comparison with SPV as the dependent variable, statistically correlated variables (patient group: EPVC, own education level [none/primary vs. secondary and above], parental status, alcohol consumption at home; control group: own and spouse's level of education) were included as independent variables in the model (Table 4). Adding predictor variables to the model, the predictive power for SPV according to categories was 78.2% in the patient group and 70% in the control group. In the patient group, EPVC was identified as the significant predictor for SPV among the independent variables. The presence of EPVC increases SPV around 5 times (Exp[B]: 5.071 95% CI: 1.092-23.549).

## DISCUSSION

One important finding from our study is the correlation between EPVC and SPV. While no correlation was found in the control group, a history

**Table 3: Comparison between groups for exposure to physical violence during childhood, witnessing parental violence during childhood, spousal physical violence, and physical violence to own child**

	Patient group		Control group		$\chi^2$	df	p
	n	%	n	%			
EPVC	70/80	87.5	29/40	72.5	4.156	1	0.041
WPVC	49/80	61.3	19/40	47.5	2.053	1	0.152
SPV	57/80	71.3	24/40	60.0	1.538	1	0.215
PVAC*	51/67	76.1	19/33	57.6	3.620	1	0.057

\*Number of persons with children: patient group 67, control group 33. EPVC: Exposure to physical violence during childhood, WPVC: Witnessing parental violence during childhood, SPV: Spousal physical violence, PVAC: Physical violence to own child

**Table 4: Analysis of variables predicting domestic spousal violence in logistic regression model for patient group and control group**

	B	SE	Wald	df	p	Exp(B)	95% CI	
<b>Patient group<sup>1</sup></b>								
EPVC	1.624	0.783	4.295	1	0.038*	5.071	1.092	23.549
Own education	-0.879	0.572	2.364	1	0.124	0.415	0.135	1.273
Parental status	0.818	0.733	1.246	1	0.264	2.266	0.539	9.525
Alcohol use	1.362	1.100	1.533	1	0.216	3.905	0.452	33.751
<b>Control group<sup>2</sup></b>								
Own education	-1.819	0.931	3.818	1	0.051	0.162	0.026	1.006
Spouse's education	-0.626	0.780	0.643	1	0.423	0.535	0.116	2.467

\*p<0.05, dependent variable; spousal physical violence. EPVC: Exposure to physical violence during childhood.

<sup>1</sup>Nagelkerke R<sup>2</sup>=0.269, predictive power of the model in the category spousal physical violence 78.2%.

<sup>2</sup>Nagelkerke R<sup>2</sup>=0.256, predictive power of the model in the category spousal physical violence 70%

EPVC in the group with psychiatric diagnoses predicted SPV, even after control for the other variables found related with SPV (low level of education, having children, alcohol consumption at home). This correlation is consistent with results in the literature finding a positive correlation between abused during childhood and domestic physical violence (29-31). Findings from a recent meta-analysis showed a significant, though relatively low, correlation between all forms of maltreatment of males during childhood and subsequent intimate partner violence (31). The correlation between exposure to violence in the family of origin and later use of intimate partner violence was found to be stronger in men than in women (30). Another meta-analysis reported that six out of ten studies found a significant positive correlation between childhood domestic violence exposure and adult intimate partner violence, while 3 studies had no significant findings (32). Therefore, it is conceivable that a combination of individual, relational, and social factors in male victims of violence contributes to the risk of exposure and perpetration of partner violence (31). In agreement with our hypothesis, the results of our study could be interpreted to suggest that the exposure of male children to physical violence, if it results in the development of a psychopathology in adulthood, may significantly increase SPV due to multiple factors. Jointly with changes in structural and functional brain development in these individuals (33), they may likely cause the development of psychopathologies and an inclination towards violence.

In contrast to EPVC, our research found no significant correlation between WPVC and SPV. In addition, there was no significant correlation of EPVC and WPVC with PVAC. The literature has shown

exposure to violence during childhood as well as witnessing violence to increase SPV (34,35), and a correlation was found between exposure to domestic physical violence during childhood and physical violence against one's own child (36,37). Researchers reporting an increased tendency towards committing abuse in individuals who have suffered maltreatment as children also point out that the route between these factors is neither inevitable nor direct (38). A review by Ertem et al. (39) found a wide range of figures (between 1 and 38%) between studies examining the rate of intergenerational transmission of violence. Studies by Widom et al. (40) found no increased risk of physical child abuse in persons with a history of abuse in their childhood. Some inconsistencies could be explained at least partly with differences in sampling (clinical sample vs. general population) and methodological differences (e.g., documented history of violence vs. retrospective self-report) and the failure to control for other experiences of violence during childhood (31).

Comparing the EPVC history with the control group, finding a significantly higher rate in the patient group (87.5% against 72.5%) is an important outcome of our study. This rate is at least three times as high as the worldwide rate of 23% reported by the World Health Organization (WHO) worldwide (41). It appears that a history of EPVC increases the burden of psychiatric comorbidities. This result of our work supports previous studies. A population-based cohort study with middle-aged men and women predicted worse mental and physical health in persons with a history of abuse decades after the event (42). Another meta-analysis revealed a causal relationship between non-sexual abuse during childhood and various mental disorders, substance use, attempted suicide,

sexually-transmitted diseases, and risky sexual behavior (43).

Our study found a high rate of SPV in both groups (71.3% and 60%, respectively). This physical violence was more directed from the male to the female (61.4% in the patient group, 70.8% in the control group). A literature review has shown a wide spread of physical violence rates, depending not only on the local level of violence in the place where the study was carried out, but also due to the definition of violence, research method, sampling technique, education of the interviewer, specialty, and cultural factors (44). In comparison with field studies from Turkey (30.4-39.3%) (45-49), our results indicate a rate of physical violence almost twice as high. In a large international study by the WHO, using face-to-face interviews, lifetime SPV rates varied between 13 and 61% (50). In South Africa, 27.5% of males from the general population reported use of violence against their female partner (51). Our study results found higher rates of violence than in regions of the world with a high level of violence. Our findings show great similarity with studies in psychiatric female samples, where violence rates were the highest (45-62%) (9-12).

The relatively higher rate of violence in the patient group may be related with the effect of psychiatric comorbidity on SPV. Studies have shown a correlation between mental health problems and an increase in male intimate partner violence rates (52,53). Preexisting mental problems, insecure relationships, and the environment may affect fragility towards domestic violence and leave women more vulnerable to male violence (6,54).

On the other hand, the high figures may be related with our interview technique. While controlling for false positive or negative results in surveys is difficult, clinical interview technique allows the development of a healthy relationship between interviewer and participant, increasing the likelihood to obtain correct information. A study comparing research on perpetration of physical violence between survey technique and clinical interview found the survey results to underreport by 11% (26). In addition, sociocultural characteristics may affect the violence level. Traditional gender roles accepting violence in relationships have been shown to be risk factors for men to use violence (55). The male-dominated structure in Turkey and a common attitude among women to accept violence may be reflected in these rates (56).

Our study found level of education, parental status, and alcohol consumption at home to be risk factor

related with SPV. With lower education levels, violent behavior increased in both groups. Numerous studies found a similar correlation between domestic violence and low level of education (15-17) and alcohol use at home (21,22), which is one of the most consistent results of our study. In addition, a low number of children has been found to be a factor reducing the risk of violence (57). The presence of children might be an additional burden for psychiatric morbidity leading to an increase in violence.

Our study found no statistically significant correlation for specific mental disorders (depressive disorder, anxiety disorders, etc.) and parameters of domestic violence in the presence of a psychiatric diagnosis. This result contradicts studies finding an increase in depression and anxiety disorders after physical abuse during childhood (58,59); however, it is consistent with a study by Vahip and Doganavsargil (10) in a female sample. Studies evaluating the mental illness burden related with SPV, tend to apply instruments measuring symptom severity, such as scales for anxiety, depression, or trauma, rather than clinical diagnostics. As we used clinical diagnoses in the evaluation, it was not possible to assess the subthreshold effect of the symptoms. Alongside the insufficient sample size, a failure to use symptom screening scales is another important limitation of our study.

Another limitation is the retrospective data collection, as environmental conditions and recall problems may have affected the reliability of the data. Our study has been designed and carried out in view of facilitating data retrieval and reliability as far as possible. In contrast with retrospective studies, we have not found any study in Turkey, neither with female nor with male samples, researching this issue with a prospective design. Prospective studies on this topic would be very helpful to respond to this need. We have tried to ensure that all male patients presenting during the sample selection were included in the study. While the clinical interviews for the study were all carried out by the same interviewer, it is hard in a general outpatient clinic to control if the first interviewer directed all patients; there could be bias related to the first interviewer. In addition, when setting up the control group, we did not control the group for homogeneity. As patient relatives, participants accompanying female patients could be their spouses, siblings, other relatives, or neighbors. The high violence parameters in the control group might be related with this situation. Selecting a sample

among persons not related with the psychiatric population might have been more appropriate. Finally, further relevant methodological limitations include not using a psychometric method evaluating the severity of the psychopathology alongside the psychiatric diagnosis and the failure to use a structured instrument when evaluating exposure to violence and abuse.

To conclude, this study in a male sample has demonstrated a high prevalence of domestic violence both in the group with psychiatric diagnosis and in the control group. Cross-sectional evaluation of the study results shows that EPVC increases the burden of psychiatric comorbidity and SPV. Males exposed to domestic violence during childhood are more likely to continue SPV than individuals with no history of domestic violence. The presence of this correlation compared to individuals without psychopathology emphasizes the mediating role of mental problems in becoming a perpetrator of SPV. Conflicting results raise the need for further studies to explain numerous other related factors.

Contribution Categories		Author Initials
Category 1	Concept/Design	V.K., B.Ö., O.K.
	Data acquisition	V.K.
	Data analysis/Interpretation	V.K., B.Ö., O.K.
Category 2	Drafting manuscript	V.K.
	Critical revision of manuscript	B.Ö., O.K.
Category 3	Final approval and accountability	V.K., B.Ö., O.K.
Other	Technical or material support	N/A
	Supervision	N/A

**Ethics Committee Approval:** This study was approved by Şişli Etfal Training and Research Hospital ethics committee.

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

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** The authors did not report any conflicts of interest.

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