Health problem multiple behaviors in Iranian adolescents: a cross-sectional study

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\textbf{ABSTRACT}

The present cross-sectional research was conducted on 245 adolescents selected through a multi-stratified sampling method. The data collection instrument was the risky behavior scale (YRBSS). The collected data were statistically analyzed via SPSS ver19. Such indices as mean, standard deviation, min and max scores were used as descriptive statistics. The present findings showed that 17 subjects (6.9\%) had carried cold weapons with them at least once before; 22 subjects (15.17\%) had experienced drug consumption (opium and hash) at least; 52 subjects (21.3\%) consumed alcohol; 45 (out of 108) (41.66\%) had sexual affairs with the opposite sex and 108 (44.1\%) experienced smoking. Certain measures can be taken to prevent and reduce the rate of risky behaviors: closer and stronger family ties between parents and teenagers, emphasis on positive examples set by peers, establishment of moral values, provision of sport facilities and public welfare, special attention to the key role of schools.

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\textbf{Introduction}

Adolescence is a transition from childhood to adulthood and helps to form many different behaviors that can negatively affect health. It is also accompanied by the development of chronic diseases under the effect of such habits as inadequate physical activities, smoking and inappropriate nutrition (Eaton et al., 2012). On the other hand, mortalities induced by violence or entering physical fights have increased influenced by such behaviors as alcohol overconsumption, legal and illegal drug abuse (Leão et al., 2017). Despite the measures taken within the past three decades, there has been a significant rise in risky behaviors all around the world which has been a serious threat to adolescents’ psychological health (Khazaei et al., 2016). Physical inactivity, unhealthy dietary habits, smoking, drug abuse and alcohol consumption are the six main categories of risky behaviors among the young, as recognized by disease control and prevention centers to be ever increasing with growing age (Eaton et al., 2012). Such risky behaviors do no occur in isolation. Growing evidence has shown that adolescents tend to adopt behavioral models which can probably lead to the additive and adversative effect of a disease. Therefore, it is essential to explore the correlation of multifaceted healthy behaviors and emergence of risky behaviors so as to emphasize the need for monitoring multifaceted healthy behaviors and interventions (Prochaska, Spring, & Nigg, 2008). A great proportion of the young population are prone to one or more risky behaviors (Coutinho, Santos, Folmer, & Puntel, 2013) which can continue up until adulthood (Faria, Gandolfi, & Moura, 2014). A body of international
research (Eaton et al., 2012; Ruchiwit, 2013) has shown that the presence of one or more (simultaneous) health risk(s) can lead to contagious diseases (hospitalization, severe damage) and primary mortality among the youth. Moreover, other investigations reported the risk of gender discrimination, driving while drunk and entering physical fights to negatively affect the young health (Hagger-Johnson et al., 2013; Ruchiwit, 2013). Social, cultural and economic contexts can be an observable variable in understanding and adopting healthy behaviors by adolescents (Silva & Petroski, 2012). Risky behaviors are the main factors threatening social health. It is estimated that by 2030 the mere mortality rate induced by smoking will reach 10 million a year (Guttmacher, Kelly, & Ruiz-Janecko, 2010). Global body of research has shown that the majority of risky behaviors are initiated prior to the age 18 and they mainly include smoking, alcohol consumption and drug abuse (El Mhamdi, Wolfcarius-Khiari, Mhalla, Salem, & Soltani, 2011; Smith & Wessel, 2011). An investigation conducted in America indicated that from among the student subjects within 30 days in advance to the study, 32.8% had texted or sent emails while driving, 38.7% had consumed alcohol and 23.1% had consumed marijuana. Within one year prior to the study, 32.8% had got involved in physical fights, 20.1% had bullied at school and 7.8% committed suicide (Center for Disease Control and Prevention, 2011). The body of research in Iran shows that similar to other countries, there has been a growing trend of risky behaviors (Ghaderi, Ahmadi, Darabzadeh, Nasiri, & Fakouri, 2015; Hedayati-Moghadam, Eftekharzadeh-Mashhadi, Fathimoghadam, & Pourafzali, 2015). The body of national investigations indicate the high prevalence of risky behaviors such as smoking cigarettes or hookah, consuming alcohol and drugs by 14–18 year-old adolescents (Fakhari, Mohammadpoorasl, Nedjat, Sharif Hosseini, & Fotouhi, 2015; Nazarzadeh et al., 2013).

Considering the young population of Iran and its subsequent issues, challenges and downsides, risky behaviors shown by the young has turned into a social issue in recent years followed by great concerns at university, management and public scales. However, there has been a dearth of research into the risky behaviors of this age group, despite the aforementioned population and problems. Thus, the present research aimed to explore the multiple risk behaviors of adolescents in the north of Tehran, Iran.

**Materials and methods**

**Research design**

The present descriptive, analytic research was cross-sectional in type. The research population was comprised of all adolescents in the north of Tehran. The sample size was estimated in a formula to be 245. The sampling method was randomized multi-stratiﬁed. Once the sample size was estimated and the required permissions were obtained from the education office of the district, several schools in the north of Tehran were selected as clusters. A number of schools were further selected and in the final stage a randomized sample was selected. The inclusion criteria were afﬁliation with the high schools in the target geographical district in Tehran and full consent to take part in the research. The exclusion criterion was incomplete questionnaires.

**Instrumentation**

A questionnaire which was used to collect the data in the present research was comprised of two sections:

Section A: The demographic information of the subjects including the grade at school, interest in education, feeling of success in education, parents’ education, income, father’s occupation,
mother’s occupation, history of a special disease, experience of prior consultation, gender, weight, height and marital status.

Section B: Risky behavior scale: To evaluate risky behaviors, the Persian version of the young risky behavior scale (YRBSS) was used which was formerly developed by the American disease control center (CDC). There are 88 items in the target questionnaire that enquire about risky behaviors in different categories including safety, violence (challenging behavior), suicide, smoking cigarettes, alcohol consumption, any illegal drug abuse, risky sexual affairs, improper nutrition, inadequate physical activity. It is noteworthy that due to cultural mismatches, several items were either altered or omitted. An item enquiring about the experience of smoking hookah was added, as highly prevalent in Iranian culture (Baheiraei, Hamzehgardeshi, Mohammadi, Nedjat, & Mohammadi, 2012).

Ethical issues

The ethical considerations included the clarification of the purpose of research and the methods to subjects. Their full consent to participate was obtained and they were ensured of the confidentiality of the information they provided.

Data analysis

SPSS ver19 (made in IBM Company, Armonk, NY, USA) was used to analyze the data with such indices as mean, standard deviation, minimum and maximum scores as the required descriptive statistics.

Results

The results revealed that 166 subjects (67.8%) were freshmen. Moreover, 191 subjects (78%) were female and 228 (93.1%) were single (Table 1).

The findings related to risky behaviors are presented below under each individual healing:

| variable          | Sub-group                              | F (%) | variable          | Sub-group                              | F (%) |
|-------------------|----------------------------------------|-------|-------------------|----------------------------------------|-------|
| Father’s occupation | Employed (white-collar worker)         | 122(49.8) | Mother’s education | Employed (white-collar worker)         | 87(35.5) |
|                   | University student                      | 6(2.4) |                   | University student                      | 11(4.5) |
|                   | Employed (blue-collar worker)          | 32(13.1) |                   | Employed (blue-collar worker)          | 7(2.9)  |
|                   | unemployed                              | 4(1.6) |                   | unemployed                              | 59(24.1) |
|                   | retired                                 | 29(11.8) |                   | retired                                 | 3(1.2)  |
|                   | other                                   | 52(21.2) |                   | other                                   | 78(31.8) |
|                   | uneducated                              | 4(1.6) |                   | uneducated                              | 10(4.1) |
| Father’s education | Elementary or junior high school        | 38(15.5) |                   | Elementary or junior high school        | 52(21.3) |
|                   | High school                             | 98(40) |                   | High school                             | 110(44.9) |
|                   | university                              | 100(40.8) |                   | university                              | 70(28.6) |
|                   | Religious school                        | 5(2) |                   | Religious school                        | 3(1.2)  |
| Education | 1st grade of high school               | 3(1.2) | Marital status     | married                                 | 17(6.9) |
|                   | 2nd grade of high school               | 8(3.3) |                   | single                                  | 228(93.1) |
|                   | 3rd grade of high school               | 27(11) | gender             | male                                    | 54(22)  |
|                   | Pre-university                          | 41(16.7) |                   | female                                  | 191(78)  |
|                   | freshman                                | 166(67.8) |
**Safe driving**

The present findings revealed that within 30 days before the study, 229 subjects (90.6%) had not consumed alcohol. On the other hand, 13 (5.3%) had at least once experienced driving while drunk and 4% had experienced it more than once. Moreover, 95 subjects (38.8%) had at least once experienced driving without driver’s license. 56 others (22.9%) had experienced risky driving behaviors such as swerving or dangerous overtaking.

**Violence (challenging behavior)**

The present findings showed that 17 subjects (6.9%) had carried at least once a cold weapon with them; 24 subjects (9.8%) had at least once avoided going out as they felt unsafe in the streets, at work or school; 12 subjects (4.9%) had been at least once injured in a physical fight or by a cold weapon such as a knife or club; 33 subjects (13.5%) had at least once got involved in a physical fight and 9 of them (27.8%) ended up in a doctor’s office.

**Suicide**

According to the present findings, 98 subjects (40%) had felt depressed for two weeks within the year before the study; 26 subjects (10.6%) had contemplated a suicide attempt and 15 subjects (57.7%) thought about suicide seriously. 11 subjects (42.3%) had attempted suicide.

**Illegal drug abuse**

The results revealed that 22 subjects (15.17%) had, at least once, experienced hash or opium consumption (13 subjects: 1–2 times, 5 subjects: 3–9 times, 2 subjects: 10–19 times, 2 subjects: more than 20 times); 2 subjects (.08%) abused crystal meth, and crack 3–9 times; 7 subjects (2.9%) had consumed heroin (3 subjects: 1–2 times, 2 subjects: 3–9 times, 2 subjects: more than 10 times), 5 subjects (2%) had consumed amphetamines such as crystal and ice (1 subject: 1–2 times, 4 subjects: 3–9 times), 5 subjects had consumed ecstasy or X-tablets (1 subject: 1–2 times, 2 subjects: 3–9 times, 2 subjects: more than 10 times), 8 subjects (3.3%) had taken hormones or steroids (3 subjects: 1–2 times, 2 subjects: 3–9 times, 3 subjects: more than 10 times); 9 subjects (3.7%) had taken such drugs as Retalin (3 subjects: 1–2 times, 3 subjects: 3–9 times and 3 subjects: more than 10 times).

According to the present findings, 164 subjects (66.9%) had friends who smoked cigarettes or hookahs; 115 subjects (46.9%) had friends who consumed alcoholic drinks; 32 subjects (13.1%) had friends with an experience of drug abuse; 13 subjects (5.3%) had friends who consumed psychedelics. Among those who abused drugs, 2 subjects (9%) had bought their stuff from a retailer while 14 subjects (63.6%) purchased it from friends.

**Alcohol**

As the results showed, 193 subjects (78.7%) had no experience of alcohol consumption. Among the remaining 52, 38 subjects (73%) consumed alcohol fewer than 20 times, 6 subjects (11.6%) between 40 and 100 times and 8 subjects (15.4%) more than 100 times lifelong. The age of the initial consumption was less than 12 years in 3 subjects (5.7%), 12–16 years for 10 subjects (19.3%) and 17 or more for 39 subjects. From among the 21 subjects with an experience of alcohol consumption within one month before the study, 6 subjects (28.6%) had bought their stuff from an unauthorized source; 8 subjects (38.1%) from friends, 3 subjects (14.3%) in the family and 4 subjects (19%) in parties.
Risky sexual affairs

From among the 245 subjects who entered the study, 108 subjects (44.1%) had friends of the opposite sex. From among them, 45 (41.66%) experienced had an affair with friends of the opposite sex. Moreover, 10 subjects (22.22%) experienced sexual relationship below the age of 15 and 35 subjects (77.78%) above 15 years of age. 8 subjects (18.2%) had consumed alcohol in their last affair and only 12 (26.7%) had used a condom.

Smoking cigarettes or hookah

As the results revealed, 108 subjects (44.1%) in the present research had the experience of smoking even as one puff. The beginning age of smoking was less than 11 years in 10 subjects (9.3%), between 11 and 14 years in 20 subjects (18.5%), between 14 and 17 in 27 subjects (25%) and above 17 years of age in 67 subjects (62%). Among 43 subjects who had experienced smoking one month before the study, 26 subjects (60.5%) purchased cigarettes at stores; 5 subjects (11.6%) from vendors, 11 subjects (15.6%) from friends and 1 (2.3%) made it at home. The rest of the indicators are presented in Table 2.

According to the present findings, 69 subjects (28.2%) consumed no natural fruit juice, 53 subjects (21.6%) consumed no vegetables (e.g. lettuce or cucumber), 84 subjects (34.3%) consumed no fresh green leaves and 75 subjects (30.6%) consumed no milk in the month before the study (Table 3).

As the findings showed, the majority of subjects had not had adequate physical activities. The relevant data are presented in Table 4.

Discussion

The present research aimed to explore the prevalence of risky behaviors among adolescents in Tehran. The present findings concerning safe driving behaviors showed that adolescents showed no proper behavior with this respect as they drove without a driver’s license and showed such risky behaviors as swerving or dangerous overtaking. These all can, on their own terms, cause a social

Table 2. Distribution of indicators concerning smoking cigarettes and hookahs.

| Indicator | Experience of smoking hookah | Mutual use of a hookah | Living with cigarette smokers | Living with hookah smokers |
|-----------|-------------------------------|------------------------|-------------------------------|---------------------------|
| Yes       | 164(66.9)                     | 129(78.7)              | 115(46.9)                     | 112(45.7)                 |
| No        | 81(33.1)                      | 35(21.3)               | 130(53.1)                     | 133(54.3)                 |
| Total     | 245(100.0)                    | 164(100.0)             | 245(100.0)                    | 245(100.0)               |

| Indicator | Total days of smoking cigarettes within the past month | Total no. of cigarettes smoked within the past month |
|-----------|-------------------------------------------------------|------------------------------------------------------|
| Never     | 59(57.8)                                              | < 5                                                  | 38(88.4)                |
| ≤ 5       | 28(27.4)                                              | 5–10                                                 | 3(7)                    |
| 6–19      | 8(7.8)                                                | > 10                                                 | 2(4.6)                  |
| 20–30     | 7(7)                                                  | Total                                                | 43(100)                |

Table 3. Distribution of indicators concerning dietary habits within the past 7 days.

| Indicator | Drinking natural fruit juice | Eating vegetables | Eating green leaves | Consuming canned food and soda | Drinking milk |
|-----------|------------------------------|-------------------|---------------------|--------------------------------|---------------|
| none      | 69(28.2)                     | 53(16.4)          | 84(34.3)            | 118(48.2)                      | 75(30.6)      |
| <6 times a week | 139(56.7)             | 148(60.4)         | 120(49)             | 88(35.9)                       | 113(46.1)     |
| Once a day| 13(5.3)                      | 14(5.7)           | 7(2.9)              | 10(4.1)                        | 19(7.8)       |
| 2 times a day | 8(3.3)                   | 9(3.7)            | 12(4.9)             | 20(8.2)                        | 17(6.9)       |
| ≥ 3 times a day | 16(6.5)                  | 21(8.6)           | 22(9)               | 9(3.7)                         | 21(8.6)       |
| Total     | 245(100.0)                  | 245(100)          | 245(100)            | 245(100)                       | 245(100)      |
anarchy. Friends’ and peers’ influence with this respect is undeniable as this is the remarkable feature of adolescence when peers are more influential than parents. With their particularly strong power of influence, peers can either positively or negatively affect a teenager’s thoughts, feelings and behaviors (Wu, 2014). An investigation in Sweden revealed that peers and friends managed to positively affect and thus reduce unsafe driving behaviors (Åberg, 1993). Other investigations similarly confirmed the effect of colleagues on reducing the rate of risky driving behaviors (Pradhan et al., 2014; Simons-Morton, Lerner, & Singer, 2005). Another possible explanation for this could be parents’ inadequate monitoring of teenagers while they are out. Parents’ monitoring can be a key strategy and a preventive factor of adolescents’ risky behaviors (Strunin et al., 2013). Among the other probable explanations can be teenagers’ psychological and sociological states, lack of recreation facilities in city to spend their leisure time and energy. To reduce the rate of unsafe driving behaviors, we suggest that teenagers’ awareness is raised of the consequences of risky driving through posters and advertisements publicized by schools or the police. Among the other suggestions to reduce risky driving behaviors are: severe legal actions taken against social threats, provision of healthy and happy recreation opportunities, emphasis on those highly influencing teenagers and strengthening family ties.

According to the present findings, though violence and challenging behaviors accounted for a low percentage, they can still cause concern. Violence among adolescents can be explained in different ways. One such probable reason can be the experience of smoking or alcohol consumption. It seems that those with an experience of smoking showed more violent behaviors than other teenagers. With this respect, an investigation found that teenagers who either smoked or drank alcohol tended to show aggressive behaviors ten times as high as the rest (Silva, Soares, & Cabral de Oliveira, 2014). On the other hand, we could assume that adolescents’ attitude to violence probably affects their aggressive behaviors. In their research, Sahin et al. found a positive correlation between attitude to violence and exposure to aggressive behaviors (Sahin, Baloglu, & Unalmis, 2010). Therefore, there is a need for planning preventive measures based on changing the attitude towards violence more than ever before. Among other probable factors that can affect aggression among adolescents can be their socioeconomic status. With this respect, an investigation reported a positive correlation between socioeconomic status and the extent of aggression (Elmi & Tighzan, 2009). On the other hand, the influence of computer games on aggressive behaviors should not be underestimated. With this regard, in some other research, Patrick emphasized on the effect of violence provocative computer games on teenagers’ aggressive behaviors (Bender, Plante, & Gentile, 2017). Among the other reasons why teenagers show aggressive behaviors are parents’ failed monitoring, company of misbehaving friends, ignorance of ethical issues, parents’ conflicts and no family attachment. Thus, certain actions can be taken to reduce aggressive behaviors in this age group including more family monitoring over their behaviors, closer and stronger family ties.

Table 4. Distribution of indicators concerning physical activity within the past 7 days.

| Indicator | Total no. of days with 20 minutes of exercise, sweating and gasping | Total no. of days with 30 minutes of exercise, sweating and gasping | Total no. of days with 60 minutes of exercise, sweating and heart beats |
|-----------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| None      | 146(59.6)                                                   | 131(53.5)                                                   | 170(69.4)                                                   |
| 1–2       | 78(31.8)                                                    | 86(35.1)                                                    | 51(20.8)                                                    |
| 3         | 12(4.9)                                                     | 14(5.7)                                                     | 15(6.1)                                                     |
| 4–5       | 8(3.3)                                                      | 13(5.3)                                                     | 4(1.6)                                                      |
| > 5       | 1(0.4)                                                      | 1(0.4)                                                      | 5(2)                                                        |
| Total     | 245(100.0)                                                  | 245(100)                                                    | 245(100)                                                    |

| Indicator (mins.) | Total time (mins.) of exercise in a gym | Indicator (n.) | Total no. of sport teams with which you were affiliated last year |
|-------------------|-----------------------------------------|----------------|---------------------------------------------------------------|
| <20               | 49(32.23)                                | None           | 193(78.8)                                                    |
| 20–40             | 72(47.36)                                | 1              | 43(17.6)                                                     |
| 40–50             | 8(5.26)                                  | 2              | 9(3.7)                                                       |
| > 50              | 23(15.15)                                | Total          | 245(100)                                                     |
| Total             | 152(100)                                 |                |                                                               |
less family conflicts, establishment of moral values in children, control of friends and teenagers’ more participation in social activities.

The present findings concerning suicide show that among those considering suicide, a vast majority took it serious and even gave it a try. Investigations within the past two decades in Iran show a growing rate of suicide attempts by teenagers and youngsters in most regions especially Kurdistan (Iran)(Mirzaie & Shams Alizadeh, 2013) and Isfahan (Iran)(SGh, Malekian, Keykhaei, Keykhaei, & Mahmoudi, 2008). In some other research, Moradi et al. found that in all age groups, teenagers and young adults attempted the highest rate of suicide(Moradi, Moradi, & Mostafavi, 2012). The results of some research in 2016 in 32 low/moderate-income countries showed that suicide accounted for 6% of the total number of mortalities worldwide and is known as the second highest cause of mortality among girls and is the third cause of mortality of 10–24 year old men(McKinnon, Gariépy, Sentenac, & Elgar, 2016). There are many factors involved in why teenagers contemplate over suicide. These can include family problems especially that of the parents. With this respect, some research found teenagers’ and their parents’ disagreement as one key factor involved in suicide attempts. Asante et al. (2017) observed that parents’ understanding of teenagers’ concerns and problems was correlated with all indices of suicide behavior (Asante, Kugbey, Osafo, Quashie, & Sarfo, 2017). Among other reasons involved in suicide are disappointment, low self-esteem, desperation, parents’ failed understanding or mutual behavior, unemployment and many others that can cause spiritual and psychological failures in the young and can lead to such consequences as suicide. It is, therefore, suggested that more access is provided to adequate number of consultation centers for the public. Mass media can contrive of different programs to prevent suicide. The role of media especially visual media has been greatly emphasized. Awareness is to be raised of suicide-related drugs, state and familial restrictions, not storing drugs at home, consequences of storing drugs, more control and supervision by the drugstores. State and private organizations can and need to cooperate to solve adolescents’ problems, raise their self-esteem and develop their skills.

In the present research, about half of the subjects had the experience of friendship with someone of the opposite sex. Half of these subjects experienced sexual affairs. Bisexual relationships have not been of concern in any country more than Iran. Some work of research in Iran revealed that about 60% of university students had a positive attitude toward sex before marriage (Zaresshahabadi, 2012). Another investigation revealed that about 30 to 70% of teenagers were obsessed with this issue(Hosseinkhanzadeh, Taher, Seyednuri, Yahyazadeh, & Esapour, 2014). Friendship with those of the opposite sex can be attributed to different matters such as the family income and socioeconomic status. In other words, higher-income and more educated families show more tendency to relationships with people of the opposite sex. It seems that higher education is positively correlated with more tendency to friendship with someone of the opposite sex. Education has managed to drive families away from the traditional outlook toward such relationships. Thus, more freedom is provided to children as well as more facilities. With this concern, an investigation reported the correlation of family socioeconomic status and children’s making friends with people of the opposite sex(Zaresshahabadi, 2012). Another probable cause can be parent-child positive relationship. That is to say that parents who feel more intimate with children make children desire less to make friends with people of the opposite sex. With this regard, Krishna et al. maintained that children of broken families are driven to the establishment of such relationships with others(Ramakrishna, Karott, & Murthy, 2003). Considering the key role of mass media and new networks, there is a need for enculturation of marriage and increasing the tendency to establish a family and prioritize them in national sociocultural media. That is due to the fact that correct enculturation of the relationships between two sexes can lead to establish desired behavioral patterns.

As the present findings showed, the majority of subjects did not enjoy proper physical activities. In their research, Kazemi et al. also reported teenagers’ inadequate physical activity(Kazemi, Eftekhardabali, & Nekueii Zahraei, 2011). Teenagers’ low physical performance in the present research can be explained by such factors as parents’ education, socioeconomic level and parents’
physical activity. With this respect, some research in Nigeria indicated that youngsters’ inactiveness was influenced by socioeconomic factors (Oyeyemi et al., 2016). Low physical activity seems to be correlated with low socioeconomic status and leads to less access to recreation and sport facilities. Some other research in the Iranian context showed that physical activity, not unlike many other behavioral patterns, has a learning aspect and family can play a key role concerning this (Kazemi et al., 2011). In a systematic study, showed, in the Chinese context, that there existed a positive correlation between parents’ model of physical activity and that of the children (Lu et al., 2017). Therefore, it is essential to attempt more to educate people and enculturate this issue in society especially among teenagers and youngsters who make the future of the country.

According to the present findings, about half of the subjects experienced smoking cigarettes and they began this habit at a low age. The age at which smoking begins is of a great significance as the sooner teenagers begin to smoke the more probable it is for them to continue this habit for the rest of their life. They might even die as a result of smoking-induced diseases or might get down with cardiovascular diseases. There are several factors that drive teenagers to smoke cigarettes including their lower awareness of the side effects of smoking. Babatunde et al. (2017) found a positive correlation between awareness and smoking cigarettes (Babatunde, Babatunde, Oladeji, & Ashipa, 2017). Some other research indicated that teenagers’ low awareness of the adverse effects of smoking made them susceptible to smoking. It seems that an emphasis on the short-term consequences of smoking can cut down on the rate of this habit among teenagers. Among the other probable reasons can be the previous experience of smoking in family members or parents and family problems. Okagua maintained, in an academic work, that there was a significant correlation between teenagers’ smoking habit and the experience of smoking by their parents (Okagua, Opara, & Alex-Hart, 2016). Family members’ smoking can set an example for teenagers and can also provide an easy access to cigarettes.

**Limitations of the study**

One limitation of this study was caused by the cross-sectional type of the research which made it hard to claim a causal relationship. The second limitation was that of the sample which included subjects from one district of the Northern Tehran which makes it hard to generalize the results to the whole city. Thirdly, several limitations were imposed by the contextual effects and the dominant restrictions of schools as well as the presence of parents at schools.

**Conclusion**

In the light of the present findings, it is essential that policy-makers and planners adopt a scientific approach to risky behaviors in order to raise the quality of anti-drug abuse plans and preventive measures of risky behaviors. They are expected to employ psychologists, sociologists and health educationalists to improve the overall state of health. Short-term and long-term plans can help to reduce or prevent different types of risky behaviors. Moreover, strengthening family ties especially between parents and teenagers, emphasizing the positive example set by peers, establishing moral values, providing for recreation and sport facilities and especial attention to schools and their key role can help to reduce the rate of risky behaviors.

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No potential conflict of interest was reported by the author(s).

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