Indian Journal of Mednodent and Allied Sciences
Vol. 5, No. 3, November 2017, pp- 138-144

IndianJournals.com
A product of Diva Enterprises Pvt. Ltd.
DOI : 10.5958/2347-6206.2017.00024.3

Original Research

Evaluation of Drug Addiction and Its Withdrawal Management

Manju Thomas[1], Michael Mbasha[2] and Nahida Anwar[3]

ABSTRACT

Addiction is a big problem in the society. It can lead to many socio-economic problems. The withdrawal of addiction drugs like opioid can be managed using non-medical social support approach or the additional support of medications. The objective of this research is to evaluate the drug addiction and withdrawal management. It also verifies other drugs commonly used by the cocaine or heroin addicts, age groups affected by drug addiction, source of exposure of drug addicts, income to purchase such drugs. Further, an attempt is made to compare the effectiveness of behavioural therapy and methadone therapy for opioid addiction. The study was a cross-sectional study at methadone clinic and sober houses. The result found that 40% of drug addicts are using alcohol and 20% use cigarettes. The most common age group affected by cocaine and heroin addiction is 26–36 years. The majority enters to exposure of the drug by friends and the income mostly is by theft.

KEYWORDS: Drug addiction, Cocaine/heroine, Methadone therapy

INTRODUCTION: BACKGROUND INFORMATION

Addiction is considered a fundamental problem in every society. Everyday a large number of people turn to substances and as a result, they suffer from physical, psychological, familial, economic and social consequences of this disorder.

Addiction changes brain circuitry, making it hard to 'apply the brakes' to detrimental behaviours. In the non-addicted brain, control mechanisms constantly assess the value of stimuli and the appropriateness of the planned response applying inhibitory control as needed. In the addicted brain, this control circuit becomes impaired through drug abuse, losing much of its inhibitory power over the circuits that drive response to stimuli deemed salient.

Drug addiction, like other chronic, relapsing diseases requires long-term treatment of its varied consequences. The goal of treatment is to help people get to a point where they can manage their long-term recovery, including drug abstinence.

Globally, cannabis is the most commonly used (129–190 million people), followed by amphetamine type stimulants, then cocaine and opioids.

Alcohol withdrawal may be treated with a pharmacologic agent that exhibits cross-tolerance with alcohol. Agents that are commonly recommended include diazepam, lorazepam, chlordiazepoxide and phenobarbital. Withdrawal symptoms from heroin addiction are predictable and identifiable. Management of withdrawal can be accomplished with clonidine or methadone. Patients for whom clonidine is indicated include intranasal heroin users, outpatients and those who are motivated to achieve abstinence. Patients for whom methadone is indicated include intravenous users, inpatients, those who have medical and psychiatric complications and patients with a history of poor compliance when withdrawing from opiates [1]. Methadone maintenance is a form of pharmacologic management of opiate addiction. Patients must meet admission requirements and must conform to clinic standards to participate in the programme. Typically, methadone is given daily in oral doses ranging from 30 to 100 mg or greater. Methadone is administered under the supervision of a physician [1].

[1,2,3]Kampala International University, Dar es Salaam, Tanzania

The abstinence-based method is commonly used to treat alcohol or drug addiction (95% of programmes surveyed). This method utilises cognitive behaviour techniques and referral to 12-step recovery programmes, such as AA and NA [2].

REVIEW OF LITERATURE

Use of illicit substances of abuse is a major public health problem in the developed countries like the United States. However, this problem of illicit substance use has spread like a tumour to include currently developing countries where most of its youths and adolescents are actively engaged in this illegal practice. This problem is even more worse in poor resource countries as use of these substances is accompanied with a lot of HIV-risk behaviours, and for cocaine and heroin drug injectors often share injecting equipments, hence, increasing the chances of contracting and spreading HIV infection. Apart from HIV infection, other infections include hepatitis B, C, abscesses and other ill-health problems such as drug dependence manifested with complex set of behaviours related to mental illnesses. For non-drug injectors, the chances of contracting and spreading HIV through their unsafe, unprotected sexual behaviours especially those having multiple partners is there. Use of these illicit substances has other consequences like compromising the dosing schedule or adherence, poor compliance to ARTs/ ARVs among those enrolled. Furthermore, use of illicit substances may be accompanied with domestic sexual violence which is done without using any protective measures leading to HIV/AIDS and unplanned pregnancies. However, various studies and preventive approaches have been tried in the US on drug abusers to prevent the associated adverse health outcomes. There are many reasons why people use drugs. In many situations, drugs are being used as artificial problem-solvers such as frustrations, stress or tiredness. Drugs can often make a problem disappear for a short time but not usually the answer for solving the problem. They just help to remove it temporarily. Other people choose to use drugs to enjoy the feelings or for recreational purposes which many drugs produce. For example, many people, especially young people, experiment with using drugs to find out more about the sensations they produce. Drug use is a problem to users when it begins to cause some damage to their physical health, mental health and social well-being. These include mental illness, diseases caused by or related to use of drugs for example practice of sharing needles or syringes among drug injectors and also non-drug injectors may acquire HIV/AIDS and hepatitis, crimes and violence. However, the number of harm associated with the use of drugs is increasing in Tanzania and other developing countries in sub-Saharan Africa and globally in the developed nations like the United States and many others [3]. Nearly one half of the patients who visit a family practice have an alcohol or drug disorder. Primary care physicians have an opportunity to intervene at all stages during the course of addictive illness. Each stage can be characterised by types and severity of withdrawal and relapse prevention [4–6].

Psychoactive Effects of Opioids

Certain psychoactive effects of opioids are entirely desirable, as opioids are used medically to treat severe pain. However, the most common use of opioids for their psychoactive effects is in a non-medical context.

Effects of Fast-Acting Opioids

The four stages of injecting or smoking fast-acting opioids such as heroin are

1. The rush or peak: It can be described as

i. an intense, visceral sensation of warmth and thrill

ii. a high and intense pleasure (rush) compared with sexual orgasm

iii. an intense sense of well-being

Its intensity varies with dose and tolerance.

2. The high: It can be described as

i. a foggy, unreal feeling of being detached from things

ii. a pleasant, relaxed, dreamy state

iii. an overwhelming sense of indifference to physical or psychic pain

iv. an elevation of mood and increased self-esteem

v. decreased concern with anticipated problems

Duration and intensity varies with dose and tolerance; doses exceeding tolerance can cause a state of sedation referred to as being 'on the nod'.

3. Feeling straight: Not high, not on the nod and not sick.
4. Feeling sick: Experiencing withdrawal symptoms.

When heroin is injected intravenously or smoked, the rush is experienced within a minute or two and lasts a few minutes. The high may last up to an hour. Over time, tolerance develops to these effects. Fast-acting opioids like heroin have elimination half-lives of 2–3 h. A regular heroin user generally starts feeling sick after 4–6 h. Most of the 4–6 h before the user begins feeling sick are spent in the straight phase.

Effects of Slow-Acting Opioids

The effects associated with the medical use of oral slow-acting opioids (e.g. methadone used in the treatment of opioid dependence) are minimal.

- No rush is experienced. It takes about 2–4 h for plasma.
- Psychoactive effects are very mild and virtually disappear once.

The optimal maintenance dose has been established, that is once dose increases have stopped, stable plasma methadone levels have been achieved and tolerance to these effects has developed.

Management of opioid withdrawal is popularly called **detoxification**. It can be undertaken with or without the support of healthcare professionals. When support is sought, opioid withdrawal can be managed using a non-medical social support approach (which doesn't involve medication) or the additional support of medications.

Objectives of This Research

The objectives of this research were as follows:

Broad Objectives

To evaluate drug addiction and withdrawal management.

Specific Objectives

- To identify the drugs commonly abused by heroin/cocaine addicts
- To identify age groups commonly affected by drug addiction
- To identify the source of exposure of the drug addicts
- To identify the sources of income to purchase such drugs by the addicts
- To compare the effectiveness of behavioural therapy and methadone therapy for opioid addiction
- To identify the cheapest and effective way of drug addiction withdrawal management as a means of expanding the service to different parts of Tanzania.

Research Questions

Which were the common drugs abused by heroin/cocaine addicts? Which age groups were commonly affected by drug addiction? What were the sources of exposure of the drug addicts? What were the sources of income to purchase such drugs by the addicts? Which was an effective withdrawal therapy for opioid addiction? What was the most effective way of drug addiction withdrawal management as a means of expanding the service to different parts of Tanzania?

METHODOLOGY

Study Design

This was a cross-sectional study which took place for a period of 3 months.

Study Area

This research took place at methadone clinic and sober houses in Dar es Salaam as well as Mt. Meru Mental Health Clinic in Arusha.

Study Population

Drug addicts who visited the clinic and sober houses during that period of time and who were between 15 and 47 years age and adherent and visited the clinic regularly.

Sampling and Sampling Techniques

Probability sampling, in which random sampling technique was used.

Data Collection Methods

The data was collected using the questionnaire method to obtain relevant information from the drug addicts.

An interview was also conducted to obtain information from the drug addicts and personnel in-charge of those sober houses and clinics.

Data Analysis

The data collected was analysed using Microsoft Excel.

Ethical Issues

An ethical clearance was obtained from Kampala International University ethical committee and only respondents who accepted voluntarily to give information were selected and used for collection of data.

RESULTS

Other Commonly Abused Drugs by Cocaine/ Heroine Addicts

A total of 40% of participants were using alcohol and other drugs and cigarette smoking were done by 20% and cannabis by 33% and 5% were not using any other drugs.

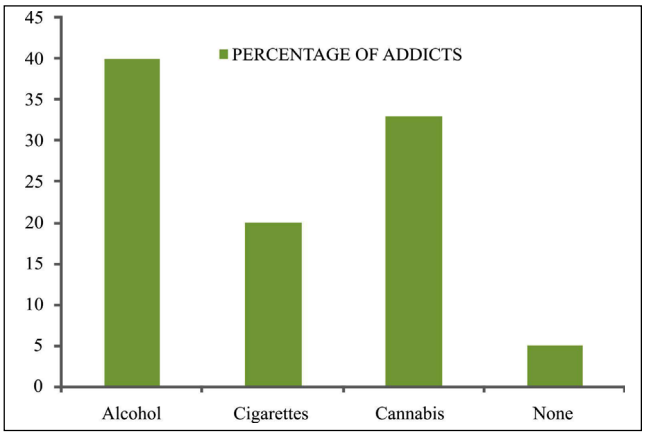

Figure 1: Other drugs commonly abused by heroin/cocaine addicts

Common Age Group Affected by Heroin/Cocaine Addiction

The most affected age group of heroin or cocaine addiction is 26–36 years with 34 participants, followed by 37–47 years with 18 participants and 13 participants of 15–25-year age group.

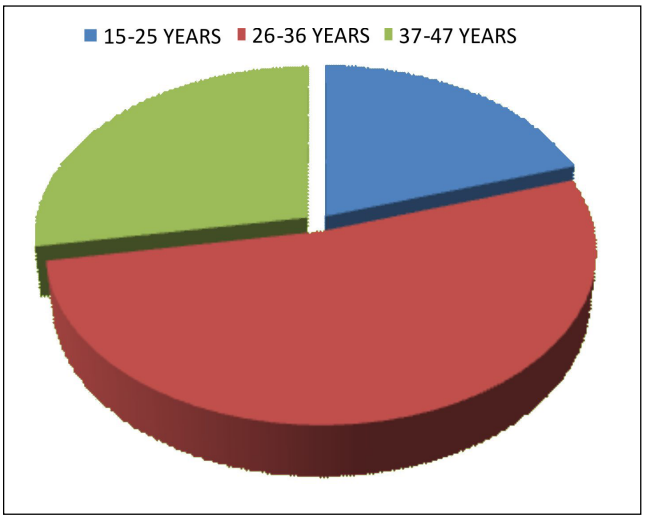

Figure 2: Common age groups affected by heroin/cocaine addiction

Source of Exposure

A total of 49 participants enter into addiction by the influence of friends. The others are stress (8), spouse/ GF/BF (7), drug dealer (5), personal curiosity (4) and family (2).

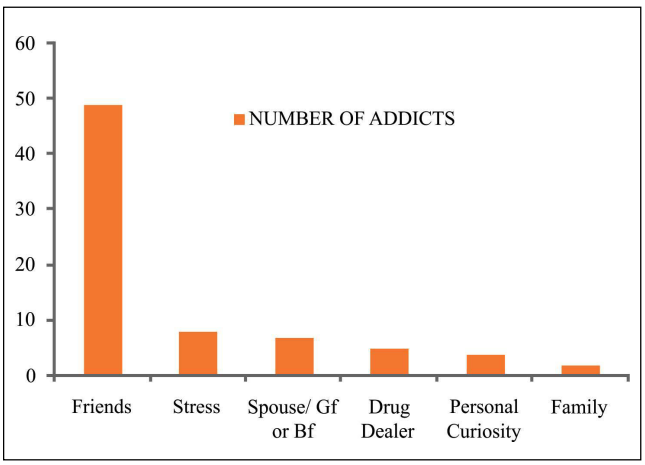

Figure 3: Source of exposure

Source of Income to Purchase Drugs

A total of 49 addicts found money to purchase drugs by theft, 16 by selling personal properties, 7 by work and 6 claimed friends used to buy for them.

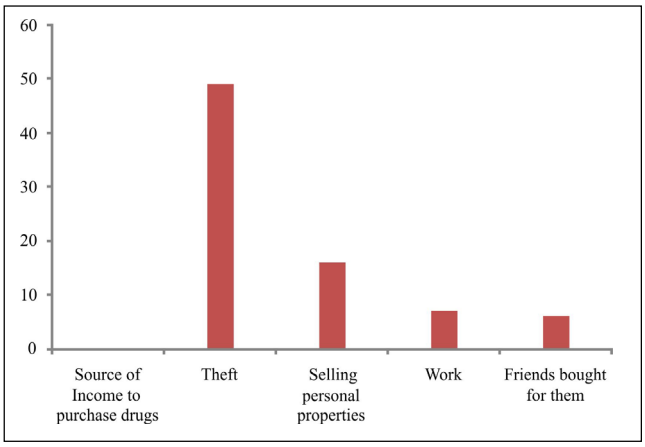

Figure 4:

DISCUSSION

As per the objectives of this research, other drugs commonly abused by heroin/cocaine addicts were found to be alcohol, cigarettes and cannabis.

A tendency to shift from less strong drugs to stronger ones, for example from cigarettes then dumping it and take cannabis then dumping it and take cocaine/heroine.

Almost no one starts directly with heroine rather will do alcohol, cigarettes, cannabis then heroine. Also, most of the drug addicts are being made to use heroine the first time without their knowledge as it can be mixed up with cannabis. When they get addicted to it, they are given pure cannabis and find out that it is no more interesting. It does not take them there therefore some ending up giving all other drugs for the powder (heroin or cocaine as it is reflected on the graph, 5% addicts only used heroine alone at end point).

Alcohol maintains its position and the tendency to give up all together for heroine is not that much, as, alcohol is a legal drug and is commonly accepted in the society. Contrary to cannabis, it is rare to mix heroine into alcohol, so it always carries its unique flavour. But there is a tendency of shifting from less strong alcohol to stronger ones. Most of the drug addicts who still use alcohol would tell that they started with beer, then wine then gin and spirits. Most of them at end point take gins, konyagi, and popularly called ‘viroba’ with 40% alcohol.

The most vulnerable age group commonly affected by drug addiction was found to be between 26 and 36 years. This is because between 15 and 25 years, most of the youths are still building up their career, going to school and others. Even those who didn’t do much of schooling can still survive under the care of their family. But between 26 and 36 years, this is where the most stress comes up in life. Some do have education but have no jobs and the families consider them as grown-ups that means they should go out there and make a living for themselves and for others this is the time when everybody is free to do what they want as the families reduce their control over their children. Most are living independently, making it easy to make bad choices. Some have money as they are working at this age. Thus, they can buy whatever they want and go wherever they want. Most have big dreams and when they fail, it turns them into great frustration and some end up using drugs as a means of relieving stress. During 37–47 years, most of them are already settled, with families and satisfied with their achievement. Thus, they have compromised in their lives.

The main source of exposure of the drugs addicts was found to be friends. They convince each other to do it and if one has a friend who takes drugs, then it is easy for the person to turn his friends to it. As the saying goes; show me your friends and I will tell who you are.

The main source of income to purchase the drugs was found to be theft, for even those who sell their properties at end point they would have been left with nothing to sell hence turn to theft, friends can also buy for them in the beginning but later is everybody for himself, even those who work later on due to drugs will lose jobs and will have to steal to get dose of drugs. People cannot withstand the sick stage popularly known as ‘Alosto’ and will do about anything to get the next dose. Most of them use an average of 25–30 Tanzanian shillings thousand per day (appUS$8) for the dose. For some, it goes up to about 150,000

TSH or US$60 though jobless. Ultimately, they tend towards theft to quench their drug dependence.

CONCLUSION AND RECOMMENDATIONS

Methadone is orally effective, substituting methadone for heroin which is usually injected. It can drastically reduce or eliminate in injection drug use altogether. This may help keep them and others with whom they come into contact, from contracting infectious blood-borne diseases, such as HIV or viral hepatitis, which are often acquired through sharing needles.

Methadone is long acting and reduces the peaks and troughs of opioid in the system and increases patients' likelihood of progress in regulating the other areas of their lives.

Reduction in high-risk activities has been seen with methadone, including needle sharing and unsafe sex which are associated with the transmission of HIV and hepatitis.

The dose of methadone is known, being pure and free from additives. This in turn reduces harmful consequences as compared with opioids of unknown purity and dose. It also assists to minimise the harmful consequences associated with possessing illicit opioids such as being arrested, taken to court or imprisoned.

Methadone treatment is provided free of cost at few government hospitals in Dar es Salaam, minimising the chances of theft as most drug addicts steal and sell personal properties to get money for purchasing the drugs.

It puts people into regular contact with the healthcare system, which enables constant follow-up and monitoring through medical and counselling services as this is beneficial to minimise chances of relapse.

Methadone can help normalise a patient's physical and psychological functioning throughout the day by alleviating the cycles of intoxication and withdrawal that are experienced by users of heroin.

Patients on methadone treatment may experience side effects such as sweating and constipation.

At present, in Tanzania, the methadone treatment is only being provided in Dar es Salaam, this is a great challenge as drug addicts are all over the country but this service is quite limited and not accessible to all.

Therefore, the government should make initiatives to ensure that methadone maintenance clinics are expanded to other parts of the country as it is free of cost and more people can have access to it.

On the other hand, at sober houses, therapy involves the body healing itself through adequate diet, meditation, feeling session and meetings to remind them based on the 12-step recovery programmes, such as those of AA and NA as well as sharing their ideas, experiences and beliefs and encouraging each other. Withdrawal symptoms are managed using sleeping pills such as diazepam, pain killers such as tramadol, antiemetic drugs to control nausea and vomiting and others. Drug addicts presenting psychotic symptoms are also managed accordingly under medical supervision therefore the drug addicts live in protected environment.

However, the facilities provided at sober houses are still not adequate enough as the drug addicts are not categorised according to their substance of abuse and therefore no individualisation of therapy which is a key component in the detoxification process. Some drug addicts cannot afford to be admitted to sober house due to their monthly charges.

Also, no adequate facilities are there for women especially for pregnant, breast feeding and women with young children who still need their mother's care and love.

Substance abuse treatment should include medications, behavioural therapies and ancillary support services like vocational training. This will modify their attitudes and behaviours related to drug abuse, and increase their life skills as well as prevent idleness once they leave the sober houses.

Social workers have to be incorporated to support and educate families on the aftercare matters; this can help to minimise the chances of relapse.

Building facilities at sober houses for women that will enable them to get appropriate therapy at the same

time take care of their children, this will highly promote women who are addicted to drug and hence makes it convenient for them to get rid of their problem.

Create awareness in the population that drug addicts should be regarded as sick people suffering just from any other chronic disease so as to avoid stigmatisation and fear of rejection.

As per now, the most effective and efficient method of drug addiction withdrawal management could be methadone maintenance treatment as it is striving to provide adequate facilities that can help reduce the use of illicit drugs, reduce criminal activity through providing the services free of charge, reduce needle sharing and blood-borne diseases such as HIV and hepatitis, improves social health and productivity as the patients can receive their daily dose in the morning and proceed with their daily activities, as well as gradual tapering of methadone dose over a period of time can assist to reduce the risk of relapse.

REFERENCES

[1] Miller NS. Management of withdrawal syndromes and relapse prevention in drug and alcohol dependence. 1998;58(Jul (1)):139–46.

[2] Chappel JN. Long-term recovery from alcoholism. Psychiatric Clinics of North America 1993;16:177–87.

[3] Nsimba SE. Methadone maintenance therapy as evidence based drug abuse planning in developed countries: can developing countries afford and learn from this experience?. East African Journal of Public Health 2010;7(Mar (1)):54–7.

[4] U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism. Epidemiology of alcohol use and alcohol related consequences. In: Alcohol and health. Eighth special report to the U.S. Congress from the Secretary of Health and Human Services; September 1993. pp. 1–35.

[5] Bennett JC, Plum F, editors. Cecil textbook of medicine. 20th ed. Philadelphia: Saunders; 1996.

[6] Adams RD, Victor M, Ropper AH. Principles of neurology. 6th ed. New York: McGraw-Hill, Health Professions Division; 1997.

[7] Isaac P, Kalvik A, Brands J, Janecek E. Methadone maintenance, a pharmacist guide to treatment. 2nd ed.