Original Article

The Relation between Students' Mental Health and Tendency toward Risky Behavior in Pishva, Iran

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Abstract
Background: Risky behaviors can cause severe damage in communities. These behaviors are more common among the youth. This study aimed to investigate the mental factors associated with high-risk behaviors among university students in Tehran province, Iran.
Methods: This cross-sectional study was conducted on students selected using multistage sampling from different faculties in 2014-2015. In total, 477 students completed the Youth Risk-Taking Scale and Mental Health Inventory-28. Data were analyzed using descriptive statistics and linear regression.
Results: Psychological well-being had a significant negative correlation with the tendency to risky behavior ($P<0.001$). There was a strong significant correlation between psychological distress and smoking, drinking, and sexual risk-taking. This study revealed that students with a higher level of psychological well-being were less likely to engage in risky behaviors such as sexual risk-taking, careless driving, violence, smoking, and alcohol and drug abuse ($P<0.001$).
Conclusion: The results of this study showed that mental health promotion can decrease risky behaviors among youths in Iran.
Keywords: Risky behavior, Psychological well-being, Psychological distress

Introduction

The World Health Organization (WHO) considers health as complete physical, mental, and social well-being and not only the absence of disease or disorder (1). The prevalence of mental health disorders is increasing (2), and this may be related to socioeconomic factors, including family structure, occupation, social class, and income (3). Low psychological well-being may be associated with higher levels of risky behaviors (4). High-risk behaviors are behaviors that endanger the individual and the community and lead to injuries, disabilities, and death (5).

Youth are particularly vulnerable to high-risk behaviors. They often make immediate decisions based on their feelings and are often less afraid of the possible consequences of their decisions and behaviors (6). A study on Tehran University students in 2014 showed that risky behaviors are more common in male than female students (7,8). Sociodemographic factors can be related to smoking, drug abuse, and alcohol drinking in students (9). Some students also turn to risky behaviors, especially drug use and alcohol drinking, due to loneliness, curiosity,

or pleasure (10). Religious beliefs may have a protective effect on risk-taking behavior (11).

Researchers think depression, anxiety, inefficiency, loss of confidence, lack of satisfaction with life, and inability to accept oneself as they are, are associated with risky behaviors (12). High-risk behaviors include violence, smoking, alcohol and drug abuse, and risky sexual contact that possibly result in unwanted pregnancies and sexually transmitted diseases or AIDS (13). Normal sexual behavior is based on consent and without force or feeling guilty or anxious and is accepted by the community and customs. However, high-risk sexual behaviors can represent psychological problems (14).

To prevent the tendency to high-risk behaviors in the community, the effective causes and factors should be investigated and identified, so that appropriate intervention programs aimed at behavior change and reducing vulnerable activities can be performed (14).

Some studies have been conducted on the relation between physical health and the occurrence of risky behaviors in students (15). Nevertheless, this study aimed to investigate the association between students' tendency

to high-risk behaviors and its relation with mental health.

Methods

This was a cross-sectional descriptive and analytical study, approved by the Ethics in Research Committee of Kerman University of Medical Sciences (code IR.KMU. REC.1395.429). The population under study was all students studying at the Islamic Azad University of Pishva in Tehran province in 2014-2015. The total number of these students was 5928. The appropriate sample size was 361 according to the Morgan table (16). Then, by assuming a design effect of 1.2 and a 10% possibility of loss of participants, the final sample size was estimated to be 477. Initially, cluster sampling was undertaken, and each university department was regarded as a cluster. After separating different departments, students were selected from different study years using stratified random sampling.

The objectives of the study were explained to the students in person. After the students consented to participate, they completed the questionnaires. The questionnaires included the Mental Health Inventory (MHI-28) and Youth Risk-Taking Scale.

The Mental Health Inventory was designed by Veit and Ware (17). This questionnaire was validated for use in Iran by Besharat and includes 28 items and two subscales (each with 14 items) measuring psychological well-being and psychological distress. The items are rated on a 5-point Likert scale from strongly disagree to strongly agree with higher scores indicating higher mental health (18). The Cronbach's alpha coefficient reported in the study by Besharat was 0.91 for psychological well-being and 0.88 for psychological distress (18). In the present study, the validity and reliability of the questionnaire were tested again and the Cronbach's alpha coefficient was 0.93 for psychological well-being and 0.92 for psychological distress. Psychological well-being measures characteristics such as happiness, vitality, and hope while psychological distress measures anxiety, depression, despair, and being under pressure.

The Youth Risk-Taking Scale has been validated by Zadeh Mohammadi et al (19) in Iran and measures the tendency to dangerous driving, violence, smoking, drug and alcohol abuse, and immoral sexual behavior. The items are scored on a 5-point Likert scale ranging from strongly agree (1 point) to strongly disagree (5 points). The Cronbach's alpha was 0.93 for the total scale and 0.77 to 0.93 for its subscales (19). In the present study, the Cronbach's alpha was 0.96 for the total scale and 0.86 to 0.94 for its subscales. The categories in the questionnaire included sexual risk-taking, dangerous driving, violence, smoking, drug and psychotropic substance abuse, and drinking (19).

A researcher-made demographic questionnaire was also used to collect data on gender, age, place of residence, year of education, marital status, occupation, family income, and field of study.

The results were analyzed using SPSS software (version 21) and descriptive statistics and multivariate linear regression results were reported.

Results

A total of 477 students participated in this study. Table 1 shows the demographic characteristics of the participants. The students majored in three fields including science, humanities, and engineering.

As seen in Table 2, high-risk driving was significantly more prevalent in younger (age group of 18-20 years) than older students (age group of 27-49 years) ($P < 0.001$). Moreover, the tendency toward violence had a significant inverse relation with psychological well-being, and the higher the level of psychological well-being, the lower the tendency toward violence ($P = 0.037$). Besides, the tendency to violence in males was significantly higher than females ($P < 0.001$). Students in the age group of 27-49 years were less prone to violence than younger students (18-20 years) ($P < 0.001$). Furthermore, students with household income levels below 10 million Rials per month were significantly more likely to be prone to violence compared to students with the household income of 10-20 million Rials per month ($P = 0.025$).

According to Table 3, the attitude toward smoking was significantly associated with psychological distress ($P = 0.016$) i.e., the higher the level of psychological distress, the more the tendency to smoke. The tendency to smoke was more prevalent in male than in female students ($P < 0.001$). Students in the highest age group in this study (27- 49 years) reported a lower tendency to smoke ($P = 0.010$) compared to younger ones (18-20 years). Findings showed that students from the rural areas and Tehran metropolitan area were more likely inclined to smoke, in comparison to students coming from other cities and this difference was statistically significant ($P = 0.010$, $P = 0.004$, respectively). In addition, students with a household income level of 10-20 million Rials per month reported a significantly lower tendency to smoke compared to students with a household income level below 10 million Rials per month ($P = 0.016$).

As shown in Table 3, the tendency toward drug abuse was observed more in males than in females ($P < 0.001$). In terms of age, older students (age group of 26-49 years) reported less tendency to drug abuse than younger ones (age group 18-20 years) ($P = 0.001$). The students from rural areas compared with those living in cities were more likely to abuse drugs ($P = 0.011$). Students who lived with their family, had a significantly less tendency to drug abuse compared to those living in dormitory ($P = 0.019$). Moreover, students with a household income of 10-20 and 20-30 million Rials per month reported less tendency to drug abuse compared to students with a household

Table 1. The characteristics of the participants

Variable	Frequency	Percent
Gender		
Male	190	39.83
Females	287	60.16
Age[a]		
18-20	113	23.68
21-26	294	61.63
27-49	70	14.67
Living area		
Urban area	159	33.33
Rural area	42	8.80
Tehran metropolis	276	57.86
Year of study		
1	72	15.09
2	133	27.88
3	151	31.65
4	98	20.54
5	23	4.82
Marital status		
Single/Divorced/ Widow/ Widower	396	83.01
Married	81	16.98
Job status		
Employed	119	24.94
Unemployed	358	75.05
Living place		
Dormitory	8	1.67
With family	456	95.59
Alone at home	9	1.88
With friends	4	0.83
Household income (per month)		
Less than 10 million Rials	88	18.44
10-20 million Rials	163	34.17
20-30 million Rials	125	26.20
30-50 million Rials	55	11.53
More than 50 million Rials	46	9.64
Major		
Science	222	46.54
Humanities	170	35.63
Engineering	85	17.81
Total	477	

[a] Mean (SD) = 22.88(4.00)

income below 10 million Rials ($P < 0.001$ and p = 0.031, respectively).

According to the study findings (Table 4), alcohol consumption had a significant relation with psychological distress, and the higher the psychological distress, the more tendency the students had to consume alcohol ($P = 0.022$). The tendency to alcohol use was reported more in males than in females ($P < 0.001$). In terms of age, students in the age group of 27-49 years reported less tendency to alcohol use than younger students (18-20 years) ($P < 0.001$) and students from rural areas and Tehran metropolitan area had significantly more tendency to use alcohol compared to students from other cities ($P = 0.027$ and $P < 0.001$, respectively). On the other hand, students who lived with their family were statistically less prone to alcohol consumption compared to students living in dormitory ($P = 0.022$). Besides, students with a household income level of 10-20 million Rials per month reported less tendency to smoke compared to students with a household income level below 10 million Rials per month ($P = 0.024$).

As shown in Table 4, in this study, a significant relation was found between the tendency to sexually high-risk behaviors and psychological distress, and as the level of psychological distress increased, the tendency to high-risk sexual behaviors increased as well ($P = 0.034$). The tendency to high-risk sexual behaviors was reported more in males than in females ($P < 0.001$), and students in the age group of 27-49 years compared with those in the age group of 18-20 years, reported less tendency to sexually high-risk behaviors ($P < 0.001$). On the other hand, the students coming from other cities had less tendency to sexually high-risk behaviors than those from the rural areas and Tehran metropolitan area ($P < 0.001$ and $P = 0.013$, respectively). Furthermore, students living in dormitory had more tendency to sexually high-risk behaviors than those living with their family, alone, or with friends ($P = 0.002$, $P = 0.027$, $P = 0.049$, respectively). In terms of household income level, those with a household income of 10-20 million Rials per month had less tendency to high-risk sexual behaviors and those with a household income level above 50 million Rials had more tendency to sexually high-risk behaviors ($P = 0.017$ and $P = 0.042$, respectively).

Discussion
The results of this study showed that psychological distress had a significant relation with tendency to high-risk behaviors. This finding is consistent with the results of the descriptive study by Atadokht et al conducted to investigate the tendency of 192 students to high-risk behaviors based on demographic variables and their relation with psychological well-being in 2013 in Ardabil (20). In addition, the study by Brooks et al. on 2224 ninth- and tenth-grade students in Massachusetts showed that increased levels of psychological distress, including stress and depression, were directly associated with high-risk behaviors (21). This may be because those with identity problems and low psychological well-being were also involved in multiple behavioral problems, and despair was seen in most of them (22,23). Moreover, those with low mental health and psychological and emotional

Table 2. Linear regressions results of mental health and demographic variables to predict tendency toward risky driving and violence (Multiple regression)

Variable	Risky driving		Violence	
	B (95% CI)	*P* value	B (95% CI)	*P* value
Psychological well-being	-0.068 (-0.155, 0.019)	0.125	-0.077 (-0.149 to -0.005)	0.037
Psychological distress	0.044 (-0.023, 0.110)	0.197	0.010 (-0.045 to 0.065)	0.718
Gender				
Female	Baseline			
Male	0.731 (2.542, -1.079)	0.428	2.705 (1.198 to 4.211)	<0.001*
Age				
18-20	Baseline			
21-26	-1.562 (-3.567, 443)	0.126	-1.620 (-3.289 to 0.048)	0.057
27-49	-7.035 (-9.746, -4.323)	<0.001*	-6.156 (-8.413 to -3.900)	<0.001*
Living area				
Urban area	Baseline			
Rural area	0.046 (-2.783, 2.876)	0.974	0.821 (-1.534 to 3.176)	0.493
Tehran metropolis	0.432(-1.184, 2.048)	0.600	-0.103 (-1.448 to 1.242)	0.880
Year of study				
1	Baseline			
2	0.980 (-1.339, 3.300)	0.407	-0.927(-2.857 to 1.003)	0.346
3	-0.072 (-2.572, 2.429)	0.955	-0.722 (-2.803 to 1.359)	0.496
4	-0.680 (-3.389, 2.030)	0.622	-1.872 (-4.127 to 0.383)	0.103
5	0.231 (-3.952, 4.414)	0.914	0.210 (-3.271 to 3.690)	0.906
Marital status				
Single	Baseline			
Married	-0.967 (-3.111, 1.177)	0.376	1.380 (-0.404 to 3.164)	0.129
Job status				
Unemployed	Baseline			
Employed	1.124 (-0.892, 3.139)	0.274	0.622 (-1.055 to 2.299)	0.466
Living place				
Dormitory	Baseline			
With family	0.276 (-6.620, 7.173)	0.937	-1.529 (-7.268 to 4.211)	0.601
Alone at home	-1.362 (-10.694, 7.971)	0.774	-1.619 (-9.385 to 6.147)	0.682
With friends	2.158 (-8.141, 12.457)	0.681	-1.420 (-9.991 to 7.151)	0.745
Household income (per month)				
Less than 10 million Rials	Baseline			
10-20 million Rials	-0.825 (-2.921, 1.271)	0.440	-1.991 (-3.736 to -0.247)	0.025*
20-30 million Rials	0.459 (-1.755, 2.673)	0.684	-1.537 (-3.379 to.306)	0.102
30-50 million Rials	0.785 (-1.948, 3.519)	0.573	-.951 (-3.226 to 1.323)	0.411
More than 50 million Rials	2.782 (-0.106, 5.671)	0.059	-.734 (-3.137 to 1.670)	0.549
Major				
Science	Baseline			
Humanities	-0.334 (-2.087, 1.420)	0.709	-0.055 (-1.514 to 1.404)	0.941
Engineering	1.772 (-0.297, 3.840)	0.093	1.441 (-0.280 to 3.162)	0.101

*Significant at the 0.05 level.

distress may engage in high-risk behaviors as a strategy to deal with their problems and reduce stress (24). Traits of hopelessness, helplessness, and the feeling that there is nothing to lose can lead to a person's tendency to high-risk behaviors (25).

According to the findings of the present study, tendency to violence had a significant inverse relation with the level of psychological well-being. Studies indicate that individuals who have been through life skills training, and are able to deal with stress and anxiety and have more self-

Table 3. Linear regressions results of mental health and demographic variables to predict tendency toward smoking and drug abuse (Multiple regression)

Variable	Smoking		Drug abuse	
	B (95% CI)	*P* value	B (95% CI)	*P* value
Psychological well-being	-0.036 (-0.108, 0.035)	0.319	-0.023 (-0.101 to 0.054)	0.554
Psychological distress	0.067 (0.012, 0.122)	0.016*	0.054 (-0.005 to 0.113)	0.074
Gender				
Female	Baseline			
Male	3.721 (2.225, 5.216)	<0.001*	4.239 (2.626 to 5.852)	<0.001*
Age				
18-20	Baseline			
21-26	-0.585 (-2.241, 1.072)	0.488	-1.457 (-3.243 to 0.329)	0.110
27-49	-2.954 (-5.194, -0.714)	0.010*	-4.068 (-6.485 to -1.652)	0.001*
Living area				
Urban area	Baseline			
Rural area	3.070 (0.733, 5.408)	0.010*	3.279 (0.758 to 5.800)	0.011*
Tehran Metropolis	1.949 (0.614, 3.284)	0.004*	1.382 (-0.058 to 2.822)	0.060
Year of study				
1	Baseline			
2	0.543 (-1.373, 2.459)	0.578	0.912 (-1.155 to 2.979)	0.386
3	1.676 (-0.390, 3.742)	0.112	1.984 (-0.244 to 4.212)	0.081
4	0.477 (-1.761, 2.716)	0.675	0.580 (-1.834 to 2.995)	0.637
5	2.604 (-0.852, 6.060)	0.139	2.619 (-1.108 to 6.346)	0.168
Marital status				
Single	Baseline			
Married	-0.665 (-2.436, 1.106)	0.461	0.580 (-1.330 to 2.491)	0.551
Job status				
Unemployed	Baseline			
Employed	-0.041 (-1.706, 1.624)	0.962	-0.145 (-1.940 to 1.651)	0.874
Living place				
Dormitory	Baseline			
With family	-0.677 (-6.374, 5.021)	0.815	-7.351 (-13.497 to -1.206)	0.019*
Alone at home	3.738 (-3.972, 11.448)	0.341	-4.524 (-12.839 to 3.792)	0.286
With friends	4.808 (-3.700, 13.317)	0.267	-3.674 (-12.851 to 5.502)	0.432
Household income (per month)				
Less than 10 million Rials	Baseline			
10-20 million Rials	-2.132 (-3.864, -0.400)	0.016*	-3.433 (-5.301 to -1.565)	<0.001*
20-30 million Rials	-0.605 (-2.434, 1.225)	0.516	-2.177 (-4.150 to -0.204)	0.031*
30-50 million Rials	0.166 (-2.092, 2.424)	0.885	-1.553 (-3.989 to 0.882)	0.211
More than 50 million Rials	2.154 (-0.232, 4.540)	0.077	0.673 (-1.900 to -1.900)	0.607
Major				
Science	Baseline			
Humanities	-0.454 (-1.902, 0.994)	0.538	0.016 (-1.546 to 1.578)	0.984
Engineering	-0.137 (-1.846, 1.571)	0.875	-0.186 (-2.029 to 1.657)	0.843

*Significant at the 0.05 level.

esteem, and more psychological well-being; have a lower tendency toward violence (26,27).

Consistent with previous studies (28,29), this study showed the tendency toward high-risk behaviors such as smoking, drinking, drug abuse, unsafe sex, and violence was more prevalent in males than in females. Other studies also showed women are more risk-averse than men (28,29).

In the present study, tendency to smoking, drug abuse, drinking, and sexually high-risk behaviors was

Table 4. Linear regressions regression of mental health and demographic variables to predict tendency toward drinking and sexual risk-taking behavior (Multiple regression)

Variable	Drinking		Sexual risk-taking behavior	
	B (95% CI)	P value	B (95% CI)	P value
Psychological well-being	-0.063 (-0.163, 0.037)	0.217	-0.017 (-0.089 to 0.055)	0.639
Psychological distress	0.089 (0.013, 0.166)	0.022*	0.059 (0.004 to 0.115)	0.034
Gender				
Female				
Male	5.450 (3.364, 7.536)	<0.001*	6.691 (5.190 to 8.192)	<0.001*
Age				
18-20				
21-26	-1.307 (-3.618, 1.003)	0.267	-.881 (-2.543 to 0.781)	0.298
27-49	-6.139 (-9.264, -3.014)	<0.001*	-4.998 (-7.246 to -2.749)	<0.001*
Living area				
Urban area				
Rural area	3.680 (0.419, 6.941)	0.027*	4.000 (1.654 to 6.345)	<0.001*
Tehran Metropolis	4.684 (2.822, 6.547)	<0.001*	1.699 (0.359 to 3.039)	0.013*
Year of study				
1				
2	-0.155 (-2.828,2.518)	0.909	-0.733 (-2.656 to 1.190)	0.454
3	0.572 (-2.310, 3.454)	0.696	0.512 (-1.561 to 2.586)	0.628
4	0.626 (-2.497, 3.748)	0.694	0.468 (-1.779 to 2.714)	0.683
5	2.227 (-2.593, 7.048)	0.364	2.730 (-0.738 to 6.198)	0.123
Marital status				
Single				
Married	-0.154 (-2.625, 2.317)	0.903	1.427 (-0.351 to 3.205)	0.115
Job status				
Unemployed				
Employed	2.049 (-0.273, 4.372)	0.084	0.912 (-0.759 to 2.583)	0.284
Living place				
Dormitory				
With family	-9.292 (-17.240, -1.344)	0.022*	-9.085 (-14.803 to -3.367)	0.002*
Alone at home	-3.596 (-14.351, 7.159)	0.511	-8.722 (-16.459 to -0.984)	0.027*
With friends	-9.981 (-21.850, 1.888)	0.099	-8.587 (-17.126 to -0.048)	0.049*
Household income (per month)				
Less than 10 million Rials				
10-20 million Rials	-2.788 (-5.204, -0.372)	0.024*	-2.114 (-3.852 to -0.376)	0.017*
20-30 million Rials	-1.958 (-4.510, 0.594)	0.132	-1.092 (-2.928 to 0.744)	0.243
30-50 million Rials	0.893 (-2.257, 4.043)	0.578	-0.237 (-2.503 to 2.029)	0.837
More than 50 million Rials	2.060 (-1.269, 5.389)	0.224	2.480 (0.085 to 4.874)	0.042*
Major				
Science	Baseline			
Humanities	-0.345 (-2.365, 1.675)	0.737	0.201 (-1.253 to 1.654)	0.786
Engineering	-0.039 (-2.423, 2.345)	0.974	0.421 (-1.294 to 2.136)	0.630

*Significant at the 0.05 level

higher among rural youth than among those living in cities. Eaton et al. showed that the prevalence of high-risk behaviors was different depending on the place of residence and there was a difference between states and large urban school districts (30). There is a possibility that rural students studying in big cities feel more freedom to commit high-risk behaviors (31). Chan et al also showed that some high-risk behaviors are more prevalent among

rural households than urban households; as a result, rural youth are more prone to these behaviors (32). Furthermore, the findings of this study are consistent with the results of other studies that have shown the prevalence of some high-risk behaviors such as smoking, alcohol consumption, and sexually high-risk behavior is higher in students from Tehran than students from other cities. The population of big cities such as Tehran is in transition from traditional to modern living. The more widespread use of the internet, satellite networks, and videos may lead to more familiarity of these communities with western culture resulting in less control over high-risk behaviors (33).

The findings of this study also indicated that the tendency to all high-risk behaviors had a reverse relation with age, and the younger students had more tendency to high-risk behaviors than seniors. This is consistent with the findings of the study by Dohmen et al about risky attitudes of roughly 22 000 individuals living in Germany (34) while inconsistent with the results of Miller et al.'s study on the 2003 National Youth Risk Behavior Survey in American high school students (35). Perhaps, younger individuals have less information and experience about the consequences of high-risk behaviors and may even believe they gain more respect and attractiveness by performing high-risk behaviors.

Many studies have revealed socioeconomic problems have a significant effect on mental health and cause a tendency to a variety of high-risk behaviors (9,36). The present study also showed that the tendency to high-risk behaviors can be related to low or sometimes high household income (37). In this study, except for the tendency to high-risk driving, the tendency to risky behaviors in youth with middle household income was significantly less than those with a higher or lower household income. According to another study, the youth from the middle economic class are more under the supervision of their parents than the lower classes. On the other hand, unlike many youths from the lower class, they do not have to work during their education; therefore, they have a better psychological state and this may cause a lower tendency to high-risk behaviors (38).

However, concerning the tendency toward high-risk sexual behaviors, it was observed that those with a higher household income were more prone to high-risk behaviors than those with low incomes. This finding is consistent with the results of the study by Bostani about high-risk behaviors and their relation with social capital among high school students in Kerman. This could be a wake-up call for families with high incomes. Researchers believe high family income, if not accompanied by social capital, could have negative impacts (39).

The results of the present study are in line with those of the study by Atadokht et al suggesting that students living in dormitory have more tendency to drug and alcohol abuse and high-risk sexual behaviors in comparison with those living with their family. Since parental supervision may have a direct effect on reducing youth tendencies to high-risk behaviors and given that there is less family supervision for students living in dormitory, an increase in high-risk behaviors is expected. In previous studies, even concerning the tendency to sexually high-risk behaviors, students living in dormitory reported more tendency to high-risk behaviors than all other students and this can be because of the possible effect of peers and friends living in dormitory (20,40).

A limitation of this study was that it only included students studying at one university; hence, the results are not generalizable to all adolescents in Iran.

Conclusion
Tendency to high-risk behaviors has an inverse and significant relation with mental health. In other words, students prone to high-risk behaviors have lower mental health than others. Accordingly, mental health promotion can decrease risky behavior among the youth.

Authors' Contribution
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Competing Interests
The authors have no conflict of interest.

Informed Consent
Informed consent was obtained from all participants.

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