



Methamphetamine Dependence and Technology-Based Interventions in Iran

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Dear Editor,

In recent years, technology-based interventions have been used for treating methamphetamine dependence in western countries (1). These treatments are believed to be more cost-effective and time-saving than therapist-assisted therapies (2). Technology-based interventions include computer-based interventions, internet-based interventions, text messaging, and smart phone or mobile-based treatments (1-3).

Methamphetamine dependence is a health concern in methadone treatment services in Iran, the most populated Persian Gulf country (4-7). However, to date, in Iran such new interventions have not been well-evaluated yet. In 2014 - 2015, we conducted a survey in 54 methadone clinics in Shiraz, Isfahan, Mashhad, and Tehran. The clinics were located in middle class areas. Overall, 1000 clients in methadone treatment (100 females and 900 males) answered the questions. They were individually asked to self-report their personal opinions about providing technology-based interventions for methamphetamine dependence among methadone patients. The details of technology-based interventions were explained to each participant by well-trained clinical psychologists. A 45-minute visual video of all technology-assisted treatments was also showed to each participant. Overall, 24% of the males were methamphetamine-dependent while 35% of the females were methamphetamine-dependent. The mean age of the interviewees was 35 (SD = 9.8) years. The median years of schooling were 7 years. Duration of methamphetamine dependence was 5 years. The side effects of methadone were the major reasons of methamphetamine dependence. Only 10% of the interviewees received the Matrix treatment. Only 25% of the interviewees

received community treatment for MA dependence. Females reported more depression (52% vs. 21%, $P < 0.05$) and suicide ideations (27% vs. 16%, $P < 0.05$) than males while males reported more violent behaviors (53% vs. 23%, $P < 0.05$) and psychosis (29% vs. 12%, $P < 0.05$) than females. Overall, 82% of the patients disagreed with delivering such interventions because of the following reasons:

1- A need for face-to-face relationships: This referred to the issue that strong therapeutic relationships between psychologists and methadone clients were needed to treat methamphetamine dependence in treatment. They believed that technology could not provide the empathy that methadone clients required to receive for methamphetamine treatment. Participants believed that methadone clients needed to talk with their treatment providers. This was a way that methadone clients could receive emotional support and feel self-confident. Furthermore, this was the way that encouraged them to come to methadone treatment. They reported that technology-based treatments such as text messaging and smart-phone interventions could not replace the emotional aspects of face-to-face treatments.

2- Lack of adequate technology-based devices and services for many patients inside methadone clinics: This referred to the issue that most methadone clinics could not pay for many technology-based devices and services such as computers and Internet for their clients. Most methadone clinics owned computers and Internet services for their office works. Furthermore, they did not have enough staff to supervise completing the technology-based assignments by clients. Such services were not cost-effective in Iran. Clinic staff could provide methadone treatment, however they could not spend their time on

reviewing computerized assignments and tasks. There, it was possible that many methadone clients would leave their works incomplete in technology-based interventions. This problem became serious when patients did not have enough literacy for writing and reading.

3- Lack of cost-effectiveness of buying technology-based devices and services by most patients: This referred to the issue that most methadone clients, especially women, were jobless and marginalized. Therefore, they could not pay for computers, smart phones with large screens, and Internet. Participants reported that many technology-based devices such as smart phones may be cost-effective for methadone clients in western countries such as the US while they are not cost-effective for many methadone clients in Iran.

4- Furthermore, they reported that technology-based interventions were not able to answer their personal and unpredicted problems associated with methamphetamine dependence in treatment. They reported that sometimes interpersonal problems or familial and social problems occurred and these could trigger methamphetamine use. Methadone clients needed to discuss them. However, technology-based interventions had no place for such conditions.

To date, such interventions have not provided better treatment outcomes than therapist-assisted treatments (1-3). The most important lesson from the above survey is that western treatments such as technology-based interventions should be used with caution in Iran. In using such interventions, the problems inside methadone clinics or within Iranian patients should be considered. Large randomized controlled trials should be conducted to evaluate the feasibility and efficacy of such programmes in Iran. Individual and financial differences among patients should be considered. A combination of therapist-assisted treatments and technology-based interventions may be a better option, which should be investigated. The role of supervision should be investigated in increasing the efficacy of technology-based interventions among methadone pa-

tients.

Footnotes

Authors' Contribution: Mohammad Effatpanah conceived and designed the study. Afsaneh Moradi and Mohammad Effatpanah collected the data for manuscript writing. Mohammad Effatpanah drafted the manuscript. Afsaneh Moradi revised the manuscript critically. All the authors read and approved the final manuscript.

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