Full Length Research Paper

Prevalence And Patterns Of Early Drug Abuse Among Clients Attending Ngara Medically Assisted Therapy Clinic Nairobi, Kenya - A Retrospective Study

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Abstract

Substance abuse and its effects on physical and psychosocial health is becoming a global public health concern, mostly affecting adolescents and youth. Globally, 29.5 million people suffer from drug use disorders, opioids being the most harmful. A report by NACADA (2016), reveals that 11.7% of boys and 5.4% of girls in schools abuse drugs and that initiation of drug and alcohol use is likely to occur during adolescence. The objective of this study was to establish the age of onset to drug use and pattern of substance abuse among patients attending the Ngara Methadone Clinic. Data was collected on sex, age of onset of drug use, age of onset of heroin use and the type of drug first used from the standard government registers and patients' medical records for clients attending medically assisted therapy at the Ngara Methadone Clinic from February 2017 to March 2018. A total of 388 clients participated in the study. Findings revealed that the mean age of onset to drug use was 16 years. Cannabis was the most commonly used drug (35.9%) followed by Tobacco (29.1%), alcohol (12%), heroin (11.3%), khat (5.9%), benzodiazepines (3%), glue (1.5%), amphetamines (0.3%), cocaine (0.3%) and barbiturates (1%). Most participants used more than one drug at a time. A two-sample independent t-test revealed that there was a significant difference in the mean ages of onset of other drug use (M =16.3, SD 4.6) and mean ages of onset of heroin use (M=21.8, SD=5.7). The study recommends the creation of awareness on drug use in schools and subsequent screening for drugs in both primary and secondary schools.

Introduction

Substance abuse and its effects on physical and psychosocial health is fast becoming a global public health concern that affects every level of society including individuals, families, communities and governments (Schulte and Hser, 2014, Winters, Botzet and Fahnhorst, 2011) Globally 275 million people use drugs which is roughly 5.6% of the global population aged 15-64 years with 30.5% of these having drug use disorders (World Drug Report, 2018). In Kenya, 18.2% of the total population are currently using one drug or substance of abuse (NACADA, 2016). Opioids cause the most harm and account for 76% of deaths which occur as a result of drug use disorders. Currently, the nonmedical use of prescription drugs is a major threat to public health and law enforcement worldwide (World Drug Report, 2018).

Globally, more preadolescents and teenagers are using drugs and alcohol (Chen and Kandel, 1995; Ali et al., 2011). Early adolescence (12-14 years old) to late adolescent (15-17 years old) are critical risk periods of initiation to drug and substance abuse with the peak being between 18-25 years (Jordan and Andersen, 2017).

In Kenya, the period of transition from primary school to secondary school, that is, between the ages of 13-15 years, marks the age of onset of drug abuse (NACADA, 2016). During this age young people are vulnerable to new experiences, new ideas and negative peer influence and they opt for drugs to cope with the social and physical challenges they experience during the different phases of development (Chen and Kandel, 1995). Other factors that may influence the path to early initiation to drug and substance abuse include socioeconomic factors and physical environment, parental and family functioning, mental and behavioral health problems, poverty, lack of opportunities, lack of social support and parental guidance.

The drug abuse in young people increases their likelihood of physical health problems, unemployment, suicidal tendencies, mental illness and lower life expectancy. Additionally, substance use problems in adolescence has been shown to increase the risk of development of substance abuse disorder later on in life (UNODC, 2018; Pompili et al., 2015).

Globally the rate of drug abuse in men is higher than women (United Nations Office on Drugs and Crime, 2018). Overall, men are more likely than women to use cannabis, cocaine and opiates, whereas the prevalence of the non-medical use of opioids and tranquillizers is comparable between men and women (Becker and Hu, 2008). In Kenya, 11.7% of school going boys and 5.4% of school going girls abuse drugs (NACADA, 2016).

Early drug abuse often includes such substances as tobacco, alcohol, inhalants, marijuana, and prescription drugs such as sleeping pills and antianxiety medicines. If drug abuse persists into later adolescence, abusers typically become more heavily involved with marijuana and then advance to other drugs, while continuing their abuse of tobacco and alcohol (Brasseux, D'Angelo, Guagliardo and Hicks, 1998). Studies have also shown that abuse of drugs in late childhood and early adolescence is associated with greater drug involvement later on in life (Gallimberti et al., 2015). Cannabis is a common drug of choice for young people as it is perceived to be easily available and there are perceptions of low risk of harm making it the most common drug that is initiated at adolescence before subsequent use of other drugs. In Kenya, khat and cannabis are the most frequently used drugs in the general population while heroin, cocaine and prescription drugs are common among the 18-24 age bracket (UNODC, 2018). Secondary school students in Kenya are more likely to be initiated to drug use with prescription drugs and inhalants at 13 years, alcohol, khat, tobacco and heroin at the age

of 14 years, cocaine at 14.5 years and bhang at 15 years. A survey conducted in Kenya by NACADA in 2016 among secondary school students concluded that alcohol was the most common substance of abuse followed by khat, prescription drugs, tobacco, bhang inhalants, heroin and cocaine (NACADA, 2016).

Objectives of the Study

The main objective of this study was to establish the prevalence and patterns of drug and substance abuse among patients attending the Ngara Methadone Clinic in Nairobi.

Methodology

This was a retrospective cross sectional study whereby data of clients who attended medically assisted therapy in Ngara Methadone Clinic from February 2017 to March 2018 was analysed. The data was collected retrospectively from patient medical records and standard government registers. The researchers collected data on sex, age of onset of drug use, age of onset of heroin use and the type of drug first used. The participant records were selected using systematic random sampling and a total of 388 participants who had complete records were included in the analysis. The data was de-identified and entered into an excel spreadsheet and later exported to STATA version 11 for analysis.

Results

A total of 388 participants who had complete records were sampled for the study. Of these, 28 (7%) were females while 360 (93%) were males. Cannabis was the most commonly used drug and it was used by 212 (35.9%) of the participants. Tobacco was used by 172 (29.1%), alcohol 71 (12%), heroin 67 (11.3%), 35 (khat 5.9%), benzodiazepine 20 (3%) while the least used drugs were glue 9 (1.5%), amphetamines 2 (0.3%), cocaine 2 (0.3%) and barbiturates 1 (0%). Most participants used more than one drug at a time.

Table 1: Drug use per age group

Drug Use	AGE GROUP									Total	%
	5 - 9	10-14	15- 19	20-24	25-29	30-34	34-39	40-44	45-49		
Cannabis	4	67	102	30	7	2	0	0	0	212	35.9
Tobacco	6	49	78	30	7	2	0	0	0	172	29.1
Alcohol	3	13	45	9	0	0	0	0	1	71	12.0
Heroin	0	13	29	14	7	2	1	1	0	67	11.3
khat	2	5	19	9	0	0	0	0	0	35	5.9
Benzodiapezine	3	3	10	4	0	0	0	0	0	20	3.4
Glue	5	2	1	1	0	0	0	0	0	9	1.5
Amphetamine	0	1	1	0	0	0	0	0	0	2	0.3
Cocaine	0	0	2	0	0	0	0	0	0	2	0.3
Barbiturates	0	0	1	0	0	0	0	0	0	1	0.2

Figure1: Frequency of use of drug by sex
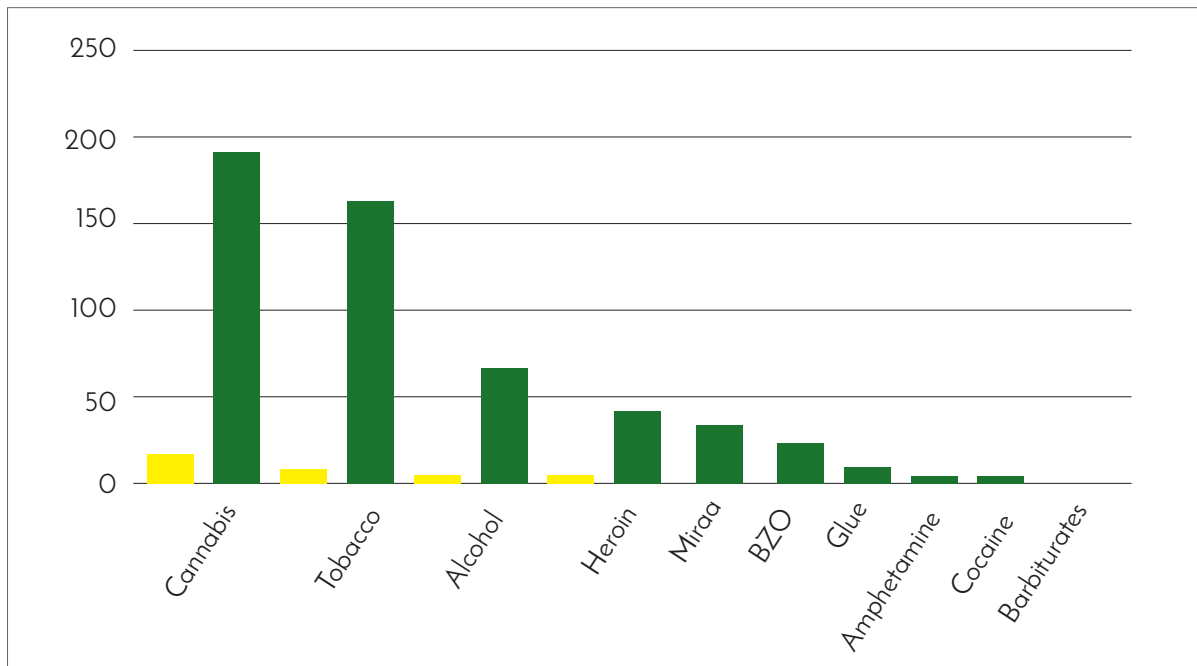
Out of the total 212 (35.8%) participants who used cannabis as their first drug, 195 (92%) were males while 8% were females; out of the 172 (29%) who used tobacco as their first drug, 162 (94%) were males while 10 (6%) were females; out of the 71 (12%) who used alcohol as their first drug, 66 (93%) were males while 10 (6%) were females; out of the 67 (11%) who used heroin as their first drug, 66 (93%) were males while 10 (6%) were females; out of the 35 (5.9%) who used khat as their first drug, 34 (97%) were males while 1 (3%) were females; and, out of the 20 (5.9%) who used benzodiazepines as their first drug, 19 (95%) were males while 1 (5%) were females. Glue, amphetamines, cocaine and barbiturates were used by only males (Figure 1).

Figure 2: Age of onset of drug use by type of drug

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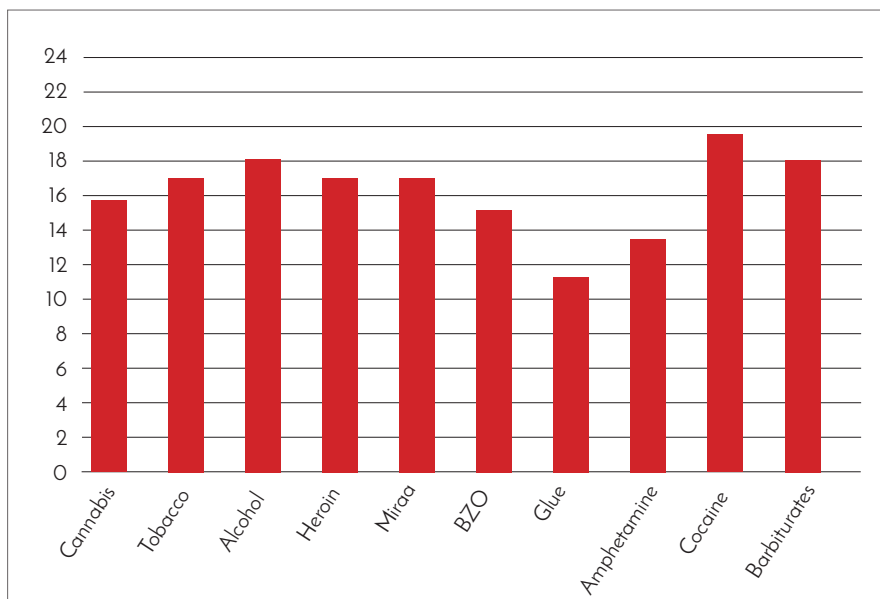
As shown in Figure 2, the age of onset of drug use is 16 years for cannabis, 16.5 years for tobacco, 16.8 years for alcohol, 16.5 years for heroin, 16.7 years for khat, 15.5 years for benzodiazepines, 12 years for glue, 13.5 years for amphetamines, 19 years for cocaine and 18 years for barbiturates.

Generally, the mean age of onset of other drug use was 16 years while the minimum age of onset of drug use was 5 years.

Figure 3: Age of onset of use of other drug by gender
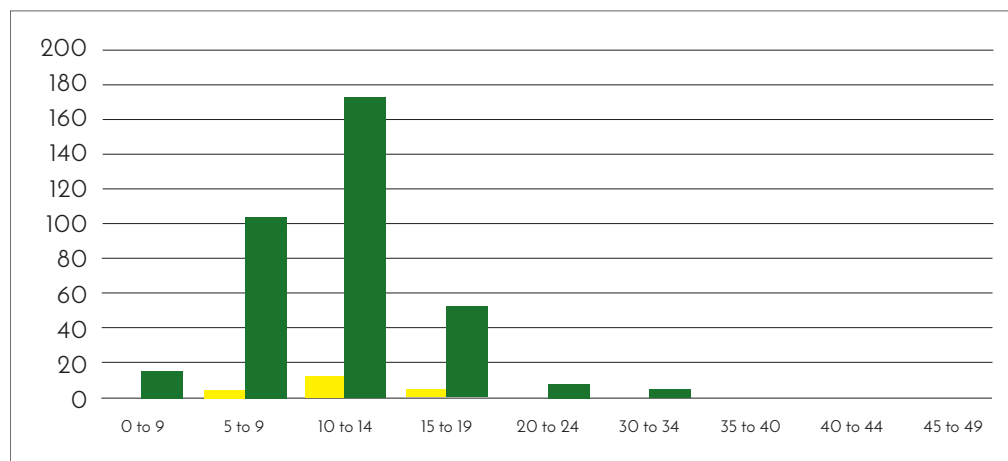
190 (49%) participants were between the age of 15- 19 years when they first took drugs. 110 (28%) were between ages 10-14 years; 54 (14%) were between the ages 20-24 years; 17 (4%) were between the age of 5-9 years; 11 (3%) were between ages 25-29 years; 3 (1%) were between the age of 30-34 years; 1 (0.16%) was between the age of 35-39 years; 1 (0.16%) was between the age of 40-44 years; 1 (0.16%) was between the age of 45-50 years (Figure 3).

Figure 4: Age of onset of Heroin Use by gender
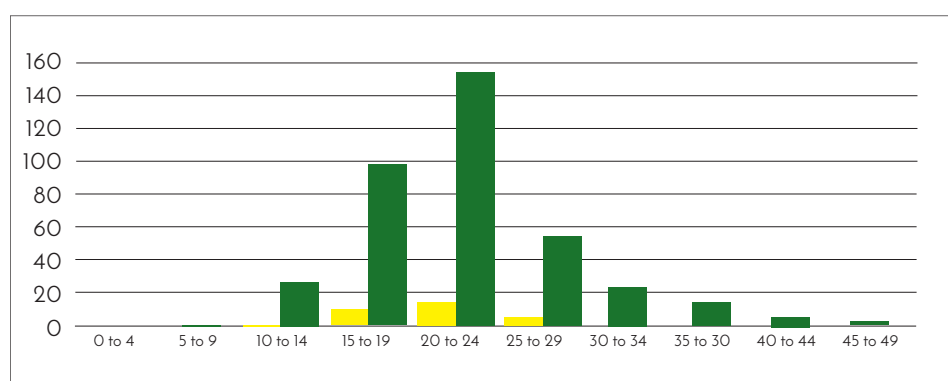
The age of onset of heroin use being 9 years. Male heroin users were 360 (93%) while the female heroin users were 28 (7%). Out of the 163 (42%) heroin users who were between the age of 20-24 years, 148 (90.8%) were male and 15 (9.2%) were females.

Out of the 103 (26.55%) heroin users who were between the age of 15-19 years, 95 (92.2%) were males while 8 (7.8%) were females.

Out of the 60 (15.5%) heroin users who were between the age of 25-29 years, 56 (93.3%) were male and 4 (6.7%) were females.

Out of the 25 (6.4%) heroin users who were between the age of 10-14 years, 24 (96%) were male and 1 (4%) were females. There were no female heroin users above 30 years of age (Figure 4).

Table 2: Independent T test for differences in mean between age of first drug use and age of first heroin use

Two-sample t test with equal variances						
Variable	Obs	Mean	Std. Err,	Std. Dev.	(95% Conf.	Interval)
AGEFIR~G	388	16.2732	.2347828	4.624684	15.81159	16.734881
HEROIN~E	388	21.76289	.2826744	5.5658039	21.20712	22.31866
Combined	776	19.01804	.2084104	5.805642	18.60893	19.42716
Diff		-5.489691	.3674612		-6.211029	-4.768352

diff=mean (AGEFIRSTUSEDOT~G) - mean (HEROINEFIRSTUSE)   T=-14.9395

Ho: diff=0   degree of freedom =774

Ha: diff < o	Ha:diff!=0	Ha: diff>0
Pr (T< t) = 0.0000	Pr (|T| > |t|) = 0.0000	Pr (T>t) = 1.0000

A two sample independent t test was used to compare the mean age of onset of other drug use and mean age of onset of heroin use. There was a significant difference in the mean ages of onset of other drug use (M =16.3, SD 4.6) and mean ages of onset of heroin use (M=21.8, SD=5.7) df=774, p=0.0000. Therefore the mean age of onset of heroin use is higher than the mean age of onset of other drug use which means use of other drugs precedes heroin use.

Discussion

In this study the mean age of onset of use of drugs was 16 years with the youngest age of onset of drug use being 5 years. This is consistent with the findings from a survey that was conducted by NACADA that found the mean age of onset of drug abuse in Kenya to be between 15-17 years (NACADA, 2016). In a study conducted in Eldoret, the mean age of onset of alcohol use was 17.5 years (Atwoli, Mungla, Ndung'u, Kinoti and Ogot, 2011) while a study in Kisumu recorded the mean age of onset of drug abuse to be between 16-18 years (Otieno and Ofulla, 2009). Glue had the lowest age of onset of 11 years which might be as a result of ease of availability and it is largely used by street children (Embleton, Ayuku, Atwoli, Vreeman, and Braitstein, 2012). The age of onset of cocaine was 19 years which was higher than other drugs. This findings are consistent with the findings of a study conducted in United States whereby the onset of drugs like cannabis was lower compared to age of onset of hard drugs like cocaine (Bracken, Rodolico and Hill, 2013).

Generally, there were gender differences in the choice of drug used with all substances being used with more males than females. This is consistent with other studies that have documented high prevalence of drug use among males compared to females (Becker and Hu, 2008).

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The most commonly used drug was cannabis while the least used drug was barbiturates. The World Drug report indicated that cannabis was the most abused drug due to easy availability and perception of low risk of harm and it is the most common substance initiated in adolescence (United Nations Office on Drugs and Crime, 2018). Cannabis has been labelled as the 'gateway drug' meaning that its use is likely to precede use of other drugs and development of addiction to other substances. In addition, Cannabis has been linked to alcohol use and related disorders and nicotine addiction (Weinberger, Platt and Goodwin, 2016).

From the findings, it is noted that the mean age of onset of heroin use was 21 years while the mean age of onset of other drugs was 16 years. This means that most people start with more established substances like cannabis and khat, while the substances that have become readily available in Africa like heroin are mostly used among young adults of between the age of 18-24 years (UNODC, 2018).

Conclusion and Recommendations

The findings of this study have demonstrated that drug abuse starts early in life, affecting the health and well-being of adolescents and young adults. Therefore, there is need to develop effective strategies to mitigate the onset of drug abuse among this age bracket. In Kenya there is need to formulate policies and design programs for creating awareness and prevention of substance and drug use.

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