



# Violence-Related Behaviors Among Iranian University Students: Prevalence, Risk Factors, and its Relationship with Religiosity and Family Support

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## Abstract

**Background and aims:** Violence is recognized as a significant public health problem throughout the world. The present study aimed to evaluate the prevalence of violence-related behaviors and its relationship with other risky behaviors, family support, and religiosity among students in Bushehr.

**Methods:** This cross-sectional study was conducted on a total of 977 students in Bushehr city, southern Iran, in 2016. Required data were collected using a self-administered questionnaire on violence-related behaviors and other risky behaviors. The validity of the questionnaire was measured by MPH students with a Cronbach's alpha of 0.90. Additionally, family support scale and religious belief questionnaire were applied. Data analysis was performed using chi-square, *t* test, and logistic regression model in SPSS version 16.0.

**Results:** The overall prevalence rates of weapon carrying and physical fighting were reported to be 9.1% and 7.1%, respectively. The findings of this study revealed that hookah use (OR: 2.93), physical fight (OR: 5.64), and having unsafe sex (OR: 2.42) were associated with weapon carrying ( $P < 0.001$ ). Moreover, male gender (OR: 3.36), illicit drug use (OR: 3.64), weapon carrying (OR: 5.24), and family support (OR: 0.97) were shown to be associated with physical fight ( $P < 0.001$ ).

**Conclusion:** The results of the present study suggested co-occurrence nature of risky behaviors. Given the high prevalence of violence-related behaviors, the implementation of preventive interventions for college students is of great importance.

**Keywords:** Violence related behaviors, Religiosity, Family support, Risk taking behaviors, Student

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## Introduction

Violence-related behaviors are major public health problems causing serious complications, disability, suffering, and death.<sup>1,2</sup> Violence is defined by the World Health Organization (WHO) as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, which either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation."<sup>3</sup> Violence such as physical fights and weapon carrying may result in social and personal consequences, including anxiety, depression, loneliness, anger, low academic education, low self-esteem, long-term physical disabilities, and suicide.<sup>4,5</sup>

In the United States, the direct and indirect costs of

violent behaviors such as weapon carrying, murder, and treating victims are estimated at \$ 1.7 billion per year.<sup>2</sup>

Studies across the world have shown a remarkable rate of violent behaviors among youth and university students.<sup>6-8</sup> A study conducted in 25 African, Asian, and American countries showed that 13.1% of students reported physical violence over the past 12 months, with the lowest prevalence in China and the highest one in Russia and Pakistan.<sup>6</sup> In another study in Nigeria, violence was the second most prevalent risky behavior after drug abuse in students.<sup>9</sup> The relatively high prevalence of violence among adolescents and young people is alarming and a major challenge for social systems in Iran.<sup>10</sup> Another study also showed a high prevalence of physical fights among Iranian adolescents aged 10 to 18 years.<sup>11</sup>

Factors such as the peers' effects, family and social differences, poverty, having multiple sexual partners, depression, male gender, smoking, illicit drug use, binge drinking, and gambling are shown to be associated with violent behaviors.<sup>6,12</sup> Besides, factors including religious orientation and religious behaviors were reported to be associated with the decreased likelihood of violent behaviors.<sup>13</sup> Since the youth problem behaviors are major concerns in most developing countries, the enhancement of current prevention and recovery programs and the implementation of new ones are important, based on a strong awareness of the relationship between factors that may potentially engage young people in problem activities and protective factors that counteract existing risks, especially for the most vulnerable communities. Given the importance of violence-related behaviors among students and lack of related studies in Iran, the present study was carried out to evaluate the prevalence of violence-related behaviors and its relationship with other risky behaviors, family support, and religiosity among students.

### Materials and Methods

This cross-sectional study was conducted on a total of 977 students based on the sample size formula in Bushehr city, southern Iran. Samples were selected using multistage sampling based on student code. First, all students of the target university were listed. Then, classes (clusters) were randomly selected from each college and all students of each selected class were recruited into the study. Data collection was performed using a self-administered questionnaire. Accordingly, violent behaviors were measured at two time intervals (over the past year and over the past month) Accordingly, the questions for these two time points were "How many days have you carried a weapon in over the past month?" and "How many times have you had physical fight over the past year?"

A pilot analysis was initially carried out on 50 students, verifying the specificity of the questionnaire with a Cronbach's alpha of 0.90. The questionnaire was prepared on the basis of the WHO core questionnaire and the Alcohol, smoking, and Substance Involvement Screening Test (ASSIST). A group of researchers in another report had previously checked the validation of the questionnaire. The validity of the questionnaire was also measured by MPH students.<sup>14</sup>

Required data were collected using a self-administered

questionnaire on violence-related behaviors and other risky behaviors. Additionally, family support scale and religious belief questionnaire were applied.

Data on demographic characteristics and risk-taking behaviors including smoking, alcohol use, illicit drug use, and risky sexual behaviors were obtained from the participants. Family support was assessed using Aneshensel and Sucoff's 13-item parental social support scale.<sup>15,16</sup> Moreover, religiosity was evaluated through Kendler's general religiosity scale.<sup>16,17</sup> Further information regarding the applied questionnaires was mentioned in another study.<sup>18</sup>

Data analysis was conducted using chi-square and independent *t* test. Additionally, multiple relationships between all study variables with weapon carrying and physical fight were analyzed using logistic regression model (backward method). The IBM SPSS version 16.0 was applied for data analysis. The significance level of the relationship was considered 0.05.

### Results

A total of 977 students entered this study, of whom 58% were female and 13.1% were married. The mean age of the participants was  $21.11 \pm 2.32$  years (ranging from 17 to 39 years). The mean scores of religious beliefs and family support were  $112.57 \pm 20.49$  and  $50.57 \pm 10.34$ , respectively. The prevalence of weapon carrying and physical fight are shown in Table 1.

The prevalence rates of weapon carrying and physical fight in the past year and past month were shown to be higher in males than in females. Moreover, the prevalence of physical fight was reported to be 7.1% in both male and female students. Demographic characteristics and factors associated with weapon carrying and physical fight are shown in Table 2. The results of this study show that male gender, smoking, hookah use, alcohol use, illicit drug use, having unsafe sex were significantly associated with weapon carrying and physical fight ( $P < 0.05$ ). Furthermore, working along with education was associated with weapon carrying ( $P = 0.002$ ). Weapon carrying was also shown to be reversely linked with physical fight ( $P < 0.001$ ). The mean scores of family support and religiosity were significantly lower in students with a history of weapon carrying and physical fight.

The results of logistic regression model are shown in Table 3. After adjusting the effect of confounding

**Table 1.** Prevalence of Violence-related Behaviors in the University Students by Gender

Variable		Female (n=573)	Male (n=404)	Total (n=977)
		No. (%)	No. (%)	No. (%)
Weapon carrying	No	530 (92.5)	356 (88.6)	888 (90.9)
	Yes	43 (7.5) 95% CI: [5.48-9.98]	46 (11.4) 95% CI: [8.46-14.89]	89 (9.1) 95% CI: [7.38-11.09]
Physical fight	No	555 (96.9)	353 (87.4)	908 (92.9)
	Yes	18 (3.1) 95% CI: [1.87-4.92]	51 (12.6) 95% CI: [9-16]	69 (7.1) 95% CI: [5-8]

**Table 2.** Demographic Characteristics and Correlated Variables by Violence-related Behaviours in a Sample of Iranian Students in 2016

Characteristics		Weapon Carrying		P Value	Physical Fight		P Value	N
		No	Yes		No	Yes		
		No. (%)	No. (%)		No. (%)	No. (%)		
Gender	Male	358 (88.6)	46 (11.4)	0.038	353 (87.4)	51 (12.6)	<0.001	404
	Female	530 (92.5)	43 (7.5)		555 (96.9)	18 (3.1)		573
Marital status	Single	768 (90.5)	81 (9.5)	0.228	788 (92.8)	61 (7.2)	0.700	849
	Married	120 (93.8)	8 (6.3)		120 (93.8)	8 (6.3)		128
Housing	Parental home	212 (91.0)	21 (9.0)	0.948	219 (94.0)	14 (6.0)	0.715	233
	Dormitory	605 (91.0)	60 (9.0)		615 (92.5)	50 (7.5)		665
	Single house	71 (89.9)	8 (10.1)		74 (93.7)	5 (6.3)		79
Residency status	Native	469 (91.1)	46 (8.9)	0.839	478 (92.8)	37 (7.2)	0.875	515
	Non-aboriginal	419 (90.7)	43 (9.3)		430 (93.1)	32 (6.9)		462
Working along with education	Yes	122 (84.1)	23 (15.9)	0.002	130 (89.7)	15 (10.3)	0.095	145
	No	766 (92.1)	66 (7.9)		778 (93.5)	54 (6.5)		832
Smoking (last year)	Yes	76 (77.6)	22 (22.4)	<0.001	82 (83.7)	16 (16.3)	<0.001	98
	No	812 (92.4)	67 (7.6)		826(94.0)	53(6.0)		879
Hookah use (last year)	Yes	124 (79.0)	33 (21.0)	<0.001	137 (87.3)	20 (12.7)	0.002	157
	No	764 (93.2)	56 (6.8)		771 (94.0)	49 (6.0)		820
Alcohol use (last year)	Yes	44 (75.9)	14 (24.1)	<0.001	45 (77.6)	13 (22.4)	<0.001	58
	No	844 (91.8)	75 (8.2)		863 (93.9)	56 (6.1)		919
Illicit drug use (last year)	Yes	21 (65.6)	11 (34.4)	<0.001	20 (62.5)	12 (37.5)	<0.001	32
	No	867 (91.7)	78 (8.3)		888 (94.0)	57 (6.0)		945
Physical fight	Yes	45 (65.2)	24 (34.8)	<0.001	-	-	-	69
	No	843 (92.8)	65 (7.2)		-	-		908
Weapon carrying	Yes	-	-	-	65 (73.0)	24 (27.0)	<0.001	89
	No	-	-		843 (94.9)	45 (5.1)		888
Having unsafe sex	Yes	40 (72.7)	15 (27.3)	<0.001	43 (78.2)	12 (21.8)	<0.001	55
	No	848 (92.0)	74 (8.0)		865 (93.8)	57 (6.2)		922
Age (mean ± SD)		21.06±2.24	21.65±2.96	0.072	21.10±2.24	21.31±3.12	0.574	21.12±2.32
Score of religious beliefs (mean ± SD)		113.18±20.44	106±20.12	0.004	113.28±20.04	103.37±24.01	0.001	112.58±20.50
Score of family support (mean ± SD)		50.91±47.13	47.13±11.57	0.004	50.95±45.56	45.56±11.46	<0.001	50.57±10.34

variables, eventually hookah use (OR: 2.93), physical fight (OR: 5.64), and having unsafe sex were positively associated with weapon carrying. Moreover, male gender (OR: 3.36), illicit drug use (OR: 3.64), weapon carrying (OR: 5.24), and family support (OR: 0.97) were associated with physical fight ( $P < 0.05$ ).

### Discussion

The overall prevalence rates of weapon carrying and physical fight were 9.1% and 7.1%, respectively. Results of many studies conducted in western and Asian countries showed that violence-related behaviors are more prevalent among young people.<sup>6,7</sup> For example, a study in Canada reported a prevalence of 35.6% for physical fight.<sup>7</sup> Moreover, a study conducted in the US reported a prevalence of 32% for physical fight.<sup>19</sup> Results of previous studies showed that the prevalence of weapon carrying in the past year was 7.8% among adolescents in Thailand.<sup>20</sup> According to literature, the prevalence rates of weapon

carrying and physical fight were reported to be 13.1 and 14.8%, respectively, among Iranian students.<sup>21</sup> Besides, the prevalence of physical fight among Iranian adolescents was reported to be 39.7%.<sup>22</sup> These differences may be due to differences in cultural norms, geographic areas, lifestyle, lack of education and awareness in Iranian families, and ineffective training methods in various societies.

The results of this study suggest that other risky behaviors are significantly associated with violence-related behaviors, as these behaviors significantly increase odds of violence-related behaviors. Results show that weapon carrying was significantly linked with physical fight. The relationship between weapon carrying and physical fight was shown to be reverse, indicating a strong association between these two variables. Saiphoklang et al reported that a history of physical fight increased the likelihood of weapon carrying.<sup>20</sup> Another study indicated that history of weapon carrying increases the risk of physical fight among adolescents.<sup>6</sup>

**Table 3.** Logistic Regression Analysis of the Association Between the Prevalence of Violence-Related Behaviours and its Correlated Factors in a Sample of Iranian Students in 2016

Variables		Weapon Carrying			Physical Fight		
		OR	95% CI	P Value	OR	95% CI	P Value
Gender	Female	--	--	--	--	--	<0.001
	Male	--	--	--	3.36	1.87-6.04	
Hookah use (last year)	No	--	--	<0.001	--	--	--
	Yes	2.93	1.77-4.86		--	--	
Physical fight (last year)	No	--	--	<0.001	--	--	--
	Yes	5.64	3.14-10.10		--	--	
Having unsafe sex	No	--	--	0.015	--	--	--
	Yes	2.42	1.19-4.94		--	--	
Illicit drug use (last year)	No	--	--	--	--	--	0.003
	Yes	--	--		3.61	1.53-8.56	
Weapon carrying	No	--	--	--	--	--	<0.001
	Yes	--	--		5.24	2.87-9.56	
Score of family support	No	--	--	--	--	--	0.023
	Yes	--	--		0.97	0.95-99	

Unsafe sex as a health threatening factor is known as a risky behavior.<sup>23</sup> Results of previous studies showed a positive relationship between having unsafe sex and violence-related behaviors.<sup>24,25</sup> The findings of the present study indicate a significant relationship between weapon carrying and having unsafe sex. Moreover, hookah use is another risky behavior associated with increased odds of weapon carrying. Additionally, a study conducted in Thailand revealed that smoking was significantly associated with weapon carrying.<sup>20</sup>

In addition, the results of logistic regression analysis revealed that male gender was associated with increased odds of physical fight. A number of previous studies stated that male gender is a factor associated with physical fight.<sup>26,27</sup> Accordingly, we found that violence-related behaviors such as weapon carrying and physical fighting were more prevalent in males than in females, which was consistent with previous studies.<sup>24,28</sup> Females are less likely to be engaged in violent behaviors due to their emotional, biological, intellectual, and behavioral differences compared with males. In contrast, the likelihood of having a risky behavior such as physical fight is significantly greater in males because they are more risk-taking, spend more time outdoors, and have more autonomy.

A number of previous studies have shown the significant relationship between illicit drug use and violence-related behaviors. For instance, Yang et al proposed that illicit drug use increases the risk of physical fight.<sup>29</sup> Another study also revealed a positive significant relationship between illicit drug use and physical fight.<sup>30</sup> The study results confirmed that students who used illicit drugs were more likely to have physical fight.

Alcohol and illicit drug use may affect the functioning of the brain and motivate individuals to engage in aggressive and violent behaviors.<sup>31</sup> Previous studies showed that

domestic violence and non-partner violence are associated with illicit drug use. For example, illicit substance use predicts intimate partner violence.<sup>32,33</sup> Cunningham et al showed that the use of alcohol, marijuana, and cocaine significantly predicts non-partner violent assault.<sup>34</sup>

The results of the present study show that family support was a protective factor in the development of violence-related behaviors, which was in compliance with previous studies indicating that lack of family support increased the risk of physical fight.<sup>7,35</sup> These findings suggest that strengthening emotional relationships between parents and children, intimacy and mutual respect in the family, observance of values and norms by parents and passing them on to children can be a preventive factor in the development of violence-related behaviors. It seems that parents play a key role in character development of the child, and behaviors such as family exclusion, repeated accusations of parents, and child abuse may considerably affect mental health and increase the likelihood of engagement in risky behaviors such as physical fighting.

The results of this study show the co-occurrence of weapon carrying and physical fight with other risky behaviors. Accordingly, hookah use, physical fight, having unsafe sex, male gender, illicit drug use, weapon carrying, and family support were shown to be associated with violence-related behaviors. The co-occurrence of risky behaviors has been shown in many previous studies.<sup>29,36,37</sup> Accordingly, a study conducted on Iranian adolescents revealed that violence-related behaviors were associated with smoking, alcohol use, and illicit drug use.<sup>22</sup> Similarly, we found a strong association between weapon carrying and physical fight. Therefore, effective preventive interventions should be implemented to reduce risky behaviors, especially violence-related behaviors. Therefore, prevention programs should include all types of

risky behaviors, and a comprehensive prevention program should be developed and implemented in universities to reduce the prevalence of risky behaviors, especially violence-related behaviors.

Its comparatively large sample size and high response rate, both of which improve the generalizability of the data, were the strengths of the present study. Using a self-administered questionnaire was one of the drawbacks of this study, which may contribute to the underestimation of the findings. In addition, the causal relationship between independent variables and high-risk activities could not be clarified by this cross-sectional analysis. Future studies are required to obtain longitudinal data on high-risk behaviors.

### Conclusion

The results of the present study show the co-occurrence nature of risky behaviors. Given the high prevalence of violence-related behaviors, implementation of preventive intervention aimed to empower individuals and improve life skills and anger control skills in college students is of great importance. In addition, family support was shown as a protective factor in the development of violence-related behaviors; therefore, parenting training should be implemented at early stages of childhood to reduce risky behaviors.

### Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This study was approved by the Ethics Committee of Shiraz University of Medical Sciences (Ref. No: IR.Sums.REC.1395.S1246).

### Informed Consent

Informed consent was obtained from all individual participants included in the study.

### Conflict of Interest Disclosures

The authors declare that they have no competing interests.

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