

Associations of treatment completion against drug addiction with motivational interviewing and related factors in Afghanistan

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ABSTRACT

Despite the increase in the number of drug treatment centers, patients with drug addicts have been increasing without the improvement of treatment in Afghanistan. This study aimed to examine the associations of the completion of drug addiction treatment with motivational interviewing (MI) and other factors among male drug users in Afghanistan. Subjects were patients admitted to Jangalak Hospital in Kabul, Afghanistan in 2014 and 2015. Systematic sampling and supplementary sampling were applied. The records of 327 males aged 18 to 54 years were collected from those of 3,373 male inpatients. Completion of treatment was defined as presence and receiving treatment in the hospital for at least 45 days. Multiple logistic regression models were applied to estimate the adjusted odds ratio (AOR) and 95% confidence interval (CI) for the completion of drug addiction treatment. Among the patients, heroin was the most commonly used drug, followed by opium, crystal, hashish, and other drugs. Patients with treatment history for drug addiction (AOR 2.46; 95% CI 1.14–5.30), those attended MI before admission (AOR 43.98; 95% CI 17.21–112.39), and those used heroin (AOR 4.74; 95% CI 1.32–16.97) were more likely to complete the drug addiction treatment. Among the factors examined in this study, attending MI was most strongly associated with the completion of drug addiction treatment. Amendments to policies to include compulsory MI in standard operational procedures of drug addiction treatment before hospitalization may be recommended.

Keywords: drug addiction, drug treatment, motivational interviewing, Afghanistan

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INTRODUCTION

Drug addiction has negative consequences at individual, family, community, and national levels. At individual and family levels, adverse health outcomes, such as sexually transmitted infections including HIV, tuberculosis, and mental health problems, can occur. In regard to the community level, drug addiction can cause security problems including illegal acts such as robbery and murder. Problems related to drug addiction can threaten a country's economy and security, and

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be a burden on the health system. In 2014, approximately 250 million people aged between 15 to 64 years worldwide used at least one type of narcotics. Of them, nearly 29 million suffered from drug-related problems and needed treatment. However, only one out of six drug users suffering from severe drug addiction underwent treatment.¹⁾

Afghanistan is known to have the highest number of opiate users in the world. The national rate of drug users was 12.6% among adults in 2015, being almost two times higher than the global rate of 5.2%. At least one family member used drugs at one out of three households in Afghanistan. The estimated recent drug users were 1.6 to 2.4 million adults. In 2015, the drug use rate in rural areas was 2.5 times higher than in urban areas.²⁾

Motivational interviewing (MI) is an evidence-based method, by which a patient's behavior could modify through interactive counseling. MI is an applied patient-centered approach to raise patients' awareness toward drug use and negative health outcomes. MI also facilitates patients to imagine a better future and set goals to accomplish.³⁾ It was reported that integrating MI in the early phases of treatment might have positive effects on treatment and improve the effectiveness of treatment programs.⁴⁻⁶⁾

In 2012, 102 drug addiction treatment centers offered treatments for drug addiction across Afghanistan. Of them, 78 drug addiction treatment centers were supported by the United States government under the Bureau of International Narcotics and Law Enforcement Affairs.⁷⁾ Drug addiction treatment is a cycle that includes pre-treatment, treatment, and post-treatment phases. In the pre-treatment phase, patients' health status is measured and categorized to find out suitable drug treatment centers. During the treatment phase, the patients receive symptomatic drug treatment, behavioral counseling, and support groups are established. Post-treatment services consist of 1) follow-up visits of successfully treated patients, 2) facilitation of employment for former drug users through vocational training, and 3) establishment of effective appliances to reduce the frequency of a relapse.⁸⁾

Regardless of the effectiveness of MI, attending a MI is completely voluntary in the pre-treatment phase of a drug addiction program in Afghanistan. Many drug users do not attend MI before receiving drug addiction treatment in Afghanistan. Therefore, this study aimed to examine the associations of the completion of treatment with MI and other factors.

MATERIALS AND METHODS

Study participants

The study was conducted at a drug addiction treatment hospital, Jangalak Hospital with 300 beds in Kabul, Afghanistan. The maximum treatment capacity in a year was 2,400 male drug users. According to the Drug Demand Reduction Policy, the duration of treatment in this hospital was 45–90 days. Data were collected from case files of patients admitted in 2014 and 2015. In total, 3,373 case files were available from January 2014 to December 2015. At first, 500 cases were selected by a systematic sampling using the discharge list; every sixth case in the order of admission number. When 21 cases were found in one month, the sampling moved to the next month. Because of the renovation of the hospital, the patients discharge on December 2015 were fewer, resulting in 17 cases. Those discharged at the first day due to treatment rejection and referral to another facility were excluded from the 500 selected cases. Those without information listed in Tables 1 and 2 were also excluded. Since the excluded cases were larger than expected, 45 cases were arbitrarily sampled from the inpatients discharged during the same period.

Table 1 Socio-demographic characteristics of participants according to the permanent address (N=327)

| Characteristics | Total | | Kabul | | Non-Kabul | |
|---|-------|------|-------|------|-----------|------|
| | N | % | N | % | N | % |
| Total | 327 | 100 | 74 | 100 | 253 | 100 |
| Age | | | | | | |
| 18–27 years | 146 | 44.6 | 36 | 48.6 | 110 | 43.5 |
| 28–37 years | 123 | 37.6 | 22 | 29.7 | 101 | 39.9 |
| 38–47 years | 48 | 14.7 | 14 | 18.9 | 34 | 13.4 |
| 48–54 years | 10 | 3.1 | 2 | 2.7 | 8 | 3.2 |
| Marital status | | | | | | |
| Single | 160 | 48.9 | 42 | 56.8 | 118 | 46.6 |
| Married | 167 | 51.1 | 32 | 43.2 | 135 | 53.4 |
| Employment status | | | | | | |
| Unemployed | 218 | 66.7 | 46 | 62.2 | 172 | 68.0 |
| Employed | 109 | 33.3 | 28 | 37.8 | 81 | 32.0 |
| Economic status | | | | | | |
| Poor ^{*1} | 256 | 78.3 | 55 | 74.3 | 201 | 79.4 |
| Fair and rich | 71 | 21.7 | 19 | 25.7 | 52 | 20.6 |
| Social status | | | | | | |
| Good ^{*2} | 284 | 86.9 | 65 | 87.8 | 219 | 86.6 |
| Better and best | 43 | 13.1 | 9 | 12.2 | 34 | 13.4 |
| Family history of drugs use | | | | | | |
| No | 276 | 84.4 | 63 | 85.1 | 213 | 84.2 |
| Yes | 51 | 15.6 | 11 | 14.9 | 40 | 15.8 |
| Immigration status from other provinces to Kabul | | | | | | |
| Immigrated | 136 | 41.6 | 0 | 0.0 | 136 | 41.6 |
| Not immigrated | 191 | 58.4 | 0 | 0.0 | 191 | 58.4 |

*1 Those without a regular income.

*2 Those living apart but keeping with their family.

Table 2 Drug use characteristics of participants according to the permanent address (N=327)

| Characteristics | Total | | Kabul | | Non-Kabul | |
|------------------------------|-------|------|-------|------|-----------|------|
| | N | % | N | % | N | % |
| Duration of drug use | | | | | | |
| ≤13 years | 279 | 85.3 | 61 | 82.4 | 218 | 86.2 |
| >13 years | 48 | 14.7 | 13 | 17.6 | 35 | 13.8 |
| Number of use per day | | | | | | |
| 1–2 | 204 | 62.4 | 50 | 67.6 | 154 | 60.9 |
| >2 | 123 | 37.6 | 24 | 32.4 | 99 | 39.9 |
| Mode of use | | | | | | |
| Smoke | 309 | 94.5 | 71 | 95.9 | 238 | 94.1 |
| Non Smoke | 18 | 5.5 | 3 | 4.1 | 15 | 5.9 |
| Reason for first use | | | | | | |
| Social problem | 78 | 23.9 | 16 | 21.6 | 62 | 24.5 |
| Peer pressure | 249 | 76.1 | 58 | 78.4 | 191 | 75.5 |
| First use place | | | | | | |
| Afghanistan | 201 | 61.5 | 51 | 68.9 | 150 | 59.3 |
| Out of Afghanistan | 126 | 38.5 | 23 | 31.1 | 103 | 40.7 |
| Initiation age | | | | | | |
| ≤24 years | 209 | 63.9 | 52 | 70.3 | 157 | 62.1 |
| >24 years | 118 | 36.1 | 22 | 29.7 | 96 | 37.9 |
| Previous treatment | | | | | | |
| No | 170 | 52.0 | 40 | 54.1 | 130 | 51.4 |
| Yes | 157 | 48.0 | 34 | 45.9 | 123 | 48.6 |
| Heroin | | | | | | |
| No | 30 | 9.2 | 6 | 8.1 | 24 | 9.5 |
| Yes | 297 | 90.8 | 68 | 91.9 | 229 | 90.5 |
| Opium | | | | | | |
| No | 264 | 80.7 | 59 | 79.7 | 205 | 81.0 |
| Yes | 63 | 19.3 | 15 | 20.3 | 48 | 19.0 |
| Crystal | | | | | | |
| No | 264 | 80.7 | 59 | 79.7 | 205 | 81.0 |
| Yes | 63 | 19.3 | 15 | 20.3 | 48 | 19.0 |
| Hashish | | | | | | |
| No | 295 | 90.2 | 61 | 82.4 | 234 | 92.5 |
| Yes | 32 | 9.8 | 13 | 17.6 | 19 | 7.5 |
| Other drugs | | | | | | |
| No | 296 | 90.5 | 64 | 86.5 | 232 | 91.7 |
| Yes | 31 | 9.5 | 10 | 13.5 | 21 | 8.3 |

Study measures

The dependent variable was the completion of drug addiction treatment; coded as “0” for uncompleted drug addiction treatment, and “1” for the completion of drug addiction treatment. The independent variables were age, marital status, social status, economic status, family history of drug use, duration of drug use, frequency of drug use, mode of drug use, previous drug treatment history, reason for the first use of drugs, place of drug use for the very first time, and type of drug. These variables were dichotomized as “0” for no and “1” for yes.

Data analysis

Data were analyzed using the Statistical Package for Social Science (SPSS) software program version 20.0 (IBM SPSS Inc.). A descriptive analysis was applied for the socio-demographic characteristics and drug use of participants. Multiple logistic regression models were applied to estimate the odds ratio (OR) and 95% confidence interval (CI) of factors for the completion of drug addiction treatment.

Ethical considerations

The study proposal was approved by the Afghanistan Institutional Review Board. Approval to conduct the research was also obtained from the Drug Demand Reduction Directorate, Ministry of Public Health, Afghanistan. The study used a numeric coding system instead of using the names of the participants. This study followed the all ethical standards, and confidentiality of the participants' information was considered in all stages of the data handling process.

RESULTS

The mean age of the participants was 30.1 years with a standard deviation of 7.7 years. Table 1 shows the socio-demographic data of the participants according to their permanent address. Of 327 participants, 22.6 % of the participants were permanent residents of Kabul and 77.4% came from 28 provinces of Afghanistan; no participants from the other remaining 6 provinces. Nearly half of the participants were aged 18–27 years; 48.6% in Kabul and 43.5% in non-Kabul provinces. In this study, the majority of the participants were unemployed economically backward. Those with a family history of drug use were 15.6%.

Table 2 presents the drug use of participants according to their permanent address. Most of participants started using drugs in the last 13 years maybe because of sociopolitical change and decrease of restrictions in predisposing factors furthermore return of some refugees after 2001. Among those living in Kabul, 82.4% started using drugs in the last 13 years, while 86.2% were initiated in the same period among non-Kabul residents. Patients using drugs more than two times a day were 32.4% among those from Kabul and 39.9% among those from other provinces. Smoking was the most common mode of drug use (95.9% from Kabul and 94.1% from non-Kabul). Peer pressure was the leading reason for the first-time use of drugs (78.4% from Kabul and 75.5% from non-Kabul provinces). The other reported reasons were social and health problems (21.6% from Kabul and 24.5% from non-Kabul provinces). First-time drug use was observed in out of Afghanistan during the immigration in 126 (38.5%) cases (31.1% from Kabul and 40.7% from non-Kabul provinces). Heroin was the most commonly used drug (91.9% from Kabul and 90.5% from non-Kabul provinces) followed by opium, crystal, hashish, and other drugs, as shown in Table 2.

Table 3 shows the OR with 95% CI of completion of drug addiction treatment. After adjusting for the variables listed in the footnote on Table 3, drug users with history of drug addiction were

Table 3 Odds ratio (OR) and 95% confidence interval (CI) of completion of drug addiction treatment among the participants (N= 327)

| Characteristics | N | % | Unadjusted | | Adjusted* | |
|--------------------------------------|-----|------|------------|-------------|-----------|-------------|
| | | | OR | (95%CI) | OR | (95%CI) |
| Age | | | | | | |
| >30 years | 125 | 83.7 | 1 | | 1 | |
| ≤30 years | 202 | 75.2 | 0.59 | (0.34–1.03) | 0.92 | (0.41–2.05) |
| Marital status | | | | | | |
| Single | 160 | 83.8 | 1 | | 1 | |
| Married | 167 | 77.2 | 0.66 | (0.38–1.15) | 1.07 | (0.47–2.42) |
| Employment status | | | | | | |
| Unemployed | 218 | 81.7 | 1 | | 1 | |
| Employed | 109 | 78.0 | 0.79 | (0.45–1.41) | 0.55 | (0.24–1.26) |
| Economic status | | | | | | |
| Poor | 256 | 82.0 | | | 1 | |
| Fair and rich | 71 | 74.6 | 0.65 | (0.35–1.20) | 0.88 | (0.36–2.17) |
| Social status | | | | | | |
| Good | 284 | 80.6 | 1 | | | |
| Better and best | 43 | 79.1 | 0.91 | (0.41–2.00) | | |
| Family history of drugs use | | | | | | |
| No | 276 | 80.1 | | | | |
| Yes | 51 | 82.4 | 1.16 | (0.53–2.53) | | |
| Current address | | | | | | |
| Kabul | 207 | 83.1 | 1 | | 1 | |
| Other provinces | 120 | 75.8 | 0.64 | (0.37–1.11) | 0.63 | (0.29–1.36) |
| Permanent address | | | | | | |
| Kabul | 253 | 75.7 | 1 | | | |
| Other provinces | 74 | 81.8 | 1.45 | (0.78–2.69) | | |
| Duration of drug use | | | | | | |
| ≤13 years | 279 | 81.7 | 1 | | 1 | |
| >13 years | 48 | 72.9 | 0.6 | (0.30–1.22) | 0.34 | (0.11–0.98) |
| Frequency of drug use per day | | | | | | |
| One to two times | 204 | 80.4 | 1 | | 1 | |
| More than two times | 123 | 80.5 | 1.01 | (0.57–1.77) | 1.01 | (0.46–2.22) |
| Initiation age of drug use | | | | | | |
| ≤24 years | 209 | 81.3 | 1 | | | |
| >24 years | 118 | 78.8 | 0.85 | (0.49–1.50) | | |

* Adjusted for all factors listed in the table.

Table 3 Odds ratio (OR) and 95% confidence interval (CI) of completion of drug addiction treatment among the participants (N= 327) (Continued)

| Characteristics | N | % | Unadjusted | | Adjusted* | |
|-----------------------------------|-----|------|------------|---------------|-----------|----------------|
| | | | OR | (95%CI) | OR | (95%CI) |
| Mode of drug use | | | | | | |
| Smoke | 309 | 80.3 | 1 | | | |
| Non smoke | 18 | 83.3 | 1.23 | (0.35–4.38) | | |
| Amount of drug use per day | | | | | | |
| ≤0.5g | 158 | 80.4 | 1 | | | |
| >0.5g | 169 | 80.5 | 1.01 | (0.59–1.74) | | |
| Previous treatment history | | | | | | |
| No | 170 | 75.9 | 1 | | 1 | |
| Yes | 157 | 85.4 | 1.85 | (1.05–3.26) | 2.46 | (1.14–5.30) |
| Reason for first use | | | | | | |
| Social problem | 78 | 76.9 | 1 | | 1 | |
| Peer pressure | 249 | 81.5 | 0.76 | (0.41–1.40) | 1.70 | (0.72–4.04) |
| First use place | | | | | | |
| Afghanistan | 201 | 81.1 | 1 | | | |
| Out of Afghanistan | 126 | 79.4 | 0.89 | (0.51–1.57) | | |
| Ever attend MI** | | | | | | |
| No | 109 | 46.1 | 1 | | 1 | |
| Yes | 218 | 96.0 | 28.08 | (12.98–60.79) | 43.98 | (17.21–112.39) |
| Heroin | | | | | | |
| No | 30 | 50.0 | 1 | | 1 | |
| Yes | 297 | 83.5 | 5.06 | (2.32–11.03) | 4.74 | (1.32–16.97) |
| Opium | | | | | | |
| No | 264 | 82.6 | 1 | | 1 | |
| Yes | 63 | 71.4 | 0.53 | (0.28–0.99) | 0.66 | (0.24–1.84) |
| Crystal | | | | | | |
| No | 264 | 81.8 | 1 | | 1 | |
| Yes | 63 | 74.6 | 0.65 | (0.34–1.25) | 0.83 | (0.33–2.09) |
| Hashish | | | | | | |
| No | 295 | 80.3 | 1 | | | |
| Yes | 32 | 81.2 | 1.06 | (0.42–2.70) | | |
| Other drugs | | | | | | |
| No | 296 | 81.1 | 1 | | | |
| Yes | 31 | 74.2 | 0.67 | (0.29–1.58) | | |

* Adjusted for all factors listed in the table.

** Motivational interviewing

more likely to complete the drug addiction treatment (adjusted OR 2.46; 95% CI 1.14–5.30). Those who attended MI before hospitalization were more likely to complete the drug addiction treatment (adjusted OR 43.98; 95% CI 17.21–112.39). In addition, those who used heroin were more likely to complete the drug addiction treatment than the others (adjusted OR 4.74; 95% CI 1.32–16.97).

Fig. 1 shows the percentages of treatment completion according to the place of their past treatment. Compared with no treatment in the past (75.9%), treatment in hospitals (89.7%) showed a higher completion percentage. When compared between not treated and the other three groups combined [(134 completed out of 157 participants (85.3%)), the combined group was significantly higher ($p=0.036$).

Fig. 2 shows the treatment completion percentage according to the number of times of MI before admission to Jangalak Hospital. The percentage increased along with the increase in the number of times of MI. Among participants who attended two sessions of MI, the completion percentage (89.6%) was higher than that among those who did not attend MI (52.9%). Among those with one or more MI, the percentage was 95.8%, significantly higher ($p<0.0001$) than no MI.

DISCUSSION

This study was the first study to identify the factors associated with the completion of drug addiction treatment among male drug users in Afghanistan. The study also explored the role of MI in the completion of drug addiction treatment. The findings revealed that participants who attended MI or used heroin were more likely to complete the drug addiction treatment. Participants who had received drug addiction treatment were more likely to complete the drug addiction treatment. This study highlighted the problem of relapse among male drug users, challenging drug addiction treatment around the world.⁹⁾

In Afghanistan, drug addiction treatment is voluntary and drug users can avail treatment at any place they want. In total, there are 102 drug-treatment centers in Afghanistan with 68 centers that provide residential or inpatient services, and 34 centers that provide outpatient services.⁷⁾ These treatment programs focus on detoxification. A study reported that integrating psychosocial treatment with detoxification was more effective than just prescribing medication.¹⁰⁾ Thus, policy makers need to consider integrating psychosocial treatment with drug addiction treatment programs in Afghanistan. Furthermore, such programs should also focus on providing life skills training so drug users can live independently, cope with stress, and refrain from starting another drug use cycle.

This study found that 66.7% of the participants attended one or more MI sessions before admission to the hospital. After adjustment for the possible confounding variables, it was revealed that drug users who attended MI were more likely to complete the drug addiction treatment successfully. This finding was in line with previous studies that reported that MI was an important factor to improve drug users' psychological and behavioral condition.^{10,11)} However, attending MI is a voluntary policy of drug addiction treatment in Afghanistan. Therefore, making MI a compulsory criterion for admission to a drug addiction treatment program in Afghanistan can be linked to the successful completion of drug addiction treatment.

This study showed that heroin was the most commonly used drug (90.8%) followed by opium (19.3%), crystal (19.3%), hashish (9.8%) and other drugs (9.5%). A similar study in Afghanistan reported that drug use is significantly increasing and heroin usage is the drug of choice particularly in Kabul city. The report also stated that Kabul was ranked the highest for

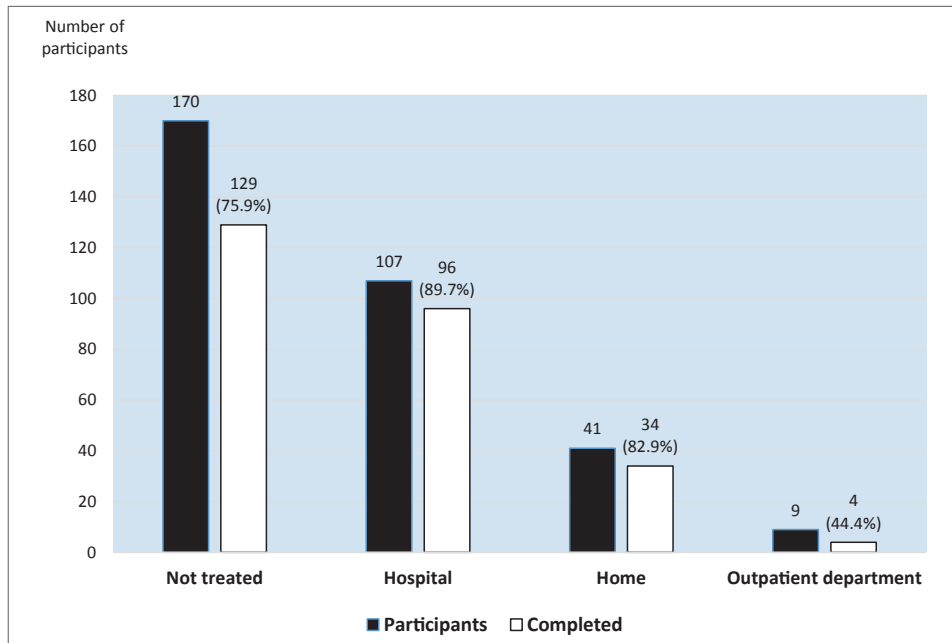


Fig. 1 Completion of treatment at Jangalak Hospital among the participants according to the place of previous treatment (N=327)

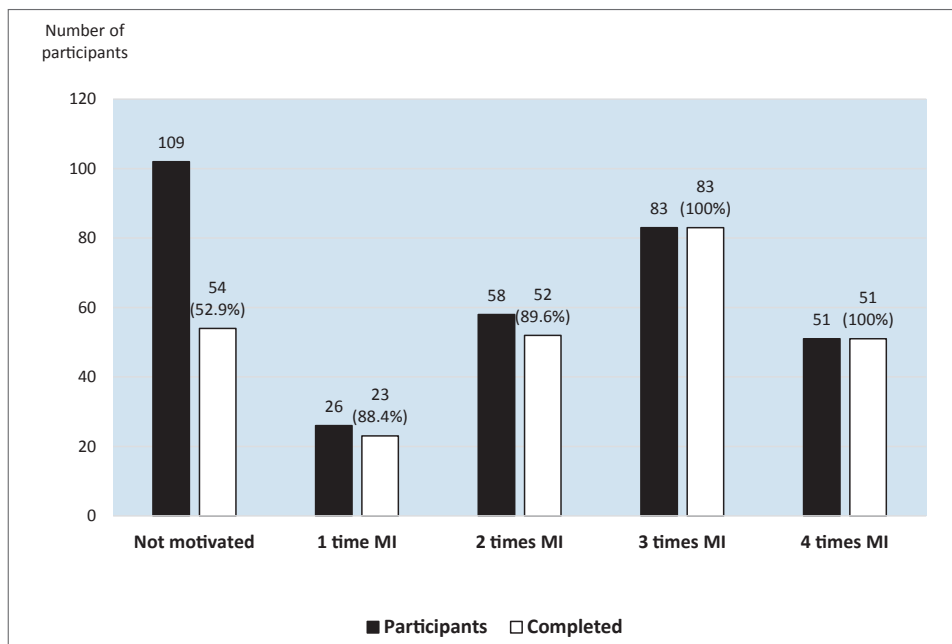


Fig. 2 Completion of treatment according to the number of participants received motivational interviewing (MI) before hospitalization (N=327)

the most quickly rising population of opium and heroin users in Afghanistan. This is because of easy access to opium and heroin, and also drug use among internally displaced persons and refugees who return from camps from other countries.¹²⁾ The Afghanistan National Drug Use Survey also reported a similar finding that opioids were widely used amount adult drug users in Afghanistan, and mortality from illicit drug use was mainly contributed by the use of opioids.¹²⁾

Participants who used heroin were more likely to complete drug addiction treatment compared to their counterparts. The treatment completion rate among the users of other drugs was lower than that among non-users. Those who did not use heroin used other drugs, and this was consistent with the findings on the treatment completion rate of heroin users. Possibly, the 30 non-heroin users might be strong addicts, and so the completion rate was lower; although, the actual reasons were not clear.

Nearly half of the participants of the study were between 18 to 27 years old. A similar study conducted in the United States on children aged 12 years or older in a non-institutionalized population showed that more than 1 in 5 young adults aged 18 to 25 years (22.0%) used illicit drugs in 2014.¹³⁾ Similarly, a study showed that the age group 25–29 years reported the highest proportion of treatment admissions (14.8%), followed by those aged 20–24 years (14.4%), and those aged 40–44 years (12.6%).¹⁴⁾ While 22.6% of them were from Kabul, nearly three quarters of the participants were from other provinces of Afghanistan. Among them, 136 participants (41.6%) had immigrated to Kabul during the study period. These people were possibly homeless drug users. It was reported that there were about 1,500 street-drug users in Kabul.¹⁵⁾

This study revealed that peer pressure was a more commonly cited reason than social problems for first-time drug use among the participants. Another study in Kabul found that nearly half of the participants began to use heroin because of the encouragement of friends, family members, roommates and colleagues.¹⁶⁾ Similarly, the Focus Group Findings of Smoking Onset Among Male Youth in China reported that cigarettes were offered by peers in first-time users, and social interaction was the second reason for first-time smoking; however, some of them started smoking because of their own decision.¹⁷⁾ A number of studies in the United States showed similar findings among the young generation of American Indians and non-American Indians.¹⁸⁾ In another study conducted in the United States, more than 80% university students consumed at least one alcoholic drink in the past two weeks, and 40% of these students were binge drinking four or more drinks on occasion compared to their non-university peers.¹⁹⁾

Our study also revealed that most of the participants were economically backward (78.3%). A poor economy is one of the reasons for the increase in drug addiction rate in Afghanistan, and poverty is the common cause for drug use all over Afghanistan.²⁰⁾ In addition, a majority of the participants in this study had a very low social status (86.8%). In a study among college students, social trouble was reported as the most recognized reason for drinking, and social reason was associated with alcohol consumption levels more strongly than enhancement or coping causes.²¹⁾ Unemployment was common among the participants of this study (66.7%). In a study on unemployment and substance use, it was found that unemployment was an important risk factor for substance use and the growth of substance use disorders.²²⁾

A significant number of participants in this study (38.6%) initiated drugs outside the country during immigration. During immigration in other countries, 136 (41.6%) participants used drugs for the first time. Another study showed that almost 50% of 34 study participants initiated the use of heroin during immigration in Iran and in Pakistan, while 35% started using drugs in Kabul and the rest of them started in other cities of Afghanistan.¹⁶⁾ In a previous study, an association between the experience of a breakup and increased drug use was reported.²³⁾ Previous studies also reported that refugees were at high risk of drug use because of poor economic situations and psychological changes.²³⁾ It was reported that a large number of Afghans began using drugs

during immigration and while living in camps in Iran and Pakistan.²⁴⁾

This study has several limitations. First, data on follow-up of the participants after their discharge from hospital were not available. Accordingly, the long-term effects could not be evaluated. Second, although there were participants from provinces other than Kabul, the study cannot be generalized for all provinces of Afghanistan. Third, the participants were males, and did not include women and children. Lastly, this study did not examine the mental problems of the participants as prognostic factors for treatment completion.

In conclusion, participants who received drug addiction treatment, attended MI, or those who used heroin were more likely to complete the drug addiction treatment. Therefore, policy makers in Afghanistan must consider amending the standard operational procedures to include attending MI as compulsory criterion to admit patients to drug addiction treatment programs. In addition, there is a need to increase the number of vocational training programs, psychosocial treatment, and life skills training to promote independent living, and stress management to ensure the decrease to minimum level of relapse among drug users.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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