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Research Article

A Qualitative Study of the Relationship Between Methamphetamine Abuse and Sexual Dysfunction in Male Substance Abusers

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Abstract

Background: Increased prevalent use of methamphetamine is a global public challenge. Information on drug use can be helpful in preventing high-risk behavior related to drug abuse.

Objectives: This study aims to investigate the sexual function changes related to methamphetamine use in the male clients of public and private addiction treatment centers.

Patients and Methods: In this qualitative study, 45 men (35 methamphetamine users, 5 family members of the users, and 5 psychiatrists or physicians who were famous for treating or researching addiction) are involved. An in-depth interview was done with therapists and key individuals.

Results: The results show that the effects of methamphetamine on sexual function are not identical. The first usage is concomitant with the increased duration of sex, an increase in the quality and quantity of sexual pleasure, a delighted orgasm, and feeling more control of the sex act. These effects gradually decrease. A decreased libido and various sexual dysfunctions such as erectile dysfunction, premature ejaculation, and losing control during the sex act will appear over time.

Conclusions: There are differences in the libido and sexual functions of methamphetamine users. Personal perceptions of one's sexual function may be affected by cognitive changes resultant from the drug. Drug-use prevention, addiction treatments, appropriate sexual behavior education, and harm reduction are priorities.

Keywords: Qualitative Research, Sexual Dysfunction, Amphetamine

1. Background

Methamphetamine (also known as meth) use and dependency are serious public health problems across multiple areas, from societal impact to burdens on psychiatric and medical resources (1). Methamphetamine is a potent form of amphetamine, administered through inhalation, smoking, injection, and ingestion (1). Cravings are one of the main reasons for abuse of the drug; Ekhtiari et al. reported that methamphetamine is a common stimulant substance in Iran that produces high levels of cravings (2).

A study at the methadone maintenance treatment clinic of the Baharan Psychiatric hospital in Zahedan city, in the east of Iran, shows that methamphetamine abuse increased from 6% among the patients in 2009 to approximately 20% in 2011 (3). The short-term effects of methamphetamine are increased level of energy, appetite, and a general sense of well-being (4); addiction, mood disturbance, paranoia, agitation, psychosis, cognitive impairments, poisoning, and death are the long-term effects (1). The absence of methamphetamine after long-term consumption leads to withdrawal syndrome such as dysphoric mood, weakness, lethargy, anxiety, nightmares, insomnia, sweating, and tension (5). Methamphetamine increases sexual desires, which is directly related to high-risk behaviors (1).

The use of drugs and committing substance-related problem behaviors are presumably due to deficits in the inhibitory control and are commonly associated with a loss of inhibitory control of sex behavior, or sexually compulsive behavior (6). Research indicates that most consumers believe that methamphetamine may increase the pleasure of their sexual experiences (7). This may be one of the most important factors of sexual deviation in methamphetamine users (8). Previous research findings indicate that other factors may be responsible for high-risk behaviors (9) and factors such as impulsiveness are more impor-

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tant (10).

Sexual intercourse marathons, in which intercourse lasts for several hours, are prevalent among methamphetamine users. There is an extreme shortage of specific research on these marathons, especially among methamphetamine users. It seems that methamphetamine facilitates this condition by increasing sexual desire, reducing behavioral inhibition, increasing the duration of erections, and reducing the refractory period (11).

In a previous study, 138 opium users, 57 cocaine and methamphetamine users, and 75 alcohol users completed a sexual behavior assessment checklist. The goal was to understand the relationship between sexual behavior and four types of narcotic/stimulant substances. It was found that opium users believed less that drug use increased their thoughts, feelings, sexual desires, and sexual performance. They also believed less that their drug use made them involved with sex in an obsessive and/or excessive way. The possibility of high-risk behaviors was also lower in opium users; they needed less treatment compared to other groups. However, methamphetamine users believed that their sexual performance and pleasure were increased by drug use, and they believed more than other participants that sexual intercourse and meth use had a strong relationship. Cocaine users also believed that drug use made them involved with sex in an obsessive and excessive way and that there was a powerful relationship between their sexual behavior and drug use (12).

2. Objectives

There has been a significant increase in methamphetamine use recently. Using this substance as a stimulant is prevalent in different countries especially among younger adults (13). One of the effects of methamphetamine use is increased sexual activities and high-risk sexual behaviors. The health, economic, cultural, and social burden of methamphetamine use on society is so significant that understanding the reasons for methamphetamine use is one of the main priorities in Iran. There have been many efforts to prevent and treat methamphetamine abuse and addiction in Iran for many years. This current study's goal is to examine the exchanges of sexual function and methamphetamine use in male clients of the public and private clinics in Tehran.

3. Patients and Methods

3.1. Participants and Plan

We used a qualitative content analysis method to examine the exchange of sexual function and methamphetamine use in male clients of the public and private clinics in Tehran. The participants included 45 men: 35 methamphetamine users, 5 family members of the users, and 5 psychiatrists or physicians who were famous for treating or researching addiction. In this study, the data saturation occurred after interviewing the participants. This study was done in 2012.

3.2. Procedure

We explained the goals of this study to the participants and got their written permission for recording their voice and publishing the data. We then gathered data from those who were qualified to enter the study. We used a focused group discussion to get information from methamphetamine users and their family members. In-depth interviews were done to get information from therapists and key individuals. The methamphetamine users and their family members were selected using the opportunistic and peer referral methods of sampling. The methamphetamine users were selected from different economic and social classes. We used a checklist and open questionnaires to collect information. The data were analyzed using conventional content analyses according to the Graneheim and Lundman method. The answers were analyzed and the results were interpreted.

3.3. Ethical Considerations

We explained to the participants that their information would remain secret, their name would not be used in any document related to this study, and they could quit the study at any time.

4. Results

We interviewed 35 methamphetamine users, 5 of their family members, and 5 therapists. The users were aged from 19 to 45, with the majority of them between 25 and 35. Two-fifths of them did not earn their high school diplomas; one-fifth had a high school diploma; and the rest had a higher academic degree. Twelve of the participants were single, three were divorced, and ten were married. The duration of their methamphetamine use was from less than 1 year to 8 years; a majority had been using methamphetamine for 2 to 5 years. More than four-fifths of the users had used opium before starting methamphetamine use. About half of them had used illicit drugs frequently within the last month. Methamphetamine was the most used substance within the last month: about one-third of them had used it. Alcohol and sedatives were the next most-used drugs.

We examined the participants' answers and distinguished four main categories: different attitudes toward sexual behavior, different sexual abilities, feeling a compulsion to have sexual intercourse, and having problems with appropriate sexual behaviors. Each of these categories was further divided into subcategories, as described in the following sections and in Table 1.

4.1. Category 1, Different Attitudes Toward Sexual Behavior

4.1.1. Different Experience of Sexual Intercourse

The vast majority of the methamphetamine users reported that using methamphetamine increased their sexual desire significantly, and that sexual intercourse while on methamphetamine was very enjoyable. The first uses of methamphetamine resulted in more enjoyable orgasms, longer acts of sexual intercourse, a quantitative and qualitative increase in sexual pleasure, and feelings of having more control over the relationship. Only one participant reported that methamphetamine reduced his sexual desire. Some of the participants reported that their original or primary uses of methamphetamine were more effective in increasing their sexual desire, but the therapists did not accept this statement and instead believed that methamphetamine users experience anhedonia after some time as a result of the impairments to the reward circuit of their brain, which are then wrongly attributed to the quality of substance.

-A 44-year-old male user: The experience of sexual intercourse while on meth is so great that you feel the pleasure with all the cells in your body!

-A 28-year-old male user: You feel like it is the highest point of satisfaction, there is nothing above that!

4.1.2. Effects of Methamphetamine Use on Emotion

The methamphetamine users had different experiences but the majority of them believed that using methamphetamine strengthened their affection toward their sexual partner.

- A 28-year-old male user: At first, it is so enjoyable that you feel everything is enjoyable!

- A 37-year-old male user: It tasted differently. When I kissed my partner lips, those tasted like fruits.

4.1.3. Preferring Sexual Intercourse with a Partner Who Uses Methamphetamine

Most of the methamphetamine users said that having sexual intercourse with a female user was more enjoyable, but some of them were not interested in having sex with methamphetamine users because of men's moral problems. When we asked the participants whether, regardless of their personality, having sex with a methamphetamine user or a normal partner was better, all of them said, A female meth user reaches orgasm less quickly and is more experienced in having sex. The quality of sex with a meth user is higher. Some of them also believed that a female meth user would prefer a male methamphetamine user as a sexual partner because of his relationship skills and delayed ejaculation.

- A 30-year-old male user: My female partner became more eager than me when she used meth!

- A 30-year-old male user: A female user gives you such a pleasure that a normal person can never do!

4.2. Category 2, Different Sexual Ability

4.2.1. Duration of Intercourse While on Methamphetamine

The majority of participants believed that the duration of their acts of sexual intercourse increased after using methamphetamine. Delaying orgasm and making the sexual relationship last longer were two of the drug's effects reported by more than half of the users. These effects were more apparent at the beginning of their use and reduced after some time.

- A 30-year-old male user: I reached orgasm every 15 minutes, but it seemed nothing had happened. My sexual desire was very high. I did not let go of her, and this made her very tired.

4.2.2. Sexual Intercourse Marathon

Some of participants reported that they could have sexual intercourse for hours without feeling tired or taking a rest.

- A 30-year-old male user: You continue having sex and do not reach the end. You want to go on and on. You do not get tired, physically or mentally.

- A 35-year-old male user: We had sex in different positions for 3 hours. We did not get tired at all!

4.2.3. Quality of Sex in the First Months

Almost all of the participants reported that the quality of their sexual encounters was great in the first few months, but its quality changed over time. The wives of married participants did not report any change in the quality of their sexual relationship before and after their husbands' use of methamphetamine.

- A 32-year-old male user: In the first 6 months, it makes you more sexual and horny.

- A 35-year-old male user: I could never experience the pleasure of my first sex while on meth.

4.3. Category 3, Feeling a Compulsion to Have Sexual Intercourse

4.3.1. Mental Compulsion to Have Sexual Intercourse and Sexual Addiction

Most of the users reported that using methamphetamine forced them to have sex, and, while on

Table 1. Extracted	l Concepts Diagram	

Domain	Contents	
Different attitude toward sexual behavior	Different experience of sexual intercourse	
	Effects of methamphetamine use on emotions	
	Preferring sexual relationships with a partner who uses methamphetamine	
Different sexual ability	The quality of sexual intercourse in the first months	
	Duration of intercourse while on methamphetamine	
	Sexual intercourse marathon	
Feeling compulsion to have sexual intercourse	Feeling a mental compulsion to have sexual intercourse	
	Having sexual intercourse in inappropriate places	
	Feeling compulsion to watch pornographic videos	
	Masturbation	
	Forcing others to have sexual intercourse	
Having problems with appropriate sexual behaviors	Necessity of using helping drugs	
	Sexual preferences	

methamphetamine, they wanted to have sex at any cost. If they did not, they became nervous and tense.

- A 34-year-old male user: During that time, you are eager and your eyes are closed. You just want to have sex and relive your tension.

- A 35-year-old male user: I did everything to have sex, I tried very hard and did everything to satisfy my partner.

4.3.2. Having Sex in Inappropriate Places

Most participants had the experience of engaging in sexual relations in inappropriate or dangerous places: inside a car, in an alley, in ruins, and on top of the buildings. In some cases, having sex in these places resulted in serious problems.

- A 30-year-old male user: I was in ruins and a girl was with me. She had escaped from her parents' house and lived in cardboard boxes. I wanted to take her to my parents' house, but I thought my mom would call the police on me, so I took her to ruins, and I was very stressed out and scared.

4.3.3. Feeling Compulsion to Watch Pornographic Videos

Most of the participants reported that methamphetamine made them to masturbate more. Some masturbated several times a day. Some of them believed that this increase in masturbation resulted from experiencing an increase in sexual desire and having erectile dysfunction in the same time.

- A 35-year-old male user: I masturbated 7 times in 24 hours.

- A 28-year-old male user: It was the most trouble-free sex, without stiffness of the penis!

4.3.4. Aggressiveness and Forcing Others to Have Sex

Three of the participants reported being sexually aggressive.

- A 22-year-old male user: When I used methamphetamine, I became very aggressive and forced girls to have sex with me. I even slapped and kicked them to force them into doing this.

- Wife of a 30-year-old male user: He became very cruel, and I did not like that at all. He also pulled out my hairs and had anal sex with me. He had too much sex with me.

4.4. Category 4, Having Problems with Appropriate Sexual Behavior

4.4.1. Necessity of Using Helping Drugs

Most participants who had used methamphetamine for a long time encountered erectile dysfunction and had used drugs such as Sildenafil to treat this problem.

- A 31-year-old male user: After some months without using Viagra, I had to use it to be able to have an erection.

4.4.2. Sexual Preferences

Most participants were inclined toward voyeurism. None of them spoke about incest, but three of them reported that they had thought about it. Only one of the users reported having homosexual desires after using methamphetamine, but some of the therapists believed that homosexual behaviors are more prevalent among male methamphetamine users. Three of participants reported an inclination toward sexual aggression.

- A 28-year-old male meth user: After starting meth use, I became a sodomite!

- A 30-year-old male meth user: Some thoughts about incest came to my mind, but I wiped them out immediately like cleaning a blackboard!

5. Discussion

This report includes the results of a qualitative study to understand the sexual problems in male methamphetamine abusers and their dependents and to examine the relationship between these problems and the first use of this substance. The clinical effects of methamphetamine on sexual performance are not similar in all users, and most people have different experiences in using this drug (7). This difference has been shown in this study. It seems that the expectation and amount of knowledge that a user has about the effects of this substance are important in the effects they get from it.

It is also clear that methamphetamine affects the sexual desire of users differently. Many participants reported that they experienced a significant increase in their sexual desire at the beginning of their use of this drug, but other participants did not report increases in their sexual desire. Some studies have shown that using stimulant drugs like methamphetamine increase sexual desire at the beginning of use (14).

The users emphasized that the main advantage of using methamphetamine was the strengthening of the sexual relationship with their partner. Some users attributed the different quality of their sexual relationship to this feeling of intimacy. Semple et al. (15) (2002) show in their study that homosexual people have a different experience in all phases of sexual intercourse. One the effects of using methamphetamine in men is delaying the ejaculation time (16). In our study, some methamphetamine users reported this effect.

During focused group discussions, some methamphetamine users described the nature of their sexual behavior after using methamphetamine as compulsive, and some used the phrase sex addiction for these relationships. Other studies have also shown the association between methamphetamine use and compulsive sexual behaviors (17). Methamphetamine use leads to an impairment of the user's ability to make decisions (18) and reduces their control over their sexual behaviors (19). As a result, a methamphetamine user does not inhibit the desires and behaviors that are socially and morally inappropriate. This lack of control increases the unusual behaviors and leads to aggression after frustration. Our results, consistent with previous studies, showed relationships between amphetamine-type stimulants use and sexual aggression; it was found in this study, like other studies (20), that using amphetamine-type stimulants leads to sexual aggression.

One of the findings of this study was the widespread use of Sildenafil by methamphetamine users as a selftreatment method for their erectile dysfunction. Other researchers have also found that methamphetamine users who experience sexual intercourse marathons are more likely to self-treat with medications such as Sildenafil (15). Having sexual intercourse marathons (sexual intercourses which last for several hours) is very prevalent among methamphetamine users. There is an extreme shortage of specific researches on sexual intercourse marathons especially among methamphetamine users. It seems that methamphetamine facilitates this condition by increasing sexual desire, reducing behavioral inhibition, increasing the duration of erections, and reducing the refractory period (11).

In this study, the participants stated that, after beginning to use methamphetamine, they started sexual relationships with multiple partners. Other studies have also shown this association. Tayyebi et al. (6) (2013) found that methamphetamine users are more likely to change their sexual partners.

An important trait said about methamphetamine is that using it can gradually change the user's sexual profile; it has been seen that many people who had always lived in a heterosexual relationship and had never shown any conscious desire toward people of the same sex felt homosexual desires and started to have homosexual intercourse after using methamphetamine. Most of our participants did not acknowledge experiencing these desires, but that could be explained by both our small sample and because homosexuality is a powerful stigma in Iranian society. All therapists involved in this study reported seeing these desires in their clients.

According to these points, using methamphetamine can lead to quantitative and qualitative changes in what a person perceives as his/her role in sexual performance and can bring about physiological changes in sexual performance. Some of these behaviors result from methamphetamine intoxication and some are caused by changes made by the long-term use of this substance. Policies related to sexual issues that arise from the long-term using of methamphetamine need more quantitative and accurate studies. There is a fear that the changes in performance, emotions, and sexual attitudes in methamphetamine users transmit to other people and affect the culture of Iranian society, specially the younger population.

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Footnotes

Authors' Contribution: Behrouz Dolatshahi and Ali Farhoudian designed and implemented the focus group, Ebrahim Rezaee and Mahmoud Tavakoli analyzed the data, and Mozhgan Falahatdoost wrote this paper.

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References

- 1. Lashkaripour K, Torbati E. Methamphetamine dependency. Int J High Risk Behav. 2012:7-8.
- Ekhtiari H, Alam-Mehrjerdi Z, Hassani-Abharian P, Nouri M, Farnam R, Mokri A. Examination and evaluation of craving-inductive verbal cues among persian-speaking methamphetamine abusers. *Adv Cogn Sci.* 2010;12(2):69–82.
- Alam Mehrjerdi Z, Abarashi Z, Mansoori S, Deylamizadeh A, Salehi Fadardi J, Noroozi A, et al. Methamphetamine use among Iranian heroin kerack-dependent women: implications for treatment. *Int J High Risk Behav Addict.* 2013;2(1):15–21. doi: 10.5812/ijhrba.10216. [PubMed: 24971266].
- 4. Vaziri S, Lotfi KF. Effects of methamphetamine and narcotics on the increase of libido and reckless sexual behavior. 2010
- Newton TF, Kalechstein AD, Duran S, Vansluis N, Ling W. Methamphetamine abstinence syndrome: preliminary findings. *Am J Addict.* 2004;13(3):248–55. doi: 10.1080/10550490490459915. [PubMed: 15370944].
- Tayyebi K, Abolghasemi A, Mahmood Alilu M, Monirpoor N. The Comparison of Self-regulation and Affective Control in Methamphetamine and Narcotics Addicts and Non-Addicts. *Int J High Risk Behav Addict*. 2013;1(4):172–7. doi: 10.5812/ijhrba.8442. [PubMed: 24971258].
- Sherman SG, Gann D, German D, Sirirojn B, Thompson N, Aramrattana A, et al. A qualitative study of sexual behaviours among methamphetamine users in Chiang Mai, Thailand: a typology of risk. *Drug Alcohol Rev.* 2008;27(3):263–9. doi: 10.1080/09595230801956520. [PubMed: 18368607].

- Harawa NT, Williams JK, Ramamurthi HC, Manago C, Avina S, Jones M. Sexual behavior, sexual identity, and substance abuse among low-income bisexual and non-gay-identifying African American men who have sex with men. *Arch Sex Behav.* 2008;37(5):748–62. doi: 10.1007/s10508-008-9361-x. [PubMed: 18546069].
- Lee NK, Rawson RA. A systematic review of cognitive and behavioural therapies for methamphetamine dependence. *Drug Alcohol Rev.* 2008;27(3):309–17. doi: 10.1080/09595230801919494. [PubMed: 18368613].
- Hayaki J, Anderson B, Stein M. Sexual risk behaviors among substance users: relationship to impulsivity. *Psychol Addict Behav.* 2006;**20**(3):328–32. doi: 10.1037/0893-164X.20.3.328. [PubMed: 16938071].
- Colfax G, Shoptaw S. The methamphetamine epidemic: implications for HIV prevention and treatment. *Curr HIV/AIDS Rep.* 2005;2(4):194–9. [PubMed: 16343378].
- Rawson RA, Gonzales R, Brethen P. Treatment of methamphetamine use disorders: an update. J Subst Abuse Treat. 2002;23(2):145–50. [PubMed: 12220612].
- Ventura A, Young AG, Winslow MM, Lintault L, Meissner A, Erkeland SJ, et al. Targeted deletion reveals essential and overlapping functions of the miR-17 through 92 family of miRNA clusters. *Cell.* 2008;**132**(5):875– 86. doi: 10.1016/j.cell.2008.02.019. [PubMed: 18329372].
- Volkow ND, Wang GJ, Fowler JS, Telang F, Jayne M, Wong C. Stimulantinduced enhanced sexual desire as a potential contributing factor in HIV transmission. *Am J Psychiatry*. 2007;**164**(1):157-60. doi: 10.1176/ajp.2007.164.1.157. [PubMed: 17202559].
- Semple SJ, Patterson TL, Grant I. A comparison of injection and non-injection methamphetamine-using HIV positive men who have sex with men. *Drug Alcohol Depend.* 2004;**76**(2):203–12. doi: 10.1016/j.drugalcdep.2004.05.003. [PubMed: 15488344].
- Zemishlany Z, Aizenberg D, Weizman A. Subjective effects of MDMA ('Ecstasy') on human sexual function. *Eur Psychiatry*. 2001;**16**(2):127–30. [PubMed: 11311178].
- Gorbach PM, Drumright LN, Javanbakht M, Pond SL, Woelk CH, Daar ES, et al. Antiretroviral drug resistance and risk behavior among recently HIV-infected men who have sex with men. J Acquir Immune Defic Syndr. 2008;47(5):639–43. doi: 10.1097/QAI.0b013e3181684c3d. [PubMed: 18285715].
- Scott JC, Woods SP, Matt GE, Meyer RA, Heaton RK, Atkinson JH, et al. Neurocognitive effects of methamphetamine: a critical review and meta-analysis. *Neuropsychol Rev.* 2007;**17**(3):275–97. doi: 10.1007/s11065-007-9031-0. [PubMed: 17694436].
- Embry D, Hankins M, Biglan A, Boles S. Behavioral and social correlates of methamphetamine use in a population-based sample of early and later adolescents. *Addict Behav.* 2009;**34**(4):343–51. doi: 10.1016/j.addbeh.2008.11.019. [PubMed: 19138821].
- Du Mont J, Macdonald S, Rotbard N, Bainbridge D, Asllani E, Smith N, et al. Drug-facilitated sexual assault in Ontario, Canada: toxicological and DNA findings. *J Forensic Leg Med.* 2010;17(6):333–8. doi: 10.1016/j.jflm.2010.05.004. [PubMed: 20650424].