Research Paper

Investigating Domestic Violence and Related Factors among Medical Sciences Students During the COVID-19 Pandemic: A Cross-sectional Study

Maryam Aghabarary[1*], Amirreza Zerafatkar Yeganeh[2], Mahsa Khedmatizare[2], Roohangiz Norouzinia[1], Shirin Riahi[3]

1. Social Determinants of Health Research Center, Alborz University of Medical Sciences, Karaj, Iran.
2. Student Research Committee, Alborz University of Medical Sciences, Karaj, Iran.
3. Non-Communicable Diseases Research Center, Alborz University of Medical Sciences, Karaj, Iran.

Use your device to scan and read the article online

Citation Aghabarary M, Zerafatkar Yeganeh A, Khedmatizare M, Norouzinia R, Riahi Sh. Investigating Domestic Violence and Related Factors among Medical Sciences Students During the COVID-19 Pandemic: A Cross-sectional Study. Current Psychosomatic Research. 2024; 2(2):133-144. http://dx.doi.org/10.32598/cpr.2.2.205.1

http://dx.doi.org/10.32598/cpr.2.2.205.1

ABSTRACT

Background and Objective: Considering the adverse consequences of domestic violence, it is essential to investigate its amount and associated factors across different countries, populations, and cultures. This study aimed to investigate domestic violence and related factors among medical sciences students during the COVID-19 pandemic in Iran.

Materials & Methods: In this cross-sectional descriptive study, 847 students at Alborz University of Medical Sciences, Iran, were selected using convenience sampling in 2021. A 60-item questionnaire consisting of three sections was designed and utilized for data collection. The collected data were analyzed with SPSS software, version 26 using descriptive and analytical statistics at a significance level of $P \leq 0.05$.

Results: The experience of domestic violence in the participants with a mean score of 30.86±10.31 was at a low level. Among the participants, 8% reported no experience of domestic violence, 89% experienced low levels, and approximately 3% experienced high levels of domestic violence. The supportive and physical factors were the most critical factors related to domestic violence. Experience of domestic violence varied significantly based on students' marital status, education level, and academic major ($P<0.05$). A significant direct correlation was found between domestic violence and economic, supportive, psychological and physical factors ($P<0.001$).

Conclusion: More than half of the students participating in this study encountered instances of domestic violence, particularly emotional violence, during the COVID-19 period. However, the overall level of domestic violence experienced by them was low. University officials play a crucial role in identifying, providing counseling and implementing comprehensive and multifaceted interventions to prevent and address domestic violence among students, especially during pandemics.

Keywords: COVID-19, Quarantines, Domestic violence, Students, Cross-sectional study

Article info:
Received: 18 Jul 2023
Accepted: 25 Nov 2023
Publish: 01 Jan 2024

*** Corresponding Author:**
Maryam Aghabarary, Assistant Professor.
Address: *Social Determinants of Health Research Center, Alborz University of Medical Sciences, Karaj, Iran.*
Phone: *+98 (912) 6104684*
E-mail: *aghabararym@gmail.com*

Introduction

Domestic violence refers to violent behaviors within the family, which can be physical, psychological, sexual, or financial [1]. This phenomenon encompasses various forms of mistreatment by one family member against another, which can lead to physical, psychological, and emotional harm and even death [2]. While most published statistics on domestic violence pertain to women, men can also be victims of domestic violence [3]. Although limited data exists on the prevalence of domestic violence against men, according to global statistics, overall, 35% of women experience domestic violence [4]. Addressing domestic violence is a global public health priority due to its prevalence and consequences [5, 6].

In line with this fact and following the COVID-19 pandemic, there were concerns about the potential effects of this crisis on individuals' mental health and its resulting consequences [7]. One of the most serious concerns is the evidence of increased rates and severity of domestic violence in the wake of the COVID-19 pandemic [8].

The results of a study in Atlanta, Georgia, showed that the number of domestic violence incidents increased during the COVID-19 pandemic in 2020 compared to 2018, indicating a rise in domestic violence rates during this period [9]. According to a study in Peru, the rate of domestic violence complaints increased by 48% compared to pre-pandemic levels [10]. An online survey of 15000 Australian women revealed that 65.4% of them experienced domestic violence for the first time during the COVID-19 pandemic, perpetrated by their partners [11]. In France, the rate of domestic violence increased by 36.19% during the COVID-19 pandemic [12]. According to a Chinese police report, approximately 90% of recent domestic violence cases have been linked to the COVID-19 pandemic [13]. A report from the UK also shows that due to the increase in physical, mental, and sexual abuse during the COVID-19 pandemic, the home environment has become a terrifying and dangerous place for children and adults experiencing domestic violence [14].

Furthermore, Hamzaoglu et al. found that 28% of participants in a study in Turkey reported an increase in violence, anger, and arguments within the family during the COVID-19 pandemic [15]. According to a study by Maji et al. there have been numerous cases of domestic violence in India that have significantly increased during the COVID-19 pandemic compared to previous years [16].

In Iran as well, the results of a study by Bagheri Lankarani et al. show that the rate of domestic violence in Shiraz, one of Iran's major cities, increased by 37.5% compared to pre-COVID-19 levels [4]. The results of a study by Seyyedzadeh and Jangi in Mashhad, another major city in Iran, also show an increase in the incidence of various types of domestic violence against women, especially emotional and verbal violence, in the first year after the COVID-19 outbreak compared to before the start of the COVID-19 pandemic [17].

The results of the literature review show that quarantine, social distancing, social isolation, school and business closures, and travel restrictions have made many people around the world victims of domestic violence [9-16, 18]. In the study by Jetelina et al. prolonged quarantine, concerns about disease transmission, stressors (such as job loss, insufficient income and social support limitations), access to a large amount of information about COVID-19 infection and its prognosis on social media, hopelessness, fatigue and job burnout, were reported as factors associated with domestic violence during the COVID-19 pandemic [19]. Wake and Kandula also reported depression, spending more time in close contact with other family members, job loss, financial insecurity, addiction (alcohol or drugs), control of wealth in the family, technology and quarantine as risk factors associated with domestic violence during the COVID-19 pandemic [20].

The United Nations Population Fund (UNFPA) also reported that for every three months of home quarantine following the COVID-19 pandemic, 15 million cases of violence against women are expected [21]. The results of a meta-analysis study by Piquero et al. which aimed to evaluate and estimate the effect of quarantine and other COVID-19-related restrictions on reported domestic violence incidents, show that out of 18 studies from 12 US states and 6 different countries around the world, domestic violence increases after the implementation of quarantine and stay-at-home orders [8]. Based on the results of studies conducted in Iran, quarantine and social isolation have also been one of the most important reasons for the increase in the rate of domestic violence, especially against women, during the COVID-19 pandemic [4, 17]. Accordingly, social isolation is one of the main methods used by abusers to isolate victims from support networks and strategies, and quarantine policies during the pandemic have provided the necessary grounds for increased domestic violence [22, 23, 24]. On the other hand, the COVID-19 pandemic led to the misconception that substance abuse could control the anxiety associated with the disease, which in turn increased domestic violence [25].

Domestic violence has various consequences, including physical (bodily harm), psychological (stress, depression, obsessive-compulsive disorder) and sexual (unwanted pregnancy and abortion). It can even lead to severe disability or death [26]. Considering the adverse consequences of domestic violence, it is essential to investigate its rate and associated factors across different countries, populations and cultures. This approach allows for culturally appropriate planning to prevent its spread. One of the at-risk populations for experiencing domestic violence, especially during pandemics, is university students [24].

Numerous and extensive studies have been conducted on domestic violence during the COVID-19 pandemic worldwide. International statistics indicate changes in the prevalence and severity of domestic violence during this period. Although these studies are not limited to youth and do not provide specific and separate statistics for young people, they offer valuable insights into the increase in domestic violence during lockdowns. These statistics generally depict a worrying trend of rising domestic violence during the pandemic, emphasizing the need for targeted interventions and support systems to address and mitigate this crisis. The official statistics on violence during the COVID-19 era include comprehensive survey reports encompassing various populations from different age groups. Many studies focus on women, children, and older people, with no official statistics published for young people, particularly students. Our study distinctively focuses on students as the target group. The implementation of lockdown measures, the closure of universities and the transition from in-person to online education systems during the COVID-19 pandemic caused both non-local and local students to move back into their parents' homes and spend extended periods at home with their parents and other family members. This situation created an environment where the increased stress factors associated with the COVID-19 crisis could potentially heighten the risk of experiencing domestic violence perpetrated by a family member [27].

Consequently, university students were also uniquely impacted by COVID-19 and its resulting consequences, including quarantine and limited access to support services, when facing instances of domestic violence [24]. Therefore, it is crucial to specifically examine domestic violence and associated factors among this particular group within society. Considering the diverse sociocultural backgrounds of university students and their representation of a broad population, this study aimed to investigate domestic violence and related factors among medical sciences students during the COVID-19 pandemic in Iran.

Materials and Methods

Study design, setting and samples

This cross-sectional descriptive study was conducted at Alborz University of Medical Sciences, Iran, between May and September 2021, coinciding with the fourth and fifth waves of COVID-19. During this period, the education system (schools and universities) in Iran was closed, and students were locked down. The study population comprised all medical sciences students (n=3500), including nursing, midwifery, medicine, pre-hospital emergency, health, laboratory sciences, anesthesia, operating room technology, pharmacy and dentistry. According to Morgan's table [28], a minimum sample of 346 individuals was determined. Students willing to participate in this study were included using convenience sampling.

Study instruments

A 60-item questionnaire consisting of three sections was designed and utilized for data collection. First, demographic characteristics contained five questions on demographic characteristics such as age, sex, marital status, education level, and academic major. Second, the experience of domestic violence consisted of 21 items, each representing a specific behavior of domestic violence. Participants were asked to rate their personal experiences for each item on a 5-point Likert scale (never, seldom, sometimes, often, always). The possible score range for experienced domestic violence was from 21 to 105, based on the number of items and the Likert scale. A score of 21 indicated no experience of domestic violence. Scores between 22 and 63 reflected a low level of domestic violence experience, while scores between 64 and 105 indicated a high level of domestic violence experience. The third part is domestic violence-related factors that included 34 items in five dimensions: economic (4 items), supportive (6 items), physical (7 items), psychological (15 items), and spiritual/moral (2 items). Participants were asked to rate the impact of each item on domestic violence using a 5-point Likert scale (very low, low, to some extent, high, very high). The mean score was calculated in each domain by dividing the sum of item scores by the number of items in that domain. The mean score was determined and reported on a scale of 1 to 5 to identify the most significant item in each domain. Considering the score range from 1 to 5 across all dimensions, a score of 3 was regarded as the midpoint. A higher score indicated a greater impact of the item on domestic violence.

The initial draft of the questionnaire was created based on a literature review. Feedback was then gathered and incorporated during a meeting with 5 faculty members from Alborz University of Medical Sciences, all experts in the field of violence (three psychiatric nurses and two psychologists). The face and content validities of the questionnaire were confirmed by comments from 10 faculty members, comprising psychologists, sociologists, and psychiatric nurses. The reliability of the questionnaire was assessed using the Cronbach α method, which was found to be 0.95 for the experience of domestic violence section, ranged from 0.78 to 0.94 for factors related to domestic violence and 0.95 for the entire questionnaire.

Data collection

Data collection began after receiving approval from the University's Ethics Committee. Due to the COVID-19 pandemic and the inability to conduct face-to-face interviews with students, an electronic version of the questionnaire was used. The electronic questionnaire and explanations about the study's title, objectives and methodology were prepared in April 2021. Subsequently, one student from each academic major was selected to assist in distributing the questionnaire link. The second and third authors distributed the questionnaire link to eligible studentswho were willing to participate and completed and submitted the questionnaire. The questionnaire link was active for five months, from May to September 2021. Participation was low during the first two months; however, in the subsequent three months, participation increased significantly—approximately three times the minimum required sample size—due to the widespread dissemination of the questionnaire link through social media platforms accessible to students. Finally, 847 students completed and submitted the questionnaire over the five-month sampling period.

Data analysis

Statistical analysis was conducted using SPSS software, version 26, employing descriptive and inferential statistics with a significance level of $P \leq 0.05$. Initially, the demographic characteristics of the participants and the research variables were assessed using Mean±SD. Following this, the Pearson correlation was used to examine the relationship between domestic violence and related factors. To analyze domestic violence and associated factors based on the participants' demographic characteristics, the independent samples t-test, ANOVA and Tukey post hoc test were utilized.

Results

A total of 847 students (565 female and 282 male) completed the questionnaires. The mean age of the participants was 22.16±3.37 years (range: 18-46 years). The demographic details of the participants are presented in Table 1.

Table 1 shows the experience of domestic violence in the participants with a mean score of 30.86±10.31 was at a low level. Among the participants, 8% reported no experience of domestic violence, 89% experienced low levels, and approximately 3% experienced high levels of domestic violence.

Experience of domestic violence was higher among single students compared to married ones, was higher in students with associate degrees compared to other degrees and was higher in operating room technology students compared to other academic majors. The Tukey post hoc test showed significant differences in experience of domestic violence based on educational level between master's and bachelor's degrees (P=0.049) and based on academic major between operating room technology and all other majors (P=0.001).

Table 2 presents the domestic violence-related factors and the two items with the highest mean score in each dimension. The supportive factors had the highest mean score (3.60±1.10), while the spiritual/moral factors had the lowest mean score (2.50±1.18).

Domestic violence-related factors by the level of experience of domestic violence are displayed in Table 3. In all three levels of experience of domestic violence, spiritual/moral factors had the highest mean score. For both groups (with no experience of domestic violence and with low levels of domestic violence), economic factors were the second most important.

Table 4 lists domestic violence-related factors based on the demographic characteristics of the participants. Significant differences were observed in the scores for economic and spiritual/moral factors based on the level of education. The Tukey post hoc test indicates that the economic factor score among master's students is lower than that of professional doctorate students (P=0.049), while the spiritual/moral factor score among bachelor's students is higher in master's students (P=0.048). There were also significant differences in the scores for economic, supportive, psychological and physical factors based on academic major. The economic factor score was higher in the Pharmacy field than in operating room

technology (P=0.036), and the supportive factor score in operating room technology was lower than in the Health, Nursing, Pharmacy and Medicine fields (P<0.05). Additionally, the psychological factor score in the Pre-hospital Emergency field was higher than in Operating Room Technology (P=0.048) and the physical factor score in the Pre-hospital Emergency field was higher than in both operating room technology and medicine fields (P<0.05). Significant differences were also observed in the economic and supportive factors scores based on age groups. The economic factor for the 18-20 age group significantly differed from that of the 21-23 age group (P=0.045) and the supportive factor score for the 18-20 age group was higher than that of the 21-23 and 24-26 age groups (P<0.05).

According to the results of Pearson correlation analysis, a significant direct correlation was found between domestic violence and related factors, including economic (r=0.202, P<0.001), supportive (r=0.176, P<0.001), psychological (r=0.194, P<0.001), and physical factors (r=0.140, P<0.001). No significant correlation was found between domestic violence and spiritual/moral factors (r=0.042, P=0.225).

Discussion

In this study, domestic violence and related factors were investigated among students at Alborz University of Medical Sciences in Iran during the COVID-19 pandemic. The results indicated that although the overall level of violence experienced by the participants was low, more than half of them encountered instances of domestic violence, especially emotional violence, during this period. The most common forms of violence reported were "arguing and shouting," "sulking and avoiding talking," and "disregarding opinions and talents." Since there was no pre-pandemic data on the level of domestic violence experienced by these students, it was impossible to compare it with the present findings to determine the extent of change (increase or decrease) in violence during this period. Additionally, due to cultural differences in the manner and extent of violence reporting, providing precise statistics on domestic violence is challenging [6, 29].

On the other hand, research on domestic violence among students during the COVID-19 pandemic has been limited. However, a study by Daigle et al. (2021) [24], involving 13373 students from 22 different colleges in the United States indicates a potential link between COVID-19 and increased vulnerability to violence among students. This study utilized data from the National College Health Assessment (NCHA) survey by the American College Health Association in the fall of 2020 to explore the relationship between COVID-19 and domestic violence among college students. The results revealed that a confirmed COVID-19 diagnosis in a student increased their likelihood of experiencing various forms of violence (sexual violence, stalking, intimate partner violence, polyvictimization). Students who had contracted COVID-19 were 29% more likely to experience violence than other students. Similarly, the likelihood of experiencing intimate partner violence was 24% higher, and the chance of polyvictimization was 25% higher for students with COVID-19. Additionally, students showing COVID-19 symptoms were significantly more likely to become victims of various forms of violence: They had a 74% higher likelihood of experiencing violence, a 65% higher likelihood of sexual violence, a 115% higher likelihood of being stalked, and a 41% higher likelihood of experiencing intimate partner violence. The possibility of polyvictimization was 35% higher compared to those without symptoms or with negative test results [24].

Although research on domestic violence among students during the COVID-19 pandemic has been limited, numerous studies conducted on domestic violence during the pandemic in general populations and especially in women around the world have shown an increase in domestic violence during the COVID-19 pandemic [8, 23].

For instance, a study by Bagheri Lankarani et al. (2022) involving 563 individuals (474 women and 179 men) in Shiraz, one of Iran's major cities, found a 37.5% increase in domestic violence compared to pre-pandemic levels. Emotional, verbal, and financial violence were reported as the most common types of violence [4].

A cross-sectional study by Gharacheh et al. (2023) conducted between 2020 and 2021 (coinciding with the COVID-19 pandemic) on a large sample of 5317 married women attending urban health centers in five major Iranian cities (Tehran, Mashhad, Tabriz, Shiraz and Ahvaz) indicates that 74.7% of women experienced at least one type of domestic violence during this period. Psychological violence was reported by 66.7%, physical violence by 44.8%, sexual violence by 28.8% and injury by 24.5%. All women who experienced physical violence also experienced psychological violence [30].

A study by Gebrewahd et al. (2020) on 682 women of reproductive age in northern Ethiopia also reports that emotional violence is the most common type of violence, followed by physical and sexual violence, during the COVID-19 pandemic [31].

The study by Ribeiro et al. (2022) in Portugal also indicates a significant increase in domestic violence, especially against children and adolescents, during the COVID-19 pandemic compared to before. This study analyzes data from a service management platform the Portuguese Victim Support Association provided, which reviewed 12576 requests from 2019 to 2020. Data analysis shows a 13.3% increase in help requests in 2020 compared to 2019 (pre-pandemic), with a 100.7% increase during lockdown periods. The prevalence of physical and psychological violence also increases across all victim groups (intimate partner violence, children, adolescents, and older people). This finding highlights the need for new support strategies to help victims, bystanders and professionals during the pandemic [32].

Additionally, Kourti et al. (2023) in a systematic review, examined 32 studies from four geographical regions of the world (North America, Europe, Asia-Pacific and Africa) to identify international trends in domestic violence and assess its negative effects on individuals and families during the COVID-19 pandemic. The results indicate that COVID-19 increases in domestic violence cases, especially during the first week of lockdown, in various countries [33].

In this study, economic, supportive, psychological, physical and spiritual/moral factors related to domestic violence were examined. Supportive and physical factors, with the highest mean score, are the most important factors related to domestic violence. In the supportive factors dimension, the two items with the highest mean importance were “lack of socioeconomic support for damaged jobs and businesses from authorities” and “lack of access to psychological support for families, especially those affected by COVID-19.” The two items with the highest mean importance in the physical factors dimension were “restrictions on holding sports, cultural, social, and religious programs” and “disruption of normal life due to the need to follow health protocols and imposed restrictions.”

The literature review indicates that quarantine and its consequences, such as social distancing and isolation, school and business closures, and travel restrictions imposed by governments to prevent the spread of COVID-19 infection, are primary contributors to the rise in domestic violence during this pandemic [9-16, 18]. Studies show an increase in domestic violence following stay-at-home orders, with rates rising by 10%-27% in the U.S., 40%-50% in Brazil, 30% in France, 18% in Spain, and tripling in China [21]. Similarly, increases are observed in Italy, Canada, Germany and the United Kingdom [33]. In Iran, quarantine and social isolation significantly also contributed to the rise of domestic violence during this pandemic [4, 17, 30]. Economic pressures from the pandemic, including unemployment and debt, further exacerbated domestic violence [34].

Haque et al. (2020) reported that domestic violence is more prevalent in poorer families and is linked to socioeconomic status [35]. The study by Evans et al. (2021) showed that increased economic pressure and reduced healthcare capacity could be potential reasons for the rise in domestic violence during the COVID-19 pandemic [9]. In other words, employment and income levels are crucial factors influencing various types of violence [26, 36]. Family members’ inability to fulfill economic obligations puts them under pressure, creating a breeding ground for various forms of violence [37, 38]. Limited access to support and legal systems also plays a critical role, as continuous contact between perpetrators and victims during home confinement increased violence [22, 24, 32, 33]. The findings of Kourti et al. (2023) indicate that although expert estimates show an increase in violence and abuse cases, particularly among children and adolescents, reports to police and social services declined during the COVID-19 pandemic. The closure of schools and universities isolated students at home and reduced their access to social and support networks. This condition could explain the decrease in reported cases of domestic violence to police and social services during the COVID-19 pandemic in some countries [33].

Quarantine, university closures and the shift to virtual learning during COVID-19 forced students to return home, leading to extended periods with family and increased stress, heightening the risk of domestic violence [27]. Prolonged confinement, anxiety about COVID-19, and conflicts over health protocols further escalated tensions, potentially leading to aggression and violence. Reduced physical activity also negatively impacted mental health, increasing anxiety and depression, which could lower tolerance and trigger domestic violence [4]. Students, already stressed by academic demands, were uniquely vulnerable to the pandemic’s effects, including increased risk of domestic violence due to isolation and limited access to support services. Financial strain from the pandemic compounded this risk, particularly for students managing debt. Based on the findings of Daigle et al. conducted among students, quarantine, mandatory virtual learning, and isolation introduced new stressors and uncertainties regarding students’ finances and well-being, increasing their vulnerability to domestic violence. The study indicates that access to support and counseling services, which could help students navigate

Table 1. Experience of domestic violence in medical sciences students at Alborz University of Medical Sciences in 2021 (n=847)

Variables		No.	Mean±SD	P
Gender	Female	565	30.38±9.83	0.054
	Male	282	32.11±11.51	
Marital status	Single	778	31.25±10.71	0.009*
	Married	69	27.76±6.01	
Education level	Associate degree	23	32.22±8.99	0.049**
	Bachelor degree	524	31.20±10.52	
	Master of science	13	25.38±4.33	
	Professional doctorate	287	30.67±10.55	
Academic major	Medicine	170	30.75±8.36	0.001**
	Nursing & midwifery	198	29.29±7.51	
	Laboratory sciences	63	27.53±8.91	
	Operating room technology	73	39.60±15.82	
	Anesthesia	38	30.15±8.44	
	Pre-hospital Emergencies	49	32.70±11.09	
	Pharmacy	75	29.82±10.66	
	Dentistry	43	31.83±16.42	
	Health	138	30.39±8.63	
Age (y)	18-20	270	29.97±9.14	0.057
	21-23	404	31.09±10.38	
	24-26	128	33.23±12.90	
	27-46	45	29.22±9.42	

Experience of Domestic Violence		Score Range	No. (%)	Mean±SD	Range (Min-max)
Never	Mean±SD: 30.86±10.31	21	70(8.3)	21±0.0	21-77
Low		22-63	755(89.1)	30.63±8.00	
High		64-105	22(2.6)	70.32±4.09	

*The independent samples t-test, **One-way ANOVA, P≤0.05.

the COVID-19 pandemic and its aftermath, was more challenging for students who experienced domestic violence compared to non-victimized students [24].

This research also examined domestic violence based on the demographic characteristics of students. The results show significant differences in the experienced violence based on marital status, education level and academic major. Domestic violence is higher among single students compared to married students. This finding aligns with the study by Salimi et al. (2021) which indicated that home quarantine during COVID-19 and increased internet use could cause stress from receiving bad news, subsequently increasing domestic violence incidents, es-

Table 2. Domestic violence-related factors and 2 items with the highest mean score in each of the dimensions in medical sciences students at Alborz University of Medical Sciences in 2021

Domestic Violence-related Factors	Two Items With the Highest Mean Score	Mean	Mean±SD Total	Range (Min-max)*
Economic	Increased financial costs due to purchasing hygiene items to observe health protocols	3.10	2.95±1.04	1-5
	Reduced purchasing ability (necessities) of people and inadequate nutrition	3.06		
Supportive	Lack of socioeconomic support for damaged jobs and businesses from authorities.	3.78	3.60±1.10	
	Lack of access to psychological support for families, especially those affected by COVID-19	3.66		
Psychological	Psychological pressures from conflicting news about the process of controlling and treating COVID-19	3.75	3.39±0.88	
	Psychological pressures from statistics on COVID-19 infections and deaths in Iran and the world	3.72		
	Feelings of depression due to COVID-19-related quarantine and imposed restrictions	3.72		
Physical	Restrictions on holding sports, cultural, social, and religious programs.	3.67	3.44±0.85	
	Disruption of normal life due to the need to follow health protocols and imposed restrictions	3.64		
Spiritual/moral	Lack of adherence to religious and spiritual principles.	2.51	2.50±1.18	
	Lack of adherence to ethical principles and values.	2.49		
	Total factors	3.33±0.80		

Current Psychosomatic Research

pecially among single individuals [37]. This difference might be related to greater free time and higher internet usage among single individuals than married ones.

According to the results, students with an associate degree experience higher levels of domestic violence compared to those with other degrees. It is possible that, throughout their academic learning, individuals gain more knowledge and awareness about violence. Therefore, it appears that those with higher education levels are more aware of the meaning and behavioral manifestations of violence. Moreover, greater knowledge and higher education levels help individuals develop more constructive attitudes toward violence and use healthier behaviors to express their feelings [4]. On the other hand, higher education levels are expected to empower individuals and increase their awareness of their rights, thereby reducing their exposure to various forms of violence [37].

The study also found that students in operating room technology experienced more domestic violence compared to other academic majors. Since this research was the only study conducted on medical science students, no similar studies were found for comparison. However, this finding could be due to familial, cultural, economic, social, and psychological factors affecting student groups. Home quarantine and spending extended time together, concerns about disease transmission, access to a large amount of information about COVID-19 and its projections on social media, frustration, fatigue, depression, job loss, financial insecurities, substance abuse, and addiction (drugs/alcohol) are some of the determinants of domestic violence in various communities [19, 20], including among university students during the COVID-19 pandemic.

In the present study, there was no significant difference in the domestic violence experienced based on age and gender. However, previous research has shown that women experience domestic violence more than men. Men are more likely than women to believe that violence can be a means to solve family problems. This belief, combined with a lack of anger management and problem-solving skills, can facilitate the use of violence by men who think they have the right to use violence to solve their family issues [4]. Women and children also experience fear in their lives due to the abuse exerted by men to maintain and control their lives. Although women also show violence towards men, the rate is one-eighth of men's violence against women [39]. Domestic violence is prevalent in all communities, demographic groups, educational backgrounds and professions. This phenomenon exists in modern and developed societies and may be influenced by cultural, psychological, biological, social and economic factors within a community [26, 32].

Table 3. Domestic violence-related factors by the level of experienced domestic violence in medical sciences students at Alborz University of Medical Sciences, in 2021

Experience of Domestic Violence	Domestic Violence-related Factors	Mean±SD	95% CI
Never	Economic	3.40±1.14	3.11-3.66
	Supportive	2.78±1.21	2.49-3.08
	Psychological	3.07±1.10	2.81-3.34
	Physical	2.82±1.04	2.55-3.07
	Spiritual/moral	3.88±1.25	3.58-4.20
	Total	3.19±0.98	2.95-3.43
Low	Economic	3.04±1.02	2.96-3.11
	Supportive	2.38±1.07	2.28-2.43
	Psychological	2.57±0.84	2.51-2.64
	Physical	2.54±0.82	2.48-2.60
	Spiritual/moral	3.46±1.15	3.38-3.55
	Total	2.79±0.76	2.74 to 2.85
High	Economic	2.05±0.63	1.77-2.33
	Supportive	1.60±0.98	1.17-2.03
	Psychological	2.04±0.51	1.82-2.27
	Physical	2.14±0.72	1.82-2.47
	Spiritual/moral	3.84±1.43	3.20-4.47
	Total	2.34±0.54	2.09-2.58

Current Psychosomatic Research

Conclusion

More than half of the students participating in this study encountered instances of domestic violence, particularly emotional violence, during the COVID-19 period. However, the overall level of domestic violence experienced by them was low. The present study showed that supportive and physical factors were the most critical factors related to domestic violence. It was also found that the experience of domestic violence varied based on demographic characteristics, including marital status, education level, and academic major. A significant direct correlation was found between domestic violence and related factors, including economic, supportive, psychological, and physical factors. University officials play a crucial role in identifying, providing counseling, and implementing comprehensive and multifaceted interventions to prevent and address domestic violence among students, especially during pandemics. These interventions should consider various factors related to domestic violence, including cultural, social, economic, and psychological aspects.

Study limitations

Although this study was conducted with a relatively large sample size, the results may not be readily generalizable to other regions of Iran or other countries. Indeed, domestic violence is a culturally dependent concept, and its examination should be grounded in the cultural and social contexts of each society. Additionally, the data collection tool in this research was a questionnaire distributed electronically to the study population. Consequently, those who did not have access to the internet or a mobile phone could not participate in the study. Another potential limitation of this study could be self-censorship and dishonesty in completing the questionnaire. Therefore, for a more comprehensive collection and analysis of data related to domestic violence and associated factors among students, especially during pandemics, it is recommended to design and conduct longitudinal and qualitative studies.

Table 4. Domestic violence-related factors by demographic characteristics of medical sciences students at Alborz University of Medical Sciences, in 2021

Variables		Mean±SD				
		Economic	Supportive	Psychological	Physical	Spiritual/Moral
Gender	Female	3.07±1.06	2.36±1.08	2.52±0.87	2.49±0.85	3.54±1.19
	Male	2.89±0.97	2.40±1.09	2.77±0.84	2.67±0.82	3.44±1.16
	P*	0.264	0.581	<0.001*	0.002*	0.243
Marital status	Single	3.06±1.04	2.39±1.09	2.59±0.87	2.56±0.84	3.51±1.17
	Married	2.84±0.92	2.15±0.94	2.69±0.87	2.48±0.86	3.51±1.27
	P*	0.100	0.059	0.346	0.489	0.953
Education level	Associate degree	2.82±0.98	2.16±0.80	2.65±0.78	2.61±0.57	3.02±1.19
	Bachelor degree	3.00±1.01	2.35±1.08	2.62±0.87	2.58±0.86	3.54±1.17
	Master of science	2.44±1.15	1.93±1.16	2.14±1.09	2.21±1.02	2.76±1.39
	Professional doctorate	3.14±1.06	2.46±1.09	2.60±0.86	2.51±0.83	3.52±1.16
	P*	0.046**	0.186	0.279	0.281	0.024**
Academic major	Medicine	3.03±1.04	2.37±1.05	2.53±0.90	2.48±0.85	3.46±1.16
	Nursing & midwifery	2.92±1.06	2.44±1.12	2.66±0.94	2.63±0.89	3.45±1.20
	Laboratory sciences	3.15±1.04	2.19±1.04	2.51±0.78	2.44±0.81	3.46±1.20
	Operating room technology	2.75±0.92	1.88±0.89	2.41±0.74	2.36±0.77	3.75±1.06
	Anesthesia	3.12±0.97	2.37±1.20	2.45±0.81	2.61±0.90	3.35±1.28
	Pre-hospital emergencies	3.03±0.82	2.51±0.94	2.96±0.80	2.95±0.68	3.41±1.21
	Pharmacy	3.37±0.97	2.63±1.13	2.71±0.79	2.56±0.80	3.51±1.22
	Dentistry	3.18±1.22	2.51±1.13	2.68±0.82	2.58±0.81	3.68±1.11
	Health	3.11±1.06	2.44±1.10	2.57±0.90	2.52±0.88	3.51±1.21
	P*	0.047**	0.003**	0.046**	0.037**	0.768
Age (y)	18-20	3.18±1.02	2.54±1.11	2.70±0.90	2.61±0.87	3.46±1.16
	21-23	3.00±1.04	2.33±1.08	2.53±0.87	2.52±0.84	3.51±1.19
	24-26	2.98±0.99	2.27±1.04	2.67±0.77	2.57±0.81	3.56±0.81
	27-46	2.73±1.02	2.06±0.91	2.53±0.93	2.40±0.87	3.55±1.20
	P*	0.026**	0.016**	0.099	0.523	0.338

*The independent samples t-test, **One-way ANOVA, P≤0.05.

Ethical Considerations

Compliance with ethical guidelines

This research was taken from a research project (No. 4254) that was approved by the Ethics Committee of Alborz University of Medical Sciences (Code: IR.ABZUMS.REC.1400.036) and was conducted following the revised Declaration of Helsinki. Student participation was voluntary. Since explanations regarding informed consent for participation in the study were provided at the beginning of the electronic questionnaire, completion and submission of the questionnaire link was considered as consent to participate in the study. Questionnaires were completed anonymously and participants' information was kept strictly confidential.

Funding

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

Authors' contributions

Conceptualization and study design: Maryam Aghabarary; Data collection: Amirreza Zerafatkar Yeganeh and Mahsa Khedmatizare; Statistical analysis: Shirin Riahi; Writing–original draft: Amirreza Zerafatkar Yeganeh, Mahsa Khedmatizare and Roohangiz Norouzinia; Critical review and final approval: All authors.

Conflict of interest

The authors declared no conflict of interest.

Acknowledgments

The authors thank all the participants in this study. The authors also thank the Social Determinants of Health Research Center, Alborz University of Medical Sciences, for approving this research.

References

[1] Asadi N, Salmani F, Salmani M. The relationship between aggressive behaviors of preschool children and the violence against Iranian women in the COVID-19 pandemic. BMC Women Health. 2022; 22(1):406. [DOI:10.1186/s12905-022-01954-0]

[2] Vameghi R, Akbari SA, Majd HA, Sajedi F, Sajjadi H. The comparison of socioeconomic status, perceived social support and mental status in women of reproductive age experiencing and not experiencing domestic violence in Iran. J Inj Violence Res. 2018; 10(1):35-44. [DOI:10.5249/jivr.v10i1.983]

[3] Kadiani A, Chaudhury S, Saldanha D, Pande N, Menon P. Psychosocial profile of male perpetrators of domestic violence: A population-based study. Ind Psychiatry J. 2020; 29(1):134-48. [DOI:10.4103/ipj.ipj_78_18]

[4] Bagheri Lankarani K, Hemyari C, Honarvar B, Khaksar E, Shaygani F, Rahmanian Haghighi MR, et al. Domestic violence and associated factors during COVID-19 epidemic: An online population-based study in Iran. BMC Public Health. 2022; 22(1):774. [DOI:10.1186/s12889-022-12536-y]

[5] World Health Organization (WHO). Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: World Health Organization; 2013. [Link]

[6] Gulati G, Kelly BD. Domestic violence against women and the COVID-19 pandemic: What is the role of psychiatry?. Int J Law Psychiatry. 2020; 71:101594. [DOI:10.1016/j.ijlp.2020.101594]

[7] Torales J, O'Higgins M, Castaldelli-Maia JM, Ventriglio A. The outbreak of COVID-19 coronavirus and its impact on global mental health. Int J Soc Psychiatr. 2020; 66(4):317-20. [DOI: 10.1177/0020764020915212] [PMID]

[8] Piquero AR, Jennings WG, Jemison E, Kaukinen C, Knaul FM. Domestic violence during the COVID-19 pandemic-Evidence from a systematic review and meta-analysis. J Crim Justice. 2021; 74:101806. [DOI:10.1016/j.jcrimjus.2021.101806]

[9] Evans DP, Hawk SR, Ripkey CE. Domestic violence in Atlanta, Georgia before and during COVID-19. Violence Gend. 2021; 8(3):140-7. [DOI:10.1089/vio.2020.0061]

[10] Agüero JM. COVID-19 and the rise of intimate partner violence. World Dev. 2021; 137:105217. [DOI:10.1016/j.worlddev.2020.105217]

[11] Boxall H, Morgan A, Brown R. The prevalence of domestic violence among women during the COVID-19 pandemic. Australas Policing. 2020; 12(3):38-46. [Link]

[12] Godin M. French Government to house domestic abuse victims in hotels as cases rise during coronavirus lockdown [Internet]. 2020 [Updated 2020 March 31]. Available from: [Link]

[13] Wanqing Z. Domestic violence cases surge during COVID-19 epidemic [Internet]. 2020 [Updated 2020 March 2]. Available from: [Link]

[14] Bradbury-Jones C, Isham L. The pandemic paradox: The consequences of COVID-19 on domestic violence. J Clin Nurs. 2020; 29(13-14):2047-9. [DOI:10.1111/jocn.15296]

[15] Hamzaoglu N, Rozant-Reisyan R, Kalfoglou S. The evaluation of depression levels and domestic violence during the COVID-19 Pandemic. Soc Work Public Health. 2023; 38(1):47-57. [DOI:10.1080/19371918.2022.2095071]

[16] Maji S, Bansod S, Singh T. Domestic violence during COVID-19 pandemic: The case for Indian women. J Commun Appl Soc Psychol. 2022; 32(3):374-81. [DOI:10.1002/casp.2501]

[17] Seyyedzadeh S M, Jangi K. The effect of the coronavirus on the extent of domestic violence: A case study of women in Toos Boulevard District, Mashhad City, Iran. J Sch Public Health Inst Public Health Res. 2022; 20(2):199-210. [Link]

[18] Newnham EA, Chen Y, Gibbs L, Dzidic PL, Guragain B, Balsari S, et al. The mental health implications of domestic violence during COVID-19. Int J Public Health. 2022; 66:1604240. [DOI:10.3389/ijph.2021.1604240]

[19] Jetelina KK, Knell G, Molsberry RJ. Changes in intimate partner violence during the early stages of the COVID-19 pandemic in the USA. Inj Prevent. 2021; 27(1):93-7. [DOI:10.1136/injuryprev-2020-043831]

[20] Wake AD, Kandula UR. The global prevalence and its associated factors toward domestic violence against women and children during COVID-19 pandemic-"The shadow pandemic: A review of cross-sectional studies. Womens Health. 2022; 18:17455057221095536. [DOI:10.1177/17455057221095536]

[21] Sharifi F, Larki M, Latifnejad Roudsari R. COVID-19 outbreak as threat of violence against women. J Midwifery Reprod Health. 2020; 8(3):2376-9. [DOI:10.22038/jmrh.2020.16036]

[22] Lyons M, Brewer G. Experiences of intimate partner violence during lockdown and the COVID-19 pandemic. J Fam Violence. 2022; 37(6):969-77. [DOI:10.1007/s10896-021-00260-x]

[23] Hsu LC, Henke A. COVID-19, staying at home and domestic violence. Rev Econ Household. 2021; 19(1):145-55. [DOI:10.1007/s11150-020-09526-7]

[24] Daigle LE, Hancock KP, Chafin TC. Covid-19 and its link to victimization among college students. Am J Crim Justice. 2021; 46(5):683-703. [DOI:10.1007/s12103-021-09638-5]

[25] Campbell AM. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. Forensic Sci Int Rep. 2020; 2:100089. [DOI:10.1016/j.fsir.2020.100089]

[26] Fallah S, Rostamzade S, Ghelich M. [Effective factors on confronting violence on married women (Persian)]. J Gorgan Univ Med Sci. 2015; 17(4):91-7. [Link]

[27] Kofman YB, Garfin DR. Home is not always a haven: The domestic violence crisis amid the COVID-19 pandemic. Psychol Trauma. 2020; 12(S1):S199-201. [DOI:10.1037/tra0000866]

[28] Krejcie RV, Morgan DW. Determining sample size for research activities. Educ Psychol Meas. 1970; 30(3):607-10. [DO:10.1177/001316447003000308]

[29] Nejatizade AA, Roozbeh N, Yabandeh AP, Dabiri F, Kamjoo A, Shahi A. Prevalence of domestic violence on pregnant women and maternal and neonatal outcomes in Bandar Abbas, Iran. Electron Physician. 2017; 9(8):5166-71. [DOI:10.19082/5166] [PMID]

[30] Gharacheh M, Sadeghi T, Mirghafourvand M, Montazeri S, Jahanfar S, Ranjbar F. Domestic violence against Iranian women during the Covid-19 lockdown: A cross-sectional study. Health Sci Rep. 2023; 6(10):e1627. [DOI:10.1002/hsr2.1627]

[31] Gebrewahd GT, Gebremeskel GG, Tadesse DB. Intimate partner violence against reproductive age women during COVID-19 pandemic in northern Ethiopia 2020: A community-based cross-sectional study. Reprod Health. 2020; 17(1):152. [DOI:10.1186/s12978-020-01002-w]

[32] Ribeiro R, Almeida I, Saavedra R, Caridade S, Oliveira A, Santos M, et al. The different contexts of domestic violence before and during the COVID-19 pandemic: A portuguese overview. Vict Offender. 2022; 17(8):1224-40. [DOI:10.1080/15564886.2022.2052214]

[33] Kourti A, Stavridou A, Panagouli E, Psaltopoulou T, Spiliopoulou C, Tsolia M, et al. Domestic violence during the COVID-19 pandemic: A systematic review. Trauma Violence Abuse. 2023; 24(2):719-45. [DOI:10.1177/15248380211038690]

[34] Fegert JM, Vitiello B, Plener PL, Clemens V. Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: A narrative review to highlight clinical and research needs in the acute phase and the long return to normality. Child Adolesc Psychiatry Ment Health. 2020; 14:20. [DOI:10.1186/s13034-020-00329-3]

[35] Haque MA, Choudhury N, Ahmed SMT, Farzana FD, Ali M, Rahman SS, et al. Factors associated with domestic violence in rural Bangladesh. J Interpers Viol. 2022; 37(3-4):1248-69. [DOI:10.1177/0886260520922353]

[36] Ghazvineh Z, Saroukhani B, Shekarbigi A. Spatial distribution of domestic violence in Kermanshah City. Geogr Environ Sustain. 2018; 8(3):79-98. [Link]

[37] Salimi H, Hajializade K, Ameri Siahoui M, Behdost P. Investigating the role of Corona stress mediators in relationship between internet addiction and marital and family conflict and violence. Couns Cult Psycother. 2021; 12(45):95-116. [DOI:10.22054/qccpc.2020.53954.2480]

[38] Sharma A, Borah SB. Covid-19 and domestic violence: An indirect path to social and economic crisis. J Fam Violence. 2022; 37(5): 759-765. [DOI:10.1007/s10896-020-00188-8]

[39] Zamani-Moghadam M, Hasanvandi S. [A qualitative study of domestic violence against housewives in khorramabad (Persian)]. J Woman Soc. 2019; 10(39):145-70. [Link]