

Cannabis Use Among Patients Attending A Methadone Maintenance Treatment Clinic In Nairobi, Kenya

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Research

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**CANNABIS USE AMONG PATIENTS ATTENDING A METHADONE
MAINTENANCE TREATMENT CLINIC IN NAIROBI, KENYA**

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ABSTRACT

Background: Cannabis use is common among patients with opioid use disorder receiving methadone treatment. Research has shown that cannabis use during methadone treatment may impact negatively on treatment outcome. This study aimed at determining the prevalence and pattern of cannabis use and the associated socio-demographic characteristics among patients on methadone treatment.

Methods: This was a retrospective study of 984 patients on methadone therapy at a methadone maintenance treatment clinic in Nairobi, Kenya. Data on socio-demographic characteristics and drug use patterns based urine drug screens was collected from patients' files. Data was analyzed using SPSS for windows version 23.0.

Results: Prevalence of cannabis use was 84.8% at baseline and 62.8% during follow up. Polysubstance use pattern was observed with heroin, cannabis and benzodiazepines being the commonest drugs. Majority of cannabis users were male (88.1%), aged 28-37 years (42.2%), unemployed (74.3%), had low level of education (87.7%) and single (72.4%). Cannabis use was associated with loss to follow up ($p < 0.001$). Females were more likely to drop out of treatment and less likely to stop using cannabis during follow up compared to males. Sociodemographic factors associated with reduced risk for cannabis use were; being in older age group 48-57 years (OR 0.51, 95%CI, 0.30-0.87, $p = 0.013$) and university education (OR 0.15, 95%CI, 0.05-0.69, $p = 0.005$) while being in age group 18-27 years and being married were associated with increased risk for cannabis use (OR 2.62, 95%CI, 1.78-3.86, $p = 0.001$ and OR 1.50, 95%CI, 1.7-2.10, $p = 0.021$ respectively).

Conclusion: There is a prevalence of cannabis use among patients in receiving methadone treatment in Kenya is similar. In addition, cannabis use was associated

with loss to follow up and sociodemographic characteristics. Cannabis use screening and targeted interventions for management should be incorporated in methadone treatment programs to improve outcomes for patients on methadone.

Key words: cannabis, opioid use disorder, methadone maintenance treatment, Kenya

Background

Opioid use is prevalent globally with past -year prevalence of 1.2% in people aged 15-64 years in 2018 which was an increase from 0.7% reported in 2016 (1). A systematic review on opioid use in Africa reported that opioid use is emerging with most of the studies done in East Africa(2). Studies done in Kenya have shown a varying prevalence of opioid use depending on the population studied. National surveys reported a lifetime prevalence of 0.3% in the general population aged 15-65 years in 2017 while among secondary school students lifetime prevalence in 2016 was higher at 1.2% and 0.4% reported use in past six months (3,4). A study done among inpatients on treatment for substance use disorders, reported a higher prevalence with 8% reporting lifetime opioid use and 4.5% reporting current use(5).

Opioid use is associated with several negative effects compared to other substances which include; opioid overdose which is associated with a high mortality, accidental injuries, increased risk for infections such as HIV and Hepatitis C and increased involvement with the criminal justice system (1,6). In addition, continued use of opioids results in opioid use disorder which is associated with significant physical social and occupational dysfunction(7) Treatment for opioid use disorder involves psychosocial and pharmacological treatment. Long-term maintenance treatment also known as opioid substitution therapy (OST) is the recommended treatment for opioid use disorder. The medications approved for OST are methadone, buprenorphine and naltrexone. Methadone is a mu-opioid receptor agonist and is the most commonly used pharmacological agent for OST to assist in opioid cessation. Methadone aids in the reduction of strong desire for opioids, dependence, withdrawal symptoms and opioid response through receptor coverage without producing the euphoric effects (8,9). In addition, methadone maintenance treatment (MMT) reduces attrition in the

program, illegal heroin use, crime rates, frequency of injection drug use thus decreasing HIV incidence, mortality rates and improves psychosocial functioning and quality of life(6).

Cannabis is the most common drug used worldwide with a trend of increasing use in recent years (1). Although cannabis is frequently used because it is presumed to be harmless, it contributes significantly to morbidity through other adverse health outcomes(10,11). In addition cannabis use is associated with increased risk for psychiatry illness such as psychosis, depression and anxiety (12,13).

Polysubstance use is common among patients on methadone maintenance treatment globally with cannabis being the most frequently used drug in this population. In addition, prevalence of cannabis use in patients on methadone maintenance treatment is higher than the prevalence in the general population (14). Some studies have reported a high prevalence ranging at 50-70% (15,16). while a study in Finland reported a lower prevalence of 30% (17). A systematic review of 23 studies reported prevalence of cannabis use in opioid use disorder to range 11.2%-78.6% (14). A study in Iran reported gender difference in use where the prevalence of cannabis use in males was 25% and 5% for females(18).

Research on effect of cannabis use during MMT has reported mixed results (14). Some studies have shown negative effects such as increased risk to drop out of treatment(15), continued illicit opioid use(16), poor psychosocial functioning, increased rate of incarceration for those with cannabis dependence at baseline (15) and poor family relationships (16,19), use of other substance(20,21) physical and psychological health problems (21) . Some studies have shown gender differences in these effects (16,20,21). There are studies that have reported benefits of cannabis use during MMT such less money spent on acquiring heroin as a proxy measure of opioid use and reduction in opioid withdrawal symptoms(22) and retention in treatment (23) with some report on role of cannabis in opioid use disorder treatment(24). In

contrast, Epstein and team (25) did not find cannabis use to reduce opioid withdrawal symptoms.

In sub-Saharan Africa, MMT services are offered in Kenya and seven other countries (26,27). In Tanzania, two studies done on patients in MMT program have shown a high prevalence of cannabis use in patients at intake. However, no assessment on cannabis use during follow up was reported (28,29). In Kenya, MMT is offered in government-funded clinics since December 2014 (30). There are currently seven MMT clinics in several regions in the country. To the authors' knowledge, no study has been done to assess cannabis use among patients with opioid use disorder on MMT. The objective of this study was to examine the prevalence and patterns of cannabis use and their association with sociodemographic characteristics among patients receiving MMT.

METHOD

Study Design

This was a cross-sectional study that involved retrospective abstraction of data from files of patients on methadone maintenance treatment.

Study setting

The study was conducted at the MMT clinic in Mathari National Teaching & Referral Hospital (MNTRH) which was the first urban, publicly funded and university-sponsored located in Nairobi. In addition to MMT, other services at the clinic include treatment for comorbid disorders such as HIV, tuberculosis, sexually transmitted diseases and psychiatric illness. The eligibility criteria for MMT initiation are: individuals presenting with opioid use disorder, age above 18years and testing positive for opiates through urine drug screening. The clients attend the MMT clinic daily to receive their prescribed methadone dose which is given as directly observed treatment.

Study Population

The study population was patients undergoing treatment with methadone at MNTRH MMT clinic. The study participants included all patients who were enrolled into the MMT clinic from December 2014 to November 2018 and had urine drug screen results. The standard procedure for MMT enrollment and induction was baseline urine drug screen tests at intake. During the methadone maintenance therapy, random urine drug screens were performed every three months and the results were attached in the patients' records.

Sample Size and sampling procedure

The targeted sample size was files of all patients who were enrolled into the MMT clinic from December 2014 to November 2018 at MNTRH. The patients enrolled within the study period were 984. The patients' files at the MMT clinic had an outpatient number that helped in locating the files from the shelves. The outpatient number was a distinct number given to each patient on enrollment into the MMT clinic.

Inclusion and exclusion criteria

The inclusion criteria were participants (1) undergoing treatment in the MMT clinic at MNTRH (2) who were enrolled and initiated methadone therapy within the study period (December 2014 to November 2018) (3) who had urine drug screen results. The exclusion criteria were participants (1) not enrolled within the study period (2) with missing information on bio data and urine drug screens.

Data Collection Procedures

A data collection form was used to document data retrieved from the patient files at the records department in the MMT clinic. The data collected included age, gender, education level, marital status, occupation and urine drug screen results. A pilot study was carried out to pretest the tool prior to the study to ensure validity and reliability. This was done using a

sample of 20 patient records at the MMT clinic. The participants' socio-demographic and urine drug screen results were retrieved from the selected files that met the inclusion criteria then documented in the data collection forms.

Data Management

Data entry and analysis was done using SPSS for windows version 23.0. This study utilized univariate and bivariate analysis. In univariate analysis, demographic data was presented by frequency and proportions. Distribution of data was shown by central tendency measurements. In bivariate analysis, chi square and Fischer Exact test were used to represent the nature of cannabis use among methadone patients and test the significance of the association between the variables. The threshold for statistical significance was set at $p \leq 0.05$. The results were presented using narratives, tables, charts and graphs.

Results

Socio-demographic characteristics of participants

A total of 984 participants were enrolled in the study. The mean age of the participants was 35.2 (SD 9.0) years with a median age of 35 years. Majority of participants in the MMT clinic were males at 87.3% (n=859). Most of the participants had a low education status, with only 7.9% and 1.0% having attained tertiary and university education, respectively. Majority of the participants were enrolled in 2015, with 2017 having very low enrolment rate (0.4%) and 63% of the participants were active in the program at the time of the study. This is shown in Table 1.

Table 1: Socio-demographic characteristics and enrollment status of study participants

Variable	Category	Frequency (N=984)	Percentage (%)
Gender	Female	125	12.7
	Male	859	87.3
Age	18-27	204	20.7

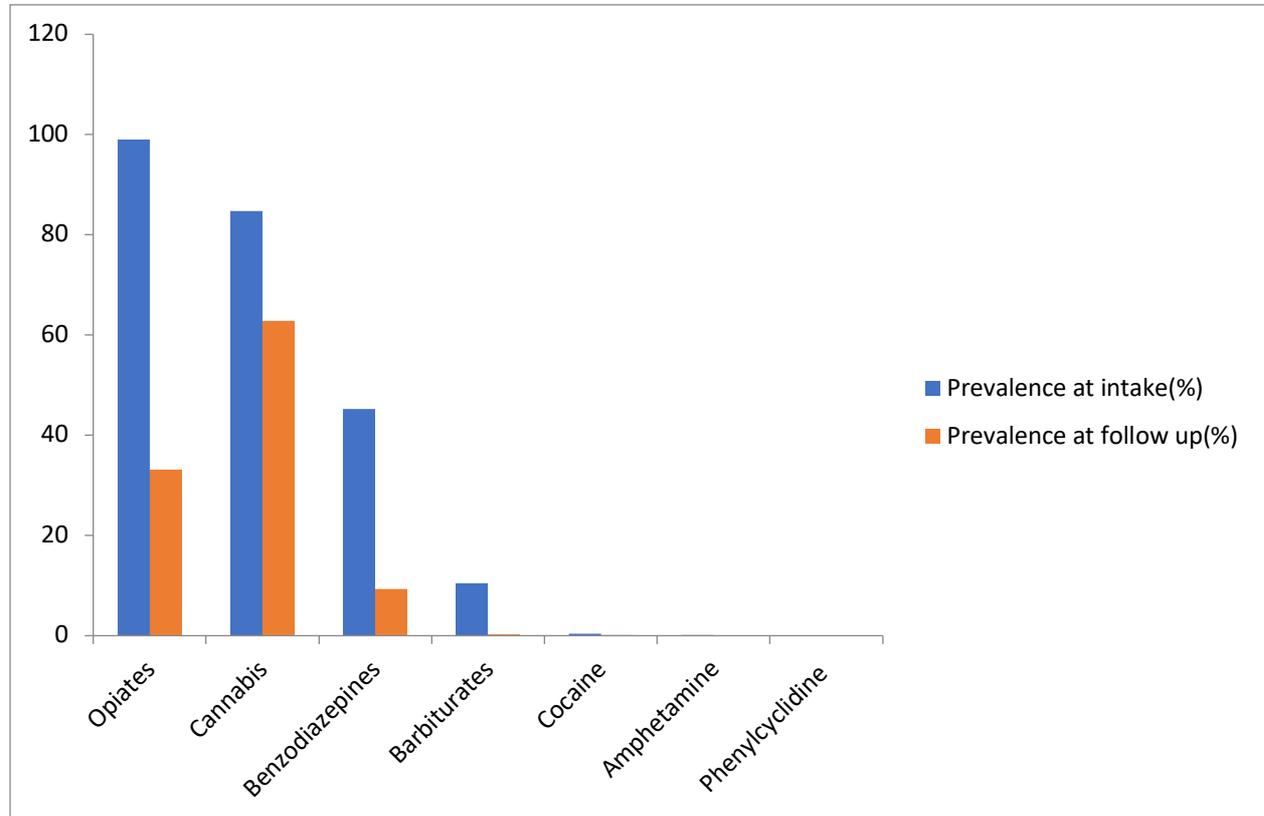
	28-37	408	41.5
	38-47	291	29.6
	48-57	65	6.6
	58-67	13	1.3
	> 68	3	0.3
Marital Status	Single	252	25.6
	Married	223	22.7
	Separated	451	45.8
	Widowed	22	2.2
	No data	36	3.7
Education Level	Primary	483	49.1
	Secondary	361	36.7
	Tertiary	78	7.9
	University	10	1.0
	No formal education	16	1.6
	No data	36	3.7
Employment Status	Employed	165	16.8
	Business	61	6.2
	Unemployed	723	73.5
Enrollment status	Active	620	63.0
	Lost to follow up	238	24.2
	Deceased	34	3.5
	Transferred out	15	1.5
	Weaned off	64	6.5
	Involuntarily discontinued	4	0.4
	Voluntarily discontinued	9	0.9
Year enrolled	2014	22	2.2
	2015	534	54.3
	2016	42	4.3
	2017	4	0.4
	2018	382	38.8

Prevalence of cannabis and other substance use at intake into the MAT and during follow up

The baseline urine drug screens carried out at intake revealed polysubstance use. Substances used were heroin, cannabis, benzodiazepines, cocaine, barbiturates, amphetamines, phencyclidine and pethidine. At follow up only 894 participants had repeat urine drug screen results. The 90 participants on methadone therapy who had no repeat urine drug screens carried out was because they were either lost to follow up or were not eligible for the random three monthly repeat urine drug screen. The pattern of polysubstance use remained but there was a decline in use compared to intake. The most prevalent substance was cannabis at

62.8% (n=561), followed by heroin at 33.1%, benzodiazepines (9.3%), barbiturates (0.3%) and cocaine (0.1%). This is illustrated in Figure 1.

Figure1: Prevalence of substance use at intake and follow up



Pattern cannabis and other substance use

The prevalence of cannabis use on methadone was 62.8% (n=561). Majority of these participants (61.3%) used cannabis only, while the remaining used cannabis together with other substances as shown in the Table 2.

Table 2: Pattern of cannabis and polysubstance use

Substance	Frequency	Percentage (%)
Cannabis only	345	61.5
Cannabis and Heroin	172	30.7
Cannabis, Heroin, Benzodiazepines	25	4.4
Cannabis, Benzodiazepines	17	3.0
Cannabis, Cocaine	1	0.2
Cannabis, Heroin, Barbiturates	1	0.2
Total	561	100.0

Pattern of Cannabis use during follow up

At baseline, 84.8% of participants (n=834) used cannabis and 59.4% (n=496) of this population continued to use cannabis. During follow up, 27.3% who tested cannabis-positive at intake stopped using cannabis during follow-up while 6.6% were shown to start using cannabis during follow up of which females had higher likelihood than males. Females were more likely to never use cannabis than males (8% vs. 6.3%). Among those who stopped using cannabis, males were more than females (27.7% vs. 24.8%). Among the 90 participants who had no repeat urine drug screen results, 7% had tested positive for cannabis at intake and 2.1% used other substances at intake. This is shown in Table 3.

Table 3: Pattern of cannabis use by gender

Pattern	Male (%)	Female (%)	Total (%)
Continued cannabis use	440 (51.2)	56 (44.8)	496 (50.4)
New cannabis users	54 (6.3)	11 (8.8)	65 (6.6)
Never used cannabis	54 (6.3)	10 (8.0)	64 (6.5)
Stopped cannabis use	238 (27.7)	31 (24.8)	269 (27.3)
Cannabis use at intake without repeat UDS ^a	57 (6.6)	12 (9.6)	69 (7.0)
No cannabis use at intake without repeat UDS	16 (1.9)	5 (4.0)	21 (2.1)
Total	859 (100.0)	125 (100.0)	984 (100.0)

^aUDS-urine drug screen

Pattern of cannabis use by enrollment status of participants

Of the 984 participants at baseline, 238 were lost to follow up, of which, 81.9% (n=195) used cannabis (p<0.001). Participants who tested positive for cannabis at intake 84.8% (n=834), continued to use cannabis at 59.4% (n=496). There were more participants lost to follow up that had cannabis use compared to non-cannabis users (p<0.001). This is shown in Table 4.

Table 4: Pattern of cannabis use by enrollment status of participants

Pattern of cannabis use	Active	LTFU	Deceased	TO	Weaned off	Inv. Discontinued	Vol. Discontinued	Total
Continued cannabis use	344	114	13	5	12	3	5	496
New cannabis users	40	19	1	2	3	0	0	65
Cannabis use at intake	18	37	3	3	8	0	0	69

without repeat UDS								
No cannabis use at intake	4	11	2	1	2	0	1	21
without repeat UDS								
Never used cannabis	41	13	4	1	4	1	0	64
Stopped cannabis use	173	44	11	3	35	0	3	269
Total	620	238	34	15	64	4	9	984

Inv.-Involuntary, LTFU-Lost to follow up, TO- Transferred out, UDS-Urine Drug Screen, Vol.-Voluntary.

Comparison of cannabis users and cannabis non-users by sociodemographic characteristics

The mean age for those with cannabis use was 34.0 (SD=8.9) years with a median age of 34.0 (IQR=12) years. Most of the cannabis users were in the age group 28-37 years (42.2%). Those in the age group 18-27 had greater odds of reporting cannabis use while being in the older age groups 38-47, and 48-57 years reduced the risk of cannabis use. In addition having university education was associated with reduced risk for reporting cannabis use, while being married increased the risk for cannabis use (OR= 1.5, 95%CI 1.07-2.10). This is shown in Table 5.

Table 5: Association of sociodemographic characteristics with cannabis use

Characteristics	Users	Non Users	Total	OR (95% CI)	p-value
Age (years)	(N, %)	(N, %)	(N, %)		
18-27	142 (25.3)	38 (11.4)	180 (20.2)	2.62 (1.78-3.86)	<0.001
28-37	237 (42.2)	131 (39.5)	368 (41.2)	1.12 (0.85-1.48)	0.413
38-47	146 (26)	127 (38.3)	273 (30.6)	0.57 (0.43-0.76)	<0.001
48-57	27 (4.8)	30 (9.0)	57 (6.4)	0.51 (0.30-0.87)	0.013
58-67	7 (1.2)	5 (1.5)	12 (1.3)	0.80 (0.25-2.54)	0.744
68+	2 (0.4)	1 (0.3)	3 (0.3)	1.20 (0.11-13.3)	0.890
Sex					
Male	494 (88.1)	292 (87.7)	786 (87.9)	1.00 (0.66-1.51)	0.870
Female	67 (11.9)	41 (12.3)	108 (12.1)		
Education					
Primary	284 (50.6)	165 (49.5)	449 (50.2)	1.04 (0.79-1.36)	0.756

Secondary	208 (37.1)	124 (37.2)	332 (37.1)	0.99 (0.75-1.31)	0.962
Tertiary	44 (7.8)	24 (7.2)	68 (7.6)	1.10 (0.66-1.84)	0.729
University	2 (0.4)	8 (2.4)	10 (1.1)	0.15 (0.03-0.69)	0.005
None	10 (1.8)	5 (1.5)	15 (1.7)	1.20 (0.41-3.54)	0.750
Nil	13 (2.3)	7 (2.1)	20 (2.2)	1.10 (0.43-2.79)	0.832
Marital status					
Single	144 (25.7)	83 (24.9)	227 (25.4)	1.00 (0.73-1.37)	0.805
Married	142 (25.3)	62 (18.6)	204 (22.8)	1.50 (1.07-2.10)	0.021
Divorced/Separated	252 (44.9)	172 (51.7)	424 (47.4)	0.80 (0.61-1.05)	0.051
Widowed	10 (1.8)	9 (2.7)	19 (2.1)	0.70 (0.28-1.74)	0.356
Nil	13 (2.3)	7 (2.1)	20 (2.2)	1.10 (0.43-2.79)	0.832
Employment					
Employed	92 (16.4)	63 (18.9)	155 (17.3)	0.80 (0.56-1.14)	0.336
Business	39 (7.0)	17 (5.1)	56 (6.3)	1.40 (0.78-2.52)	0.271
Unemployed	417 (74.3)	247 (74.2)	664 (74.3)	1.00 (0.73-1.36)	0.958
Nil	13 (2.3)	6 (1.8)	19 (2.1)	1.30 (0.49-3.43)	0.605

DISCUSSION

This study aimed to determine the prevalence and pattern of cannabis use and associated sociodemographic characteristics at among patients receiving MMT. The findings show a high prevalence of cannabis use among the participants. In addition cannabis use was associated with some sociodemographic characteristics.

Prevalence and pattern of cannabis use

At intake, prevalence of cannabis use was 84.8%. This is higher than patterns recorded at baseline among patients getting enrolled in MMT in other regions. Studies in Canada have shown lower baseline prevalence of cannabis use at approximately 50% (15,23). This may reflect the difference in pattern of substance use in the different regions.

During follow up, prevalence of cannabis use during MMT therapy continued to be high though lower than the prevalence during intake. This prevalence is consistent with similar studies done in the rest of the world which have reported a rate of 46.9-61.5% (16,21,22).

This is a significant finding since continued use of cannabis during MMT has been associated with negative effects such as high attrition and increased use of illicit substances. This should provide a guide to policy to have MMT programs incorporate interventions for co-occurring cannabis use. This can be done through use of psychosocial treatments such as cognitive behaviour therapy, motivational interviews and contingency management that have been found to be effective(11,31).

In this study we observed a pattern of polysubstance use at baseline with most common substances used being cannabis, benzodiazepines and barbiturates. This pattern persisted during follow up but with less frequency of use. This is similar to findings in a study in Finland where 85% of participants had polysubstance use(17). Among the participants using cannabis during follow up, 38.5% used cannabis in combination with another substance, majority using cannabis together with heroin. This pattern of polysubstance is common in

patients on methadone therapy (14). Additionally, majority of those using cannabis at intake, continued use during follow up and were more likely to be lost to follow up compared to cannabis non-users. This is in agreement to previous research where cannabis use during MMT is associated with attrition from the program (12). However, one study in Canada reported that those reporting cannabis use were more likely to be retained in opioid maintenance at six months(23). This discrepancy in findings can be explained by differences in the two studies. For example, in the study by Socías and colleagues (23), the proportion of participants reporting cannabis use was lower compared to this study and cannabis use was based on self-report, while in the current study we based cannabis use on assessment of urine toxicology screen results.

The findings of this study further show that females were more likely to start cannabis use during follow up; more likely to drop out of treatment and less likely to stop using cannabis during follow up compared to males. This can be explained by the observation that women start using substances later than men but develop drug use disorders faster which may result in high attrition from MMT programs(1,32). Earlier reports have shown cannabis use by females on MMT to be a predictor for continued illicit drug use, increased risk to develop cannabis use disorder and worse mental health outcomes (16) and impact negatively on retention in treatment(15). This can be attributed to the gender differences that have been reported among people with cannabis use disorder(33,34).

Association of sociodemographic characteristics and cannabis use

Similar to findings in previous studies, majority of participants with cannabis use were males. However, the proportion of males relative to females in our study was higher than reported in studies done in the other regions (15,16,18,21,22). This can be attributed to variation in substance use patterns in the different regions where these studies have been conducted.

Despite, the higher prevalence of cannabis use in males, further analysis did not show any statistical difference in gender when comparing those using cannabis and cannabis non-users. This differs with previous studies that have shown gender differences in those using cannabis during MMT (16,20).

Among participants with cannabis use, the mean age was lower than for all participants enrolled in MMT at 34.0 (SD=8.9) years. In addition, being in the age group 18-27 was associated with increased risk for cannabis use while age above 38 years was found protective against cannabis use. This is an expected finding based on studies done using population-based samples which report more cannabis use among those aged 18-30 compared to those above 45 years. In addition, being in the younger age group is associated with continued or resuming cannabis use during follow up (35,36). Also this may be attributed to early age of cannabis use initiation based on findings of a study in the same hospital that found 74.6% of people with substance use disorders had started use before age 20 years(5).

In this study we found majority of the participants had a low level of education which is similar to Bower et al., (21) who found that only 27.9% of patients who used cannabis on methadone therapy had attained secondary level of education. A similar pattern was also reported in studies done on MMT recipients in Tanzania (28,29). In addition, having university education was associated with reduced odds for using cannabis. This can be attributed to the poor education attainment associated with cannabis use(37,38).

In this study a high prevalence of unemployment was observed with almost three-quarter of those reporting cannabis use being unemployed. This finding is comparable to previous studies (16,21). This could partly be explained by the low level of education resulting from cannabis use. (37,38). Incorporating vocational training to patients on MMT may help to

bridge this unemployment gap and improve the socioeconomic status of the participants. This is because socioeconomic status is associated with overall health outcome (38).

Among those with cannabis use, the proportion that reported as being married and not married was the same. However, an interesting finding was reported where being married increased the odds of using cannabis by 50%. This finding is contrary to findings reported previously that those with cannabis use were less likely to be married (39) and that, in the general population, cannabis use disorder is higher among those never married (36).

Limitations

This was a cross-sectional study which relied on retrospective abstraction of data hence not able to conclude on association between the exposure and the outcome.

In addition, our study relied on record of urine drug screen and hence did not assess for use of other substances which were not measured by the screening tool such as alcohol, nicotine or Khat.

Conclusion and recommendations

To our knowledge, this is the first study to determine prevalence of cannabis use among patients receiving methadone treatment at a methadone clinic in Kenya. There is a high prevalence of cannabis use in patients on MMT. In addition a pattern of polysubstance use was observed. This underscores the need for addressing the public health burden of the high prevalence. Cannabis use was associated with significant loss to follow up. Additionally, being in the younger age group and being married increased risk for cannabis use while older age and university education was associated with reduced risk for cannabis use. This shows role of having targeted interventions to reduce the negative effects associated with cannabis use.

To build upon our study findings, we recommend exploratory studies on the drivers for cannabis use in patients receiving methadone and appropriate interventions. Future researchers need to conduct longitudinal studies to assess which pattern of cannabis use results in cannabis use disorder. In our study, more individuals who were lost to follow up reported cannabis use compared to non-cannabis use thus, more prospective cohort studies on the impact of cannabis use on treatment outcome would be necessary. Importantly, there is need for similar study in other MMT clinics in other regions in Kenya for comparison. The findings may help to inform policy in management of cannabis use in patients on MMT.

List of abbreviation

HIV- Human immunodeficiency virus

IQR – Interquartile range

Inv. – Involuntary

LTFU- Lost to follow up

MMT- Methadone maintenance treatment

MNTRH- Mathari national teaching and referral hospital

OR- Odds ratio

OST- Opioid substitution therapy

SD- Standard deviation

TO- Transferred out

UDS- Urine drug screen

Vol. – voluntary

Declarations

Ethics approval and consent to participate

The study was performed in accordance with the Declaration of Helsinki.

Ethical approval to conduct this study from Scientific Ethics and Research Committee of University of Nairobi, Kenyatta National Hospital (KNH-UON ERC) was obtained before conducting the study. In addition, permission was sought to carry out the study from the management of MNTRH and the MMT clinic.

Consent for publication

Not applicable.

Availability of data and materials

Data sets used and analyzed in this current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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The authors report no external funding for this study.

Authors' contributions

EWN was involved in study conception, design, acquisition and interpretation of data and drafting and revising the manuscript. SKK was involved in interpretation of data, drafting and revising of the manuscript. FRO and RNK were involved in design, interpretation of data and revising the manuscript. All the authors read and approved the final version of the manuscript for publication.

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Figures

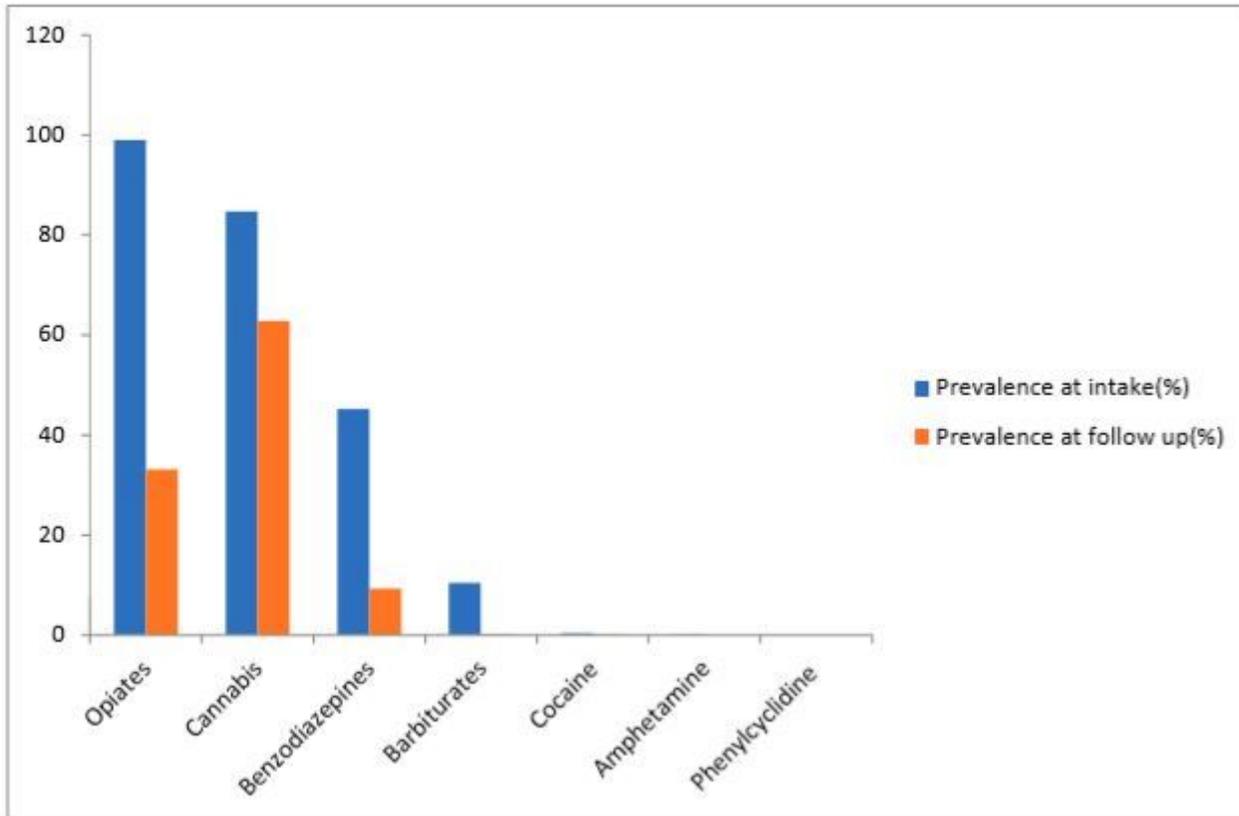


Figure 1

Prevalence of substance use at intake and follow up