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Original Research Article

Heroin use among clients receiving methadone treatment in Dar es Salaam Tanzania: a qualitative study

Idda H. Mosha*

Department of Behavioural Sciences, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania

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***Correspondence:**
Dr. Idda H. Mosha,
E-mail: ihmosha@yahoo.co.uk

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ABSTRACT

Background: Simultaneous heroin use among methadone-maintained clients is a recognized phenomenon worldwide. Tanzania is the first sub-Saharan African country to offer methadone treatment. This study explored reasons for heroin use among clients on methadone treatment clinics in Dar es Salaam, Tanzania.
Methods: This was exploratory cross-sectional study. Purposive sampling was used to select ten study participants. In in-depth interview guide was used to collect data. The interviews were conducted in Kiswahili and lasted for about sixty minutes. Audio-recordings of the interviews were transcribed verbatim and translated into English. Transcribed data was analysed and subjected to thematic analysis with the help of Nvivo 12 software.
Results: Many reasons were mentioned for concurrent use of heroin and methadone among clients on methadone treatment. Some of the mentioned reasons were inadequate methadone dose, treatment, healthcare providers' attitudes, and healthcare provision environment, lack of family support, peer influence homeless and easy availability of heroin.
Conclusions: Different measures should be taken by methadone programs and stakeholders to overcome concurrent use of heroin and methadone among clients receiving methadone treatment.

Keywords: Heroin, Methadone treatment clinics, Dar es Salaam, Tanzania

INTRODUCTION

Injecting drug use is a critical concern in the human immuno-deficiency virus (HIV) epidemic in Tanzania and in globe. While HIV transmission continues to occur mainly through heterosexual intercourse, transmission through shared injecting equipment carries much higher risk per exposure, making it vital to reach people who inject drugs (PWIDs) with prevention and treatment measures.[1,2] Many cities along the East African coast are conduits of heroin trade routes between countries that supply in the Middle East and consumer markets in Europe and North America since the mid-1980s.[3] Nevertheless, a recent increase in the availability of strong, cheap heroin to urban populations has contributed to growth in injecting drug use in Dar es Salaam.[4,5] Informal access to heroin combined with countless social and economic forces have further contributed to an increase in injecting drug use.[4] The Tanzania drug control commission estimates presence of 50,000 people who inject drugs nationally.[6] Research estimates that 42% to 50% of PWID in Dar es Salaam are living with HIV compared to an estimated 6.9% prevalence in the general urban population.[3,7] Any additional drug use by methadone patients may be motivated by psychological processes negative emotional states, positive emotional states or exposure to 'temptation situations'.[8]

Confidence in ability to remain abstinent is related to alcohol and tobacco treatment outcomes, and client-centred interventions for alcohol problems have sought to strengthen patients' coping self-efficacy.[9] It has been established those psychosocial interventions, when tailored to the needs of the individual, can enhance methadone treatment outcomes greatly.[10]

To address the problem of PWIDs in Tanzania, the government established a national policy to prevent and treat HIV among people who use and inject drugs, including methadone-assisted therapy (MAT) for heroin dependence in 2009.[5] Studies have revealed that methadone as a long-term, lifesaving medical intervention among addicted drug users.[11] MAT decreases the morbidity, mortality associated with heroin dependence.[12]

For example, one study which was conducted in 2009 in Tanzania revealed rates of substance use at 17.2%, 8.7% and 0.8% for alcohol, tobacco, and cannabis respectively.[13] While another study, which was conducted to investigate opioid use and associated harm to youths injecting drugs revealed the presence of scenarios of opioid use in Tanzania.[14]

Results of a study which was conducted in 2013-2014 in 12 regions of Tanzania shows that cannabis was the most widespread smoked alone or with tobacco and heroin as blend, indicating increased use compared to previous studies. It was also reported that heroin was available in all regions whereas cocaine was less common, possible due to high cost and unpredictable accessibility. Substances such as petrol, shoe polish, and glue were used as inhalants.[15] One study revealed that substances such as petrol, shoe polish, and glue were used as inhalants.[15] The interventions to overcome use and effects of opioid overdose include treatment of opioid use disorder with an opioid agonist, provision of naloxone to laypersons and the formation of a supervised injection facility.[16]

In sub-Saharan Africa, Tanzania is the first country to have established methadone treatment with three sites which are at Mwananyamala Regional Referral Hospital, Muhimbili National Hospital and Temeke regional referral hospital. The government of Tanzania launched an opioid treatment program (OTP) using methadone in Dar es Salaam in February of 2011. Oral methadone is the drug of choice available and adopted for use in opioid dependence treatment in Tanzania.[17] Methadone programs have been successful in reducing heroin use, HIV transmission, and criminal behavior including reducing the rate of imprisonment MAT.[18-21] Within its infancy, methadone program has shown similar achievements in Tanzania.[22] There are reports of clients of methadone maintenance treatment and concurrently use heroin and other drugs.[22]

Continual use, abuse, and drug dependence on a broad range of prescription and non-prescription drugs during treatment pose a major clinical challenge to substance-specific pharmacotherapies like methadone maintenance treatment (MMT).[23] Concurrent heroin and methadone behavior has been reported globally, and the prevalence of concurrent heroin use has ranged between 50% and 62%.[24] In Tanzania, twenty percent (20%) of methadone clients were revealed to continue using drugs while on methadone, more than 13% being positive on heroin.[25]

Barriers to behaviour change to complete abstinence of heroin injection behavior while on methadone treatment have only been studied in Europe and Asia.[26] Little has been done in Tanzania, to explore reasons for concurrent heroin use and methadone among clients enrolled at methadone clinics. Therefore, this study aimed at exploring reasons for concurrent heroin and methadone use among clients on methadone clinics in Dar es Salaam, Tanzania. Studies on methadone in Tanzania mainly focused on retention into the program and the risk towards contracting HIV.[16-18,20,27]

To my best knowledge, no study has been conducted in Tanzania exploring reasons for concurrent heroin and methadone use among methadone clients in methadone clinics in Dar es Salaam, Tanzania.

METHODS

Study design and setting

This was exploratory cross-sectional study. This study was conducted in Dar es Salaam, a city in Tanzania covering 1,593 sq^2 kilometres. Dar es Salaam is located along the coast of Indian Ocean, and is the largest city and former capital of Tanzania. The researcher purposely selected Dar-es-Salaam region because it is where the methadone treatment clinics are located. Specifically, the study was conducted at Mwananyamala and Temeke methadone clinics in Dar es Salaam, with approximately 50,000 PWIDs. It is the first city in Sub Saharan Africa to provide opioid substitution therapy (OST) using oral methadone among heroin users. Tanzania has only three methadone providing clinics which are Muhimbili National hospital methadone clinic, Mwananyamala and Temeke methadone clinics.

Sampling technique

Temeke and Mwananyamala methadone clinics were selected purposively. Study participants were selected purposively with consideration to gender, experiences in years of heroin use, and the time they have been on methadone treatment. Some healthcare providers were involved in the selection of study participants in collaboration with principal researcher. Ten participants were interviewed when saturation point was observed. The study participants included methadone clients, who were complete cognitively, have been on the methadone program for at least a year prior the study, agreed to participate voluntarily and signed the consent form.

Study participants

The study participants were clients receiving methadone treatment in Temeke and Mwananyamala methadone clinics. Steady methadone clients maintained at these clinics stand a better chance of explaining why concurrent use of heroin while on methadone treatment.

Data collection methods

A total number of ten in depth interviews were conducted using in depth interview guide. The questions on the guide focused on reasons for heroin use among clients on methadone treatment. The in-depth interview guide was prepared in English and then transferred into Kiswahili.

The in-depth interviews were conducted in Kiswahili by the researcher and a research assistant. Each in-depth interview lasted for about sixty minutes. The in-depth interviews were recorded both by using a digital recorder and then transcribed and translated into English before data analysis. Data was collected from June 2017 to July 2017.

Data analysis

Recorded interviews were transcribed verbatim and translated from Kiswahili into English language. Data were transcribed and analysed using thematic analysis.

Thematic analysis using five stages was performed to establish meaningful patterns: familiarisation with the data, generating initial codes, searching for themes among codes, reviewing themes and presenting the results. Nvivo 12 version computer software was used to help data analysis process.

RESULTS

Socio demographic characteristics of participants

A total number of ten participants participated in this study. Their ages ranged from 29 to 50. Mean age was 34 years. Among the study participants, only two had secondary education, while the rest had primary school education.

Four of the study participants were females while the rest were males. With regard to marital status, five of the study participants were single, two of them were cohabiting, and two were married while one was separated from her spouse. The following themes emerged from the findings.

Needle mania

Some study participants reported that some people who inject drug can develop the love for injection. They further narrated that through injection they get an extra pleasure which they miss when they receive methadone treatment orally. They added that might lead to some of them to continue using heroin through injection while on methadone treatment. One participant had this to share:

“I mean injecting heroin become part of you, and part of your life, I mean you cannot help it and you cannot stay a day without injecting yourself with heroin, even when you are enrolled at methadone treatment clinics where we receive methadone orally” (IDI, 28 years, male).

Peer influence

Some study participants narrated that concurrent use of heroin and methadone is caused by peer influence. They affirmed that clients who are on methadone and have partners/friends who use heroin face challenges to stop concurrent heroin and methadone use because of peer pressure that is why some people continue using heroin despite being on methadone treatment. One had this to comment:

“I think many people who are on methadone treatment are using heroin due to peer influence. Their friends who are heroin user exert some pressure on methadone clients to continue using heroin. If the methadone-maintained people do not detach from their friends who use heroin they will continue using heroin and methadone concomitantly (IDI, 38 years, male).

Increased sexual pleasure

Some participants reported that heroin injection help them to get pleasure in many ways including sexual pleasure. They further recounted that heroin use delays orgasm during sexual encounters thus leading to long lasting sexual intercourse. This was identified as a reason for concurrent methadone and heroin use among methadone-maintained clients. One participant had this to share:

“When one uses heroin during sex, it enables him to last longer than the one who doesn’t use it. If a man has a girlfriend, and wants her respect him, he uses a little bit of heroin before having sex and this includes people who are receiving treatment from methadone clinic…when you are used to that behaviour then you can’t have sex without using heroin…so it can lead to concurrent use of methadone and heroin (IDI, 33 years, female).

Healthcare factors

Some participants mentioned environment as one of the reasons for concurrent heroin and methadone use. Participants added that healthcare providers at the clinic can suspend clients from taking methadone for some days or even weeks; this causes some clients to go back to heroin use. Study participants lamented that mistakes which are punished range from delay in giving out the cards number to the healthcare provider at the methadone clinics to coming to the clinic while drunk. One participant had this to say:

“…sometime they give you punishment, to stay for seven days, or even two weeks without methadone, so do you think that people will continue having the heroin withdrawal syndrome? No! They search for heroin and use it and when the punishment is over, they continue with concurrent use of heroin and methadone…” (IDI, 35 years, female).

Another male added on how punishment at methadone treatment clinics cause them to continue using heroin while on methadone treatment, he said:

"We are punished when we do mistake at methadone clinics. But what real hurts us is the kind of punishment, healthcare providers at methadone clinics should change the type of punishment; imagine a patient makes mistakes and you give him a punishment by denying him treatment for a week! What do you think will he do for one week? Do you know methadone symptoms are painful than heroin? When methadone is finished, he goes back to maskani (places where drugs are sold) and starts injecting heroin again. These punishments cost us a lot and make us fail to stop using heroin while on methadone treatment. Imagine a person is given that punishment just for delaying to give out his card…" (IDI 46 years, male).

Health care provider's attitude

Some participants reported that health care providers' attitude as a reason for heroin use while on methadone clinics. Participants further narrated that some healthcare provider's negative attitude to methadone clients leads to poor provider-clients' relationship and hence continuing heroin use while on methadone treatment. They further lamented that a client may stop attending methadone treatment clinic until a friendly/another healthcare provider is on duty administering methadone. They affirmed that for them to be able to deal with the withdrawal symptoms, methadone clients start using heroin. One of the participants had this to share:

"We are human beings, so occasionally it might happen that you have quarrelled with one healthcare provider at the clinic, and you find that she/he is at the dispensing window for even three days. You can't take methadone from the healthcare provider that you have quarrelled with him/her. So, you resort into using heroin until that healthcare providers period at the dispensing window is over" (IDI, 32 years, female).

Perception on quality of methadone allotted

Some study participants lamented that they feel as if they receive a more diluted methadone which does not help them to quench their craving even if the dose is increased. They added that that is why they have to quench their craving for enough methadone dose with concurrent heroin use. They further affirmed that they have reported that problem with the healthcare providers at the methadone treatment clinics and were promised to be improved but that has not been solved. The study participants narrated that has led to more methadone clients starting using heroin while on methadone to quench their craving. For instance, one of the study participants had this to say:

"I think the methadone dose given to us is diluted, I mean they dilute the dose more than its compulsory, …in the past I used to take methadone and travel for even for a week and come back without any problem. But for now, if I take methadone dose this morning, at 4 pm, I start feeling craving symptoms and the condition is so severe that I have to calm it with heroin use (IDI 32 years, female).

Inadequate methadone dose

Some study participants reported to have perception of not being satisfied with methadone dose they receive from the treatment clinics. They narrated that the methadone dose they receive from the treatment clinics is not enough to satisfy them therefore, they had the feeling that methadone has to be complemented with heroin injection in order for them to be satisfied. For instance, one had this to share:

"I think the methadone dose we receive from the clinics doesn't satisfy us. It is very little to satisfy us, I mean we do not feel the effect of methadone in our bodies, so to get high or in order for us to be satisfied we have to get a little bit of heroin injection, that is why we use methadone and heroine concurrently" (IDI, 46 years male).

Furthermore, some of the participants reported the habit of not being satisfied with methadone treatment especially in the beginning of methadone treatment, which cause some of the clients to concurrent use of heroin. Participants reported that on average, it takes up to one month of methadone treatment before one can stop using heroin. For instance, one participant had this to say:

"I think in the beginning of methadone treatment that is when majority of us use heroine to quench our craving, it is something which is well known here at the clinics that when someone starts methadone treatment, he/she will also certainly use heroin in his/her first days of methadone up to one month before stopping heroin use, some methadone-maintained clients take even up to three months before stopping using heroin. This is due to the fact that in the beginning of methadone treatment majority of clients are not satisfied with methadone dose and they don't feel the effect of the methadone treatment in their bodies" (IDI, 43 years male).

Homeless

Some study participants reported that being homeless as a reason for using heroin when enrolled in methadone treatment clinics. They added that those clients enrolled at methadone clinics who do not have homes have difficulties in abstaining from heroin use. They further affirmed that lack of a place to live among clients on methadone makes them sleep on the corridors or in unfinished buildings where heroin is sold thus difficult for them to avoid using it. One participant opined:

"I mean if you don't have a home or somewhere to sleep, then you sleep in the corridors of people's houses at night, when you sleep in the corridors at night and its cold especially, consequently, you will feel the urge to use heroin because you are lonely and cold, but if you have a

home, it's unlikely to be tempted to use heroin" (IDI, 39 years male).

Lack of family support

Some study participants reported that lack of family support from someone's family was reported to be a reason for concurrent heroin use while on methadone clinics. They further affirmed that lack of support from family leads to difficulties in adherence to methadone treatment. They added that stigma and rejection by family members discourages the efforts made by methadone clients on stop using heroin. One participant had this to state:

"I am of the view that it is difficult to stop heroin use while on methadone treatment clinics if you do not have family or relative's support. I mean if you don't have any social support then maskani (places where drugs are sold) is your saviour; and therefore, it is so easy to stop concurrent heroin and methadone use if you have some people who encourage you to stop heroin use, failure to that you can continue with concurrent use of heroin and methadone" (IDI, 32 years female).

Availability of heroin

Some of the participants claimed that availability of heroin drug in the streets as a reason for concurrent heroin and methadone use. They narrated that heroin is available easily and at large scale in the streets where they live thus being difficult for them to stop using it while on methadone clinics. Some of the participants proposed restricting entrance of heroin in Tanzania through implementation of existing laws on hard drugs. One participant had this to say:

"It's difficult to quit heroin use while you are enrolled at methadone treatment clinics; there is a lot of heroin available on the street and it is difficult for us to stop using it even if we are at methadone clinics… For us, who use heroin, availability of heroin in the streets is very easy, it should be banned so as we stop using it concurrently while we are in methadone treatment clinics" (IDI, 28 years male).

DISCUSSION

This study explored reasons for heroin use among clients receiving methadone treatment in Dar es Salaam, Tanzania. Perception that methadone dose was inadequate was reported to be a barrier to stop heroin use while enrolled in methadone treatment clinics. Thus, participants reported the effects of low dose being more noticeable when initializing methadone and withdraw phase where clients are put on either low dose leading to concurrent use of heroin and methadone. Previous studies have identified high dose to be effective in heroin abstinence, the higher the methadone dose the less probable was to find heroin in urine.[28,29] To abstain from heroin use while on methadone treatment clients should be asked to identify their adequate dose to quench heroin impulse.[30] Methadone clients' perception of an exclusive pleasure from heroin use is another common barrier to concurrent heroin use when one is enrolled at methadone treatment clinics. This has been reported formerly as drug addicts get some kind of ecstasy when injecting the heroin needle.[31] Injectable methadone has helped clients with such a strong desire for injection.[31] In this study, the methadone program uses oral methadone, something which might require the methadone clients to look for needle gratification by heroin injection.

Peer pressure or having a partner or a friend who uses heroin provide a similar social cycle of life eventually becoming barriers for heroin use among clients enrolled in methadone clinics. The study findings revealed peer influence is significant importance especially to female clients because sometimes they are forced to practice risk behaviours to HIV infection like being female sex workers. Similar findings have been reported in previous studies.[32,33]

Methadone clients' behavior of trusting heroin for extended time to ejaculation leads to continual use of heroin despite being on methadone treatment. Heroin effects on sexuality have long been documented.[34] Furthermore, heroin reduces sexual feelings; users feel little sexual desire, engage in less overt sexual activity, and display a marked decrease in "sensitivity," as particularly evidenced in the extended time to ejaculation and poor quality of the orgasm.[34-37]

Methadone clients report using heroin for delayed ejaculation without knowing its long-term effects which may lead to erectile dysfunction.[37] Counselling and education sessions to methadone clients would be more beneficial by including sexual education to methadone treatment programs. Poor provider client relationship was reported as barrier to heroin use while enrolled at methadone treatment clinics in this study.

Healthcare provider's inappropriate language and stigmatization of methadone clients leads to poor relationship to the extent of clients not taking the prescribed methadone dose when a specific health care provider is a dispenser. Friendly healthcare providers' patients' relationship has always enhanced good treatment outcome. Similar findings have been reported by another study.[39]

What is significant is the impact of methadone client's suspensions from taking drugs due to mistakes they conduct when they are at the methadone clinics. Tanzania methadone guideline allows disciplining clients with dignity whenever they commit minor violations, for example, alcohol and other drug use.[40] In this study, participants reported denied methadone treatment for up to seven days for misconducts such as chewing gums when they are at clinics. This eventually causes the clients to resort to heroin use while on methadone treatment to cope with the withdraw symptoms.

Moreover, the participants reported to be given diluted methadone compared to the usual one and they consider the methadone to be more diluted compared to usual one as they get withdraw symptoms more frequently than the previous time. Subsequently, they resort into heroin use to cope with methadone withdrawal symptoms. Availability of heroin on the streets was mentioned as a reason to concurrent use of heroin while on methadone. Similarly, lack of social support to methadone enrolled clients was mentioned as a reason for concurrent heroin and methadone use because no one to encourage or support them so as they adhere to methadone treatment only. Other reasons mentioned by study participants as a cause of concurrent heroin use while on methadone was being homeless and sleeping on corridors or unfinished houses something which expose methadone-maintained clients to heroin use.

Limitations

This study relied on self-reports from clients who were attending methadone clinics, therefore there are possibilities of social desirability bias especially from methadone clients who might provide information that they believed was what the interviewers wanted to hear rather than revealing what actually happens in terms of their personal behaviours of causes of concurrent use of heroin and methadone. Nevertheless, the interviewers took excessive care in selecting the timing and places of interviews to guarantee that the study participants were comfortable to share their experiences. Additionally, the interviewers-built rapport with study participants before starting interviewing them. Notwithstanding the limitations, this study shed some lights on reasons behind simultaneous use of methadone and heroin among methadone clients.

CONCLUSION

Methadone clients have different reasons as to why they use heroin use while enrolled at methadone treatment clinics. Methadone programs should be designed to modify methadone dosage, decrease clients' socialization with other peers who use heroin and find a solution to ban availability of heroin on the streets. Furthermore, program policies related to methadone treatment should be user friendly, and whenever possible, punishments for misbehaving should be suggested by the clients themselves and not the health care providers.

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