ORIGINAL RESEARCH

Violence Against Women During COVID-19 Pandemic: A Comparative Study from a Turkish Emergency Department

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Abbreviations:
COVID-19: coronavirus disease 2019
ED: emergency department
IPV: intimate partner violence
VAW: violence against women

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Abstract

Objective: Violence against women (VAW) is a major public health problem and a violation of women's human rights. The coronavirus disease 2019 (COVID-19) pandemic has worsened gender inequality, resulting in a heightened incidence of VAW. This study aims to assess the characteristics of women who admit to the emergency department (ED), both before the pandemic and during the pandemic. The secondary aim is to compare the frequencies of violence cases between periods.

Methods: By single-center, retrospective, and cross-sectional design, the periods of April 10 - December 31, 2020 and April 10 - December 31, 2019 were compared. The outcomes of the study were the daily ED admission numbers of both sexes, the prevalence of VAW cases in the ED, as well as sociodemographic and clinical variables of the women who were exposed to violence.

Results: During the pandemic period, number of VAW cases in the ED increased 13% and the ratio of VAW cases to all ED admissions tripled compared to the pre-pandemic period. Women exposed to VAW were more likely to be without social insurance, injured in the trunk part of their body, and having a life-threatening injury in the pandemic period. In both periods, women were attacked by an intimate partner, dominantly (42.6% and 54.1%, respectively). In addition, among all admissions of adults to the ED, women's percentage decreased while men's admission ratios increased during the pandemic period. Admissions to ED declined 47.7% during the COVID-19 pandemic compared to the year before.

Conclusion: Cases of VAW tend to increase during the pandemic, and health care settings should be well-organized to respond to survivors.

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Introduction

Violence against women (VAW) is a major public health problem in addition to being a violation of human rights.[1] This violence is related to serious health problems from women.[1] Negative health outcomes of VAW may be short term or long term. Soon after the violence, injuries, or even death, may happen while chronic exposure to VAW may cause psychiatric disorders like depression.[2] Even though survey results of VAW prevalence vary among countries, it exists regardless of country and culture.[3] All over the world, 26% of ever-married or ever-partnered women are exposed to physical and/or sexual violence of an intimate partner in their lifetime.[4] However, physical and/or sexual VAW are only the tip of the iceberg, since more than one-half of the women are exposed to psychological VAW.[5]

While striking frequency and negative health outcomes of VAW are on-going, the emerging coronavirus disease 2019 (COVID-19) pandemic has not facilitated the situation. In March 2020, World Health Organization (WHO; Geneva, Switzerland) named the COVID-19 outbreak as a pandemic.[6] Novel coronavirus disease directly affected individuals' health, and the pandemic had many indirect consequences. Aiming to keep the disease from spreading, many countries applied restrictions on daily life: closure of public places and lockdown.[7] Staying at home and becoming distant from social support made the women in abusive relationships even more vulnerable.[8] Researchers underlined increased intimate partner violence (IPV) cases during the lockdown; 90% of violent acts targeted women.[9]

Several countries have flagged heightened numbers of VAW reports during the pandemic.[10] The financial damage caused by COVID-19 increased existing inequalities in the community and became a source of stress.[11] Women confront higher levels of employment insecurity and increasing demands due to care labor because of gender inequality, which may force them to stay in abusive relationships.[12] In addition, past humanitarian crises resulted in an expansion of VAW.[13]

In the light of this, it was hypothesized that the worsening condition of VAW with the pandemic would not be limited to lockdowns. However, there is a lack of evidence on this topic. The research focused on actual ratios of VAW during the pandemic, or revolved around the effect of lockdown. In Ethiopia in April through May 2020, 24.6% of women reported psychological IPV, 8.3% of them were exposed to physical IPV, and 5.3% of them stated sexual IPV.[14] From May through June 2020, according to Yari and colleagues' study among the women in Iran, all participants were exposed to IPV, and 26.1% of them reported severe physical IPV.[15] In June and July 2020, 35.5% of Turkish women stated IPV: physical IPV was 10.1%, sexual IPV was 4.0%, and psychological IPV was 32.1% prevalent.[16] During April and May 2020, Sediri, et al conducted their study among Tunisian women and encountered striking ratios of psychological VAW (96%) while 10% of the women were exposed to physical VAW.[17] On the other hand, Plášilová and colleagues found lower levels of emotional (8.4%), physical (3.3%), and sexual (4.5%) IPV among the women in the Czech Republic, and the ratios even decreased during the pandemic.[18] Hoehn-Velasco and colleagues argued that in Mexico, domestic violence crimes reduced during lockdown and recovered as the daily life turned back to normal, according to police reports.[19] Conversely, emergency department (ED) admissions due to IPV raised from four percent to seven percent in the United States during the lockdown.[20] During the lockdown in Italy, VAW cases representing in the ED did not increase; however, the injuries of women were more severe.[21]

Emergency departments are the places where victims of VAW admit, especially those exposed to physical violence.[22] For 11.7% of the women in EDs, the reason for their presence is domestic violence.[23] Visits of women to the ED who were exposed to VAW may be their only encounter with health care professionals.[24] Injury patterns of domestic violence are not specific as they are in child abuse.[23] Thus, clinicians should ask about VAW exposure with the patient while creating an appropriate atmosphere for the patient to ease the potential disclosure.[23] The ED might be a relevant place to screen for IPV.[25] In EDs, it is crucial to have multidisciplinary teams with a structured action plan in response to VAW.[25] Survivors of VAW suffer from negative health consequences of violence, hence they may be frequent visitors to EDs.[24]

The present study aims to assess the characteristics of women who admit to the Eskişehir, Turkey Osmangazi University ED both before the pandemic and during the pandemic. The secondary aim is to compare the frequencies of violence cases between the two periods.

Methods

The present study has a retrospective, cross-sectional design. The study was carried out in Eskişehir Osmangazi University, Department of Emergency Medicine. The authors retrospectively evaluated emergency service electronic records. Eskişehir Osmangazi University Non-Invasive Clinical Research Ethics Committee approved the study protocol with decision number 01-09-2020/25. Turkish Ministry of Health (Ankara, Turkey) approved the study protocol on July 10, 2020.

Variable	April 10 – December 31		Statistics
	2019	2020	
Emergency Service Admissions by Sex, n (%)			
Women	40148 (53.43%)	19009 (48.38%)	P < .001
Men	34993 (46.57%)	20279 (51.62%)	
Emergency Service Admissions of Women, n (%)			
VAW Cases	54 (0.1%)	61 (0.3%)	P < .001
Other Cases	40094 (99.9%)	18948 (99.7%)	

Table 1. Prevalence of ED Admissions by Sex and Prevalence of VAW Cases

Note: Pearson chi square test was used for statistical analysis.

Abbreviations: VAW, violence against women; ED, emergency department.

The study included retrospectively collected data of the women who were eighteen years old or older and who applied to the ED because of VAW victimization. The VAW cases were defined as all women admitting to the ED with interpersonal physical violence exposure. To detect the prevalence of VAW in the ED, the total number of applications of women were extracted. Besides, the number of men's ED admissions (≥18 years old) were collected before and during the pandemic process.

The present study has outcomes for two periods: before the COVID-19 pandemic and during the pandemic process. The initial date was defined as April 10, 2020 because it was the first curfew set in Turkey.[26] As the authors of the study concluded, for the citizens with all backgrounds, it might be the point to understand the dangerousness of the situation. The final date of the focused interval was December 31, 2020. The same interval was chosen in 2019 and was evaluated to compare study variables. The outcomes of the study were the daily ED admission numbers of both sexes, the prevalence of VAW cases in the ED, as well as sociodemographic and clinical variables of the women who were exposed to violence.

While collecting the data and coding, the authors adhered to a data collection form developed by themselves. Besides, they followed best practice steps for chart abstraction to avoid any bias.[27]

Eskişehir city had 35,3327 adult female inhabitants in 2020 and 35,1139 in 2019.[28] The study center, Eskişehir Osmangazi University Hospital ED, is one of the largest hospitals in its territory. In 2019 and 2020, the female ED visitors were 11.43% and 5.38% of the total adult female population in Eskişehir, respectively.

Statistical Analysis

Categorical variables are shown as frequency and percentage. Since continuous data were not normally distributed, they are presented as median and quartiles. Comparing the variables between two periods, the Mann Whitney U test was used for the continuous variables. Depending on the expected values of the cells, the Fisher's exact test, Yates chi-square test, or Pearson chi-square test were used to compare categorical variables. All analyses were conducted with Statistical Package for the Social Sciences (Version 25; IBM Corporation; New York USA). Statistically significant P value was considered less than 0.05 (P <.05).

Results

From April 10 – December 31, 2019, 40,148 women and 34,993 men applied to ED. In the 2020 interval, the number of female applicants were 19,009 and there were 20,279 male applicants (Table 1). Per day

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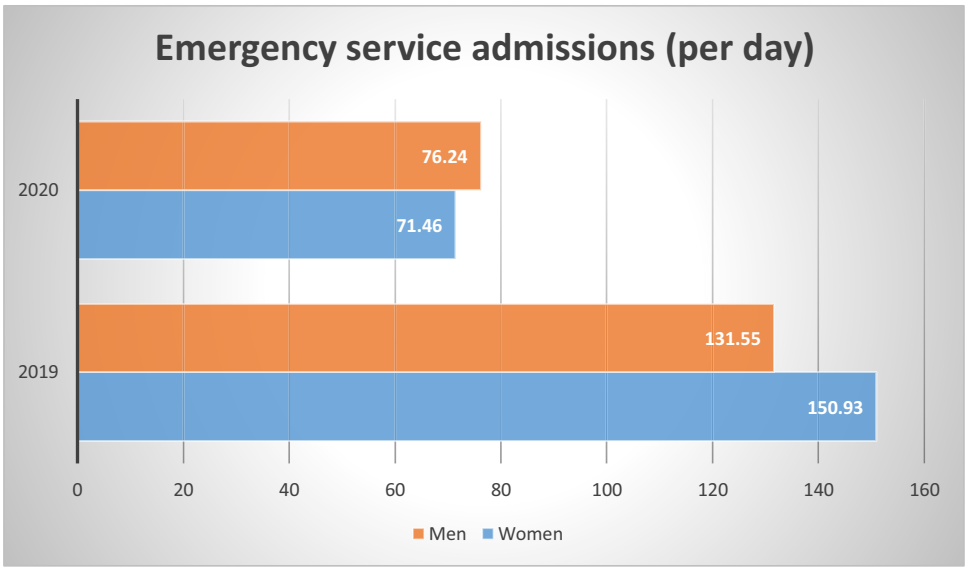

Figure 1. Emergency Service Admissions, Per Day, Pre-Pandemic and During Pandemic.

in 2019, 150.93 women and 131.55 men applied to the ED, while this numbers decreased to 71.46 and 76.24 in the pandemic period, respectively (Figure 1). Both sexes admitted less to the ED during the pandemic. Besides in 2020, the percentage of women in ED admissions decreased, while men's admission proportions increased.

During 2019 period, 54 women applied to the ED for violence exposure; in 2020, this number increased to 61. In 2019, 53 women stated physical violence, and one stated sexual violence. In 2020, all 61 applicants stated physical violence. The VAW cases were 0.01% of all ED visits in 2019, and it increased to 0.03% in 2020.

Table 2 represents the sociodemographic and clinical data of the women who were exposed to violence in the 2019 and 2020 periods. The median age of the women was 35 and 34 years, respectively. In 2020, the women who were exposed to violence had higher percentages of being single, while the difference was not statistically significant (42.6% versus 60.7%; $\chi^2 = 3.745$; P = .053). More women had government retirement fund in 2020 compared to 2019 (0.0% versus 11.5%; P = .014). Previous psychiatric diagnoses existed in 18.5% of women in 2019 and 19.7% in 2020. Among the perpetrators of the VAW, 90.7% did not use any weapon in 2019, while the percentage decreased to 83.6% during the pandemic process ($\chi^2 = 5.300$; P = .258). Violence was more likely to occur in the residence of women in 2020 (53.7% versus 73.8%; χ^2=4,191; P = .041). In the pandemic period of 2020, the perpetrators attacked the trunk part of women's body more than they did in 2019 (9.3% versus 27.9%; $\chi^2 = 5.265$; P = .022). Even though there were no differences in the need of women for complex medical interventions, life-threatening conditions were seen more often in the pandemic (respectively, 79.6% versus 75.4%; $\chi^2 = 0.100$; P = .752 and 0.0% versus 8.2%; P = .039).

Discussion

This single-center study displays that during the pandemic period, the number of VAW cases in the ED increased 13% and the ratio of VAW cases to all ED admissions tripled compared to the pre-pandemic period. Survivors of VAW were more likely to be without social insurance, injured in the trunk part of their body, and having a life-threatening injury in the pandemic period. Violent act was more likely to happen at the residence of women during the COVID-19 pandemic (73.8%). In both periods, women were attacked by an intimate partner, dominantly. Among all admissions of adults to the ED, women's percentage decreased while men's admission ratios increased during the pandemic period. Admissions to the ED declined 47.7% during the COVID-19 pandemic compared to the year before.

Rising numbers of VAW cases in this study sample is concerning. Present study showed among the females in the ED, 0.1% of patients (n = 54) were admitted to hospital due to the exposure to VAW in the pre-pandemic period; during the pandemic, the ratio raised to 0.3% of all women admitted to the ED (n = 61). Holland and colleagues' confronted ratio of female IPV cases to all female ED admissions, which were 0.029% for 2019 and 0.030% for 2020.[27]

The ratio of women admitting to the ED because of the IPV exposure to all female ED admissions did not change significantly in the United States from March through October 2020 and the year before.[29] The VAW cases admitting to the ED declined during the Italian lockdown from March through May 2020.[21] During February through June 2020, from an ED in South Africa, interpersonal violence cases declined compared to the previous year.[30] However, the study does not have sex-aggregated results.[30] Among the women who seek medical support for IPV exposure, the physical IPV exposure ratio heightened during the pandemic.[31] The ED admissions due to IPV raised from four percent to seven percent in the United States during the lockdown; unfortunately, this evidence lacked sex-aggregated statistical analysis.[20] In the light of evidence, IPV is a gendered problem: it predominantly harms women.[32] Thus, analyzing data for each sex is crucial to assess any situation related to violence.

The present study states more women survived from life-threatening violent attacks during the pandemic process. Correlatively, in the United States hospital settings, injuries due to IPV exposure were more-severe during the pandemic process comparing to previous years.[31] Perpetrators of IPV attacked women's abdomen

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Variable		(April 10 – December 31)		Statistics
		2019	2020	
Age, Median [IQR]		35 (27- 44)	34 (27-40)	U = 1563.00; P = .638[1]
Civil Status, n (%)	Single	23 (42.6%)	37 (60.7%)	χ^2 = 3.745; P = .053[2]
	Married	31 (57.4%)	24 (39.3%)	
Insurance, n (%)	Social Insurance	54 (100.0%)	54 (88.5%)	P = .014[3]
	Government Retirement Fund	0 (0.0%)	7 (11.5%)	
Previous Psychiatric Diagnose, n (%)	Yes	10 (18.5%)	12 (19.7%)	χ^2 = 0.000; P = 1.000[4]
	No	44 (81.5%)	49 (80.3%)	
Usage of Weapon, n (%)	None	49 (90.7%)	51 (83.6%)	χ^2 = 5.300; P = .258[2]
	Blunt	2 (3.7%)	4 (6.6%)	
	Sharp	0 (0.0%)	4 (6.6%)	
	Blunt and Sharp	2 (3.7%)	2 (3.3%)	
	Firearm	1 (1.9%)	0 (0.0%)	
Place of Violence, n (%)	Residence	29 (53.7%)	45 (73.8%)	χ^2 = 4,191; P = .041[4]
	Other	25 (46.3%)	16 (26.2%)	
Perpetrator, n (%)	Intimate Partner	23 (42.6%)	33 (54.1%)	χ^2 = 1.935; P = .380[2]
	Familiar Person	17 (31.5%)	13 (21.3%)	
	Stranger	14 (25.9%)	15 (24.6%)	
Admission Type, n (%)	Out-Patient	41 (75.9%)	42 (68.9%)	χ^2 = 0.405; P = .525[4]
	Ambulance	13 (24.1%)	19 (31.1%)	
Physical Examination Findings, n (%)	Yes	43 (79.6%)	49 (80.3%)	χ^2 = 0.000; P = 1.000[4]
	None	11 (20.4%)	12 (19.7%)	
Effected Part of the Body, n (%)	Extremities	21 (38.9%)	28 (45.9%)	χ^2 = 0.325; P = .569[4]
	Trunk	5 (9.3%)	17 (27.9%)	χ^2 = 5.265; P = .022[4]
	Head and Neck	26 (48.1%)	29 (47.5%)	χ^2 = 0.004; P = .948[2]
Need for Complex Medical Intervention, n (%)	Yes	43 (79.6%)	46 (75.4%)	χ^2 = 0.100; P = .752[4]
	No	11 (20.4%)	15 (24.6%)	
Life-Threatening Condition, n (%)	Yes	0 (0.0%)	5 (8.2%)	P = .039[3]
	No	54 (100.0%)	56 (91.8%)	
Hospitalization Requirement, n (%)	Yes	4 (7.4%)	5 (8.2%)	P = .577[3]
	No	50 (92.6%)	56 (91.8%)	
Imaging, n (%)	X-Ray	13 (24.1%)	26 (42.6%)	χ^2 = 3.609; P = .057[4]
	CT	25 (46.3%)	30 (49.2%)	χ^2 = 0.095; P = .757[2]
	USG	3 (5.6%)	1 (1.6%)	P = .340[3]
Time Spent in Emergency Service Minutes [IQR]		150 (60- 240)	126 (60- 225)	U = 1567.50; P = .654[1]

Table 2. Sociodemographic and Clinical Characteristics of VAW Cases
Note: 1 - Mann Whitney U test; 2 - Pearson chi square test; 3 - Fisher's exact test; 4 - Yates chi square test.
Abbreviations: VAW, violence against women; CT, computed tomography; USG, ultrasound.

and/or chest more in the pandemic period compared to previous periods.[31] During the Italian lockdown from March through May 2020, although VAW cases declined in the ED, their duration of prognosis increased. In other words, injuries became more serious.[21] The presence of severely injured women due to VAW in the hospital setting might be related to the fear of COVID-19, which ended up with later hospital admissions when the VAW and individual's injuries got worse.[31] Besides, women who are injured due to VAW might not admit to health care if they are not severely injured.[21]

The ED admissions significantly reduced (47.7%) during the COVID-19 pandemic in this hospital, predominantly among females (52.6%). Hartnett and colleagues reported that during the early stages of pandemic, ED admissions decreased 43% in the United States, mostly among women and children.[33] Again in the United States, from December 2020 through January 2021, Adjemian and colleagues found a decline of 25% (23% decline in males, 27% in females) in ED admission compared to the previous year.[34] The lessening of ED utilization may reflect the public fear of getting infected by the novel coronavirus in EDs. That fear may keep individuals away from hospital admissions. However, for the persons with little access to primary health care, avoidance of admitting EDs may cause increasing morbidity of existing diseases. The difference between sexes in terms of ED utilization during the pandemic process may refer to the deepening gender inequality in accessibility of health care.[11]

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Clinical Implications

Health authorities must ensure every ED has their multi-disciplinary team in response to VAW operating in a structured way. Screening for VAW in EDs is recommended by having the patients in a separate room, without any relatives or partners. While lack of training, prejudices towards women living with abuse, and presence of partner are barriers to screening VAW, training, professional support, and having institutional protocols or policies facilitates VAW screening for physicians and nurses.[35]

Çalıkoğlu and colleagues showed health care workers in the ED may carry supportive attitudes towards VAW.[36] For the women admitting to the EDs due to VAW, it is a very problematic situation to encounter a health care worker who is defending the idea "exposure to violence should be tolerated." It would reproduce gender inequality and impose the message that women deserve to be treated with violence. Health care workers are the key persons who may be the only connection to the victims of domestic violence.[24] Health professionals should be aware of negative health consequences of VAW while understanding the complexity of its nature: a culture of violating women's human rights. Routine training may target building awareness on VAW, as well as sexism itself.[36]

Since health care workers are a part of the society, they may not be apart from being victims or witnesses of VAW. Negative experiences of VAW can becloud intervening in VAW cases as avoidance behaviors, depending on psychological traumas. Training programs should pay regard to possible past exposure to VAW among the health care team. Program executors may offer psychological support which provides an opportunity to stay anonymous. Besides, in some cases, evaluating patients who were exposed to VAW might develop into a source of secondary trauma.[37]

Limitations and Strengths

This study represents a significant proportion of female inhabitants, even through its single-center design. In the city center of Eskişehir, there are two more public hospitals rather than this university hospital. In Turkey, uninsured citizens were issued with a health card which they could use in public hospitals. These health cards are not valid in university hospitals apart from exceptional cases like traffic accidents.[38] Thus, persons included in this study are not the most disadvantaged citizens. Besides, these results may not be generalized to the whole country.

This study focused on ED admissions, so the sample was exposed to physical and sexual violence. As a limitation, psychological/emotional/economical VAW were not able to be assessed. Besides, there must be women who were exposed to violence without the opportunity to admit to any medical institution.

Conclusion

This study highlights the concerning increase in VAW cases presenting in Eskişehir Osmangazi University ED in Turkey. Since it might be the only contact of the survivors with health care workers, all ED personnel should be well-organized to respond VAW cases appropriately.

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