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Adolescent students' high-risk behaviors

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Abstract

Considering the particular characteristics of adolescence and problematic behaviors associated with this period, a serious health-threatening issue is the prevalence of adolescents' high-risk behaviors which have been considered as one of the most important community problems. This study was conducted with the aim to determine frequency of high school adolescents' high-risk behaviors.This is a descriptive study conducted on 510 public high school students using multi-stage random sampling method. Data were collected using a demographic questionnaire and a researcher-made questionnaire of "high school adolescents' high-risk behaviors". Descriptive statistics were used to describe data, and t-test to analyze them. Study results showed that 19.4% of adolescents always drove dangerously, 18.8% always had aggressive behaviors, 19.4% often used drugs, 17.1% always drank alcohol, and 15.1% always had high-risk sexual behaviors, 12.5% always had suicidal ideations and 14.7% always had improper nutrition. In this study, significantly high-risk behaviors were observed among adolescents, especially: high-risk driving, aggressive behaviors, and alcohol use. Considering the importance of adolescents' high-risk behaviors in the community and their consequences, the results can provide guidelines for planning high-risk behavior prevention programs by community nurses, community health and education policy-makers, and schools' health department, so they Secondary pay greater attention to the issue.

Keywords: Adolescent , Dangerous Behavior, Student

Introduction

High-risk behaviors are those that put adolescents' health and well-being at risk [1], and exacerbate possibility of incidence of negative and destructive physical, psychological and social outcomes for the individual involved [2]. The most common cause of death in adolescents is high-risk behaviors such as driving (often drunk driving), suicide, and homicide. Furthermore, during adolescence, other behaviors such as smoking, less physical activity, and improper nutrition begin that can lead to future chronic diseases [3]. Today, the prevalence of high-risk behaviors among adolescents has become one of the most important and widespread concerns of human communities. Despite actions taken over the past three decades, high-risk behaviors have grown exponentially worldwide [4].

Adolescence is an important developmental stage for human, and is associated with stressors and huge problems. Adolescence as the most sensitive period in life is associated with various physical, mental and social changes and developments [5]. With more than 15 million adolescents, making up a quarter of the population, Iran is considered one of the youngest countries in the world [6].

Many high-risk behaviors such as smoking, alcohol use, and unsafe sexual relationships occur before the age of 18 years [7]. Adolescents do not regard health an important issue as adults do, and they have different perspective on the world than adults [1]. Although adults also experience high-risk behaviors, these behaviors are more committed by adolescents. Generally, high-risk behaviors increase from onset of adolescence to its middle, and fall sharply toward the end of this period [8]. Gender plays a significant role in adolescents' sexual relationship and behavior. Generally, men are more inclined to risk than women [9]. Given the particular characteristics, problematic behaviors and importance of this period in community health and development, adolescence can provide a unique context for examining behaviors associated with health. Accordingly, in some countries, high-risk behaviors in adolescents, and especially in high school students are periodically studied [10]. Considering the high population ratio of adolescents in Iran, few studies have been conducted in this area and especially in small cities. Thus, the present study was conducted with the aim to determine high-risk-behaviors of high school students in Ghorveh city. It is hoped results can be used to develop all-round policies in the community and develop prevention programs for adolescents' tendencies toward these behaviors.

Method

This descriptive study was conducted on 510 high school students (boys and girls) in Ghorveh city. Minimum required sample size was found 500 students, and 2% were added for potential withdrawals, making the final sample size 510 students.

In this study, multi-stage random sampling was used. City was divided into 4 districts (North, South, East, and West) according to municipal classifications. For proper distribution of samples and increased generalizability of results, one girl and one boy's high schools were selected from every district. Thus, 63 girls and 63 boys were selected from each district. Study inclusion criteria included Iranian nationality, age between 14 and 19 years, studying at a public high school in Ghorveh, no acute psychiatric disorders diagnosed by doctors, and living with both or one parent. In this study, data collection tool included demographics questionnaire and the researcher-made questionnaire of "adolescents' high-risk behaviors", which contained 48 items on high-risk behaviors including dangerous driving, aggressive behaviors, smoking cigarettes and hookah, drug use, alcohol use, high-risk sexual behaviors, suicidal ideations, and unhealthy nutrition. To prepare the researcher-made questionnaire, the American version "assessment of adolescents' high-risk behaviors", ZadehMohammadi et al.'s (2007) questionnaire "assessment of adolescents' sexual risk-taking", and also direct interviews with adolescents were used. Answers to the researcher-made questionnaire were scored according to 5-point Likert scale, with zero for "never", 1 for "rarely", 2 for "occasionally", 3 for "often", and 4 for "always". To determine validity of the questionnaire, content validity, face validity, and content validity ratio were used with comments from 11 experts, and internal consistency (Cronbach'salpha) and retest methods were used for reliability of the questionnaire. Content validity was found 91.5%, content validity ratio 0.79, and Cronbach'salpha 0.92 for all high-risk behaviors. Data were collected following obtaining list of public high schools in Ghorveh, and using table of random numbers, one girl's and one boy's high school were chosen from each district, and 63 students were selected according to table of random numbers from the 1st, 2nd, 3rd, and pre-university grades. Using each class's student book, 16 students were randomly selected. The researcher randomly attended schools on week-days, and after introductions and explaining objectives of the study and arrangement with school principals, provided students in their free sessions with explanations about the study and its objectives, and emphasized confidentiality of data and

obtained written consents from students to participate. He then issued "adolescents' high-risk behaviors" questionnaire to students and collected them after completion.Completion of questionnaire in each class took about 30 minutes. A researcher was present to answer any possible questions raised by students during completion. After completion, data were analyzed with SPSS-16 software using descriptive statistics and t-test.

Results

Participants' mean age was 15 years, 50.6% were boys,25.5% were studying at 1stgrade, 26.7% at 2ndgrade, 24.1% at 3rd grade, and 23.7% at pre-university grade. The results about the frequency of adolescent students' high-risk behaviors are presented in Table 1.

Table 1 *The frequency of high-risk behaviors in adolescent students'*

Phrase	Risky driving		Violent behavior		Substance Abuse		Alcohol Consumption		High-risk sexual behavior		Having suicidal thoughts		Poor Nutrition	
Frequency	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Never	102	20	131	25.7	243	47.6	161	31.6	140	27.5	142	27.8	160	31.4
Rarely	106	20.8	86	16.9	79	15.5	55	10.8	79	15.5	114	22.4	90	17.6
Sometimes	111	21.8	114	22.4	87	17.1	98	19.2	97	19	74	14.5	81	15.9
Often	91	17.8	82	16	99	19.4	107	21	116	22.7	113	22.2	101	19.8
Always	99	19.4	96	18.8	0	0	87	17	77	15.1	64	12.5	75	14.7
No response	1	0.2	1	0.2	2	0.4	2	0.4	1	0.2	3	0.6	3	0.6
Total	510	100	510	100	510	100	510	100	510	100	510	100	510	100

It can be seen from Table 1 that the highest frequency of high-risk behaviors related to dangerous driving (19.4%), and the lowest frequency to drug abuse (0%).

Table 2 *Results of t-test, comparison of high-risk behaviors in girls and boys*

Statement	Gender	Mean Score	SD	P-value
Dangerous driving	Male	29.9	8.1	0.000*
	Female	25.7	8.5	0.000*
Aggressive behaviors	Male	17.5	6.4	0.005*
	Female	15.8	6.8	0.005*
Drug use	Male	15.7	7.7	0.034*
	Female	14.3	7.9	0.034*
Alcohol use	Male	8.2	4.0	0.000*
	Female	6.5	4.5	0.000*
High-risk sexual behaviors	Male	14.4	6.4	0.000*
	Female	12.2	5.9	0.000*
Suicidal ideations	Male	8.1	3.0	0.044*
	Female	7.5	3.3	0.044*
Improper nutrition	Male	6.4	2.8	0.002*
	Female	5.6	2.5	0.002*

According to t-test results in Table 2, students' gender showed significant differences in all dimensions of high-risk behaviors, and frequency of all high-risk behaviors was higher among male students than female students ($P<0.01$).

Discussion

This study was conducted to assess high-risk behaviors among male and female high school students in Ghorveh city, and examined their high-risk behaviors in 7 domains including

dangerous driving, aggressive behavior, smoking, hookah and drug abuse, alcohol abuse, high-risk sexual behaviors, suicidal ideations, and improper nutrition. Investigations showed that these students were exposed to high-risk behaviors, such that 19.4% always drive dangerously (high speed, show-off moves, no seat belt or helmet).

According to a report by the World Health Organization, vehicle-related accidents are a major cause of death and disability in age group 10 to 24 years in most countries. Not fastening seat belt, not using helmet, and drug use by drivers increase injuries caused by accidents [6]. In America, dangerous driving has been reported in 17.2% of boys and 13.3% of girls [11]. In a study by Bakhshani et al., 78% of participants did not use helmet, and 39.4% did not fasten seat belt during biking and driving, and 49.3% drove without a license [12]. The reason for more incidence of dangerous driving in Iran compared to America may be due to weakness in driving rules, lack of proper training, disobeying rules by drivers, neglecting adolescents' needs by authorities, and cultural effects and social norms. In the present study, 18.8% of subjects always had aggressive behaviors. According to Bakhshani et al.'s report, 53.3% of students in Sistan-Bluchestan province were involved in physical brawls, of whom 41.8% had been injured at least once, and physical brawls and injuries were more prevalent among boys than girls [12]. The present study results show fewer high-risk behaviors compared to high school students in Florida, with at least once participation in physical brawls by 32.8% in 2001, and 32.1% in 2003, in which cultural issues and social norms could have been effective. The present study results also showed that 19.4% of subjects often experienced drug use, and 17.1% always drank alcohol, which are similar to other cities in Iran. A study by Zialdini et al. (2007) showed 26% of boys and 17.5% of girls in last high school years in Kerman city had experienced drugs at least once [13]. In Ayatalahi et al.'s study, 32% of high school students in Shiraz had used alcohol, and 2.1% had used drugs [14]. According to Jazayeri et al.'s report, 25% of high school students in Tehran had tendencies toward drugs, and it is estimated that 5% of them had used drugs [15]. According to a report by Center for Control of Diseases, 41.8% of students used alcohol, and 28.3% committed drunk-driving offense [16]. In a study by Granbum& Canon in America, 63.9% of students experienced smoking, of whom, 66.3% were boys and 60% girls [17].

In the present study, 12.5% of participants always had suicidal ideations. This was 19.6% in Bakhshani et al.'s study on students in Sistan-Baluchestan [12]. It can be argued that suicide is among the saddest of the high-risk behaviors, which in addition to loss of the person, causes feelings of despair, guilt, and anger in people that somehow had close association with the person that committed suicide. It should be noted that suicide is not much reporteddue to its consequences, and may be attributed to various accidents and incidents [18].

In recent years, due to unfortunate and irreparable consequences such as pregnancy, infectious diseases, and AIDS, sexual behaviors have been emphasized more than other high risk behaviors, which have become a challenging issue worldwide [19]. The present study results show that 15.1% of participants always had high-risk sexual behaviors, while in Granbum& Canon study, 45.6% of Florida students had sexual relationships in their lives, with boys (48.5%) more than girls (42.9%). The difference can be attributed to cultural differences and social norms. Pre-marriage sexual relationships are strictly forbidden in Iranian culture and religion [20].

In the present study, 14.7% of students always had improper nutrition, including frequent use of ready-made foods and lack of use of fruits and vegetables in their diets. This finding is exactly similar to results found by Garmaroodi et al in high school students in Tehran [20]. According to a report by Vermouth Health Department in 2011,

17% of European adolescents had improper nutrition, 13% were overweight, and 10% were obese [21]. Obesity in adolescents can cause many diseases in adulthood, including diabetes type II, and it is a major cause of mortality in adulthood. Higher energy intake and improper nutrition, lack of use of fruits and vegetables, lifestyle, and reduced physical activity are the main causes of obesity in adolescents [22].

Conclusion

Although study results indicate lower levels of high-risk behaviors in Ghorveh city, compared to American and other studies in Iran, they cannot deny the need to identify high-risk behaviors and attempts to correct them. Considering the young population of this country, protection of such assets and bringing up a healthy generation of adults is possible only through identifying these behaviors, educating the right behaviors, and creating a healthy lifestyle. Present study results can be helpful in making community-wide policies and developing prevention programs by identifying frequency of adolescents' high-risk behaviors.

Missing answers or wrong answers to some questions in high-risk behaviors questionnaire, such as sexual issues, was one of the study limitations that was beyond researcher's control. Considering that study was cross-sectional, it also contained limitations of cross-sectional studies, and definitive conclusions cannot be drawn about percentage of adolescents with high-risk behaviors.

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Contributions

Study design: MA

Data collection and analysis: MA, SSh

Manuscript preparation: MA, MH

Conflict of interest

"The authors declare that they have no competing interests."

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