

# Estimating prevalence and reasons of risky behaviors using network scale up method in Shiraz city in 2017

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## Abstract

**Objectives:** Risky behaviors are referred to behaviors that endanger the physical, psychological and social health and wellbeing of people in the society. Studies have shown that several factors play role in creating dangerous behaviors in the age group of adolescents and youths, such as low self-confidence, inappropriate peers group, lack of interest and eager in education and training and encouraging trainings to risky behaviors, weak relation of parent-child, weak control of family and lack of family support, inappropriate social economic status, lack of suitable training and so on.

**Methodology:** The present study was conducted on three hundred 18-35-year-old persons from Shiraz in 2017. For collecting data, scholar-made information check lists were used. Also, for estimating prevalence of risky behaviors Stata software version 11 has been used. Chi-square test was used for comparing prevalence of risky behaviors in men and women.

**Results:** The results of the present study with network scale up method showed that the highest prevalence of risky behaviors among 18-35 years old youths of Shiraz City is respectively consuming tobacco (31.25%) and alcohol (17.89%) and the least prevalence of risky behaviors is using psychedelics (1.77%). Also, the results of this study showed that the greatest reason of doing risky behaviors is first the peers pressure and then doing risky behaviors for enjoying and recreation.

**Discussion and Conclusion:** Considering prevalence of risky behaviors, training healthy behaviors along with supplying appropriate bed and providing sufficient and up to date welfare facilities for the youth and also accurate identification of factors effective in tendency to risky behaviors in youths and also codifying plans relating to preventing and controlling these behaviors by authorized organizations is a necessary matter.

**Key Words:** Risky behavior, network scale up method, Shiraz.

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## INTRODUCTION

Risky behaviors are referred to behaviors that endanger physical, psychological and mental health and well-being

of people of the society. These behaviors are divided into two groups: the first group includes behaviors that endanger the individual health and well-being, like consuming drugs, alcohol, smoking and unsafe sex behaviors. The second group includes behaviors which threaten the health and well-being of others such as theft, aggression and violence, escaping from school and house. Nature of these behaviors is so that concerning place and time of doing these risky actions, there is no possibility of direct training and continuous intervention of health authorities in these behaviors, since these behaviors are intensely dishonored and unpopular and are forbidden by the society. Based on the state forensic medicine statistics, the most prevalent reason of death, among under 25-years old youths and adolescents in Iran, is in

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the first rank driving accidents and after that toxicity due to alcohol, drugs, suicide and finally cancer. The study's results have shown that several factors are effective in creating risky behaviors in the age group of adolescents and youths, such as low self-confidence, inappropriate peers groups, lack of interest and eager in education and training and existence of encouraging trainings to risky behaviors, weak relation of parent-child, weak control of family and lack of family support, undesirable social economic status, lack of suitable training and so on. The most prevalent health risky behaviors include: excessive consumption of alcohol, drug abuse, unsafe sexual intercourse, reckless driving, dangerous sports, gaff, illegal and profligate actions. From sociological respect, risky behavior is created by weakening of the family monitoring and extension of relations with various groups of peers and social pressures. Many youths and adolescents see themselves under pressure with emotional stroke due to family break and frequent changes in the family structure and by early entrance to sexual tendencies domain and using drugs show reaction. According to Saterland, people get criminal through relation with others who bear criminal norms. In his view, most illegal and criminal behaviors are learnt in primary groups especially peer groups. Many scholars believe that youth is a very critical period that risk factors besides threatening their mental, social and emotional health may pose their existence irrecoverable damages. On the other hand, human life in the technology era is along with ignoring some social values and prevalence of risky behaviors. Regarding that a half of the country population are in the ages less than 25 years old, investigating such behaviors is significant for later planning. Also since this age group has a great susceptibility, awareness of status of risky behaviors among them is very important. Risky behaviors have some reasons which should be identified and used for removing social fields susceptible of people affection. Unfortunately, in our country, there is no accurate statistics of prevalence of these behaviors in various age groups. Considering the sensitivity of the subject of risky behaviors in the sexually active population of the country and due to legal and religious limitations, there is not much information about this sensitive issue. So, internal and valid studies in this field which could be mentioned as background are very few and due to limitation of direct methods in estimating risky behaviors, this by itself requires faster conduct of similar studies with indirect methods for estimating such sensitive behaviors. So, the present study was conducted in Shiraz City in 2017 for estimating risky behaviors using network scale up method.

## MATERIAL AND METHODS

The present study was performed as descriptive-analytical and with cross sectional method on three hundred 18-35 years old people in 2017. The statistical population includes all sexually active people in 2017 in Shiraz City who were exposed to health risky behaviors (that respectively includes 270362 and 235943 women and men). Since estimation of risky behaviors prevalence is performed in network scale up method indirectly, unlike other studies, there is no formula for calculating the sample content. Therefore, by categorizing the people in age groups, a sample with a suitable content is considered so that the estimations accuracy is optimal. Considering that the 18-35 years old population of Shiraz City is almost 506305 persons, 300-person sample was selected for the study. The studied cases were selected with convenient sampling method. For introducing the considered sample, it was tried that samples are not limited to a special space and time, in this way that sampling was done in various districts of Shiraz City and in various days of the week and also in different hours. All people who had informed consent were included in the study and in case of non-cooperation of the individual; another person was replaced with him. The used instrument is scholar made checklist which has been designed with view of expert epidemiologists. These checklists include questions relating to risky behaviors (smoking, hookah, pipe, opium, tramadol, alcohol, ecstasy and unknown substances, migration record, suicide history, drugs injection and also prevalence of sexual behaviors out of framework of marriage and tattoo) and reasons of doing risky behaviors (peers pressure, academic failure, life failure, economic poverty, being in welfare, parents problem, divorce, addiction and so on), others (recreational, beauty and joy). Checklists are self-played and after providing required explanations by the interviewer for completing it, it was completed by referees and in case of the individual illiteracy, the questions were answered with the aid of interviewer. SPSS version 16 software and Microsoft excel were used for descriptive analysis of the study variables. For estimating the prevalence and determining 95% confidence interval, Wald method and Stata 11 software were used. Chi-square test was used for comparing prevalence of risky behaviors in women and men. In all analyses, significance level was considered 0.05.

**Findings:** Table 1 shows the frequency distribution of demographic variables in 18-35 years old people in Shiraz City in 2017 that completed the questionnaire. As the table results show, 52.3% of studied people is constituted of men and 47.7% women. Also, most studied people had diploma and lived in the city.

**Table 1:** Frequency distribution of demographic variables of 18-35 years old people in 2017 that completed the questionnaire

Percent	Number	Variable Type	Variables
52/3	157	man	gender
7/47	143	woman	
53.7	161	married	marital status
45.3	136	single	
1	3	divorcee	
0	0	widow	
99.7	299	city	living place
0.3	1	village	
9	27	under diploma	education
36	108	diploma	
14	42	associate diploma	
26.7	80	bachelor	
10/7	32	master	
3/7	11	Ph.D.	

**Table 2:** Frequency distribution of risky behaviors of 18-35 years old people in social network of Shiraz City separating by gender

P-Value	Sum (Percent)	Woman Number (Percent)	Man Number (Percent)	Risky Behaviors
<0.001	1780 (31/25)	)23.18(544	)36.90 (2336	smoking
<0.001	294 (5/16)	)1.79 (42	)7.52 (252	drug abuse
<0.001	101 (1/77)	)1.27 (30	)2.12(71	using psychedelic
<0.001	127 (2/23)	)1.32 (31	)2.86 (96	risky actions
<0.001	1019 (17/89)	)11.55 (271	)22.32 (748	using alcohol
<0.001	333 (5/84)	)3.06 (72	)7.79 (261	sexual relations
<0.001	142 (2/49)	)1.74 (41	)3.01 (101	migration
<0.001	366 (6/42)	)9.03 (212	)4.59 (154	tattoo

Table 2 shows the frequency distribution of risky behaviors in 18-35 years old people in social networks in gender separation. Findings of this study show that among youths of Shiraz City, prevalence of tobacco (31.25%) and prevalence of drug abuse (5.16%) and prevalence of psychedelic (1.77%) and doing risky behaviors (2.23) and prevalence of alcohol use (17.89%) and prevalence of sexual relations out of frame (5.84%) and migration prevalence (2.49%) and tattoo prevalence (6.42%). As the results of the table show, the most prevalent risky behaviors in 18-35 years old men and women of Shiraz are respectively using tobacco with frequency of 36.90% and 23.18%. Also, the findings of the table showed that using psychedelics in both women and men with frequency of 2.12% and 1.27% has the least frequency percent. The results show that prevalence of tobacco abuse among men with prevalence of 36.90% is more than women (23.18%) and prevalence of drugs in men (7.52%) is more than women (1.97%) and prevalence of psychedelics is men (2.12%) is more than women (1.27%). Prevalence of risky actions in men (2.86%) is more than women (1.32%). Also, prevalence of alcohol use in men (22.32%) is more than women (11.55%) and prevalence of sexual intercourse out of marriage frame in men (7.79%) is more than women (3.6%). Prevalence of migration in men (3.01%) was reported more than women (1.74%) and only prevalence of tattoo in women (9.03%) is higher than men (4.59%). All these discrepancies between two genders are statistically significant ( $p < 0.001$ ) Table 3 shows that the greatest reason of doing total risky behaviors is at first the peers pressure and then doing risky behaviors for enjoying, recreation and beauty. The greatest reason of using drugs is peers pressure with 24.79%. the greatest reason of using tobacco is peers pressure with 25%. The greatest reason of sexual relation out of the family framework is enjoying with 34.1% and the greatest reason of using alcohol is respectively being in welfare (25.94%) , peers pressure (24%) and recreational use (21.3%). The greatest reason of using psychedelics is respectively recreational use with 20.9% and failure in life with 20.1%. The greatest reason of doing risky behaviors has been estimated academic failure with 30.2% and being in welfare with 44.5%. The greatest reason of tattoo has been estimated others (beauty) with 45% and being in welfare with 24.15%.

**Table 3:** Distribution of reasons of risky behaviors in 18-35 in social networks of Shiraz city separating by gender

others (recreational, joy, beauty)	parents problem	being in welfare	economic poverty	life failure %	Academic failure %	peer pressure %	gender	reasons of risky behavior
(%21) 337	(%7/7) 124	(%16) 261	(%11/5) 184	192 (%11/96)	(% 4/1) 66	441 (%27/5)	man	
(%27) 183	(%9/25) 63	(%21/9) 149	(%5/87) 40	(%13/4) 91	( %5/14) 35	17/6)120 ( %	woman	reasons of using drug
(%22/74) 520	(%8/18) 187	(%17/93) 410	(%9/79) 224	283 (%12/38)	(%4/42) 101	(%25) 561	total	
(%16/8) 53	(%9/84) 31	(%12/4) 39	(%19/4) 61	(%17/8) 56	(%1/27) 4	(%22/5)71	man	
(%9/62) 5	(%21/2) 11	(%0) 0	(%1/92) 1	(%17) 9	(%11/5) 6	20 (%38/5)	woman	reasons of using drug
(%15/8) 58	(%11/4) 42	(%10/62) 39	(%16/89) 62	65 (%17/71)	(%2/72) 10	91 (%24/79)	total	
(%25) 23	(%21/5) 20	(%4/3) 4	(%12) 11	(%19/4) 18	(%4/3) 4	(%14) 13	man	reasons of using
%12) 2	%12/2) 5(	%4/88) 2	%15) 6	%22) 9	%9/76) 4	%24) 10	woman	psychotics
(%20/9) 28	(%18/7) 25	(4/47) 6	(%13) 17	(%20/1) 27	(%5/97) 8	23 (%17/2)	total	
(%5) 5	(%10) 10	(%8) 8	(%24) 24	(%31) 31	(%0) 0	(%22) 22	man	reasons of doing risky
(%22) 11	(%22) 11	1(%2/04)	(%8/16) 4	(%28/6) 14	(%2/04) 1	(%14/3) 7	woman	behaviors
(%10/7) 16	(%14) 21	(%6/04) 9	(%18/8) 28	(%30/2) 45	(%0/67) 1	(%19/5)	total	
(%21/9) 204	(%5/79) 54	(%25/3) 236	(%9/54) 89	(%9/22) 86	(%2/1) 20	(%26) 244	man	
(%19/8) 78	(%5/34) 21	(%27/5) 108	(%9/16) 36	(%16/3) 64	(%2/29) 9	77 (%19/6)	woman	reasons of using alcohol
(%21/3) 282	(%5/6) 75	(%25/94) 344	(%9/4) 125	150 (%11/3)	(%2/19) 29	(%24) 321	total	
(%34/8) 115	(%9/09) 30	(%19) 62	(%6/67) 22	(%9/09) 30	(%0/91) 4	(%21) 68	man	reasons of using sexual
(%31) 24	(%6/4) 5	(%7/7) 6	(%39/7) 31	(%8/97) 7	(%0) 0	(%6/41) 5	woman	relations out of the family framework
(%34/1) 139	(%8/58) 35	(%16/66) 68	(%13) 53	(%9/1) 37	(%0/74) 3	73 (%17/9)	total	
(%20/8) 26	(%3/2) 4	(%41/6) 52	(%11/2) 14	(%15/2) 19	(%0) 0	(%8) 10	man	
(%14) 8	(%0) 0	(%50/9) 29	(%3/5) 2	(%12/3) 7	(%0) 0	11 (%19/3)	woman	migration reasons
(%19) 34	(%2/2) 4	(%44/5) 81	(%8/79) 16	(%14/3) 26	(%0) 0	21 (%11/5)	total	
(%32/9) 54	(%3/7) 6	(%15/2) 25	(%4/27) 7	(%7/32) 12	(%0) 0	60 (%36/6)	man	reasons of tattoo
(%53) 132	(%4) 10	%30) 75(	(%1/2) 3	(%2/8) 7	(%0) 0	(%9/2) 23	woman	
(%45) 186	(%3/8) 16	(%24/15) 100	(%2/4) 10	(%4/6)19	(%0) 0	(%20) 83	total	

## DISCUSSION AND CONCLUSION

Findings of this study show that among Shiraz city youths, prevalence of tobacco use (31.25%), prevalence of drug (5.16%) and prevalence of psychedelics (1.77%) and prevalence of alcohol use (17.89%) and prevalence of sexual relations out of the family framework (5.84%) and migration prevalence (2.49%) and tattoo prevalence is (6.42%) In a study conducted with Hashemi in 2016 in Larestan has shown the prevalence of tobacco use (14.5%) and prevalence of drugs (2.55%) and prevalence of psychedelics (1.87%) and doing risky actions (5.77%) and prevalence of alcohol use (11.9%) and prevalence of sexual relations out of family framework (7.49%) and

prevalence of migration (5.75%) and tattoo (0.84%). That using tobacco and tattoo in Shiraz city has been more than Larestan that this is due to more access to beauty institutes and hookah in Shiraz city. Also, prevalence of migration in Larestan has been more than Shiraz which is for this reason that south people are closer to the border and many Larestan people work in the countries of Persian Gulf domain, this difference exists, other cases of risky behaviors are consistent with each other. Also, a study conducted by Esmailzadeh showed that hookah use in students has the greatest prevalence (59.2%) and experience of using drugs (7.3%) and alcohol (16.7%) that the results of these two studies are consistent, but



using hookah in students is merely more than public. Allah Hajian et.al in their study showed that prevalence of smoking in Babol students in boys is 25.7% and in girls 3.6% and using psychedelics is 3% and physical conflict (risky action) is 33.5%. That the reason of this discrepancy in these two studies is that Allah Hajian study was merely conducted on students. Torkashvnd study on HIV positive people in Kerman and Rafsanjan showed that drug injection has been 61.5% and unprotected sexual behavior 40% and one third of people with HIV have had the record of tattoo before illness diagnose (20%). High percent of these results of this study is for this reason that this study has been merely conducted on very risky people with positive HIV. High prevalence of sexual relations out of family framework may indicate fading of attention to religion among youths and lack of suitable bed for youths marriage. Findings of this study are consistent with other studies. Comparing findings of this study by gender shows that prevalence of tobacco and drugs and psychedelics and risky actions and using alcohol and sexual relations out of family framework and migration are significantly more in boys than girls and just tattoo has been significantly higher in girls than boys. The results of Hashemi study (2016) show more prevalence of risky behaviors in boys than girls. Also, Allahhajian et.al showed that prevalence of smoking in boys has been significantly more than girls. Torkashvand study showed that men comparing women had significantly more behaviors like suicide and so on. The results of these studies were consistent with each other and generally prevalence of risky behaviors in men more than women. In explaining these results, we may say that men comparing women have more ease and freedom in access to tobacco and drugs and sharp instruments and psychedelics and suitable place for risky behaviors. Also, men comparing women has more courage and emotion for attracting the attention and doing risky behaviors. About prevalence of tattoo (especially eyebrow tattoo) which is more in women than men, we may say that today eyebrow tattoo and body tattoo is considered a beauty measurement for youth and with healthy methods and disposable means, many youths especially women (in eyebrow tattoo) consider this action a safe behavior that it seems that this action is not considered a risky behavior for people. Also, the results of this study showed that the greatest reason of consuming tobacco has been estimated peers pressure and recreational use with 22.74%. Also, Rezakhani Moghadam (2012) in their study on Tehran students showed that the main reason of smoking and using hookah has been recreation and entertainment which is consistent with the results of this study. The results of this study showed that the greatest reason of using drug are

respectively peers pressure 24.79% and then failure in life with 17.7% and economic poverty with 16.89%. The study of Ghaffar Ali Mahmoudi et.al showed that being with unfit friends with 79% and recreational use in friend parties with 74% had the greatest reason relating to friends and school in the present study in Khoramabad City. In the study of Molavi (2007) for investigating effective factors on tendency of youths to drug abuse, depression, divorce and family discrepancies have been stated as the most important factors in tendency of youths to drug abuse. Dehghan (2011) in a study declared the motivation of tendency to drug abuse in most cases as recreation and amusement (42.98%). The results of this study are consistent with all these studies. The results of this study showed that the greatest reason of using psychedelics is respectively recreational use (20.9%), failure in life (20.1%), parents problems (20.1%) and peer pressure (17.2%) and the greatest reason of doing dangerous actions has been estimated academic failure with 30.2% and peers pressure with 19.5%. No study was available on reason of using psychedelic and doing risky actions but Faezeh Adibnia et.al (2015) in a study considered tendency to risky behaviors as the product of interaction of cognitive, emotional, social (peers and social class) and family(family coherence). Fatemeh Alizadegan et.al in their study on Tehran students stated peers relation as one of reasons of risky behaviors. In the Chang study (2012), learning through peers has been examined and their significant relation has been specified. In explaining these results, we may say that: youths due to seeking excitation and feeling of being mature and curiosity and showing up and breaking norms do risky actions and the results of this study are consistent with other studies. The results of this study showed that the greatest reasons of using alcohol in youths are respectively being in welfare (25.94%) and peers pressure (24%) and recreational use (21.3%). In the study of Shams Alizadeh (2008) on Kordestan students the most prevalent motivation of using alcohol was mentioned as joy. The results of studies of Ali Akbar Haghdost et.al (2013) in Rafsanjan showed that 90% of alcohol toxicants have mentioned the reason of using alcohol as unemployment and lack of amusement. The reason of different causes in these studies is different casual variables considered in each of studies. In explaining the results of this study, we may say that ease of access to alcohol and unemployment and peers pressure and lack of suitable amusement have caused youths to tend these issues. The results showed that the greatest reasons of sexual contact out of family framework are respectively enjoying (34.1%), peers pressure (17.9%) and being in welfare (16.66%). But in women, the greatest reasons of sexual contact out of family framework are respectively

economic poverty (39.7%) and enjoying (31%). Faezeh Adibnia et.al (2015) in a study considered tendency to risky behaviors as the product of evolution of emotional, cognitive, social (peers and social group) and family (family coherence) factors. No appropriate study has been performed in this field and most studies have been performed in special groups like students and most studies estimated prevalence of risky behaviors. In explaining these results, we may say that lack of suitable bed for marriage, unemployment, fading of religion has caused the youths tend to sexual relation out of family framework. Also, concerning that the greatest reason of risky behaviors in women is economic poverty, we may say that women mostly do these actions for acquiring an income or in force which causes transfer and increase of infectious and contagious diseases that the role of supporting organizations in this section may be useful. The results of this study showed that the greatest reason of migration abroad has been estimated being in welfare (44.5) and men with (30.1%) has more migration than women (1.74%). Concerning that no study has been performed in this regard and in other studies migration has not been considered as a risky behaviors, so comparing with other studies is not possible. In explaining the results of this study, we may say that migration abroad has a direct relation with the people economic status. The results of this study showed that the greatest reason of tattoo in 18-35 years old youths is respectively beauty (45%) and being in welfare (24.15%). Mehrabi (2016) explains the factor of expressing identity as the most important factor (23.89% variance) and factor of message transfer as the least significant factor (7.771% variance) as the motivation and reason of athletes for tattoo. Regarding that few similar studies have been conducted but the results of the present study are consistent with previous studies. In explaining the results of this study, we may say that tattoo at the present time has a direct relation with high economic and social status of people, while in the past this behavior mostly occurred in groups with low social and economic status.

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