Research Article / Araştırma Makalesi

Evaluation of Violence Against Women: A Retrospective Study

Kadınlara Yönelik Şiddet Vakalarının Değerlendirilmesi: Retrospektif Çalışma

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Abstract

Background: In this study, it was aimed to evaluate adult female cases admitted to the forensic medicine clinic and reported for violence against women.
Materials and Methods: All female cases over the age of 18 years for whom a forensic report was issued in the forensic medicine clinic between 01.01.2011 and 31.12.2020 due to violence against women were included in the study. Groups were compared with parametric and non-parametric tests. A "p" value above 0.05 was accepted for statistical significance.
Results: The mean age of the patients was 35.26±14.43 years; 56.9% (n:281) of the cases were married. Most of the cases (n:136, 31.6%) were exposed to violence by their spouses and 43.1% (n:213) were exposed to violence by intimate partners. The overwhelming proportion of the cases (93.9%) were exposed to blunt trauma and 40.9% of the cases (n:225) had multiple injuries. Only 2.2% (n:11) of the cases were reported as life-threatening. The mean injury severity score (ISS) was 1.16±0.54 and the mean new-injury severity score (NISS) was 2.26±3.26 in 444 patients with traumatic lesions. ISS and NISS scores were markedly higher in women who were exposed to violence by their intimate partners (p<0.01). Males with sharps or gunshot wounds had statistically higher ISS and NISS scores than those with blunt trauma (p<0.001).
Conclusions: We believe that violence against women can be reduced by ensuring legal regulations against domestic violence, educating women about their rights in the face of violence and what to do for protection before and after violence, and increasing and supporting spouse therapy between spouses.

Keywords: Women, Violence, Injury, Trauma Scores, Forensic medicine

Öz

Amaç: Bu çalışmada, adli tıp kliniğine başvuran ve kadına yönelik şiddet nedeniyle rapor düzenlenen erişkin kadın olguların değerlendirilmesi amaçlanmıştır.
Materyal ve Metod: Adli tıp kliniğinde 01.01.2011 – 31.12.2020 yıllarında kadına yönelik şiddet nedeniyle adli rapor düzenlenen erişkin tüm kadın olgular çalışmaya dahil edildi. Gruplar parametrik ve non-parametrik testler ile karşılaştırılmıştır. İstatistiksel anlamlılık için p'nin 0,05 üzeri değer kabul edildi.
Bulgular: Olguların yaş ortalaması 35,26±14,43'tür. Olguların %56,9'u (n:281) evliydi. Olguların en sık (n:136, %31,6) eşi tarafından şiddete maruz kalmış olup %43,1'i (n:213) yakın partner tarafından şiddete maruz kalmıştı. Olguların büyük çoğunluğu (%93,9) künt travmaya maruz kalmıştı. Olguların %40,9'u (n:225) birden fazla bölgeden yaralanmıştı. Olguların sadece %2,2'sinde ise (n:11) hayati tehlikeye neden olacağı yönünde rapor düzenlenmiştir. Travmatik lezyon tespit edilen 444 olgunun ortalama injury severity score (ISS) 1.16±0,54 ve new-injury severity score (NISS) ortalaması ise 2,26±3,26'dır. Yakın partneri tarafından şiddete maruz kalan kadınlarda da ISS ve NISS skorları anlamlı derecede daha yüksekti (p<0,01). Kesici delici alet veya ateşli silah ile yaralanan kadınların künt travmaya maruz kalan kadınlara göre ISS ve NISS skoru istatistiki olarak daha yüksekti (p<0,001).
Sonuç: Kadına yönelik şiddetin engellenmesinde aile içi şiddete karşı yasal düzenlemelerin sağlanması, kadınların şiddet karşısında ne gibi hakları olduğu ve şiddet öncesi ve sonrasında korunmak için nelerin yapılması konusunda eğitilmesi ve eşler arasında eş terapisinin arttırılması ve desteklenmesi ile kadına yönelik şiddetin azaltılabileceğini düşünüyoruz.

Anahtar Kelimeler: Kadın, Şiddet, Yaralanma, Travma skorları, Adli tıp

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Introduction

Violence against women is not only a major public health problem but also a human rights issue (1). While violence against women can cause simple injuries, disabilities and even death in the acute phase, it can also cause serious mental illnesses in survivors in the long term (2). According to World Health Organization data, 30% of women all over the world are exposed to physical or sexual violence during their whole lives (3).

Violence against women is one of the most prevalent public health problems that occupy the agenda in our country as well as all over the world. According to the Violence against Women in Turkey Survey 2014 report, 36% of women are subjected to physical violence, 12% to sexual violence and 44% to emotional violence by their husbands or intimate partners (4). In a study from Manisa, 23.9% of the female cases admitted to the forensic medicine outpatient clinic were admitted due to domestic violence or partner violence (5). In a study conducted in Elazığ, 51.5% of females experienced to physical violence (6). In another study conducted in central Manisa, 14.8% of the women had been subjected to physical abuse (7). This situation shows that regional cases of violence against women in Turkey may be above the world average.

Injury severity score (ISS) is a widely used scoring system to indicate trauma severity (8). The ISS is a trauma scoring system using the AIS as the basis and dividing the body into six sites. The ISS is the sum of the square of the AIS score of the three most seriously affected body areas (9). NISS is a scoring system that takes the sum of the squares of the three most severe wounds, no matter which part of the body is injured. The NISS can therefore be equal to or higher than the ISS. NISS is a beneficial trauma scoring system to indicate the gravity of injury and predict mortality (8).

This study aimed to evaluate adult female cases admitted to the forensic medicine clinic and reported for violence against women.

Materials and Methods

This study was conducted at Bolu Abant Izzet Baysal University Forensic Medicine Clinic. Ethics committee approval for the study was obtained from Bolu Abant Izzet Baysal University Clinical Research Ethics Committee (dated 05.10.2021 and numbered 2021/241).

In this retrospective cohort study, 494 cases over 18 years, for whom a forensic report was requested for alleged battery between 01.01.2011 and 31 December 2020 were included. The study excluded cases under 18 years of age, male and with missing data. Hospital automation systems, forensic documents and patient charts of the cases were analysed retrospectively.

The cases were evaluated per the following parameters: 'age, marital status, accused, sex of the accused, type of injury, site of injury and forensic degree of injury, trauma score [ISS and NISS]'. ISS and NISS were measured using the AIS 2008 update.

Statistical Package For Social Science (SPSS), version 21.0 (IBM SPSS Statistics for Window, Version 20.0, Armonk, NY: IBM Corp.) statistical program was utilized for statistical analyzes. Whether the distributions were normally ranged was analysed using graphical (histogram plots) and analytical methods (Kolmogorov-Simirnov/Shapiro-Wilk's test). Desc-riptive statistics were presented as frequency, percentage, mean, median and standard deviation values.

Non-parametric tests were performed for non-normally distributed variables: paired groups by the Mann-Whitney U Test and groups of more than two by the Kruskal-Wallis Test (Post-Hoc: Dunn-Bonferroni test). Continuous variables are expressed as median (interquartile range [IQR]) and categorical variables are given as frequency and percenta-ge. P-value less than 0.05 was accepted as a statistically significant result.

Results

The mean age of the 494 cases was 35.26±14.43 years (min: 18, max: 92) and more than half of the cases (59.3%) were in their 20s and 30s. (Table 1). 56.9% (n:281) were married, 33.4% (n:165) were single, 6.1% (n:30) were divorced and 3.6% (n:18) were widowed. In this study, 83.8% of the accused were male (n:414) and 16.2% (n:80) were female. The cases were often (n:136, 31.6%) subjected to violence from their spouses and second from strangers (n:76, 15.4%). On the other hand, 43.1% (n:213) of the women had been subjected to violence by intimate partners (Table 1).

The overwhelming proportion of the cases (93.9%) were exposed to blunt trauma and 40.9% of the cases (n:225) had multiple injuries (Table 1). No traumatic lesion was detected in 50 cases of alleged assault. In 13.4% (n:66) of the cases, a report was issued stating that the injury could not be treated with a simple medical intervention, and in 2.2% (n:11) of the cases, a report was issued stating that the injury would cause life-threatening.

ISS and NISS

The mean ISS of the 444 patients with traumatic lesions was 1.16±0.54 and the mean NISS was 2.26±3.26. No statistically significant relationship was detected between the marital status of the victims and the severity of injury (p>0,05) (Table 2 and 3). ISS and NISS scores of female victims of violence by male defendants were significantly higher (p<0,01) (Table 2 and 3). ISS and NISS scores were significantly higher in women who had experienced violence by an intimate partner (p<0,01) (Table 2 and 3). Women injured with sharps or firearms had significantly higher ISS and NISS scores than women exposed to blunt trauma (p<0,001) (Table 2 and 3). Although no statistically significant correlation was found between the site of injury and trauma severity in terms of ISS score (p>0.05) (Table 2), the NISS score was found to be significantly higher in multiple site injuries (p<0,001) (Table 3).

Discussion

In a study from Mersin, the mean age of women who were subjected to violence was 35.8±10.7 years and the most

common age range was 26-35 years (37.1%) (10). In another study conducted at Çukurova University, the average age was reported to be 35.9 years (11). In the study of Çelebi et al., the average age was 35.72±10.84 years (6). The study included 494 patients. The mean age of the patients was 35.26±14.43 years (min: 18, max: 92) and more than half of the patients (59.3%) were in their 20s and 30s (Table 1).

In studies from Turkey, the majority of victims of violence against women (47.2%-91%) are married (7,12–14). In this study, over half of the cases were married (n:281, 56.9%) in accordance with the literature. Ünal et al. reported that the defendants of violence against women in Istanbul were males (95.6%) predominantly, while only 4.4% were females (15). This study's defendants were predominantly male (n:414, 83.8%). In studies conducted in Turkey, the perpetrators of violence were mostly spouses (75.6%-89.2%) in cases of violence against women (14,16). In this study, most of the cases (n:136, 31.6%) were exposed to violence by their spouses, while 43.1% (n:213) were exposed to violence by intimate partners (Table 1). The higher number of spouses as accused seems to be closely related to the fact that the majority of the victims are married.

In Tunisia, 78% of women victims of violence were injured by blunt trauma (17). Koca Yavuz et al. reported that victims of violence against women admitted to Çukurova University Faculty of Medicine Forensic Medicine Clinic were most frequently (74.4%) injured with blunt trauma (11). Most of the cases (93.9%) in this study had experienced blunt trauma (Table 1). However, the incidence of the type of trauma is strongly correlated with the seriousness of the damage. In studies involving cases of femicide, firearm injuries and sharps injuries are more common (12,18,19).

In a study conducted in Tunisia, the most common (76%) site of injury was the face (17). According to Toprak et al., the most common injuries sustained by female homicide victims were to the head (29.9%) and thorax (19.3%) (12). In this study, 40.9% (n:225) of the patients were injured in more than one region (Table 1).

Table 1. Distribution of age, marital status, accused, accused gender, type, site and degree of injury

		n	%
Age	18-19 years	51	10.3
	20-29 years	171	34.6
	30-39 years	122	24.7
	40-49 years	66	13.4
	50-59 years	48	9.7
	60-69 years	24	4.9
	70-79 years	6	1.2
	80-89 years	5	1.0
	90-99 years	1	0.2
Marital status	Single	165	33.4
	Married	281	56.9
	Divorced	30	6.1
	Widow	18	3.6
Accused gender	Male	414	83.8
	Female	80	16.2
Accused	Spouse	156	31.6
	Foreigner	76	15.4
	Friends	60	12.1
	Neighbour	46	9.3
	Boyfriend	39	7.9
	Distant relative	18	3.6
	Sibling	12	2.4
	Father	11	2.2
	Child	9	1.8
	Ex-spouse	9	1.8
	Brother	9	1.8
	Sister-in-law	8	1.6
	Ex-boyfriend	7	1.4
	Others	34	6.9
Injury type	Blunt trauma	464	93.9
	Sharp object	18	3.6
	Gunshot	10	2.2
	Burning	2	0.4
Injury site	Head-neck	141	28.5
	Body	23	5.1
	Extremities	78	15.8
	Multiple	202	45.5
Degree of forensic injuries	No lesions	50	10.1
	Cured by simple medical intervention	367	74.3
	Not cured by simple medical intervention	66	13.4
	Life-threatening	11	2.2

In their study conducted in Manisa, Karabağ et al. reported that 59.8% of the victims of violence against women had injuries that could be treated with a simple medical intervention (SMI), 34.8% had injuries that could not be treated with SMI and only 11.2% had life-threatening injuries (5). Koca Yavuz et al. reported that 87.6% of the cases were injured at a level that could be treated with SMI, 6.4% were injured at a level that could not be treated with SMI and only 2.8% had life-threatening injuries in Adana province (11).

In this study, in accordance with the literature, the most common injury was reported to be at a degree that could be treated with SMI. In 13.4% (n:66) of the cases, the injury could not be treated with SMI, and in 2.2% (n:11) of the cases, a report was issued that the injury would cause life-threatening. In general, although simple injuries are more common in cases of violence against women, regional differences can be observed in the frequency of life-threatening injuries.

ISS (Injury Severity Score) – NISS (New – Injury Severity Score)

In this study, the mean ISS of the 444 patients with traumatic lesions was 1.16±0.54 and the mean NISS was 2.26±3.26.

In this study, no statistical correlation appeared between marital status and injury severity (p>0.05) (Table 2 and 3). In general, the majority of cases of violence against women are perpetrated by males (15). Considering the difference in physical strength between males and females, it is expected that the severity of injury will be higher in cases where the accused is a male. In our study, ISS and NISS scores of female victims of violence by male perpetrators were significantly higher (p<0,01) (Table 2 and 3).

Toprak and Ersoy reported that 49.4% of femicide cases were killed by intimate partner between 2000-2010 (12). Koç reported that 88% of the defendants died due to intimate partner violence in a study involving cases of violence against women in Turkey between 2010 and 2017 (19). The reason why the accused in femicide cases is often an intimate partner may be that in intimate partner homicides, separation, jealousy, infidelity and honour killings are more common and the violence related to them is more frequently shown (12). In this study, ISS and NISS scores were found to be considerably greater in females who experienced violence by their intimate partners (p<0,01) (Table 2).

Table 2. ISS distribution by accused, accused gender, victim marital status, type and site of injury

		Injjury severity score (ISS)					p[1]
		Mean	S.D.	Median	25th per	75th per	
Accused gender	Male	1.19	±0.58	1.00	1.00	1.00	0.007
	Female	1.01	±0.12	1.00	1.00	1.00	
Accused	Intimate partner	1.24	±0.68	1.00	1.00	1.00	0.006
	Others	1.09	±0.38	1.00	1.00	1.00	
Accused	Foreigner	1.07	±0.30	1.00	1.00	1.00	0.122
	Acquqintance	1.17	±0.57	1.00	1.00	1.00	
Marital status	Single	1.16	±0.51	1.00	1.00	1.00	0.636[2]
	Married	1.14	±0.57	1.00	1.00	1.00	
	Divorced	1.14	±0.45	1.00	1.00	1.00	
	Widow	1.31	±0.79	1.00	1.00	1.00	
Injury type	Blunt trauma	1.09	±0.35	1.00	1.00	1.00	<0.001[2]
	Sharp object	1.77	±1.21	1.00	1.00	2.25	
	Gunshot	2.90	±1.28	3.00	2.00	3.50	
	Burning	1.00	±0.00	1.00	1.00	1.00	
Injury site	Head-neck	1.11	±0.31	1.00	1.00	1.00	0.510[2]
	Body	1.08	±0.41	1.00	1.00	1.00	
	Extremities	1.11	±0.42	1.00	1.00	1.00	
	Multiple	1.22	±0.69	1.00	1.00	1.00	

[1] Mann-Whitney U test [2] Kruskal-wallis test

When this study and the literature data are evaluated together, we can say that violence perpetrated by intimate partners is more serious and is more likely to result in death if necessary measures are not taken in these cases.

In general, the most common method used in cases of violence against women is blunt trauma, while the most common methods used in cases of femicide are gunshot wounds (37.2%-84.1%) and sharps injuries (34.6%-49.3%) (12,18–20). This is due to the higher severity of injury to the victim caused by these two methods. In this study, ISS and NISS scores of women injured with sharps or firearms were significantly higher than those of women exposed to blunt trauma (p<0,001).

Morbidity and mortality rates are higher in multiple trauma injuries compared to single site injuries (21). The NISS score was demonstrated to be considerably greater in multiple site injuries in this study (p<0,001) (Table 3), even though there was no statistically significant link between the site of injury and trauma severity in terms of ISS score (p>0.05) (Table 2). Injury severity is expected to be higher with multiple site injuries. Although ISS is frequently used in trauma injury, it has some limitations. For example, while it scores highest on a single part of the body, it does not measure other milder injuries on the same body part. The NISS takes into account the three

most serious injuries in the body, regardless of the affected body parts. Accordingly, the NISS may significantly exceed the ISS score in patients with multiple trauma (9). Therefore, the NISS is considered more reliable than the ISS in assessing trauma severity in patients with multiple trauma (21,22).

Table 3. NISS distribution by accused, accused gender, victim marital status, type and site of injury

		New-Injjury severity score (NISS)					p[1]
		Mean	S.D.	Median	25th per	75th per	
Accused gender	Male	2.42	±3.50	2.00	1.00	2.00	<0.001
	Female	1.35	±0.68	1.00	1.00	1.75	
Accused	Intimate partner	2.73	±4.39	2.00	1.00	3.00	0.005
	Others	1.89	±1.88	1.00	1.00	16.00	
Accused	Foreigner	1.87	±1.65	1.00	1.00	2.00	0.405
	Acquqintance	2.33	±3.48	1.00	1.00	2.00	
Marital status	Single	2.25	±3.23	1.00	1.00	2.00	0.924[2]
	Married	2.23	±3.42	1.00	1.00	2.00	
	Divorced	2.11	±2.00	1.00	1.00	2.00	
	Widow	2.81	±3.97	1.00	1.00	2.75	
Injury type	Blunt trauma	1.83	±1.52	1.00	1.00	2.00	<0.001[2]
	Sharp object	5.11	±7.07	1.00	1.00	5.75	
	Gunshot	14.9	±10.94	9.00	7.25	27.00	
	Burning	1.00	±0.00	1.00	1.00	1.00	
Injury site	Head-neck	1.41	±1.15	1.00	1.00	1.00	<0.001[2]
	Body	1.39	±1.87	1.00	1.00	1.00	
	Extremities	1.48	±1.71	1.00	1.00	1.00	
	Multiple	3.24	±4.38	2.00	2.00	3.00	

[1] Mann-Whitney U test [2] Kruskal-wallis test

Our study has some limitations. Firstly, our study was designed retrospectively. Therefore, due to lack of data, parameters such as occupation, educational status, socioeconomic status, smoking and alcohol use of victims and defendants could not be included. Since the study covers a single clinic and does not include fatal cases, it cannot be said that it fully represents all cases of violence against women.

Conclusion

In this study, we showed that more than half of the victims of violence against women in Bolu province were married and the crimes were mostly perpetrated by spouses and intimate partners. We also found that the severity of violence perpetrated by intimate partners was significantly higher. The majority of the victims were injured with blunt trauma and injuries occurred in more than one region. We think that violence against women can be reduced by providing legal regulations against domestic violence, educating women about what rights they have against violence and what to do for protection before and after violence, and increasing and supporting partner therapy between spouses to prevent violence against women.

Ethical Approval: *Ethics committee approval dated 05.10.2021 and numbered 2021/241 was obtained from Bolu Abant İzzet Baysal University Clinical Research Ethics Committee for the study.*

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