Iran Red Crescent Med J. 2019 May; 21(5):e65976. doi: 10.5812/ircmj.65976.

Published online 2019 May 5. **Research Article**

Barriers to Quitting Addiction in Iranian Women: A Qualitative Study

Abbas Rahmati [1,*], Fahimeh Zeraat Herfeh [1] and Seyed Omid Hosseini [1]

[1]Department of Psychology, Shahid Bahonar University of Kerman, Kerman, Iran

[*]*Corresponding author*: Ph.D, Associate Professor, Department of Psychology, Shahid Bahonar University of Kerman, Postal Code: 761691-13439, Kerman, Iran. Tel: +98-3431322724, Fax: +98-3433257347, Email: abr288@gmail.com

Received 2018 January 07; **Revised** 2018 February 26; **Accepted** 2018 April 03.

Abstract

Background: Substance abuse in women is a major public health problem, and despite the efforts to help women quit permanently, great numbers still end up in relapse.
Objectives: The present study aimed to investigate the barriers to quitting addiction in Iranian women.
Methods: In this descriptive qualitative research conducted in a university-affiliated hospital, Kerman, Iran, during 2016 - 2017, participants were selected using criterion sampling. The researchers interviewed 20 women with the mean age of 29.85 years (SD = 6.50), who were visiting two rehabilitation camps in the city of Kerman to quit the addiction. Transcripts were analyzed to find themes, which represented the shared consensus of the participants. The utilization of the qualitative analysis software MAXQDA 12 helped analyze and manage data of the study.
Results: The participants of the study reported that easy access to drugs, keeping in touch with drug users, the stability of attitudes, lack of/insufficient social support, coercive treatment, and neglecting Narcotic Anonymous (NA) meetings were barriers to the process of quitting addiction permanently and escalating relapse.
Conclusions: In order to facilitate the process of quitting addiction in women, access to drugs as well as keeping in touch with drug users must be restricted. Moreover, they should be encouraged to take part in educational and support programs, whose aim is to change the attitude of substance users and to motivate them to quit the addiction.

Keywords: Addiction, Attitudes, Anonymous, Barriers, Narcotics, Quitting, Social Support, Substance Abuse, Women

1. Background

Addiction is a chronic relapsing disorder and causes serious problems (1, 2) and disturbs the physical, social, and psychological life of individuals (3). It is characterized by behaviors, such as continuous use of the drug despite its negative outcomes, uncontrollable drug use, coercive use, and craving (4).

In general, women tend to abuse drugs less than men, yet, lately, addiction has been growing largely among them. Findings show that women, as compared to men, are more sensitive to drug use, treatment, and relapse (5).

The adverse psychological, medical, and functional outcomes of taking drugs are often more severe among women than men and women, who seek SUD treatment, report more familial, vocational, and social problems (6). In addition, as compared with their male counterparts, female drug users are treated rather unfairly and receive far less support from the society (7).

Although individuals with addiction issues make tremendous efforts to get rid of their addiction-related problems (8), and despite the relatively considerable periods of recovery they experience, they often report having issues in voluntarily controlling substance use and accordingly they face many setbacks (9, 10).

Studies that have examined barriers to quitting addiction have reported that inability to cope with negative emotions, cultural factors, lack of resources, and environmental issues are major barriers to quitting the addiction (11, 12). Hence, these barriers hinder successful and lasting recovery, and quitting addiction. Since studies conducted to examine the barriers to quitting addiction among Iranian women are limited, especially qualitative researches, the current study focused on the issue of women. The importance of the present study will be delineated once the outburst of addiction among Iranian women and the key role they play in families is considered.

2. Objectives

This research used the qualitative method because it can explore human behavior more profoundly and will provide the researchers with ample information from a

limited number of participants (13). This study focused on the details of the participants' lives, and attempted to examine the barriers to quitting addiction among women in the path to recovery, as well as the factors reinforcing relapse after they have quit.

3. Methods

3.1. Design

This research was a qualitative study, conducted in a university-affiliated hospital, in Kerman, Iran, during the years 2016 and 2017. The phenomenological qualitative methodology was used, among various types of qualitative methods for the present study. Each woman was interviewed individually inside the counseling room at the rehabilitation center and the session was recorded for later analysis. The participants were notified that the interviews were voice-recorded as it was not feasible for the researchers to remember all their answers, hence voice records were used for later analysis (14) and accordingly, their consensus was achieved. They were also informed that they could withdraw from the study at any stage and that their details would remain confidential.

3.2. Participants

Twenty women, who were in the process of recovery in rehabilitation camps were interviewed. The sample represented addicted women in the city Kerman, who were chosen from two governmental and private rehabilitation centers. All the members of these two centers either volunteered or were brought there by their families and friends. After arrangements with the management of the rehab centers, the researchers met with each woman face to face (there were 50 women in each center) and explained the aims and methods of the research to them. Finally, members who were eager to take part in the study and met the criteria were selected. All participants were Iranian and spoke Farsi. In addition to speaking Farsi, willingness to participate in the study, and tendency to answer the questions were the main criteria. Women diagnosed with psychotic disorders were excluded. Criterion sampling was chosen to select the participants, who met the conditions of interest of the study.

3.3. Data Collection

Data were collected through semi-structured interviews (15). Data collection took ten months with each interview lasted 40 to 60 minutes. Interviewers were members of the research team, including a Ph.D. associate professor specializing in family counseling (male) and an MA student in clinical psychology (female). All interviews were conducted by the research team, who were familiar with interviewing techniques. Interviews were conducted until data saturation of information and the sample size was based on data saturation (16).

3.4. Data Analysis

Five major steps were taken in order to analyze the data. These steps included "familiarizing, identifying a thematic framework, indexing, charting, mapping, and interpreting" (17). In the first stage, which is familiarizing, in order to become familiar with the content of data and to observe the major ideas and themes, which are repeated, the researchers studied the data profoundly and transcripts were reviewed in full detail and, as a result, the interviews were transcribed to a gamut of less than 24 hours. Accordingly, the researchers became familiar with the diversification and range of the subjects and topics at hand. At the identifying stage, textual data of the study was divided into comprehendible parts (key issues, concepts, themes, and motifs) so that a circumstantial data index was achieved. This process was carried out in retrieving, examining, and exploring data in later stages as well. The researchers then specified and delineated major codes, accordingly. At the indexing stage, once the themes were identified, codes with similar content and meaning were selected and core concepts were acquired. The researchers followed this framework to review, give additional comments, and categorize the transcriptions. Major contradictions and dichotomous concepts, theories, experiments, and research were compared in order to infer the achieved patterns and relationship among these findings. Data were encoded at the same time. After this stage, key ideas and concepts, as well as recurring themes, were identified based on the thematic framework method. Charting stage, which involves a great deal of abstraction and synthesis, was done. Certain concepts, which were regarded as the main ones, were selected and assigned to the primary codes. At the final stages of mapping and interpreting, the initial framework, which included 16 major concepts was developed and later, in the final analysis, they were abated to six. The utilization of the qualitative analysis software MAXQDA, version 12.3.1 (VERBI Software: Berlin, Germany), helped manage this process.

3.5. Trustworthiness

According to Guba and Lincoln evaluative criteria, four factors of credibility, dependability, conformability, and transferability express rigidity of a qualitative research (18). In this study, the researchers held several meetings for potential encoding and thematic analysis of data. Hence, the findings are the result of extensive discussions and

analysis of data between the research team members. In addition to this, the research team hired a qualitative scholar, who was not part of the data collection process, to provide insightful feedback on the method of the study, as well as the data analysis (19). The hired scholar was considered an expert, who examined the protocol independently, confirming that the findings were in line with qualitative methodology, reflecting genuineness of the collected data. The researchers also shared the findings with those who were interviewed (20) to make sure that the conclusions reflected the real feelings and experiences of the participants.

3.6. Ethical Considerations

The present study and its procedures were approved by Shahid Bahonar University of Kerman. Before the participants took part in the study, the aims of the study were explained for them, anonymity and secrecy were assured, and their consensus was earned.

4. Results

Participants were 20 women with the mean age of 6.50 ± 29.85, which included 95% housewife, 5% employed, 75% married, 20% divorced, and 5% single. Of the total participants, 5% were illiterate, 10% had elementary education, 45% had a guidance school education, 10% incomplete high school, and 30% completed high school. Some of them had abused one type of drug and others had abused multiple drugs (Table 1).

Table 1. Demographic Characteristics of Participants

Participant	Age, y	Age of Abuse, y	Number of Admissions
P 1	35	2	First time
P 2	23	3	Two times
P 3	38	20	More than 4 times
P 4	24	10	Two times
P 5	19	2.5	Two times
P 6	36	17	Three times
P 7	32	12	More than 4 times
P 8	27	1.3	Three times
P 9	34	2.5	First time
P 10	22	10	First time
P 11	20	4	More than 4 times
P 12	35	2	First time
P 13	29	9	Two times
P 14	35	2	Two times
P 15	23	1	First time
P 16	39	4	Two times
P 17	38	7	Two times
P 18	33	18	More than 4 times
P 19	30	16	Two times
P 20	25	4	Two times

The participants in the present study mentioned six factors as barriers to quitting addiction. These six factors and their sub-factors are shown in Table 2, as explained below.

4.1. Access to Drugs

One of the main barriers, mentioned by most participants, was access to drugs. Some of the participants stated that when they quitted addiction and returned home, it was too difficult to keep away from drugs because some of their family members still took drugs. Here is a participant's take:

"My mom was a drug user, and she never precluded me not to take drugs, or she would never say about the dangers of drugs. That is why I would start retaking drugs after quitting" (P 20).

Another participant, who was in recovery for the first time, believed her family members' addiction was an essential barrier to quitting addiction permanently, saying:

"Four of my family members are addicts; only God can help me from relapse into drugs once I get back home. It is true that it depends on me too, but drugs are so tempting that you will feel the urge to take them once you see them" (P 10).

Other participants had quit addiction for a while, but during recovery, they had continued to sell drugs, and since access was easy for them, they were again driven into relapse. One of the participants, who had quit drugs several times said:

"I didn't have any money, so I had to start selling drugs again, and because of that, I relapsed and took drugs again" (P 18).

In other cases, the participant was not a drug dealer herself and instead one of their family members sold drugs and that tempted them to retake drugs.

Another participant said she went into relapse because her family was taking drugs as well as selling them:

"My family is taking drugs as well as selling them, and that is one reason why I would have a relapse again after I quit" (P 11).

Living in neighborhoods where addicts and drugs are found easily plays an important role in having easy access to drugs and consequently heading into relapse. Here's one of the participants' take in this regard:

Table 2. The Summary of the Themes and the Sub-Themes

Themes/Sub-Themes	Percent
Access to drugs	
Continuance of drug use by a family member	40
Selling drugs by the individual or a family member	45
Living in drug-infested areas	35
Spouse's addiction	25
Keeping in touch with drug users	
Keeping in touch with addicted friends after quitting	30
Making new addicted friends during recovery	5
Keeping in touch with addicted colleagues at the workplace	10
Keeping in touch with addicted individuals during recovery	5
Stability of attitudes	
Family's stability of attitude	40
Society's stability of attitude	10
Lack or insufficient support	
Lack or insufficient financial support from family	10
Lack or insufficient emotional support from family	20
Coercive treatment	
Forced to quit by family	25
Neglecting NA meetings	
Leaving NA meetings	15
Not being in line with NA meetings	5
Neglecting NA meetings by families and not participating in them	15

Abbreviation: NA, narcotic anonymous.

"There are a lot of addicts where I live. In the house, next door, live a couple, who are both addicts and their house is a stamping ground for drug addicts. They pay the owner to use the place. I used to go there to take drugs. When my parents took me to rehab, I would go there secretly to take drugs. They (my parents) thought I would not take drugs anymore because I was taking drug maintenance pills" (P 11).

Also, for some participants, their husband's addiction was the key reason for their easy access to drugs, and obviously, relapse. According to them, despite quitting addiction, once they were back at home and saw their husband taking drugs, they could not resist the temptations to take drugs, hence relapse occurred. This participant said:

"There's no one, who can impact me as strongly as my husband, the effect of his addiction on me is always there" (P 13).

Another participant believed that her husband should quit in the first place in order for her to be able to quit. She said:

"If I want to stay in recovery, my husband shouldn't take drugs and no drugs should be in the house. When there's no drug at home, there's no temptation (for me) to take them" (P 15).

4.2. Keeping in Touch with Drug Users

Once the individual has quit yet has kept contact with drug users, they have been unable to stay in recovery and keep clean; hence, they headed into relapse. Some of these individuals, after they had quit, they kept in touch with their addict friends and therefore they had failed to stay in recovery. In their own comments they explained:

"I would hang around with my friends and they asked me to take drugs again. They would say you have been clean for a month now, but I am telling you, with just four-five puffs, all that one month would go in vain" (P 4).

Others had made friends with addicts after quitting, and that was the reason for their relapse. One of the participants said:

"I had quit and was clean for several years. Then, I made friends with a guy, and he introduced me to crack, and I got addicted to it. She told me crack is not addictive and after the first time, I felt so good that I was awake all night. But after that, I got addicted to it" (P 7).

According to some of the participants, working in environments, in which they were in touch with addicts would pave their way to relapse, after they had quit. For instance, one participant commented:

"I started working at a pizzeria after quitting, when I noticed one of my coworkers takes drugs. She told me she knows a nice boy and that she takes drugs with him and she wanted me to join them that tonight. I couldn't resist my temptations and joined them" (P 13).

In other cases, after quitting, these participants kept in touch with friends they had made in rehab and their friends' relapse had led to their own relapse as well. One of them said:

"I made friends with this guy at rehab, but I didn't know she has gone into relapse again. At first, when she offered to take drugs I resisted. But she told me since crack is not addictive, let's try it. But because I didn't like crack she got heroine and I couldn't help taking it since I had already been a heroin addict" (P 11).

However, others were in touch with their addict friends, both during and after recovery. Not only had it hampered their process of recovery, yet they found themselves taking new drugs. An example was a participant who said:

"I was recovering from heroin addiction when my friend offered me crack. She told me it's not addictive and that it makes me feel better and I took it" (P 16).

Participants also believed that one of the necessary factors in quitting addiction successfully is to avoid people, who are drug users. In this regard, a participant said:

"In order to have long-term recovery we need to have non-drug user friends and do healthy activities" (P 8).

4.3. Stability of Attitudes

A great number of the participants claimed that quitting addiction has not changed other people's attitude towards them. They said that they headed into relapse as a reaction to the fixed (and biased) attitude of others towards them as addicts. Below is a participant's take on this:

"When I was in recovery, my family thought and suspected that I was still taking drugs. I dared them to have me examined if they still had their suspicions but they disagreed. They said I was lying. They should have had me tested to prove me right, but they wouldn't. They thought I was making fun of them. This was the reason that led me into relapse. I wasn't doing drugs and if I had been tested, they would have known I was clean" (P 20).

Some of the participants claimed that they didn't have their families' and the society's support, that is, they were perceived as addicts, even though they quit and were in recovery. One of them said:

"After quitting, we are not accepted by the society and the addiction scarlet is always with us. We need someone's support to hold our hand (and help us), but there's none. They should believe that we have quit and we're clean now, but instead, they ostracize us. When I am rejected by the society, I say to myself that's it, I will take drugs again because apparently, it doesn't make any difference for them whether I am clean or not" (P 9).

4.4. Lack of or Insufficient Support

Some of the participants claimed that they weren't supported properly by their families after they had quit and therefore they headed back into relapse. One of these participants, whose family had pushed her to quit several times but had not supported her during recovery, explained:

"I wasn't supported by my family during recovery so I told myself it's not important for them, I will take drugs again. I was pushed to quit several times by my mom, but there was no support after that. My mother had remarried and her husband wasn't very fond of us (my mom's children), therefore, he wouldn't allow us to stay at his home. Obviously, I would go to my friends' houses and take drugs again" (P 7).

On the other hand, some of them said they didn't need financial support, but rather, they needed emotional and mental support. One of the participants commented:

"All we need is emotional support. We don't need financial support. We are not financially in trouble. We need to feel the support, especially from the family. The one important thing for staying clean is family support. That's all I expect during recovery" (P 8).

Being too supportive, families contribute to relapse in yet another form. Here's a participant's take on this:

"My family supports me once I am in treatment, but it doesn't help. When I see their support I tell myself next time they will also support (therefore I start taking drugs again)" (P 11).

The above-mentioned participant said the following on stable recovery:

"In order to quit successfully, my family shouldn't support me because (if they do) then I will take drugs again."

This comment shows that keeping a balance in being supportive is very important since too much support can harm the process of recovery.

4.5. Coerced Addiction Treatment

A couple of participants mentioned that coerced addiction treatment had led to relapse for them. In other words, since they did not sign up for treatment in previous instances by their own will, they were instantaneously driven back towards drugs once they were released from rehab camps. Furthermore, some participants started using new drugs as a reaction to the coercive treatment they were given. In her own words, one participant stated:

"I was taking opium when my family took me to camp by force. I was an opium addict, but I started taking heroin when I was released from rehab, because I was forced to go to camp. My information about heroin increased during camp time, and I had never heard about it. Just a half hour after I was released from camp, I took heroin but now I have volunteered to quit" (P 6).

These lines demonstrate the ineffectiveness of coercive treatments. One of the participants, who had been forced to go to rehab by her parents stated:

"I do want to quit but since I have been forced to go to rehab, I will have a reason to go back to drugs, although I know it is going to damage me" (P 14).

Therefore, in quitting addiction and signing up for stable treatment, the willpower of the individual is essential, as stated by the participants. A participant's take on this was as follows:

"Unless an addict is tired of her addiction, and regardless of how many times they have shown up in rehab, they will not quit" (P 9).

4.6. Neglecting Narcotic Anonymous (NA) Meetings

Some of the participants said that relapse occurred when they neglected and left narcotic anonymous (NA) meetings. One participant said:

"I used to attend NA meetings but after a while I stopped that. During the last two years when I was clean I went to all NA meetings, but I stopped attending the meetings and that lead to relapse" (P 18).

Some of the participants claimed that not being in line with NA meetings was the reason why they relapsed. Despite taking part in the meetings, they couldn't help taking drugs because they were not in line with NA meetings, and couldn't act as they were told to. An instance is a participant who said:

"Since my brother and sister were scolded because of my addiction, I wanted to make it up to them and instead of taking the first step (of the program), I jumped to the third and fourth steps, and consequently I was under pressure. These steps have to be taken one after another and since there was too much pressure to tolerate, I told myself I cannot do it and therefore I started taking drugs again" (P 13).

Some of the participants, however, blamed their families for neglecting NA meetings, hence their relapse. One of the interviewees said:

"After I quit, my family didn't know how to behave towards me and kept getting on my nerves. That would become my reason to take drugs again. My family didn't take part in NA meetings designed for families, although these meetings are really helpful. Others cannot fully understand addicts" (P 17).

Many of the participants mentioned the important role of NA meetings in order to achieve a stable recovery. One interviewee, who had never taken part in an NA meeting, believed it would help to achieve a stable recovery, and said:

"I can stop taking drugs if I go to NA meetings. The only thing that can hold you back from drugs is NA meetings. If you can go to a 90-day meeting and stay clean during that period, you will be fine" (P 15).

5. Discussion

This study demonstrated the barriers for quitting addiction among Iranian women. Identifying these barriers can help individuals quit successfully, reduce the negative consequences of addiction, and minimize the risks to women's health, including unintended pregnancy, sexually transmitted diseases, sexual victimization, sexual risk behaviors, cardiovascular and gastrointestinal diseases, breast cancer, and low birth weight (6).

In the present study, six factors were identified as barriers to quitting addiction among Iranian women, including access to drugs, keeping in touch with drug users, stability of attitudes, lack or insufficient support, coercive treatment, and neglecting NA meetings.

After individuals stopped taking drugs and got back to their houses and saw their parents take drugs, they were more likely to go into relapse. Studies also support this, highlighting that having drug addicted parents, correlates with delayed recovery (21), needless to say, living with an addicted parent makes access to drugs easy.

Furthermore, access to drugs and relapse is more likely to take place if individuals, their parents or other family members are dealing drugs, namely selling them. Studies also show that drug-related activities, such as distributing and selling them will lead to drug proximity, which in turn ends in relapse (22, 23).

Partner's addiction is another barrier to quitting addiction and going into relapse. These findings are in line with studies that show dependence on an intimate partner will endanger women in different ways, making them use drugs along with their intimate male partners (23).

However, another way which leads to relapse is to be in an environment where there is easy access to drugs or others are taking drugs. As shown in other studies, once the individual has quit, yet their environment has many drug-associated cues, the person will encounter powerful cravings and compulsive drug-seeking behaviors, which will lead to relapse (24).

Keeping in touch with friends, who are addicted to drugs and making new friends with people, who are drug users, after quitting addiction can also lead to relapse. Some studies showed that individuals, whose friends use drugs are more likely to increase their substance use, whereas having friends, who are not drug users will lead to a decrease in drug use (25). Other studies demonstrated that friends' substance use behavior is one of the long lasting factors predicting the use of different substances and changes in current drug usage (26).

Hence, it is essential that women avoid environments, in which addicts are found. On the other hand, families have to provide a situation, in which they will be least in touch with addicts, or drug-related settings, so that they can have a successful and stable recovery.

Moreover, if the attitude towards addicted women has not changed after they have quit and they are treated as if they are still addicts, relapse is likely to occur. Needless to say, it is critical that the attitude of their families and the society towards them change, in a way that helps them obtain a stable recovery.

In other cases, lack of social support during recovery has led to relapse. If the individual doesn't receive enough emotional, mental, and financial support from their family and society, they are more likely to have a relapse and start to take drugs again. It is important to note that social support plays a critical role in reducing the symptoms of drug dependence, preventing relapse in those receiving treatment and stopping stressors (27, 28).

Social support facilitates the process of treatment, and different social support systems can effectively speed up treatment (29). Family support is also effective in treating addiction (30). Findings show that maternal support correlates negatively with alcohol use (31), and mother-adolescent relationship support is associated with lower levels of concurrent substance use as well as lower levels of hard drug use over time (26).

Coercive treatment can also end in relapse. Women in the present study believed that as they have not made up their mind to quit, coercive treatment will not help. If there's no reason to quit addiction, there will be no interest in doing so (32). Along with this finding, studies have shown that having a strong motivation to change is a facilitating factor in treatment (29).

Finally, participants' and their families' neglect of NA meetings and not acting in line with their steps was another factor affecting stable recovery, driving the addicts to relapse. Hence, it is essential for addicted women to be encouraged to attend NA meetings and act accordingly in order to achieve a stable recovery.

This study was one of the first to shed light on barriers for quitting addiction among Iranian women. The main strength of this study was to apply a qualitative methodology through first- hand experiences of addicted women.

One of the limitations of the study was the limited number of the sample, from a population of Iranian women. It is advisable to be cautious in generalizing the findings to other populations. Certain official and time-bound regulations for meeting the participants were another limitation of the study.

5.1. Conclusions

Findings of the study showed that in order to facilitate the process of quitting addiction for women, factors such as family, society, friends, spouse, life environment, job and daily interactions have to be taken into account. Furthermore, women's motivation has to be addressed more profoundly so that they take part in NA meetings more than before.

Acknowledgments

The authors hereby thank the officials in charge of Kerman rehabilitation centers as well as the participants, who aided in conducting the present study.

Footnotes

Authors' Contribution: Abbas Rahmati supervised each aspect of the study, from conception, through data collection, analysis, and generating the submitted journal manuscript. Fahimeh Zeraat Herfeh participated in the data collection and contributed to the literature review and other parts of the manuscript; also, conducted the qualitative research analysis and assisted with writing the methods portion of the manuscript. Seyed Omid Hosseini participated in parts of the data collection and some parts of generating the manuscript.

Conflict of Interests: The authors declare no conflict of interest in this study.

Ethical Approval: The present study and its procedures are approved by Shahid Bahonar University of Kerman. Before the participants take part in the study, the aims of the study was apprised to them, anonymity and secrecy was assured, and their consensus was earned.

Funding/Support: This study was funded and supported by Shahid Bahonar University of Kerman.

References

1. McLellan AT, Lewis DC, O'Brien CP, Kleber HD. Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *JAMA*. 2000;**284**(13):1689–95. [PubMed: 11015800].
2. Levesque RJ. *Encyclopedia of adolescence*. Springer Science & Business Media; 2011.
3. Rezapour T, DeVito EE, Sofuoglu M, Ekhtiari H. Perspectives on neurocognitive rehabilitation as an adjunct treatment for addictive disorders: From cognitive improvement to relapse prevention. *Prog Brain Res*. 2016;**224**:345–69. doi: 10.1016/bs.pbr.2015.07.022. [PubMed: 26822366].
4. Egervari G, Ciccocioppo R, Jentsch JD, Hurd YL. Shaping vulnerability to addiction - the contribution of behavior, neural circuits and molecular mechanisms. *Neurosci Biobehav Rev*. 2018;**85**:117–25. doi: 10.1016/j.neubiorev.2017.05.019. [PubMed: 28571877]. [PubMed Central: PMC5708151].
5. Zhou Y, Zhao M, Zhou C, Li R. Sex differences in drug addiction and response to exercise intervention: From human to animal studies. *Front Neuroendocrinol*. 2016;**40**:24–41. doi: 10.1016/j.yfrne.2015.07.001. [PubMed: 26182835]. [PubMed Central: PMC4712120].
6. McHugh RK, Votaw VR, Sugarman DE, Greenfield SF. Sex and gender differences in substance use disorders. *Clin Psychol Rev*. 2018;**66**:12–23. doi: 10.1016/j.cpr.2017.10.012. [PubMed: 29174306]. [PubMed Central: PMC5945349].
7. Myers B, Carney T, Wechsberg WM. "Not on the agenda": A qualitative study of influences on health services use among poor young women who use drugs in Cape town, South Africa. *Int J Drug Policy*. 2016;**30**:52–8. doi: 10.1016/j.drugpo.2015.12.019. [PubMed: 26797188]. [PubMed Central: PMC4829448].
8. Graham M, Bitten C. Counseling intentional addiction recovery grounded in relationships and social meaning. *Counseling and action 2015*. New York: Springer; 2015. p. 211–22. doi: 10.1007/978-1-4939-0773-1_12.
9. Heitmann J, van Hemel-Ruiter ME, Vermeulen KM, Ostafin BD, MacLeod C, Wiers RW, et al. Internet-based attentional bias modification training as add-on to regular treatment in alcohol and cannabis dependent outpatients: A study protocol of a randomized control trial. *BMC Psychiatry*. 2017;**17**(1):193. doi: 10.1186/s12888-017-1359-2. [PubMed: 28535815]. [PubMed Central: PMC5442699].
10. Sellman D. The 10 most important things known about addiction. *Addiction*. 2010;**105**(1):6–13. doi: 10.1111/j.1360-0443.2009.02673.x. [PubMed: 19712126].
11. Martin RA, Cassidy RN, Murphy CM, Rohsenow DJ. Barriers to quitting smoking among substance dependent patients predict smoking cessation treatment outcome. *J Subst Abuse Treat*. 2016;**64**:7–12. doi: 10.1016/j.jsat.2016.02.007. [PubMed: 26979552]. [PubMed Central: PMC4818181].
12. Pagano A, Tajima B, Guydish J. Barriers and facilitators to tobacco cessation in a nationwide sample of addiction treatment programs. *J Subst Abuse Treat*. 2016;**67**:22–9. doi: 10.1016/j.jsat.2016.04.004. [PubMed: 27296658]. [PubMed Central: PMC4911699].
13. Walker R. *Applied qualitative research*. Gower Pub Co; 1985.
14. Neale J, Allen D, Coombes L. Qualitative research methods within the addictions. *Addiction*. 2005;**100**(11):1584–93. doi: 10.1111/j.1360-0443.2005.01230.x. [PubMed: 16277621].
15. Alvesson M. *Interpreting interviews*. Sage; 2011. doi: 10.4135/9781446268353.
16. Bernard HR. *Research methods in anthropology: Qualitative and quantitative approaches*. Rowman Altamira; 2011.
17. Rashidian A, Eccles MP, Russell I. Falling on stony ground? A qualitative study of implementation of clinical guidelines' prescribing recommendations in primary care. *Health Policy*. 2008;**85**(2):148–61. doi: 10.1016/j.healthpol.2007.07.011. [PubMed: 17767976].
18. Shams H, Garmaroudi G, Nedjat S. Factors related to bullying: A qualitative study of early adolescent students. *Iran Red Crescent Med J*. 2016;**19**(5). e42834. doi: 10.5812/ircmj.42834.
19. Grbich C. *Qualitative data analysis: An introduction*. Sage; 2012.
20. Mero-Jaffe I. 'Is that what i said?' interview transcript approval by participants: An aspect of ethics in qualitative research. *Int J Qual Methods*. 2011;**10**(3):231–47. doi: 10.1177/160940691101000304.
21. Athamneh LN, Stein JS, Quisenberry AJ, Pope D, Bickel WK. The association between parental history and delay discounting among individuals in recovery from addiction. *Drug Alcohol Depend*. 2017;**179**:153–8. doi: 10.1016/j.drugalcdep.2017.06.037. [PubMed: 28780380]. [PubMed Central: PMC5599355].
22. Carbone-Lopez K, Miller J. Precocious role entry as a mediating factor in women's methamphetamine use: Implications for life-course and pathways research*. *Criminology*. 2012;**50**(1):187–220. doi: 10.1111/j.1745-9125.2011.00248.x.
23. Fast D, Small W, Krusi A, Wood E, Kerr T. 'I guess my own fancy screwed me over': Transitions in drug use and the context of choice among young people entrenched in an open drug scene. *BMC Public Health*. 2010;**10**:126. doi: 10.1186/1471-2458-10-126. [PubMed: 20222984]. [PubMed Central: PMC2853507].
24. Volkow ND, Baler RD, Goldstein RZ. Addiction: Pulling at the neural threads of social behaviors. *Neuron*. 2011;**69**(4):599–602. doi: 10.1016/j.neuron.2011.01.027. [PubMed: 21338873]. [PubMed Central: PMC3188411].
25. Valente TW, Ritt-Olson A, Stacy A, Unger JB, Okamoto J, Sussman S. Peer acceleration: Effects of a social network tailored substance abuse prevention program among high-risk adolescents. *Addiction*. 2007;**102**(11):1804–15. doi: 10.1111/j.1360-0443.2007.01992.x. [PubMed: 17784893].
26. Branstetter SA, Low S, Furman W. The influence of parents and friends on adolescent substance use: A multidimensional approach. *J Subst Use*. 2011;**16**(2):150–60. doi: 10.3109/14659891.2010.519421. [PubMed: 21747736]. [PubMed Central: PMC3132133].
27. Hamdan-Mansour AM, Puskar K, Sereika SM. Perceived social support, coping strategies and alcohol use among rural adolescents/USA sample. *Int J Ment Health Addict*. 2006;**5**(1):53–64. doi: 10.1007/s11469-006-9051-7.
28. Thoits PA. Stress, coping, and social support processes: Where are we? What next? *J Health Soc Behav*. 1995;**Spec No**:53–79. doi: 10.2307/2626957. [PubMed: 7560850].
29. Hewell VM, Vasquez AR, Rivkin ID. Systemic and individual factors in the buprenorphine treatment-seeking process: A qualitative study. *Subst Abuse Treat Prev Policy*. 2017;**12**(1):3. doi: 10.1186/s13011-016-0085-y. [PubMed: 28086837]. [PubMed Central: PMC5237159].
30. Klostermann K, O'Farrell TJ. Treating substance abuse: Partner and family approaches. *Soc Work Public Health*. 2013;**28**(3-4):234–47. doi: 10.1080/19371918.2013.759014. [PubMed: 23731417].
31. Brenner AB, Bauermeister JA, Zimmerman MA. Neighborhood variation in adolescent alcohol use: Examination of socioecological and social disorganization theories. *J Stud Alcohol Drugs*. 2011;**72**(4):651–9. doi: 10.15288/jsad.2011.72.651. [PubMed: 21683047]. [PubMed Central: PMC3125888].
32. Manlatt GA, Gordon J. *Relapse prevention*. New York; 1985.