A brief overview of methamphetamine use treatment in Iran: Intervention and practice

Opium and opium residues have been used by Iranians for centuries but methamphetamine (MA) is a newly introduced psychostimulant drug in Iran, which is characterized by highly addictive effects.[1] MA which is colloquially named Shisheh in Iran has been changed in to an epidemic health concern among drug users.[2] There is a paucity of research on MA use and dependence in Iran. Treating MA use and dependence is a health priority which has not been fully addressed.

Globally, no pharmacological treatment has been approved for the treatment of MA use and dependence. Medications such as antidepressants, dopamine agonists and antagonists have been trialed for their clinical effectiveness in managing MA withdrawal or dependence.[3] In Iran, psychiatric medications are prescribed to manage acute and severe MA use presentations such as MA intoxication and psychosis. Several medications such as Bupropion[4], Baclofen[5], Topiramate[6], and Naltrexone[7] have been suggested for the treatment of MA use and dependence but non-pharmacological treatments have remained as the best practice. Non-pharmacological treatment interventions for MA use include brief interventions, behavioral therapies, psychosocial therapies, residential rehabilitation, and 12-step programs.

Brief interventions are approved treatment approaches for MA use treatment.[8] Brief interventions target patients with MA use problem at levels substantially lower than abuse or dependence in general health care and community settings. Brief interventions are not common at MA use treatment centers in Iran. Iranian MA users receive brief psychological counseling sessions rather than brief interventions. Community reinforcement approach (CRA) and contingency management (CM) are important behavioral therapies which could be used as a combination therapy. CRA provides an opportunity to identify the factors that sustain MA dependence. CRA sessions include identifying and preventing from the antecedents of drug use and finding alternative, non-drug-related behaviors that are incompatible with drug use. CRA sessions also include vocational guidance, relationship counseling, and education on skills relating to recreation. CRA sessions contribute to developing social networks with increased drug refusal skills and no addicted individuals. CM or motivational incentives therapy can be a part of CRA, which contributes to decreasing MA use.[9] The goals of CM are to encourage MA users and addicts to enter treatment and to promote initial abstinence from MA use by providing vouchers or similar incentives in exchange for successive urine samples free from drug use. CM appears to produce the most robust reductions in MA use of any single technique but study on the clinical effectiveness of CM in preventing from MA use has remained in infancy in Iran. CRA and CM are not practiced in the treatment of MA use and dependence in Iran.

Psychosocial therapies generally manipulate elements of education and the social environment to help patients recover from MA use and dependence. These therapies include cognitive behavioral therapy (CBT) (including the Matrix model of intensive outpatient treatment) and motivational interviewing (MI). The Matrix model includes elements of social learning, psychological education, and social support with CBT principles.[10] In the largest trial of a treatment for MA-dependent clients in America, patients randomly assigned to receive the Matrix model treatment demonstrated better ability for retention in treatment, in producing more free urine samples and in achieving extended periods of abstinence compared with patients assigned to receive "treatment as usual."[11] The Matrix model is the most common outpatient treatment for MA use and dependence in Iran. It has received clinical attention and is implemented by psychotherapists and clinical psychologists at outpatient drug use treatment clinics in some large cities of Iran including Tehran.[12] It should be noted that the national protocol of MA use treatment is being devised based on the Matrix model in Iran.[12] A considerable number of Iranian MA-dependent patients receive the Matrix model but the clinical effectiveness of the Matrix model as an American model of MA use treatment has not been fully evaluated for Iranian MA-using population. MI is another form of psychosocial treatment. One important concept of MI is that the treatment is designed for patients to progress along the stages of change, assuming sole responsibility for their decisions about drug use.[13] MI is one of the best implemented treatment interventions in Iran which contributes to increasing MA patients' motivations to change and treatment adherence. MI is applied at outpatient addiction centers and it is an important part of long-term outpatient treatment of MA-dependent patients in the country. A considerable number of Iranian MA-dependent patients receive MI before initiating

treatment with the Matrix model but there is a paucity of research on MI and its clinical effectiveness in Iran.

Residential rehabilitation refers to longer-term maintenance of abstinence within a contained residential setting. Residential rehabilitation programs are often based on 12-step principles and use a social or family model to catalyze changes of individual behavior.[14] A study found that among patients enrolled in a long-term residential treatment, stimulant use decreased at a 1-year follow-up but increased significantly from 1 year to 5 years post-treatment.[15] MA-specific residential rehabilitation centers have been recently established in some large cities in Iran and this program has recently contributed to rehabilitation of MA users in the country. Residential rehabilitation is the most prevalent inpatient treatment for MA use and dependence in Iran. A recent review of the literature regarding the role of 12-step self-help activities in recovery from MA use disorders suggests that the integration of this approach into treatment processes is associated with decreased drug use and enhanced treatment outcomes for patients.[16]

In recent years, 12-step programs in Iran have contributed to recovery from MA use. Many Iranian MA users, who receive the Matrix model or residential treatment, also attend 12-step groups and continue treatment with 12-step self-help groups after treatment discharge[17] but there is no study on the efficacy of such programs on MA use treatment in the country.

In Iran, the Matrix model and residential treatment are the most frequently used methods for MA use treatment. The Matrix model has been known as the best practice in Iran. Some treatment approaches have not been practiced while these approaches are likely to contribute to better treatment outcomes for MA users in Iran. Among the non-pharmacological treatment approaches for MA use treatment, studies on the effectiveness of brief interventions, residential rehabilitation and 12-step programs are limited but the Matrix model retains more participants than other standard treatments.[11] CM results in longer mean periods of abstinence than the Matrix model therapy alone.[16] CM also appears to be superior to CBT, although both are effective in treatment. In a study published in 2001, patients receiving either CM alone or a combination of CM and CBT remained in treatment for a longer period of time than those patients receiving CBT alone. Patients in the CM and CM+CBT studies provided more stimulant-free samples than the CBT group during the trial. During treatment, those who received a form of CM seemed to benefit most, but the rates of return to substance use became equivalent at follow-up visits as time progressed. All three treatments were characterized as effective.[18]

A clinician treating a client with MA dependence is faced with important decisions regarding the type of treatment to engage in with the patient and how to respond depending on the patient's progress. While many clinicians generally feel comfortable using one model of treatment with all of their clients, there is an increased interest in use of an algorithm that guides treatment decisions based on client presentation and response to that treatment. There are no evidence-based "algorithms" for guiding selection or timing of specific treatments for individuals with MA dependence in Iran and other countries. Future research will determine the appropriateness of applying chronic disease models for managing MA, but there is a growing body of literature that describes evidence-based interventions for treating MA dependence.

For a considerable number of MA patients in Iran, MA dependence is a chronic health condition and a combination of different treatment approaches may be required to treat MA use disorder. Future research is required to determine the appropriateness of applying the current pharmacological and non-pharmacological approaches for treating MA use and dependence. There is a need for developing those internationally approved treatments which have not been developed in Iran. As knowledge develops on pharmacological and non-pharmacological interventions to treat MA use and dependence, researchers and clinicians have to deal with new challenges to evaluate the clinical effectiveness of such treatment approaches to address MA use and dependence problem. Utilization of such knowledge sometimes occurs with much delay in a developing country like Iran. Therefore, the first part of any solution to the problem of MA use and dependence in Iran involves greater awareness by all those involved in treating MA use and dependence. Clearly, MA patients in Iran should be educated about what happens to them when they use MA and when they quit using. To accomplish at least part of that awareness raising, new curricula need to be developed and refined at all levels, in academic institutions at the undergraduate and postgraduate levels and in community practice settings, where Iranian clinicians may seek and find definitive trainings in treating MA use and dependence problem. Significant further study is required to expand the range of treatment options for MA users in Iran, until they are established as routine practices.

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