



Substance Abuse, Criminality, and Social Consequences: The Lived Experiences of Male Outpatients in a Methadone Maintenance Treatment Program in Iran

Fatemeh Shafiei¹; Mehrdad F Falavarjani^{2*}; Christine J Yeh³; Arash Ghodousi⁴

¹Faculty of Humanities Science and Law, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran.

²Department of Applied Social Psychology, University of Saskatchewan, Saskatchewan, Canada.

³Department of Counseling Psychology, University of San Francisco, California, United States.

⁴Forensic Medicine Research Center, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran.

*Corresponding Author(s): Mehrdad F Falavarjani

Department of Applied Social Psychology, University of Saskatchewan, Saskatchewan, Canada.

Tel: +1-360-260-3959;

Email: mehrdad.falavarjani@usask.ca

Abstract

Background: The impact of substance abuse is profound affecting not only the health status of the substance abuse addicts, but also their social networks from family members to social environments. The authors explore the impact of the Methadone Maintenance Treatment (MMT) program on both crime commission and social consequences among individuals struggling with substance dependence in Iran.

Methods: The data were collected from 13 male outpatients, ages 26 to 54 years old, using in-depth interviews. These individuals have undergone treatment at the MMT program for six months to nine years at three main methadone-distribution centers in Esfahan, Iran. The descriptive phenomenological method was employed to discern and interpret themes within the data.

Results: Thematic analysis revealed four major themes regarding types of crimes related to substance-abuse: 1) crimes against individuals, 2) crimes concerning property, 3) sale and distribution of drugs, and 4) possession of illegal drugs. In addition, three major themes emerged related to substance-abuse social consequences; 1) loss of social trust, 2) social exclusion and marginalization, and 3) loss of family supports. One main theme, return to normal life, was identified for the effect of MMT on patients.

Conclusion: The findings show that substance abuse can contribute to criminal behavior and the combination of drug abuse and criminal behavior has a negative impact on the social lives of drug addicts in terms of loss of social and

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family supports. However, we also found that the MMT program could significantly contribute to positively resolving social and criminal consequences of substance-abuse among these patients. Further implications of the findings are discussed.

Introduction

The phenomena of narcotics and substance-related crimes are widespread [1,2] with a large number of studies investigating the association between substance misuse and crime [3-5]. Such research investigates how drug misuse contributes to multifaceted problems at the social, familial, and personal levels, resulting in anti-social behaviors including criminal behavior [4,5].

When individuals are abusing drugs, they frequently face financial problems, family conflicts, social maladjustment, and psychological disturbance [6,7]. Therefore, they might be excluded from mainstream society, and hence may be susceptible to breaking social norms and laws to finance the cost of their drug use [8,9].

Specifically, studies on drug-related dilemmas have explored unique challenges facing substance abusers at the social, familial, and individual levels as fundamental determinants of their maladjustment in the community. According to Bennett and Holloway [8], substance abusers suffer from higher rates of social, familial, and psychological maladjustments in the community, compared with patients with other types of disorders [9]. These individuals face difficulties with interactions with their close family members (i.e., spouse, parents, brothers and sisters) which may result in family conflicts [10], losing family support, leaving home [11], unhealthy relationships (i.e., joining gangs) [12], and committing a variety of crimes [13]. These factors contribute to different social (e.g., losing social and familial supports) and criminal consequences (e.g., temporary arrestment and/or imprisonment). However, these consequences vary across the cultures and their social policies [9,14].

To deal with this widespread problem, the Methadone Maintenance Treatment (MMT) program has been widely introduced as an effective treatment [15,16] and as one of the best and most commonly used methods for reducing harm caused by substance abuse and improving the quality of life of the abusers [17]. The goal of this treatment is to restore patients' normal life, re-engage them in the community, and prevent recurring drug use [15,18].

In MMT, methadone serves as a biological medicine used for detoxification and maintenance treatment for opiate dependence. The low cost of methadone with its high impact on controlling the physical and psychological conditions of opiate dependence has made it an effective method in the treatment of addiction [15]. Although MMT may physiologically contribute to some dependence, it is not considered an addiction since the regular usage of methadone helps to release addicts from the state of hangover and a steady obsessive-compulsive circle. Based on this effect, addicts could effectively return back to normal life and their community [19].

Methadone replacement reduces the prevalence of drug injections, which may contribute to life-threatening illness such as HIV. The decrease of injections also limits interactions with drug dealers which in turn reduces the probability of crime [19].

In addition to the effectiveness of methadone therapy in treating drug abuse, other positive effects include the extended duration of abstinence, the improvement of psychological status (e.g., enhanced well-being and decreased depression), and the risk reduction of committing offenses [20,21]. Thus, MMT programs may be beneficial to both individuals and the community [19].

Despite the documented successes of MMT programs, few efforts have investigated the criminology of drug abusers, the social consequences of their drug abuse, as well as the effect of drug treatment on crime commission. Even fewer studies have explored this topic in the context of a culture such as Iran, which has unique social policies and cultural norms regarding drug use.

Theoretical background: The drug-crime relationship

Over the years, different theories have been introduced to help explain the connection between substance use and criminal behavior. For example, "economic necessity theory" [22] asserts that substance abusers are not able to financially support their drug abuse through legitimate working activities and will commit crimes to finance their habits. However, some other theories are based on the psycho-pharmacological reasons in which the drug intoxication could result in judgment impairment leading to crime commission [23]. Here, drugs act as "chemical recreation" for offenders to enjoy committing crimes [24].

Other theories stress that the drug abuse-crime relationship is observed as a result of a co-existence of deviant behaviors. According to Goldstein [22], both drug abusers and offenders lead to deviant behaviors including violent arguments, between group-member conflicts, and informal enforcement of normative behaviors [23]. Using social theory, Duff [24] contends that the "inability of a community structure to realize the common values of its residents and maintain effective social control" [25] facilitates the prevalence of both drug abuse and criminality. Based on these theories, the prevalence of substance abuse could increase antisocial behaviors and gradually increase crimes at the social levels and bring a large amount of financial and social burdens to society [24]. In particular, three main factors including financial problems, judgment impairment, and social settings were identified to explain the drugs-crime relationship.

Substance-related criminology

The theoretical framework of Goldstein [22] explains a taxonomy of the drug-crime connections including psycho-pharmacological, economic, and systemic associations. Therefore, the drugs-crime link could be described in three possible approaches; first, the instant impact of drugs leading to aggressive behaviors; second, the absence of financial resources causing offenses; last, crimes committed during the course of illegal drug dealing. The drug abuse may also increase the likelihood of the property offenses (e.g., theft, burglary, robbery, etc.), entrepreneurial offenses (e.g., drug trafficking, prostitution, etc.) and crimes against people (e.g., assault, murder, etc.). According to Leidenfrost et al. [26], property crimes (e.g., robbery, burglary, shoplifting, and etc.) are a common type of crimes committed by heroin abusers to finance the considerable amount of money needed for drug use.

According to radical theory [27], the social policy of the context in which the abuser resides is a determinant factor in

shaping the drugs-crime link and drug-related criminology since the legality of drug use impacts identified crimes, unidentified crimes, and the role of drug users. For example, while the Netherlands introduces a lenient social policy to minimize the hazards and risks of drug use [28], Iran considers substance-use as a serious crime and focuses on the suppression of drugs [29].

The social costs of the substance-abuse criminal

Studies on the lived experience of substance-abusers have emphasized that drug abuse is not without consequences and more than likely have personal, criminal, and social costs. Regarding the individual criminal consequences, for instance, prior studies show that most substance abusers were temporarily arrested, referred to public prosecutors' offices or courts, or sentenced to prisons for their behavior [30,31].

However, the social costs to drug abusers are relatively too high. Based on the earlier theory of environment which emphasizes the importance of cultural factors connecting crimes and drug use, Wilson [32] argued that social marginalization due to the lack of social capital can play a key role in both misusing drugs and committing frequent crimes [33,34]. In addition, the role of culture was first recognized by the National Commission on Marijuana and Drug Abuse in 1972. They acknowledged the important role of culture as a main factor in explaining the relationship between drugs and crimes.

The social consequence of drug abuse may also vary across cultures. In South Asian cultures, for instance, Kulsudjarit [35] showed the reactions of people towards drug addiction are hopelessness and shame. Iran, in particular, is a culture of honor (versus the culture of dignity), so having addicts within an Iranian family may be seen as a dishonor and reduces the family's social status at the community level. This response may decrease the levels of social capital (e.g., social interaction, bonding, cooperation, trust, etc.) among these addicts [36,37], which is less likely to be observed in cultures of dignity. Moreover, Åslund and Nilsson [36] showed the moderation role of culture in the association between social trust and alcohol consumption, smoking, and illicit drug use. They compared Sweden, which is highly egalitarian and individualistic, with Japanese culture, which is viewed as collectivistic, and revealed the social capital-drug use association. This connected in turn weakened the relationship between substance abuse and crimes. Therefore, the social consequences of drug abuse in Iran might be different from other societies with different cultural norms and social policies.

Substance abuse and treatment in Iran

Iran's long history of drug abuse, especially opium smoking, was influenced by the fact that it shared a long border with Afghanistan and was the shortest route to Europe from Afghanistan. However, drug abuse has recently become a widespread psycho-social-economic problem in Iran [38]. According to Nikpour [29], between two and three million people in Iran are currently addicted to drugs and this number continues to rise. According to Iranian officials in 2017, the number of drug abusers has doubled over the past six years [29]. This statistic for Iran represents a pervasive social and financial crisis, as the Iranian government has previously exceeded its financial allocations for dealing with substance use. Mostaghim and Bengali [39] reported that more 400,000 officers who were involved in anti-drug-trafficking have been killed since 1979. In the same time period, the number of prisoners related to drug-related

crimes has doubled in Iran where 70 percent of them are young people under 40 years old. According to one Amnesty International estimate, Iran alone has executed around 10,000 people ages 20 to 30 for drug-related crimes since 1988 [29].

In the 1990s, however, drug rehabilitation in Non-Governmental Organizations (NGOs) was initiated to enhance a zero-tolerance policy of moral conservatism toward so-called "harm reduction models" for treating drug addiction [40,41]. As a harm-reduction model in 2002, the MMT program was introduced to substance abusers by the Iranian National Center for Addiction Studies (INCAS). By the end of the year 2009, around 16,000 MMT centers ran under the Ministry of Public Health providing the treatment for out- and in-patients based on treatment protocols [30]. Currently, MMT programs are the most frequently used therapy in Iran.

Present study

The current research investigates the lived experience of substance abusers who were part of the MMT program. We specifically explore the types of crimes they committed and the criminal and social consequences experienced during their addiction period. In addition, we study the impact of the MMT on the individuals' criminal behavior and acts. The current research employed a qualitative method which explores types of crimes that participants committed during the addiction, as well as the effectiveness of the MMT program in reducing the identified crimes and social consequences of drug abuse among an Iranian sample. Our specific research questions were; (1) What types of crimes do substance abusers commit?; (2) What are the collateral and social consequences of drug-related crimes? And (3) What is the impact of the MMT program on the crimes and its consequences?

Method

Participants

All women who were involved with the MMT program refused to participate in the study even after receiving the full explanation of the study's purpose. Hence, the sample consisted of 13 males who were enrolled in the MMT program for a period of six months to nine years ($M = 3.08$ years, $SD = 2.78$). Participants were outpatients ages 26 to 55 years ($M = 38.23$, $SD = 8.69$) and undergoing MMT in one of three methadone distribution centers in Isfahan City, Iran. At the time of data collection, all participants were actively involved in the MMT program and had undergone drug rehabilitation at least once. This rehabilitation lasted from one month to 48 months ($M = 14.32$, $SD = 15.63$). Participants were addicted to opioid-dependent drugs including opium, heroin, and cocaine. The participants started taking drugs when they were between 15 to 25 years old ($M = 32.84$, $SD = 2.71$). Eight patients reported that they have a history of drug abuse in their family. In terms of marital status, six patients were married, four of whom had at least one child. Six patients were single and one was divorced. Only two patients have high educational status at the bachelor and master's degree levels.

Procedure

Subjects were recruited *via* the "purposive sampling method" [42]. This sampling method was selected to provide researchers with the preferred number of subjects. The study inclusion criteria included adults undergoing MMT treatment in Iran, fluency in Farsi, the ability to listen to and respond to

interviewers, and self-disclosure past drug-abuse experiences regarding the commission of crimes, and their lived experiences while they are under the MMT program.

As the current study was conducted at three different methadone treatment centers in Isfahan city, Iran, the permission forms were first sent to the directors of these clinics. Once the permission was signed by the directors, managers were met in order to introduce researchers to outpatients at the centers. These patients later signed a letter of consent, complete with detailed explanations about the study's purpose and procedures. In addition, the verbal consent of participants' was audio recorded and obtained.

Participants were invited into private rooms in each center for an in-person interview. Each interview lasted from 45 to 90 minutes, averaging 55 minutes. A digital audio recorder was used to record and later to play back and transcribe all the interviews. All transcriptions were translated by the first author from Farsi to English and were given to a bilingually proficient Iranian who resolved any incongruity between the Farsi and English translation. Next, another bilingual expert double-checked the translation for accuracy and meaning [43].

Process and protocol of interview

Unstructured interviews [44] were utilized for the purpose of data collection. This method is effective in gathering the viewpoints and lived experiences of participants as it provides an opportunity for increased depth and freedom in the responses given. In addition, we used a "counseling interviewing technique" *via* "structuring" the interviews at the starting point. This practice is to build the rapport between both researcher and subjects as a crucial catalyst for honest and comfortable communication [45]. This method is carried out by expressing some information about the background and the study purpose. In addition, during the opening part of the interview, the researcher also sought for the participants' verbal consent. Participants were also informed that the interview was strictly confidential.

Data analysis

The descriptive phenomenological method developed by Creswell and Poth [46] was employed in order to gain an in-depth comprehension of the past and present experiences of all participants. In addition, we selected the phenomenological approach to suit our investigation of the criminology of drug abusers, particularly the convictions they faced during the drug-abuse periods [47]. This approach provides the researchers with monitoring the validation of qualitative studies establishing the better generalization of findings and the better combination of phenomena [48]. It also expands the reflective concerns experienced by interviewers. The unstructured interview method permitted researchers to directly connect with the study participants and use their reports about their lived experiences to obtain a collective description of a phenomenon [44]. In addition, to guarantee neutral and authentic interviews, the bracketing procedure was adopted [49]. According to Sorsa et al. [49], the technique of bracketing included extracting the phenomenon from different perspectives; analyzing the phenomenon to classify, examine, and define the structure; shelving all preconceptions regarding the phenomenon; and dealing with the subject matter on its own terms, while researchers listen to and analyze participants' life experiences.

Moreover, we used the analytical steps developed by Colaizzi [50]: (a) transcripts were reviewed to discover the common phenomenon between all the subjects; (b) significant sentences and phrases were extracted *via* re-reading the transcripts relevant to the crimes and social consequences imposed on the outpatients before and after treatment; (c) this process continued until the full description was termed by one noteworthy sentence; (d) a formulated meaning was procured from the noteworthy sentences; (f) the formulated meanings were clustered into wider themes, coded, and later formed a construct; and (g) a distinctive construct was developed from theme clustering. At this level, the identified themes were distinct and separated by a comprehensive description. However, the general structure was refined from repeated reviews.

Result

For the first question (what types of crimes do substance abusers commit?), there were four major categories of crimes identified in stories behind the experience of drug abuse; (a) crimes against individuals, (b) crimes concerning property, (c) distribution and sale of drugs, and (d) possession of illegal substances. Overall, 15 sub-themes were established to simplify the constructs' complexity (Table 1).

Theme 1-1: Crimes against individuals

Participants with different ages, periods of the substance abuse, and marital statuses, expressed that they frequently committed crimes against people when they misused drugs. For example, one subject aged 34 with a nine-year history of the drug abuse reported;

"When I was under the effects of drugs, I became aggressive without any special reasons; for example, if I felt someone who was passing by was staring at me, I would aggressively approach him and started a fight with him based on his look [...]. I've got a reputation for brawling, and my friends took me out for any gang quarrels [...]. Whenever I wanted to be involved in a street fight alone or with my friends, I used drugs [...]. If I was not under the influence of drugs, I would not have been involved in any fights [...]."

Among the lived experiences of all participants, we also frequently noticed that there were quarrels and conflicts with the police on patrol where participants sometimes injured them. In one occasion, one of the police was killed. A subject (age 32 years old with the 10-year history of drug abuse) reported constant fights and conflicts with the police:

"I set fire on my motorbike once, when I was captured by the police on patrol. I drew my knife while insulting them and attacked them to injure them. I was under the drug effect and I cannot control myself when they stopped me for investigations of relevant documents such as driving licenses [...]. When I was addicted, I hated police and if they stopped me, I undoubtedly fought with them [...]."

Another client who was 31 years old and had a 15-year history of drug abuse reported;

"Once there was a plan introduced for capturing drug addicts [...], I was informed by my friends [...]. My friends and I have a "nest" where we went to take drugs [...]. They identified our nest and they attacked us to capture us, and this became a fight [...]. Several policemen were injured [...]. As far as I remembered, 11 times I fought with the police on patrol [...]."

For all patients, it was the effects of drugs that took control of their behaviors. They expressed the feelings of embarrassment at committing these offenses against peoples and the police.

Theme 1-2: Crimes concerning property

The second emergent theme was participants' crimes involving public and private properties including extortion, destruction, robbery, theft and etc. For instance, as one of the participants mentioned;

"When it is your habitual behaviors to use drugs, you cannot work properly. However, you need money to purchase drugs for your use, if you cannot afford it, you are eventually forced to commit extortion, thefts, or/and robbery [...]. You need drugs and you do every possible thing to earn some money to satiate your needs" (a 28-year-old subject with a 10-year history of drug abuse).

As can be seen, the main reason for doing these activities was to earn money for living and to purchase drugs. However, there were other subjects (for example, a 48 year old with the 20-year history of drug abuse) who were involved in robbing a jewelry store with his friends;

"When I got together with my friends and used heroin, we unintentionally talked about illegal activities [...]. Once we began to talk about the robbery of a jewelry store and eventually we did it [...]."

In addition, the need for drugs seemed to control participants' behaviors. Therefore, as one of the participants, aged 28 years old with the 10-year history of drug abuse said, the drive to commit thefts or destruction of properties is from the drug;

"I did not use the drug, and I was in need while I had no money. There was a taxi parked beside the street. I assumed that there might be some money in, I broke the taxi window and opened its door and searched for money [...]. Once again, I saw a police car [Mercedes-Benz] alarming and passing by [...], without any reasons, I threw the dagger that I carried out and threw it at one of the passing police cars' windscreen and ran away [...]."

Theme 1-2: Possession illegal substances

In this category, all participants across different ages, durations of drug abuse, and marital statuses, frequently expressed that during the drug-abuse period they carried out illegal activity, including fighting with knives, and carrying drugs for their own use or to sell. For example, one of the clients mentioned;

"I often had drugs, daggers, and pepper sprays in my pockets; I felt very anxious if I did not have drugs on me [...]. However, I carried the daggers or knives as I felt insecure about what would happen when I was out [...]. They were good things to carry out since I lost my physical strength after a while missing drugs. So, when I faced conflicts with people or the police on patrol, or I want to extort money from someone, or I aimed to involve in conducting offenses haphazardly, I used them [...]; however, whenever there were patrols, I was captured by the police for carrying out this stuff [...]" (a 28 year old unmarried client with the 10 year history of drug abuse).

As evidence, participants reported that the main reason they carried illegal materials stemmed from feeling insecure and low in self-confidence. Participants also carried and used drugs to avoid feeling hangover or from experiencing bodily pain from

substance use withdrawal. In fact, illegal drugs often helped substance users to feel physically confident in facing illegal activities they frequently conducted and experienced on a daily bias.

Themes 1-4: Sales and distributions of drugs

Another theme was that participants often sold and distributed drugs in order to finance their drug use and to earn a living. In Iran, the sale and distribution of drugs are identified as a specific type of crime. A 43 year old man who was involved in the MMT program for 6 years with an 18 year history of heroin use reported;

"I certainly was involved in purchases and sales of different types of drugs to earn a living, I had family and I must afford money for their living [...]. I could not have a stable job [...]. As I knew several addicts, I came to know drug dealers [...]. I bought and sold different types of drugs to others [...]. I can say that it was a good business for any drug-abuser who did not care about their social status or being known as an addict in the community [...]."

Since many substance abusers are not able to find a job in their community, they often begin selling drugs to support themselves financially. Based on our investigation, there are two main reasons participants were involved in these activities; 1) to earn money, and 2) to gain access to drug sources.

We also addressed our second research question: What are the collateral and social consequences of drug-related crimes? All of the cases were referred to police stations or courts by the police on patrol and sentenced to fines and/or temporary arrest based on the crimes they committed. In addition, the majority of participants were imprisoned by the court for at least one month to six years ($M = 14.75$ months, $SD = 11.02$ months). In terms of social consequences, we found three main categories; (a) losing social trust and respect; (b) social exclusion, and marginalization; and (c) losing family support. Overall, 19 sub-themes were established to answer the second question (Table 2).

Theme 2-1: Loss of social trust and respect

All clients suffered the most from social consequences of drug abuse. As participants reported, the social costs of being addicts included losing social capital. This finding may reflect the importance of Iranian culture as a collectivistic culture. All participants reported that their social group lost trust and respect in them. They became a target in their community and were often blamed for any type of criminal activity in the community, where the existence of drug abusers is considered a serious a social threat to the community.

"Since I was known by the neighbors as an addict, nobody trusted me and I could not borrow money [...]. Moreover, whenever my friends and I got together for any fun activities (i.e., playing cards or pigeon keeping), our neighbors, who saw us together, called the police [...]. They came, and if we could, we ran away without any reasons [...].you must go when you misuse drugs and you will be labeled as a criminal in the eyes of other people [...]" (The report of a 35 year old participant).

Another subject aged 46 years old mentioned;

"If there are any crimes committed in our neighborhoods, the first one suspected by people is me. So, the first person that the police come to is me [...]. This disturbed me and made me so an-

gry [...]. I hated my community as I was suspected of any crimes committed at our community and neighborhood [...]. This made me feel unwanted and I would do anything to get revenge and destroy their gathering [...]. “

Theme 2-2: Social exclusion and marginalization

Another consequence of drug abuse is to become marginalized from one’s family and community. This occurrence eventually influenced participants to socially exclude themselves from others:

Under the effect of the misuse of drugs, I lost my identity and personality. I was sleeping in the street. In fact, I was a tramp. I excluded myself from my family and community.... I had no connections with anyone, but the drug dealers (a 31 year old patient with the 5-year history of drug abuse).

A 40-year subject shared;

“When I was addicted, I could not go out or hang out with my spouse or my spouse’s family although they are so outgoing. None of them knew that I was addicted to opium. My spouse’ father invited us every week for lunch or dinner, but I never accepted to join them [...] or wherever they planned to travel I had justifications and ditched the event [...]. Once there was a wedding party in Brorazjan City and we were invited. One of my spouse’s close family invited us! But I did not participate and only sent my spouse”.

Another participant with the 15 year history of drug misuse aged 33 years old mentioned;

“I never went out for any purpose but took the drugs with my friends [...], even if someone came to visit us at our house, I wouldn’t accompany them, I left them immediately and came up with some justifications like I wanted to go out and would come back soon, but I never came back and disappeared [...]”.

Theme 2-3: Loss of family support

The third major theme that we identified as a primary social consequence of substance abuse was loss family support during the drug abuse period. After committing multiple crimes, being caught by police, and being imprisoned, family members would become disappointed and abandon the addicted individuals. This was reported by several subjects;

“I was imprisoned for 7 months for drug sales. However, when I was released, I found that my spouse had absently divorced me since I disappointed her hopes to become a normal person and come back to normal life again...” (a 40 year old participant).

Another participant (a 26 year old patient with the three year history of drug addiction);

“I never paid attention to my family’s advice, and I argued with my spouse and my family members every day and asked them to leave me alone [...]. I lied about everything and this became a source for family conflicts [...] eventually they left me and I became homeless and a tramp [...]”.

A 48 year old participant with the 23 year history of misusing drugs shared his story;

“During my drug abuse, I had no emotional connection with my family I had some many problems with my father and brothers [...]. They never trusted me or supported me if I asked for money [...]. So, I did not go home because if I went home, there would be a family conflict [...]”.

Our third research question, (“what is the impact of the MMT program on the crimes and its consequences?”) was analyzed into one major category: Return back to normal life. All clients mentioned that since receiving treatment from the MMT program, they did not continue with substance abuse, and they were able to return to their family and community. Expectantly, patients from all sorts of backgrounds reported that they did not commit crimes at all since they began taking methadone. For example, a 55 year old participant said;

“Since I began using methadone (under the MMT program), my feelings towards my family and relatives have changed and I rebuilt a strong connection with my spouse, children and my relatives. I participated in all familial parties and social gatherings [...]. I feel calm and I won’t approach problems in an aggressive way [...]. I did not tolerate one who wanted to speak against my words when I was addicted, and this behavior was a source of conflicts with family and friends. However, since I started using methadone, I can control my anger”.

Another subject, aged 28 years old who received treatment for two years mentioned;

“Although there were some disputes over issues with my family members and friends, I have not committed any crimes since I started using methadone [...]. Moreover, although everyone knows that I am using methadone, people look at me differently and I live my life like a normal individual and I do not want anything more...”.

Another participant who is 38 years old with nine year experience with MMT treatment shared;

“Since I started using methadone, I wear appropriate clothes and when I recalled the past, I just feel embarrassed people did not trust or respect me[...]. I not enjoy my family reunions and enjoy talking with them whereas before I hated being at such events!”

As stated by participants, the MMT program helped all patients to return back to normal life. In fact, the methadone helped them manage their moods and psychological status. After joining the MMT program, all participants expressed no criminal activities and have rebuilt a strong relationship with their family members and the community (Figure 1).

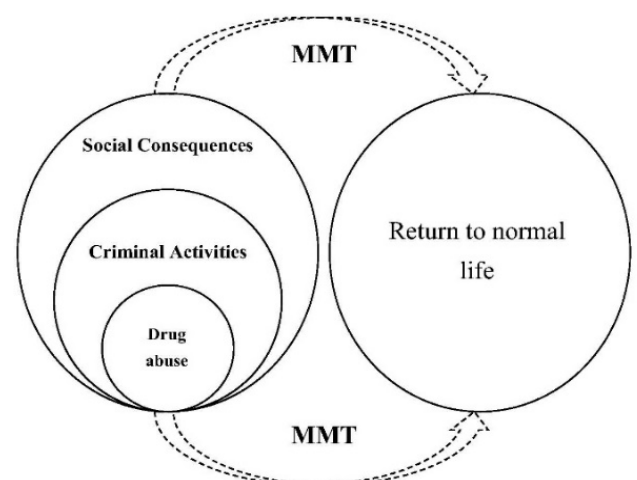


Figure 1: The impact of the MMT program on criminal activities and social consequences.

Table 1: The criminology theme emerged from lived experiences of drug-abusers.

Emergent themes	Cluster themes	Formulated meaning
Crimes against properties	<ul style="list-style-type: none"> i. Vehicle theft (i.e., motorbike, cars, etc.) ii. Armed robbery (i.e., banks, shops, etc.) iii. Robbery (workplace, family, etc.) iv. Destructions of people's properties (Deflagrate, broke, destroy, etc.) v. Extortion from neighbors and people 	Clients were not comfortable to talk about the crimes they committed and continuously expressed that they committed these crime due to financial problems.
Crimes against people	<ul style="list-style-type: none"> i. Contribution in killing a police officer ii. Threatening, beating and injuring people, neighbors, and police officers iii. Offending the people, neighbors, and police officers iv. Extortion from people 	Participants felt embarrassed about committing these crimes and mainly admitted to commit these crimes as they were affected by drugs or they were in need and could not control their behaviors.
Carrying illegal goods	<ul style="list-style-type: none"> i. Daggers ii. Knives iii. Guns iv. Drugs 	The main purpose of carrying out the daggers, knives, and guns was the anticipation of problems they will face with people and the police whenever they are out. However, it seems that life without drugs cannot be tolerable; thus, they must be have some whenever they want to go out with friends and family.
Sales and distributions of drugs	<ul style="list-style-type: none"> i. Purchases and sales of drugs and alcohols ii. Drug storage at home iii. Producing drugs 	They expressed that this is the best way of earning a living and have immediate access to drugs.

Table 2: The theme emerged from lived experiences of drug-abusers.

Emergent themes	Cluster themes	Formulated meaning
Losing the social trust and respect	<ul style="list-style-type: none"> i. Stop regular interactions and communications ii. Perceived disrespect iii. Feelings unwanted iv. Do not borrow v. Joining gang 	Once known as addicted, the primary social capital they lose is the social trust and collective respect. People at the community would not keep the regular communication and interaction with them. They stopped borrowing money, cars, motorbikes, etc. and rejected their requests immediately by bring several justifications. In fact, participants felt being unwanted or seen as a criminal or threat at the community.
Social exclusion and Marginalization	<ul style="list-style-type: none"> i. Low self-confidence ii. Preference of being alone iii. Bad appearance iv. Negative mood and emotions v. Negative attitude towards others 	It was a double-edged phenomenon. Drug abusers want to be alone and marginalized from the community, relatives and family. However, the community also tries to exclude these individuals through accepting that ignoring their existence.
Losing family support	<ul style="list-style-type: none"> i. Frequent family conflicts ii. Divorce iii. Leaving home iv. Tiredness of helping v. Destroy family honor vi. Going home late vii. Frequent social complains viii. Frequent Lying ix. Being homeless and a tramp 	The last source of the support they lost was the family support. Although they involved in several family conflicts, when they left home and lost their family interaction and social identity, their family seems to become hopeless and left them unsupportive.

Discussion

We explored substance abuse related criminology and the social consequences of drug addiction among 13 males who were outpatients in three methadone treatment centers in Isfahan City, Iran. We also investigated the impact of the MMT program on addict's criminal behavior and the social consequences of their addiction. Following the lived experiences of these patients, our finding suggests that individuals who suffer from drug addiction committed several types of crimes derived by the drugs' effects. In addition, these same participants experience isolation and negative stereotyping from their family and community. Their experiences and perspectives highlight the impact of substance abuse in a culture, such as Iran, which has strict social policies and cultural norms associated with substance use.

Consistent with our theoretical framework [22], substance abuse contributed to criminal behavior in different ways; (1) individuals under the effect of drugs approached their interactions aggressively [51] and (2) the need to finance their drug habit resulted in criminal behavior [52]. According to a recent study [53], a majority of Iranian prisoners reported having been addicted to at least one opioid substance before being imprisoned for criminal behavior. Specifically, a majority of prisoners are typically imprisoned due to crimes associated with substance abuse. These findings underscore previous research on the association between drug addiction and different criminal behaviors [4,12,13,26,27,29].

We identified three main themes for drug-related crimes, namely crimes against individuals, crimes concerning property, sales and distributions of substances, and possession the illegal drugs. Along the same lines, Buddy [54] showed property crimes including robbery, burglary, weapon violation, and motor vehicles theft are committed by drug addicts to finance their drug use in more than 50 percent of situations in the United States [55]. A survey of Bureau of Justice Statistics (BJS), found that an estimated 17 and 18 percent of state prisoners and federal inmates respectively were imprisoned for crimes that were related to their need to earn money to purchase drugs [56]. Moreover, Rand and Robinson [56] showed that in 20 to 30 percent of situations, victims perceived that offenders were under influence of drugs when committed the crimes such as crime of violence, rapes or sexual assaults, robbery, assault, aggravated and simple assault.

Two reasons are associated with the use of drugs and related crimes concerning property. These reasons include the likelihood that property offenders become drug dependent abusers and second, that both the drug abuse and property crimes are linked to social withdrawal which in turn encourages criminals to use drugs and commit crimes [8,9]. Botelho and Gonçalves [57], however, explained that selling drugs and committing property crimes, may result in crimes against individuals including homicide [51]. In addition, the sales and distribution of drugs also form acquaintances and eventually friendship among the drug users; shaping social networks and community [12].

In contrast to some western countries such as the United States, possessing drugs, firearms (e.g., guns, etc.), and cold weapons (e.g., knives, daggers, etc.) in Iran is considered as serious crime. For all of our subjects, substance abuse was a source of serious conflict when they faced the police on patrol. Therefore, one of the main causes of significant problems between substance abusers and the police is due to carrying drugs which may result in confrontations with police officers.

However, misusing drugs and committing crimes is not without criminal and social consequences. According to our interviews, we uncovered several negative outcomes in the social lives of addicts. Many of them were taken to police stations and courts or arrested and imprisoned. Moreover, once an individual is labeled as an addict, society loses trust in them; family supports become marginalized, and eventually they are excluded from social and family activities.

Consistent with previous studies [11,58], those who are involved with drugs, are socially stigmatized as criminals and they may be distanced from communities and become alienated. Although it is difficult for addicts to return back to a normal social life, in collectivistic (versus individualistic) cultures where honor is the social practice [59], the process of marginalization from the community would be faster. As our subjects expressed, once someone is identified as an addict, they are stigmatized as a criminal in society, and this becomes a source of disgrace and dishonor for family members. To keep an honorable social image, the family may try to get the addict to normal life or they may withhold family support to maintain their honorable social image. Similarly, the addict's feelings of disgrace experienced by the addict may force them to leave their family and community. Consistent with White and Gorman [60], the lack of social supports may serve as a catalyst leading drug addicts towards both drug abuse and criminality [11,61].

However, cultural factors, such as values of collectivism and honor, have a positive side as well. First, when addicted individuals decide to undergo rehabilitation, many people at both family and community levels support them [61]. Second, the addicted patients have a higher motivation to return back to life since family and community is a part of their personal identity and a source of meaning. Lastly, the culture of honor is a strong powerful tool that individuals can use to get back to the normal life due to the value of honorable, reputable image of self.

As the results indicated, the MMT program was effective in both reducing drug-related crimes as well as the social and criminal consequences of substance abuse. Based on our subjects' reports, a central emergent theme was return back to normal life. These findings are consistent with the large body of literature emphasizing the effect of MMT on the reduction of crime. For example, Burke [61] expressed that compared to criminals who are undergo drug treatment or abstain from drug abuse, offenders who take different types of drugs, typically showed two or three times higher frequencies of individual predatory crime commission. In addition, studies emphasized the effect of the MMT programs as a crime control scale [15,18]. Keen et al. [62] studied whether the MMT was able to reduce the criminal convictions and the length of time spent in prison. The study was conducted on 37 males and 20 females with criminal records. The results showed a significant reduction in the rate of both criminal convictions and eventually the time spent in prison. In addition, Schwartz et al. [21] investigated the effect of MMT on arrests of individuals by patrols, suggesting a significant reduction in the rate of the arrests. In particular, Bowden et al. [63] investigated the effect of MMT on the rate of crimes individuals committed before and during the MMT program. The result showed the number of crimes reduced from 189 to 129. In addition, they found a significant decrease in the rate of crimes such as robbery and illegal entry (about 40%). In addition, Schwartz et al. [21] investigated the effect of MMT on the rate of crimes individuals committed before and during the MMT program in the jail and community. The result showed patients entering community-based treatments have a greater likelihood of future arrest, in comparison to patients initiating methadone in a jail-based program.

The MMT program has previously been reported as an effective method on a sample of drug users in Iran. For example, Dastjerdi Gh et al. [64] utilized experimental design and studied the effect of MMT on the reduction of high-risk behaviors. Before the treatment, 37.6% of participants using drugs had a history of imprisonment, 35.5 % shared needles, 32.3 % engaged in unprotected sex, and 4.5 % committed self-injuries [65,66]. However, only 36.6% did not have any of the above mentioned high-risk behaviors. After 6 months of treatment, results showed that 86% of participants did not engage in these high-risk behaviors. In other words, the treatment has a clear role in reducing the incidence of high-risk behaviors. Therefore, according to Joseph et al. [15], methadone restores patients to a normal life, helping them re-engage in the community, and reducing the likelihood of committing crimes.

Limitations

The current study was not without limitations. Due to cultural issues and social stigma existing in Iranian society, women did not agree to be included in the study and, therefore, our study was limited to an entirely male sample. It is recommended that in later studies, the size of larger samples and female subjects also be included. Our study was also limited to the sample of

opioid-related drugs and crimes. Future research might include patients addicted to other types of drugs. In addition, we were limited to pursue the rate of subjects' relapse into drug abuse after the MMT program. Future research also may be encouraged to carry out studies with longitudinal approach where researchers seek to explore the effect of the MMT program on the addiction relapse when they stop using the methadone and compare the program with other effective methods.

Conclusion

The current research findings revealed that there is a causal relationship between substance abuse and specific types of criminal behavior. As a result, drug addicts are affected by their substances and conditions and, in many cases, commit various offenses to offset the costs of the drug use, which are subject to severe and some lasting social consequences and convictions which can be avoided by introducing the MMT program. As drug use contributes to criminal behavior among dependent opium-related users, considering a policy to expand MMT as the main approach to reduce drug-related crimes can be effective in the fight against drugs and its negative social costs.

References

- Babor TF, Caulkins J, Fischer B, Foxcroft D, Medina-Mora ME, Obot I, et al. Drug Policy and the Public Good: a summary of the second edition. *Addiction*. 2019; 114: 1941-1950.
- Lunneblad J. Introduction: School Violence in the Nordic Countries—A Changing Sociocultural Landscape. In *Policing Schools: School Violence and the Juridification of Youth*. 2019; 1-15.
- Das P, Horton R. The global drug problem: change but not progression. *The Lancet*. 2019; 394: 1488-1490.
- Håkansson A, Jesionowska V. Associations between substance use and type of crime in prisoners with substance use problems—a focus on violence and fatal violence. *Substance abuse and rehabilitation*. 2018; 9: 1.
- Pierce M, Hayhurst K, Bird SM, Hickman M, Seddon T, Dunn G, et al. Insights into the link between drug use and criminality: Lifetime offending of criminally-active opiate users. *Drug and Alcohol Dependence*. 2017; 179: 309-316.
- Eiseman S, Wingard JA, Huba GJ. *Drug abuse: Foundation for a psychosocial approach*. Routledge. 2019.
- Mancheri H, Alavi M, Sabzi Z, Maghsoudi J. Problems Facing Families with Substance Abusers: A Review Study. *Jorjani Biomedicine Journal*. 2019; 7: 31-38.
- Bennett T, Holloway K. *Understanding drugs, alcohol and crime*. McGraw-Hill Education (UK). 2005.
- Peteet BJ. Psychosocial risks of prescription drug misuse among US racial/ethnic minorities: A systematic review. *Journal of ethnicity in substance abuse*. 2019; 18: 476-508.
- Sur B, Cleary A, Rohrbaugh MJ, Ferrer E, Sbarra DA. Beyond the "Self" in Self-regulation: Family Interaction Modulates Situational Self-control by Adolescent Drug Users. *Journal of family psychology: JFP: journal of the Division of Family Psychology of the American Psychological Association (Division 43)*. 2019.
- Mowen TJ, Visher CA. Drug use and crime after incarceration: The role of family support and family conflict. *Justice Quarterly*. 2015; 32: 337-359.
- Steinberg J, Kral AH, Sumstine S, Wenger LD, D'Anna L, Bluthenthal RN. Gang Involvement and Drug Use Histories Among People Who Inject Drugs in California: A Retrospective Analysis. *Journal of drug issues*. 2019; 49: 593-606.
- Kim BE, Gilman AB, Kosterman R, Hill KG. Longitudinal associations among depression, substance abuse, and crime: A test of competing hypotheses for driving mechanisms. *Journal of criminal justice*. 2019; 62: 50-57.
- Yin X-Q, de Vries DA, Gentile DA, Wang J-L. Cultural Background and Measurement of Usage Moderate the Association Between Social Networking Sites (SNSs) Usage and Mental Health: A Meta-Analysis. *Social Science Computer Review*. 2019; 37: 631-648.
- Joseph H, Stancliff S, Langrod J. Methadone Maintenance Treatment (MMT). *The Mount Sinai Journal of Medicine*. 2000; 67: 6.
- Madden LM, Farnum SO, Eggert KF, Quanbeck AR, Freeman RM, Ball SA, et al. An investigation of an open-access model for scaling up methadone maintenance treatment. *Addiction*. 2018; 113: 1450-1458.
- Llanes C, Álvarez AI, Pastor MT, Garzón M, González-García N, Montejo ÁL. Sexual Dysfunction and Quality of Life in Chronic Heroin-Dependent Individuals on Methadone Maintenance Treatment. *Journal of clinical medicine*. 2019; 8: 321.
- O'Byrne P, Jeske Pearson C. Methadone maintenance treatment as social control: Analyzing patient experiences. *Nursing inquiry*. 2019; 26: e12275.
- Underhill K, Dumont D, Operario D. HIV prevention for adults with criminal justice involvement: a systematic review of HIV risk-reduction interventions in incarceration and community settings. *American Journal of Public Health*. 2014; 104: e27-e53.
- Potik D, Abramsohn Y, Schreiber S, Adelson M, Peles E. Drug abuse and behavioral transgressions during Methadone Maintenance Treatment (MMT) are related to high psychopathy levels. *Substance Use and Misuse*. 2000; 55: 460-468.
- Schwartz RP, Kelly SM, Mitchell SG, Gryczynski J, O'Grady KE, Jaffe JH. Initiating methadone in jail and in the community: Patient differences and implications of methadone treatment for reducing arrests. *Journal of substance abuse treatment*. 2019; 97: 7-13.
- Goldstein P. The drugs/violence nexus. *Crime: Critical Concepts in Sociology*. 2003; 4: 96.
- Goode E. *Deviant behavior*. Routledge. 2015.
- Duff S. *Offenders and Substance Abuse. Assessments in Forensic Practice: A Handbook*. 2017; 217.
- Sampson RJ, Groves WB. Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology*. 1989; 94: 774-802.
- Leidenfrost CM, Leonard KE, Antonius D. Alcohol, Drugs, and Crime. In V. B. Van Hasselt & M. L. Bourke (Eds.), *Handbook of Behavioral Criminology*. Springer International Publishing. 2017; 661-667.
- McBride DC, McCoy CB. The drugs-crime relationship: An analytical framework. *The Prison Journal*. 1993; 73: 257-278.
- Dolin B. *National Drug Policy: The Netherlands*. 2001.
- Nikpour G. Drugs and drug policy in the Islamic Republic of Iran. *Middle East Brief*. 2018; 119-128.
- Spohn C, Holleran D. The effect of imprisonment on recidivism rates of felony offenders: A focus on drug offenders. *Criminology*. 2002; 40: 329-358.
- Staton-Tindall M, Havens JR, Oser CB, Burnett MC. Substance use prevalence in criminal justice settings. In *Handbook of evi-*

- dence-based substance abuse treatment in criminal justice settings. Springer.2011; 81-101.
32. Wilson WJ. The truly disadvantaged: The inner city, the underclass, and public policy. University of Chicago Press. 2012.
 33. Pereira MB, Maia ÂDC. Juvenile Delinquency, Crime and Social Marginalization: Theoretical Background', Juvenile Delinquency, Crime and Social Marginalization. Emerald Publishing Limited. 2017.
 34. Pfaff JF. The war on drugs and prison growth: limited importance, limited legislative options. Harv J. on Legis. 2015; 52: 173.
 35. Kulsudjarit K. Drug problem in southeast and southwest Asia. Annals of the New York Academy of Sciences. 2004; 1025: 446-457.
 36. Åslund C, Nilsson KW. Social capital in relation to alcohol consumption, smoking, and illicit drug use among adolescents: a cross-sectional study in Sweden. International journal for equity in health. 2013; 12: 33.
 37. Lundborg P. Social capital and substance use among Swedish adolescents-an explorative study. Social Science & Medicine. 2005; 61: 1151-1158.
 38. Shahbazi F, Mirtorabi SD, Ghadirzadeh MR, Hashemi-Nazari SS, Barzegar A. Characterizing mortality from substance abuse in Iran: an epidemiological study during March 2014 to February 2015. Addiction & health. 2017; 9: 166.
 39. Mostaghim R, Bengali M. Iran's growing drug problem: No walk of society is immune. 2016.
 40. Nissaramanesh B, Trace M, Roberts M. The rise of harm reduction in the Islamic Republic of Iran. 2005.
 41. Rahnema R, Mohraz M, Mirzazadeh A, Rutherford G, McFarland W, Akbari G, Malekinejad M. Access to harm reduction programs among persons who inject drugs: findings from a respondent-driven sampling survey in Tehran, Iran. International Journal of Drug Policy. 2014; 25: 717-723.
 42. Maestripieri L, Radin A, Spina E. Methods of sampling in qualitative health research. In M. Saks & J. Allsop (Eds.), Researching Health: Qualitative, Quantitative and Mixed Methods. 2019; 82-102.
 43. Yeh CJ, Inman AG. Qualitative data analysis and interpretation in counseling psychology: Strategies for best practices. The Counseling Psychologist. 2007; 35: 369-403.
 44. Low J. Unstructural and semi-structrual interviews in health research In M. Saks & J. Allsop (Eds.), Researching health: qualitative, quantitative and mixed methods. 2019; 123-142.
 45. Madson MB, Villarosa-Hurlocker MC, Schumacher JA, Williams DC, Gauthier JM. Motivational interviewing training of substance use treatment professionals: a systematic review. Substance abuse. 2019; 40: 43-51.
 46. Creswell JW, Poth CN. Qualitative inquiry and research design: Choosing among five approaches (2 ed.). 2016.
 47. Falavarjani MF, Yeh CJ. A Phenomenological Study of Adaptability, Multiple Identities, and Acculturative Strengths as an Iranian Immigrant in Malaysia. International Journal of Social Science Research. 2018; 6.
 48. Sousa D. Validation in qualitative research: General aspects and specificities of the descriptive phenomenological method. Qualitative Research in Psychology. 2004; 11: 211-227.
 49. Sorsa MA, Kiikkala I, Åstedt-Kurki P. Bracketing as a skill in conducting unstructured qualitative interviews. Nurse researcher. 2015; 22.
 50. Colaizzi PF. Psychological research as the phenomenologist views it. In R. S. Valle & M. King (Eds.), Existential phenomenological alternatives for psychology (pp. 48-71). 1978; 48-71.
 51. Quigley BM, Leonard KE, Collins RL. Characteristics of violent bars and bar patrons. Journal of Studies on Alcohol. 2003; 64: 765-772.
 52. Wiesner M, Kim HK, Capaldi DM. Developmental trajectories of offending: Validation and prediction to young adult alcohol use, drug use, and depressive symptoms. Development and psychopathology. 2005; 17: 251-270.
 53. Moazen B, Saeedi Moghaddam S, Silbernagl MA, Lotfizadeh M, Bosworth RJ, Alammehrjerdi Z, et al. Prevalence of drug injection, sexual activity, tattooing, and piercing among prison inmates. Epidemiologic reviews. 2018; 40: 58-69.
 54. Buddy T. Alcohol and Drug-Related Crime Statistics. 2020.
 55. Felson RB, Staff J. Committing economic crime for drug money. Crime & Delinquency. 2017; 63: 375-390.
 56. Rand M, Robinson J. Criminal victimization in the United States, 2008 - statistical tables. Bureau of Justice Statistics (BJS). 2011.
 57. Botelho M, Gonçalves RA. Why do people kill? A critical review of the literature on factors associated with homicide. Aggression and violent behavior. 2016; 26: 9-15.
 58. Sussman SY, Ames SL. The social psychology of drug abuse. Open University Press Buckingham. 2001.
 59. Leung A, Cohen D. Within-and between-culture variation: individual differences and the cultural logics of honor, face, and dignity cultures. Journal of personality and social psychology. 2011; 100: 507.
 60. White H, Gorman D. Dynamics of the Drug-Crime. Criminal justice. 2000; 1: 151-218.
 61. Burke RH. An introduction to criminological theory. Routledge. 2017.
 62. Keen J, Rowse G, Mathers N, Campbell M, Seivewright N. Can methadone maintenance for heroin-dependent patients retained in general practice reduce criminal conviction rates and time spent in prison? British Journal of General Practice. 2000; 50: 48-49.
 63. Bowden CL, Maddux JF, Esquivel M. Arrests before and during methadone maintenance. International Journal of the Addictions. 1978; 13: 921-931.
 64. Dastjerdi Gh, Deh'sheiri E, KholseZadegh G, Ehsani F. The effect of methadone on the reduction of high-risk behaviors. Journal of Shahed Sadoughi University of Medical Sciences, Yazd. 2010; 3: 215-229.
 65. Cao Q, Huang X, Chen M, Rui G, Du C. Life Satisfaction Among Chinese Drug Addicts: The Role of Affect and Social Support. Journal of drug issues. 2019; 49: 423-435.
 66. Pauketat J. Honor and Dignity Culture Differences in the Concept of Worth: Consequences for Response to Group Insults. University of California, Santa Barbara. 2013.