Published online 2018 August 5.

Research Article



Effective Factors in First Drug Use Experience Among Male and Female Addicts: A Qualitative Study

Abbas Rahmati 601, Fahimeh Zeraat Herfeh 601 and Seyed Omid Hosseini 1

Received 2018 January 21; Revised 2018 June 09; Accepted 2018 June 23.

Abstract

Background: Addiction is a chronic relapsing disorder and there are several factors influencing its commencement and continuance.

Objectives: The aim of the present study was to examine the effective factors in first drug use experience among male and female addicts in recovery.

Methods: Interviews were performed with 40 individuals (20 females and 20 males) at addiction treatment centers across the city of Kerman, using criterion sampling. Transcripts were analyzed for themes, which represented the shared consensus of the research participants and the utilization of MAXQDAI2 software helped in the analysis of data.

Results: Participants of the present study reported four factors, including family (addiction of a family member, family's positive attitude towards drug use, family's belief that drugs are curative, and selling drugs by a family member), friends (having addict friends at school, military service, marital life, and blindly following friends' opinion towards addiction), partner (addiction of a spouse and their compulsions), and stress (stress as a result of loss or bereavement and physical pain) as the most effective factors paving the way for their first drug use experience. Three factors of family, friends, and stress were common for both males and females yet, interestingly, partner's addiction was only referred to by females as the main reason for their first drug use experience. Conclusions: The findings of the present study stress the need to focus on the role of family in preventive addiction programs, as well as educating individuals to learn better partner-seeking and friendship skills, and stress management.

 $\textit{Keywords:} \ \textbf{Substance-Related Disorders, Mental Health Recovery, Qualitative Research}$

1. Background

Addiction is among the top four crises of the twentieth century, on top of all social threats and pathologies, and is one of the most painful issues in today's world, afflicting many communities, including Iranians (1). Addiction is a chronic relapsing disorder, during which drug consumption is continued, despite its catastrophic outcomes (2). Substance abuse and dependence is one of the major sanitary, mental, and social problems of the current era and is on top of the most important issues in healthcare services, worldwide, directly effecting individuals (3).

Every year, tens of thousands of people are victims of drug-related issues and billions of dollars are spent to mend the irreparable harms of drugs, causing personal, familial, and social problems (4). In addition, drug users experience different individual issues, such as receiving diagnosis of infectious diseases, undergoing mental abnormalities, having behavioral disorders, vocational, financial, juridical, and legal problems (5). Although drugs are so-

cially undesirable, people from different social levels are engaged with its plight, as the disastrous outcomes can bring down whatever moral values there are (6).

In the latest report by the United Nations Office on Drugs and Crime (UNODC), Iran obtained the highest number of drug-dependent individuals. Along with this report, the state welfare organization of Iran reported an 8% annual growth of drug use, whereas the growth rate of the population was 2.6. Hence, the number of substance users has grown three folds more than that of the population (4). Furthermore, in the recent years, the tendency to drug use has shifted from traditional drugs, such as opium and bang, to industrial drugs, such as heroin (7).

Drug use is increasing nowadays and there are various reasons as to why this is the case. Some people take drugs to become socially accepted while others do so to feel grown up and show their independence, whereas some others do drugs to soothe their pain (8). Several studies have examined different factors effecting drug use and their results have shown that familial interactions and par-

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

^{*}Corresponding author: Associate Professor, Department of Psychology, Shahid Bahonar University of Kerman, Kerman, Iran. Email: abr288@gmail.com

ents' roles, low levels of parental monitoring (9), and having drug addicted friends can predict drug use in individuals (10). Also, adverse childhood experiences (11), parental divorce/separation (12, 13), stress (14), and little involvement with religion (15, 16) are some other factors effecting the possibility of drug use.

The general understanding of addiction is that it is mainly a phenomenon involving males, whereas it can be as serious a harm to females, as it is for males. It is an accepted general fact that females tend to take drugs less than males. Recent studies, however, reported that the number of female addicts is increasing (17). Hence, as the phenomenon of addiction is spreading among males and females, it is essential to determine factors affecting the first experience of drug use so that preventive programs are planned accordingly. The reason is many individuals continue taking drugs after its first use for one reason or another, and consequently end up in devastating outcomes of addiction.

The aim of the present study was to examine the effective factors in the first experience of drug use from the perspective of male and female addicts, who are in recovery. Due to the unique feature of qualitative studies in exploring and expressing human behavior as well as the immense information, which is acquired from a few people (18), it was chosen as the method of the present study. Since qualitative research provides rich findings, it seems that the phenomenological qualitative methodology was an appropriate method for the present study. In this study, the researchers focused on finding details of experiences in the life of individuals and attempted to determine reasons for first drug experience of males and females.

2. Methods

2.1. Design

The researchers chose phenomenological qualitative methodology, among various types of qualitative methods, for the present study. The aim of the study was to determine factors affecting the first experience of drug use among males and females, through their own reports. Data were collected through semi-structured interviews. This kind of interview enables participants to share the story of their life and their experiences, and it helps observe the world through their perspectives (19).

2.2. Participants and Data Collection

Interviews were done with 40 individuals (20 females and 20 male), who were receiving treatment at addiction treatment centers across the city of Kerman (one center specialized for treating females and one specialized in treating males). Following qualitative research standards,

criterion sampling was chosen to select the participants, who met the conditions of interest of the study. In addition to speaking Farsi, willingness to participate in the study, and tendency to answer the questions were the main criteria. Individuals diagnosed with psychotic disorders were excluded.

Once sampling was done, interviews were performed individually inside a counseling room at the addiction treatment center and the session was recorded for later analysis. The researchers told the participants that the interviews were voice-recorded because it was impossible for the researchers to remember all their answers, hence the voice records would be used for later analysis (18) and accordingly, interviews were done with those, who agreed for their voice to be recorded.

Data collection took five months (April to September 2017) and each interview lasted between 40 and 60 minutes. Interviewers were members of the research team, including a PhD 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.

During data collection, saturation was achieved, meaning the size of the sample was adequate for the present study (20). In both groups of females and males after the fifteenth interview, the researchers realized the gradual decrease of data to a point where the law of diminishing returns was occurring with the data.

2.3. Data Analysis

Open coding was used to analyze the data (21) and the researchers did not have any pre-conceived constructs. In some instances, codes were merged or removed because there was too much similarity in the viewpoints of the participants. In other cases, those codes with little or no support to represent the whole sample were removed.

Themes were derived from the codes, and those were the constructs reflected from the viewpoint of most participants. Also, the researchers made great use of the qualitative analysis software MAXQDA (version 12).

All the reported findings of the study represent the consensus of the participants. Demographic characteristics of female and male participants are shown in Tables 1 and 2, respectively.

2.4. Ethical Considerations

The present study and its procedures were approved by Shahid Bahonar University of Kerman.

Participant	Age	Duration of Abuse	First Used Substance
1	35	2 years	Crack
2	23	3 years	Crack
3	38	20 years	Opium
4	24	10 years	Opium
5	19	2.5 years	Heroin
6	36	17 years	Opium
7	32	12 years	Opium
8	27	1 year and 3 months	Heroin
9	34	2.5 years	Heroin
10	22	10 years	Crack
11	20	4 years	Opium
12	35	2 years	Heroin
13	29	9 years	Opium
14	35	2 years	Crack
15	23	one year	Heroin
16	39	4 years	Opium syrup
17	38	7 years	Heroin
18	33	18 years	Heroin
19	30	16 years	Opium
20	25	4 years	Opium

able 2. Demographic Characteristics of Males Participants				
Participant	Age	Duration of Abuse	First Used Substance	
1	26	12 years	Opium	
2	32	20 years	Cigarette	
3	40	21 years	Cigarette	
4	27	7 years	Opium	
5	38	5 years	Opium	
6	32	12 years	Heroin	
7	38	15 years	Opium	
8	27	3 years	Crack	
9	21	2 years	Opium	
10	31	9 years	Opium	
11	24	4 years	Opium	
12	29	13 years	Opium	
13	24	12 years	Opium	
14	36	6 years	Heroin	
15	22	4 years	Cigarette	
16	24	8 years	Opium	
17	36	8 years	Opium	
18	39	14 years	Opium	
19	44	26 years	Opium	
20	37	10 years	Opium	

3. Results

Preliminary codes were derived during data analysis, and at the end four major factors were found. These factors were as follows:

3.1. Family

The majority of the participants considered the role of family as the most important factor in triggering their first drug use experience. They believed parents' or other family members' drug use was the key factor triggering their attempt to try drugs for the first time. A participant, highlighting the influential role of his father's addiction, had the following to say about his first time trying drugs:

"My father is a truck driver and he takes drugs every night. I was curious and wanted to know what it was that he is taking and I didn't know where I could find and take it (other than home). In fact, I was 16 when I took drugs for the first time. I was home and decided to eat some of the opium that my father had. I used to swallow a pellet of opium every day and then it increased to 1.5 mithqa (a unit of mass equal to 4.25 grams), and after that, I started taking other drugs. I might have never touched drugs if my father had not been a drug addict." (P12 M)

This powerful quote stresses the key role of family. However, the importance of family is more obvious when the family, while taking drugs, has a positive attitude towards drugs and implies this positive attitude to the children. A participant said that her family believed in the curative power of drugs and that's the reason she tried drugs for the first time. She says:

"I had pain on my sides and since my mother was an opium addict, she told me to have a puff or two to soothe the pain. I did it, felt well and it was the start to my taking drugs." (P19 W)

This kind of family attitude towards drugs was stated by most participants, both males and females. Other participants stated that the addiction of their siblings was an important factor in triggering their first drug use experience. As an instance, one participant said that his brother's addiction and attitude towards drugs played a key role in his trying drugs for the first time. He said:

"I was sick and had pain in my kidneys. My brother was taking heroin and he offered me to try it. He used to say that it's OK to take drugs, citing himself as an example. He said it's fine if I do not take opium; instead I could take heroin to feel better. I took heroin and indeed I felt better." (P14 M)

In addition, some participants said that apart from using drugs, their family members were selling drugs, which in turn made access to drugs easy for them, paving the way for their first drug use experience and continuance. A participant described his first drug use experience as:

"My brother was a drug addict and he started selling drugs at home. I had never tried any drugs before, neither cigarette, nor opium, nor bang or any other drugs. I took heroin for the first time and I got addicted to it." (P 6 M)

It is self-evident from these lines that easy access to drugs can precipitate the potential of addiction for individuals. Some of these participants had been offered drugs earlier (by friends, for example) yet they had never taken drugs before. They had only started taking drugs once their family members were selling drugs at home and therefore they had ample access to them. A participant said:

"My mother was an opium addict and she was selling heroin. Although, my school friends were taking drugs and offered me to take drugs too, yet I never did drugs. However, since my mother was selling drugs, I got curious and tried some of the drugs she was selling. After that, whenever I wanted to take drugs, I would use some of what my mother was selling." (P 11 W)

Hence, selling of drugs within the family contributes considerably to addiction and its continuance, the reason being that individuals had easy access to drugs with the least price or often for free.

According to some participants, the role of family was so influential that although they were married and lived independently from their parents, their occasional interactions with their families made it easier for their first drug use experience and consequently they, as well as their spouses, became addicted. A participant had the following to say here:

"When I was single, my father, brother, and elder sister used to take drugs but I never did. When I got married, my brother and sister came to my house and occasionally took heroin. My husband and I tried it once and that was enough to become addicted to it." (P 8)

These profound comments indicate that family can lead to addiction in many ways.

3.2. Friends

Many of the participants believed their friends were the reason for their first drug use experience and addiction. Despite the miscellaneous details of their stories, they're obviously common in one aspect, namely friends' role. The first drug use experience of some of the participants' dated back to high school and was triggered by their high school friends. Here's a participant's description of his first drug use experience:

"My school friends were addicted and I was unaware of that. One day, I saw them taking opium and since they didn't want me to tell on them to the principal, they offered me to try it, as they said it's not dangerous. As a matter of fact, I had never touched opium or any other drugs till then and I didn't know what it could do to me. That day, I took a pellet with them and I was dizzy for three days. After that, I would go and take drugs with them regularly. I didn't take it for one day, and once I realized it's intolerable, I purchased some opium and took it." (P 4M)

The role of friends is more obvious as individuals are under the influence of their friends' propaganda of drugs, and improvidently accept what they say. A participant explained his drug use in this way:

"I used to work at the port and deliver goods. One of my friends offered me opium and said I wouldn't feel drowsy if I took it. They said it would be ok to take a puff of the opium and it would refresh me, and I can carry the loads easier. They insisted that I have a puff but I resisted. I said no, I cannot, I have just got married. They used to say once or twice wouldn't hurt and then I succumbed to the pressure. And finally, with an occasional puff or two, I got addicted." (P 5M)

These comments indicate that lack of information and unawareness of the consequences of drug use will make individuals more prone to addiction to drugs.

Other participants took drugs with friends during military service and their addiction progressed considerably during their term (two years) and they had tried and became addicted to different drugs. A participant said:

"I knew nothing about drugs before military service and my family would never think that I would become addicted. During the military service, I started smoking and tried drugs for the first time. I was missing my family and wanted to abscond from the military base to visit my family. My friends offered me cigarettes and said to me it would soothe my pain. I smoked cigarettes for three months but after a while I developed tolerance to cigarettes, therefore, I started taking the black substance (opium). When I was home on furlough, I would take methadone pills to hide my addiction from the family." (P 15M)

Making friends during married life, however, is an important factor, which has to be taken into consideration. Interacting with addicted friends can make the couple prone to addiction. A participant said:

"Back when we were newlyweds, we visited our friends and occasionally took opium for fun, but gradually, it turned into an addiction for us both." (P 6W)

Participants believed it is essential that individuals be careful in selecting friends, as they have seen unwelcome consequences of ignoring this fact. A participant described his friends as:

"The first person, who introduced me to drugs was my friend, the person, who boasted camaraderie and support." (P8M)

3.3. Spouse

Another influential factor, claimed by some of the female participants, however, was the addiction of their partner. Once husbands took drugs, their wives put them under pressure to quit. Therefore, the husbands offered drugs to their wives to minimize this pressure. A participant said:

"My family has never touched drugs, not even cigarettes. After the wedding, my husband and I moved from Kerman to Isfahan. At first, I didn't know my husband is addicted because he took drugs outside home. After a while, he started taking drugs at home. It was too difficult for me and he kept sassing me disrespectfully. I was under mental pressure and couldn't tolerate it. I wanted to move back to Kerman and be near my family, but my husband offered me drugs and wanted to make me feel well. However, the bitter fact was that he wanted to embroil me with drugs so that I would stay with him and couldn't move back to my family." (P12W)

In some cases, husbands forced their wives to take drugs and embroiled them in addiction to prevent them from applying for divorce. A participant stressed her husband's role in her addiction:

"When I got married, I realized my husband was addicted so I wanted to get a divorce. But he forced me to take heroin and I got addicted. I was reluctant to take heroin but he told me to try it just once. That one time was enough for me to get addicted to heroin." (P 18 W)

The problem doubles, however, when the individual has taken the drug, ironically, by force but gets addicted to it and continues taking it. The following participant was a prime example:

"After my husband offered me drugs and I took it for the first time, it grew on me and I asked him every day for drugs." (P18W)

Participants who had the experience of remarriage, after divorcing their first spouse, had married addicted people and unfortunately, they had started taking other drugs as well. One participant said:

"I divorced my first husband and remarried, and this time, through my second husband, I got addicted to crystal meth." (P3W)

These quotes stress the important role of spouses in the addiction of individuals. Accordingly, participants believed that it is essential to get to know their spouse before marrying them. One participant, who considered her husband's role in her addiction said:

"When two people decide to get married, they must first get to know each other well and then proceed." (P15W)

3.4. Stress

Some of the participants pointed that stressful events triggered their first drug use experience. One stressful event, according to some participants, was the bereavement of parents and they had chosen to take drugs in order to soothe their pain. She said:

"My husband had been taking drugs for over three years but I never touched drugs during that period. When my mother died I suffered a mental breakdown and at the same time my husband was taking crack. One day, he was taking drugs and I asked if I could try it also to see what it tastes like that is keeping him so dependent on it. He wouldn't allow me to do so, saying that I would get addicted to it. It was me, who insisted and finally I took a puff and felt relieved. It was so pleasing and that's how I got addicted to drugs." (P 15 W)

Imprisonment of husband was yet another stressful event in the life of some participants and in order to ameliorate their troubles, they had started taking drugs. A participant said in this regard:

"Once we were officially married, my husband was imprisoned due to a street fight he had had earlier. During his term in prison, my brother was taking drugs and since I was deeply depressed, I didn't want to continue thinking about my husband and gradually started taking drugs alongside with my husband. My brother was reluctant in allowing me to take drugs but I was too adamant and wanted to see how it tasted. I was curious and desperate to make myself feel better." (P 5W)

Another participant's description of his addiction was: "I was engaged and then we broke up. When we broke up, I started taking opium with my friends. I did it because I wanted to feel better. I thought after a couple of times, I can stop taking drugs but I didn't know it is addictive." (P 11M)

These comments demonstrate that some participants volunteered to take drugs to cope with and overcome the stressful events of their lives, and not only had they not resolved their problem, but also another, bigger trouble, namely addiction, had emerged. A participant said:

"I tried drugs to soothe my pains but that never happened. I tried solving my problem by another problem. It never helped, but I kept telling myself that it does." (P13 W)

Finally, some participants referred to their physical pain and claimed that instead of visiting a doctor or taking painkillers, they had started taking drugs to alleviate their pain. For instance, one of the participants commented:

"I was ill with a pain in my leg, so I took drugs to soothe the pain. Whenever I felt pain, I would start searching for drugs. I took drugs instead of going to a doctor." (P7M)

Therefore, we can see that individuals' improper beliefs can hamper healthy decision making and planning

and consequently lead to their addiction.

4. Discussion

The present study was carried out to examine influential factors on first drug use experience of females and males in recovery. Findings demonstrate that four factors (family, friends, spouse, and stressful events) were among the most important variables leading to the first drug use experience, which in turn, can end in the addiction of individuals. Some participants referred to parents' addiction as the main trigger for their first drug use experience. Studies suggest that parents' drugs use can predict children's drug use (22). Substance abuse of parents and consequently compromised parental functioning are among the predicting factors for children's addiction (23). Family's positive attitude towards drugs and lack of sufficient knowledge about addiction are other influential factors for individuals to try drugs and become addicted. If parents or other family members sell drugs, it can leave individuals with easy access to drugs, which in turn, can lead to drug use among individuals. In other words, individuals' activities of selling or distributing drugs can lead to drug proximity and will pave the way to addiction (24-26). These are risk factors within the family, which can push individuals, consciously or unconsciously, towards addiction. However, parental monitoring and positive relationship with children can function as a shield, lowering or stopping drug use among individuals (27, 28).

Friends, along with family, play a key role in the first drug use experience. This is supported by studies, which highlight that dependence on drug user friends predicts own concurrent and future substance use (29, 30). When parental monitoring rules are weak and friends mainly spend their time together in unstructured contexts, substance co-use with friends and individual substance use is more likely (31). Also, unsupervised time with peers at high schools and having delinquent friends outside school can potentiality provide a dangerous setting for addiction (32, 33). Therefore, friend's substance using behavior is among the major predicting factors in substance use and changes in use of different substances (30).

Another factor triggering first drug use experience, which was mentioned by female participants of the study, was the addiction of husbands. These participants claimed that their husbands played a key role in their first drug use experience and progression of addiction. Some of them had started taking drugs under the pressure of their intimate partners. Although, they could have volunteered to take drugs by themselves, yet background is an important factor for these female participants, as their partners' initiation of drug use and the provision of drugs is undeniable

(34, 35). Therefore, females are greatly subjected to different forms of risks as they have started taking drugs because of dependence upon an intimate male partner (36).

In other cases, individuals took drugs to alleviate grief, relieve negative emotions, reduce stress, and ameliorate physical pain. They have in fact tried to manage their negative feelings and better their mental and physical state through drugs (24, 37-39).

Findings of the present study indicate that males and females try drugs for the first time because of four major reasons. Family, friends, and stress are common among males and females, with the potential of leading to addiction in individuals. Partner's addiction, however, is a factor, which was mentioned by female participants of the study, which led to their first drug use experience and continuance.

There were some limitations to the present study. First of all, the researchers had difficulty in accessing the participants, that is, they weren't able to interview them at any desired time, rather, meeting them was time limited. Since the population of the study and the sample size was small, generalizations of the findings need to be done with discretion. Finally, limiting the sample to females and males of the city of Kerman was another limitation of the study. Studying other populations from other cities of Iran may lead to different and more profound findings.

Finally, it is essential to focus on the role of family in preventing addiction. Parents have to be educated and they need to know that their access to drugs and drug trafficking will ease the access to drugs for their children and exposes them to the risk of substance addiction (especially with teenagers). Furthermore, families' and individuals' mindset towards addiction has to be altered in preventive programs and the tangible outcomes of substance use must be shown to them. In addition, according to the findings of the study, friends also play an important role in the first substance use experience of individuals. Families, as well as school and social media, need to educate young children on social skills, such as making friends and problem solving skills, in order to minimize the risk of being affected by their friends.

Other areas of focus in the present study include a need for focusing more on the role of families, training individuals to cope with stress, increasing individuals' information about substance use phenomenon and its outcomes, especially starting from school, and better decision making skills in selecting spouses, which need to be practiced by social services and government regulators and will minimize the risk of substance abuse.

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 portions of generating the manuscript.

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

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

References

- 1. Tabatabaeechehr M, Ebrahimisani E, Mortazavi H. [The effectiveness of group cognitive-behavioral psychotherapy on changing of irrational beliefs in male addicts]. *North Khorasan Med J.* 2012;**4**(3):419–30. Persian. doi: 10.29252/jnkums.4.3.419.
- Jiloha RC. Biological basis of tobacco addiction: Implications for smoking-cessation treatment. *Indian J Psychiatry*. 2010;52(4):301-7. doi: 10.4103/0019-5545.74303. [PubMed: 21267362]. [PubMed Central: PMC3025154].
- IlbeigiGhalenei R, Rostami M. Role of parenting styles, perfectionism, and quality of friendship in predicting the drug craving in addicted people. Res on Addict. 2016;10(37):87-102.
- 4. Akbari Boorang M, Dalakeh MH, Saberi R, Yasbolaghi Sharahi B. [On the effectiveness of curriculums based on cognitive-behavioral therapy in the increase of self-efficacy and resilience among the addicts under methadone maintenance treatment]. *Res on Addict.* 2016;10(38):103-17. Persian.
- Jahedi N, Talepasand S, Rahimian-Bougar E. [Validation of partners checklist: Measurement of the problems experienced by family members of drug abusers]. Res on Addict. 2016;10(38):211–32. Persian.
- Cheshmeh-Sangi Z, Kord-Tamini B, Kahrazei F. [Role of assertive behavior in ego-resiliency and self-control in addicted women]. Res on Addict. 2016;10(38):163–82. Persian.
- 7. Safarzadeh S, Sabahi P. [The comparison of visual memory functions in people with heroin dependence and normal]. *Res on Addict.* 2016;**10**(38):183–98. Persian.
- 8. Mahmoodi H, Abolghasemi A, Soleimani E. [The role of attachment styles and defense mechanisms in discriminating smoker students from non-smokers]. J Sabzevar Uni Med Sci. 2009;16(3):134–41. Persian.
- Bray JH, Getz JG, Baer PE. Adolescent individuation and alcohol use in multi-ethnic youth. J Stud Alcohol. 2000;61(4):588-97. [PubMed: 10928729]
- Andrews JA, Tildesley E, Hops H, Li F. The influence of peers on young adult substance use. *Health Psychol.* 2002;21(4):349–57. [PubMed: 12090677].

- LeTendre ML, Reed MB. The effect of adverse childhood experience on clinical diagnosis of a substance use disorder: Results of a nationally representative study. Subst Use Misuse. 2017;52(6):689–97. doi: 10.1080/10826084.2016.1253746. [PubMed: 28145794]. [PubMed Central: PMC5519323].
- Jackson KM, Rogers ML, Sartor CE. Parental divorce and initiation of alcohol use in early adolescence. *Psychol Addict Behav*. 2016;30(4):450– 61. doi: 10.1037/adb0000164. [PubMed: 27322803]. [PubMed Central: PMC4916852].
- Waldron M, Vaughan EL, Bucholz KK, Lynskey MT, Sartor CE, Duncan AE, et al. Risks for early substance involvement associated with parental alcoholism and parental separation in an adolescent female cohort. *Drug Alcohol Depend*. 2014;138:130-6. doi: 10.1016/j.drugalcdep.2014.02.020. [PubMed: 24647368]. [PubMed Central: PMC4012919].
- Koob GF, Zorrilla EP. Neurobiological mechanisms of addiction: focus on corticotropin-releasing factor. Curr Opin Investig Drugs. 2010;11(1):63–71. [PubMed: 20047160]. [PubMed Central: PMC2812895].
- DeWall CN, Pond RS, Carter EC, McCullough ME, Lambert NM, Fincham FD, et al. Explaining the relationship between religiousness and substance use: Self-control matters. *J Pers Soc Psychol.* 2014;107(2):339–51. doi: 10.1037/a0036853. [PubMed: 25090132].
- Unlu A, Sahin I. Religiosity and youth substance use in a Muslim context. *J Ethn Subst Abuse*. 2016;15(3):287-309. doi: 10.1080/15332640.2015.1033664. [PubMed: 26440938].
- 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].
- 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].
- Potter J, Hepburn A. Qualitative interviews in psychology: Problems and possibilities. *Qual Res Psychol.* 2005;2(4):281-307. doi: 10.1191/1478088705qp045oa.
- 20. Bernard HR. Research methods in anthropology: Qualitative and quantitative approaches. Rowman and Littlefield; 2017.
- Maxwell JA. Qualitative research design: An interactive approach. 41.
 Sage Publications; 2012.
- Biederman J, Faraone SV, Monuteaux MC, Feighner JA. Patterns of alcohol and drug use in adolescents can be predicted by parental substance use disorders. *Pediatrics*. 2000;106(4):792–7. [PubMed: 11015524].
- Rowe CL. Multidimensional family therapy: addressing co-occurring substance abuse and other problems among adolescents with comprehensive family-based treatment. *Child Adolesc Psychiatr Clin N Am.* 2010;19(3):563-76. doi: 10.1016/j.chc.2010.03.008. [PubMed: 20682221]. [PubMed Central: PMC2916747].
- 24. Andrade X, Sifaneck SJ, Neaigus A. Dope sniffers in New York city: An ethnography of heroin markets and patterns of use. *J Drug Issues*. 1999;**29**(2):271–98. doi:10.1177/002204269902900209.
- 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.
- 26. 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].
- Capaldi DM, Stoolmiller M, Kim HK, Yoerger K. Growth in alcohol use in at-risk adolescent boys: Two-part random effects prediction models. *Drug Alcohol Depend*. 2009;105(1-2):109–17. doi: 10.1016/j.drugalcdep.2009.06.013. [PubMed: 19625141]. [PubMed Central: PMC2752270].

- 28. Marschall-Levesque S, Castellanos-Ryan N, Vitaro F, Seguin JR. Moderators of the association between peer and target adolescent substance use. *Addict Behav.* 2014;**39**(1):48–70. doi: 10.1016/j.addbeh.2013.09.025. [PubMed: 24183303]. [PubMed Central: PMC3858300].
- 29. Allen M, Donohue WA, Griffin A, Ryan D, Turner MM. Comparing the influence of parents and peers on the choice to use drugs. *Crim Justice Behav.* 2016;30(2):163–86. doi: 10.1177/0093854802251002.
- 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].
- Kiesner J, Poulin F, Dishion TJ. Adolescent substance use with friends: Moderating and mediating effects of parental monitoring and peer activity contexts. Merrill Palmer Q (Wayne State Univ Press). 2010;56(4):529-56. [PubMed: 21165170]. [PubMed Central: PMC3002110].
- 32. Lee KT, Vandell DL. Out-of-school time and adolescent substance use. *J Adolesc Health*. 2015;**57**(5):523–9. doi: 10.1016/j.jadohealth.2015.07.003. [PubMed: 26306790]. [PubMed Central: PMC4708264].
- Kiesner J, Poulin F, Nicotra E. Peer relations across contexts: Individual-network homophily and network inclusion in and after school. *Child Dev.* 2003;74(5):1328–43. [PubMed: 14552401].
- 34. Rhodes T, Bivol S, Scutelniciuc O, Hunt N, Bernays S, Busza J. Narrating the social relations of initiating injecting drug use: Tran-

- sitions in self and society. *Int J Drug Policy*. 2011;**22**(6):445–54. doi: 10.1016/j.drugpo.2011.07.012. [PubMed: 21903372].
- Guise A, Horyniak D, Melo J, McNeil R, Werb D. The experience of initiating injection drug use and its social context: A qualitative systematic review and thematic synthesis. *Addiction*. 2017;112(12):2098-111. doi: 10.1111/add.13957. [PubMed: 28734128]. [PubMed Central: PMC5673537].
- 36. Wright NM, Tompkins CN, Sheard L. Is peer injecting a form of intimate partner abuse? A qualitative study of the experiences of women drug users. *Health Soc Care Community*. 2007;**15**(5):417–25. doi: 10.1111/j.1365-2524.2007.00700.x. [PubMed: 17685987].
- Rutherford HJ, Mayes LC. Parenting and addiction: Neurobiological insights. Curr Opin Psychol. 2017;15:55-60. doi: 10.1016/j.copsyc.2017.02.014. [PubMed: 28813269]. [PubMed Central: PMC5560070].
- 38. Khobzi N, Strike C, Cavalieri W, Bright R, Myers T, Calzavara L, et al. A qualitative study on the initiation into injection drug use: Necessary and background processes. *Addiction Research & Theory*. 2009;17(5):546–59. doi: 10.1080/16066350802011664.
- Lankenau SE, Wagner KD, Jackson Bloom J, Sanders B, Hathazi D, Shin C. The first injection event: Differences among heroin, methamphetamine, cocaine, and ketamine initiates. *J Drug Issues*. 2010;40(2):241-62. [PubMed: 21423792]. [PubMed Central: PMC3059319].