

# Prevalence of Depression among Female Injecting Drug Users (FIDUs): Study of a Drop-in Rehabilitation Center in Nairobi County, Kenya

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## Abstract

Female injecting drug use needs to be addressed urgently because of its association with depressive symptoms. Females with the habit of getting drugs injected into their bodies have significant needs which expose them to a high risk of diseases making them vulnerable to depression and other psychological morbidities. The study was carried out to explore the extensiveness of depression among females injecting drug users in Nairobi County, Kenya. A cross-sectional design was used in the study while purposive sampling was used to recruit 149 participants aged above 18 years. Socio-demographic questionnaire, Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

and Becks Depression Inventory (BDI) were used to collect data. Data was analyzed quantitatively using frequencies and percentages using SPSS version 21. Most respondents were unemployed (83.2%) and single (81.9%) whose ages ranged between 26-40 years. Even though the risk level for heroin was notably high compared to all other drugs, alcohol products seemed to be the most commonly abused by female injecting drug users followed by tobacco products and khat. This is an indication that most participants are poly-drug users. There are scanty studies on female drug users that have been carried-out in Africa to objectively evaluate the relationship between depression and female injecting drug users. Most studies focus on men or generally do a combined study of both males and females. This fact implies that issues associated with female IDUs are not well documented which raises a possible concern for policy makers to develop suitable regulations that revolve around needs affecting these females. It would be vital for harm reduction strategies to be implemented in all drug programs and Comprehensive Care Clinics (CCC).

*Keywords: Female injecting drug users, poly-drug users, depression, drop-in rehab center, Comprehensive Care Clinics*

## 1.0 Introduction

Studies show that female injecting drug users (FIDUs) are more likely to have a mental disorder than in general population (United Nations Office on Drugs and Crime, 2013). As a matter of fact, studies done on low esteem issues indicate that in most countries, women are the minority of IDUs which can be partly associated with the fact that their specific needs and risks are not well addressed (Bifulco et al., 1998). Studies indicate that depression is a common problem associated with many IDUs. For instance, a study by Bing et al (2001) revealed that most IDUs were intensively affected by depression. About 36% of IDU's were diagnosed as having major depressive disorder (United Nations Office on Drugs and Crime, 2007).

Further, women involved in injecting drugs have various needs which may differ from one female to another and they are also exposed to more risk of contracting diseases and being oppressed compared to males who inject drugs (United Nations Office on Drugs and Crime, 2004). Discussions on drug injection are commonly concentrated on male IDU's yet FIDUs also face unique risks for infections. Studies further show that in groups most women will inject drugs being the last ones therefore making them the group of individuals who require help while injecting (United Nations on HIV and Injecting Drug Use, 2009). Women, compared to men, may have more sexual relationships with people who are also on drugs which increase their risks to diseases such as HIV and AIDS and violence (United Nations on HIV and Injecting Drug Use, 2009). Moreover, facilities in conventional harm reduction programs are mainly created to accommodate and serve males and also the working staffs involved have no training designed to handle females. This gender imbalance needs to be addressed.

The extent of depression among FIDU's in Kenya has not been fully assessed. It is therefore necessary to get the current statistics on the prevalence of depression among FIDUs that will help in developing tailor made programs that can specifically address their needs. The objective of this article is inclined

towards offering an understanding about the influence and extent at which depression affects FIDU's.

## 1.2 Specific Objectives of the study

The following research objectives were used to guide the study:

- (1) To assess the prevalence of depression among female injecting drug users
- (2) To explore the relationship between depression and injecting drug use among females

## 2.0 Literature Review and Conceptual Framework

Studies done in this area have shown that there exists a relationship between injecting drug use and disorders caused by depression (Bing et al, 2001). Moreover, research indicates that depression is one of the main mental disorders associated with individuals on injecting drug use. Bing et al in (2001) reported significant symptoms of depression among IDU's. About 36% of IDU's were diagnosed as having major depressive disorder (UNODC, 2007).

A report by National Institute on Drug Abuse (NIDA) USA shows that 20 to 50 percent of people suffering from extensive effects of mental disorders more often are IDU's. The report further reveals that 20 to 40 percent IDU individuals are severely affected by depression. The research carried out in Baltimore focused on evaluating how depression symptoms and needle sharing behavior of IDU individuals are related. It revealed a significant relationship between the two factors - depression symptoms and needle sharing (Chander and Moore, 2006).

Another study done in Puerto Rico which involved 536 IDUs disclosed that 35 per cent of the IDUs had severe depression symptoms (Reyes et al, 2002).

Women who inject drugs have significantly different needs and face higher risks of infections, violence and psychological morbidities such as depression than men who inject. (United Nations Report, 2004).

There are scanty studies on females that have been carried out in Africa objectively to evaluate the relationship between depression and female injecting drug use. Most studies focus on men or generally do a combined study of both males and females (United Nations Report, 2004). This fact implies that issues associated with female IDUs are not well documented which raises possible concerns in Africa regarding the association between depression and female injecting drug use. This has led to a possible under representation of the specific issues that female IDUs face and a gap in appropriate policy development and understanding around their specific needs especially when it comes to designing rehabilitation programs.

## 3.0 Methodology

### 3.1 Study Site Description

The study site was the Support for Addiction Prevention and Treatment in Africa (SAPTA) drop-in Centre situated in Pangani in Nairobi County. This drop-in Centre was started in January 2013. SAPTA is an NGO that runs addiction programs such as the 12-step programs as well as individual and group counseling services. To its clientele, it offers addiction counseling, health education talks and seminars, HIV Testing and Counseling (HTC) services, condom distribution and needle exchange programs.

### 3.2 Study Design

This study used a quantitative research method to collect data. A descriptive study design was utilized because the researcher recorded the information that was present in the population without manipulating the variables.

### 3.3 Study Population

All female clients who visited SAPTA Pangani drop-in Centre participated in the study. Participants were conveniently selected and interviewed. The entire study period was two months.

### 3.4 Inclusion Criteria

The following were the inclusion criteria for the study participants:

1. Must be a female injecting drug user with identifiable needle marks on their bodies
2. Must be 18 years of age and above
3. Must be respondents at SAPTA
4. Must be able to give written consent
5. Must have the ability to participate meaningfully to achieve logical and articulate findings

### 3.5 Study Instruments

The recruitment and consenting procedure has been illustrated in the sampling flow chart in Figure 3. The instruments used to collect data included:

1. Demographic survey questions
2. The Beck Depression Inventory (BDI)
3. Alcohol Smoking and Substance Involvement Screening Test Scores (ASSIST)

### 3.6 Procedure for collecting data

After getting permission from SAPTA, the department of Psychiatry, and KNH/UON/ERC, the researcher called the Pangani Drop-in Centre to book an appointment with the site supervisor. On the appointment date the researcher presented the site supervisor with the written approvals and a request for an office space for conducting the study. The researcher then commenced research for a period of two months. Currently SAPTA Pangani drop in-Centre registers about a minimum of 5 new female clients and a maximum of 10 per day. The researcher therefore interviewed all female participants who visited the Centre.

This was a researcher administered study, since the literacy levels of the clients varied. The researcher personally took each client through the consent processes and then presented the client with a consent form to sign. The researcher then administered the socio-demographic questionnaire and BDI. The interviewing instruments were available in both English and Kiswahili language and each interview lasted about 45 Minutes. Those found to be suffering from depression received counseling services from SAPTA counselors. Those who required psychiatric evaluation and medication were referred to Medecin Sans Frontiere (MSF) doctors. The number of participants was 149 which

was the full population of the participants reporting to the drop-in center.

Participants found to be either suffering depression or addictions were taken through therapy by SAPTA counselors and the researcher for the benefit of enhancing behavior change. Potential benefits to the society included redesigned intervention programs for the future that would address specific needs of women and not just the addiction problem.

#### 4.0 Results

This study sought to ascertain the demographic features of the respondents which included level of physical maturity, education level, conjugality and economic activities among others as presented in Table 1.

The study found that initiation to drug use was more rampant among young female adults, with 94% of the respondents being aged below 40 years and the highest number of drug users falling in the age bracket of 26 - 30 years at (28.2%). This implies that IDU among females cut across all ages even though it was more rampant among young adults.

Most respondents (81.9%) were out of the marriage institution with the highest number of drug users being single women followed by separated women at 52% and 47% respectively.

The distribution of the respondents by marital status was statistically significant at a  $p(0.000) \leq 0.001$ , showing the representative differences in marital status. This is in line with similar studies done in the area of drug use which indicate that majority of females who engage in drug use are single, separated or divorced. Similar studies have found that women who involved themselves in abusing drugs commonly refer to their marital challenges as the reason behind them abusing specific drugs.

Slightly less than a half of the respondents (45.6%) had attained up to primary level of education whereas 38.9% indicated that they had secondary school certificate which is their best achievement when it comes to education.

Statistical significance of the distribution of the respondents by the level of education yielded  $p(0.0002) \leq 0.001$ . This implies that distribution of participants using highest education attainments was

significant among the female injecting drug users; respondent had attained lower levels of education. Females who lacked career skills due to low education had a challenge in getting employment and this made many of them vulnerable to using drugs, engaging in risky sexual behavior, criminal activity, etc.

Majority of the respondents (83.2%) were unemployed. A few of them (14.8%) indicated that they were self-employed, while 2% of the respondents were employed. This could be attributed to their substance abuse status and low levels of education. The relationship between substance abuse and employment status was statistically significant with a  $P(0.0004) \leq 0.001$ . This meant that there were significant differences related to statistical data concerning employment conditions of respondents involved. Basically; this could imply that those who were not employed had a lot of idle time which might have influenced their mental status. The lack of money may lead to feelings of frustration due to inability to provide even basic needs for them resulting in increased rates of drug abuse.

Distribution of the respondents by whether they injected drugs yielded a  $p(0.0001) \leq 0.001$ . This implied that distribution of respondents by whether they injected drugs into their body was representative of the true population. Majority of the respondents had a preference for injectable drugs due to their ability to elicit quick action in achieving a "high". More than two thirds of the respondents (73.8%) indicated that they injected drugs, while the rest (26.2%) did not inject drugs due to various reasons like collapsed veins due to previous addictive use, preference to non-injectable drugs, affordability of non-injectable drugs compared to injectable ones which tend to be costly.

An overwhelming majority of the participants (95.3%) indicated that they were not recruited into any treatment program for drugs. However, a few of them (4.7%) indicated that they were in a treatment program. There were statistical differences in the participants' involvement in treatment programs for drugs with a  $P(0.0009) \leq 0.001$ , implying that either the participants were not willing to quit drug use or they did not have knowledge of treatment centers available for drug treatment.

The ASSIST Scores, presented in Table 2, presents a summary of the drugs the participants commonly abused, frequency of their use and risk levels.

Their scores were rated as follows: (Refer to Table 2 for the actual scores)

## ASSIST Scores

1. Low, 0-3: Means that an individual's health risk is low among other challenges from their present habit of drug use.
2. Moderate, 4-26: Means a person is at higher health risk among other challenges from his / her present habit of drug use.
3. High, 27+: Means that an individual is exposed at a higher risk of serious health effects; socially, financially, legally and even marital status caused by their present habit of substance use and most of such people are not independent.

The risk level for heroin was notably high compared to all other drugs, followed by alcohol products, tobacco products and Khat, which implies that most participants are poly-drug users. This observation can be attributed to the fact that Heroin is relatively scarce and more expensive because of its complex supply chain network. In order to remain high, most heroin users would need about KShs 150 - 300 for a dose every 6 hours. Majority of the participants cannot afford this, thus the need for participants to engage in combining injectable drugs with other drugs for its potentiality effect and possibly to self-medicate against the depressive and withdrawal symptoms.

## 4.1 Levels of Depression among Female Injecting Drug Users (FIDUS)

The existence of depressive disorders among IDUs is supported by robust studies. Often, depression is reported to be the major cause behind most mental disorders among substance abusers. In this context, the study has concentrated on determining the levels of depression in FIDUs using BDI, a 21-scale item. This is a self-report rating inventory that is propelled

towards finding an appropriate measurement for mood features and depressive symptoms among drug using individuals.

The results according to BDI scores are illustrated in Figure 2. From the findings, the proportion of respondents with depressive disorder symptoms drawn from borderline clinical depression to extreme depressive symptoms was 86.6% (129), which is very high. These results indicate that the prevalence of depressive disorders among the respondents was very high revealing that female drugs users have high levels of depression. If we take a cut off point from moderate depression to extreme depression, we can infer that mood is seriously affected by one's substance use. As observed in Figure 2 slightly more than half of the respondents 54.4% (81) had moderate levels of depression while slightly more than a quarter of the respondents 25.5% (38) indicated that they had severe to extreme depression levels.

## 5.0 Discussion, Conclusion and Recommendations

The findings in this study show that most respondents involved had moderate to severe depression (75.9%). The existence of the articulate relationship of injecting drug using individuals and disorders caused by depression resonates with many other studies. This result further indicates that depression is the most common mental disorder among injecting drug users.

The findings are in agreement with Bing et al (2001) who in a study conducted in the US reported considerable disorders associated with depression among injected drug using respondents where in this group, 36 percent were immediately put in treatment schedules for people with severe depressive symptoms. Chander et al (2006) carried out a similar research for the same state to come to a conclusion that most injected drug users had a high percentage of depression levels.

This study has revealed that depression symptoms and disorders are widespread and common among the female population involved in injection drug use. Further, the findings indicate that this key population is comprised of people who are single, separated, divorced or widowed and have no

livelihoods (unemployed) and therefore have poor psychosocial and economic support systems. It is also demonstrated that most of the respondents are not in any treatment programs for abuse of drugs.

The study was impelled towards establishing the extent of effect of depression among positive female IDUs in Nairobi County.

Having established the extent and implications of depression among female injecting drug users, this study therefore proffers some significant solutions to the main challenge of substance abuse and depression keeping in mind that these two factors are highly related. It is the responsibility of policy makers, academicians as well as researchers to immerse their efforts on how to handle depression which will be a helpful tool for physicians and psychologists to help depressed individuals overcome this common problem and avoid extensive effects on their lives including drug and substance abuse.

This study demonstrated that most of the respondents are not in any treatment program for abuse of drugs. At this point it would be vital to have Drug Rehabilitation programs that are tailored around female specific needs so that females with children, females who are pregnant, females who are incarcerated or those infected with diseases like HIV can all get treatment services that holistically address their needs under one roof.

This will help to take away the self-stigma that many

females experience which makes them shy away from presenting themselves in treatment facilities for treatment for abuse of drugs.

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## 8.0 Figures and Tables

Figure 1: The conceptual framework

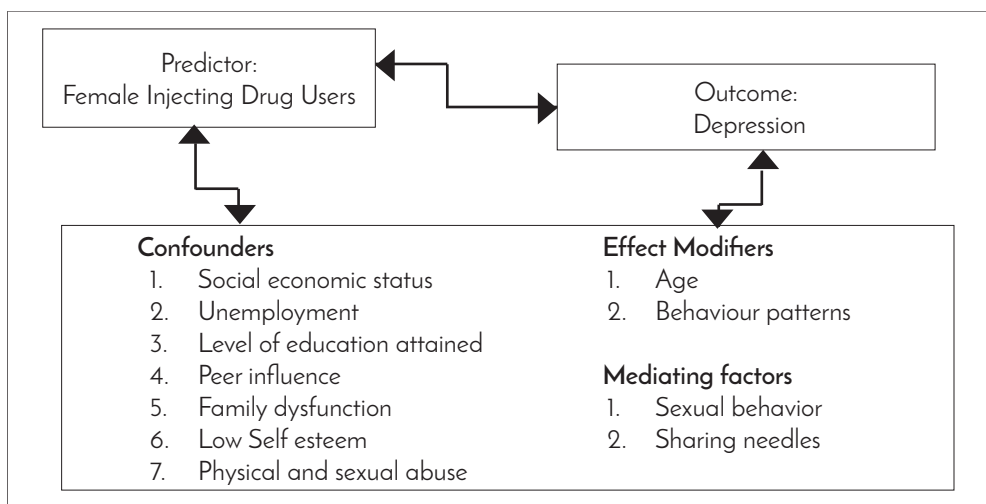


Figure 2: Becks Depression Inventory (BDI) Scores

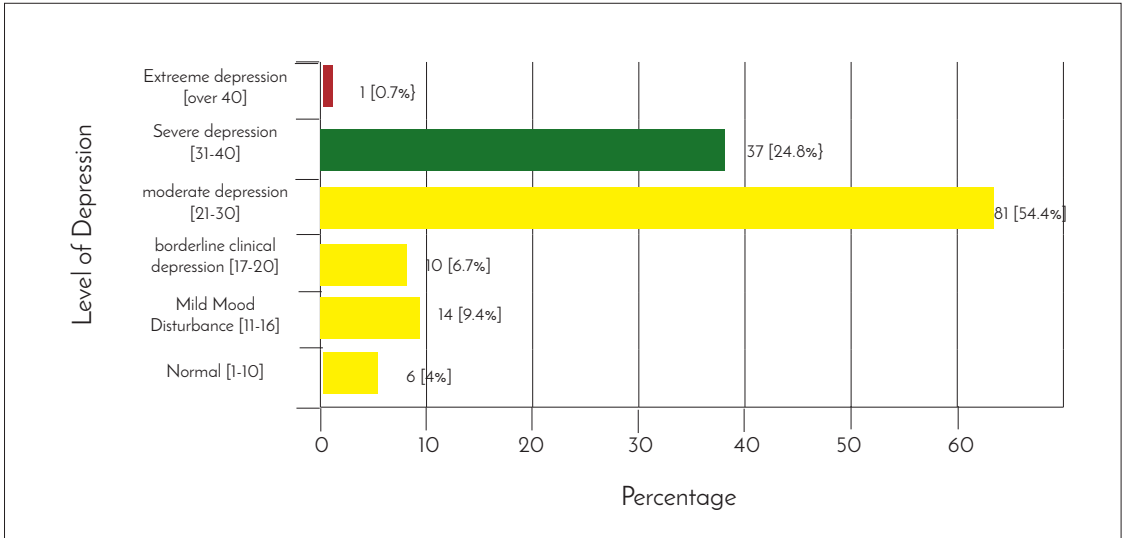
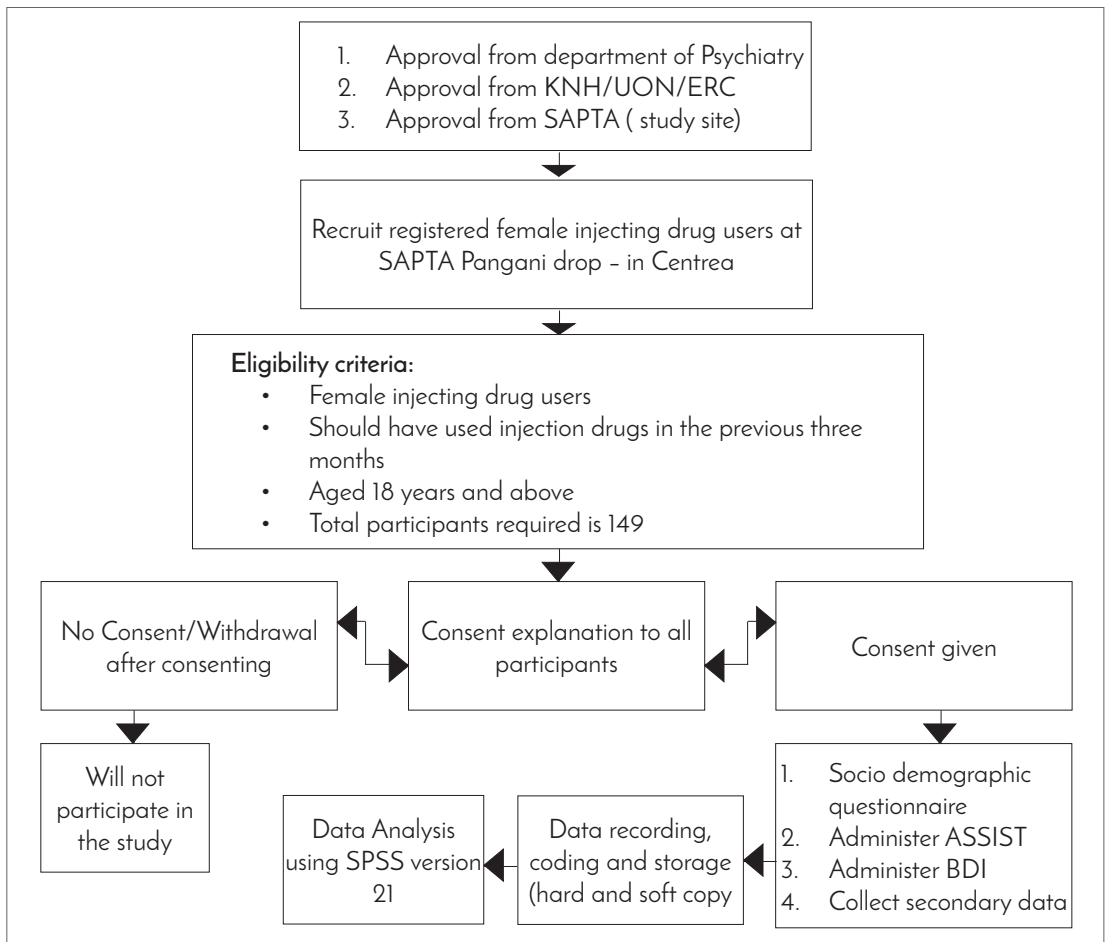


Figure 3 Sampling flow chart (recruitment and consenting procedure)



### Demographic Characteristics of the Respondents

This study sought to ascertain the demographic features of the respondents including; age, education achievement, relationship status and economic activities among others, as presented in table1:

Table 1: Summary Distribution of the Respondents by their Background Information (n=149)

Covariates	Frequency (F)	Percentage (%)
Age		
15-20 years	10	6.7
21- 25 years	31	20.8
26-30 years	42	28.2
31-35 years	37	24.8
36- 40 years	23	14.4
41 years and above	6	4
Relationship status		
Single	52	34.9
Married	21	14.1
Separated	72	47
Widow	6	4
Education level		
No Formal education	19	12.8
Primary	68	45.6
Secondary	58	38.9
College	4	2.7
Occupation		
Unemployed	124	83.2
Employed	3	2
Self Employed	22	14.8
Enrollment in Treat-ment Programs		
Yes	7	4.7
No	142	95.3

Table 2: Alcohol Smoking & Substance Involvement Screening Test (ASSIST) Scores

Substance	Commonly Abused (Score %)	Frequently Used (Score %)	Risk level
Tobacco Products (cigarettes, chewing tobacco, kiraiko)	19	37	27+ High
Alcohol Products (Tusker, Tusker malt, Guinness, senator, White cap, Wines, Changaa', Karubu and Muratina)	42	35	27+ High
Miraa, Khat, Kanget, Mogoka, Kuber	19	28	27+ High
Heroin	21	38	27+ High
Rhypnol	1	1	0 - 3 Low
Canabis (Bhang)	2	3	0 - 3 Low
Cocaine	1	1	0 - 3 Low



## 9.0 References

- Beck, A.T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571.
- Beck, A. T., Steer, R.A., & Garbin, M.G. (1988) Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8(1), 77-100.
- Bifulco, A., Brown, G. W., Moran, P., Ball, C., & Campbell, C. (1998). Predicting depression in women: the role of past and present vulnerability. *Psychological Medicine*, 28(1), 39-50.
- Bing, E.G., Longshore D. Burnam, M. A., Fleishman, J. A., Longshore, D., Sherbourne, C. D., London, A. S., & Morton, S. C. (2001). Psychiatric disorders and drug use among human immunodeficiency virus-infected-adults in the United States. *General psychiatry*, 58(8), 721-728
- Brown, Y., Viswanathan, B., Rousson, V., Paccaud, F., & Bovet, P. (2010). Association between substance use and psychosocial characteristics among adolescents of the Seychelles. *BMC Pediatrics*, 11(1), 85.
- Caldeira, R. S., Mrasek, K. D., & Ballinger, R. (2013). Individualist and collectivist values in transition planning for culturally diverse students with special needs. *The Journal for Vocational Special Needs Education*, 25(2-3), 20-29.
- Chesang, R. (2013). Drug Abuse among the Youth in Kenya. *International journal of scientific & technology research*, 2(6), 126151.
- Chander G HS, Moore RD. (2006) Substance abuse and psychiatric disorders in HIV positive patients: epidemiology and impact on ARV therapy: *General Psychiatry*, 58(8), 721-728.
- Hawkins, H., Blake, S. M., Schwartz, P. M., & Flinchbaugh, L. J. (1992). Developing theory-based substance abuse prevention programs for young adolescent girls. *The Journal of Early Adolescence*, 21(3), 256-293. doi: 10.1177/0272431601021003002
- Ikram, A. I., Ryan, J. A., French, J. F., & Weinbaum, D. (2012). The epidemiology of substance use among middle school students: The impact of school, familial, community, and individual risk factors. *Journal of Child and Adolescent Substance Abuse*, 8(1), 55-75. doi: 10.1300/J029v08n01\_03Joint
- Leishner, T. (2011). Finding the right fit: Program fidelity and adaptation for prevention programs. *International journal of scientific & technology research*, 7(1), 301-785.
- Maithya, G. (2012). Gastrointestinal symptoms in primary care: prevalence and association with Depression and anxiety. *International journal of scientific & technology research*, 9(4), 458-621.
- National Campaign Against Drug Abuse Authority (2012). The role of parents in prevention and control of alcohol and drug abuse among their children in Nairobi. Retrieved from National Campaign against Drug Abuse Authority website: [http://www.nacada.go.ke/wp-content/uploads/2011/02/role-of-parents-in-drug-and-substance-abuse-report\\_2010.pdf](http://www.nacada.go.ke/wp-content/uploads/2011/02/role-of-parents-in-drug-and-substance-abuse-report_2010.pdf)
- National Campaign Against Drug Abuse Authority (2010). Alcohol use in Central Province of Kenya: A baseline survey on magnitude causes and effects from the perspective of community members and individual users. Retrieved from National Campaign against Drug Abuse Authority website: <http://www.nacada.go.ke/wp->
- Nyandindi CL, (2011) HIVnumbers serostatus, Hepatitis C and Depression among injection drug users in Kinondoni Municipality, Dar es salaam, Tanzania. Muhimbili University of health and allied services.
- Pinto-Meza A, Serrano-Blanco A, Penarrubia MT, et al. (2005) Assessing depression in primary care with the PHQ-9. *J Gen Intern Med*. 20(8):738-42.
- Shaw, N. (2012). Finding the balance - program

fidelity and adaptation in substance abuse prevention: A state-of-the art review. Rockville, MD: Center for Substance Abuse Prevention. (2), 21-47

United Nations on Acquired Immuno-Deficiency Disease Syndrome (2000). Caring for Carers; managing stress in those who care for people with HIV/AIDS. Best Practice Collection.(2)41-50

United Nations on Acquired Immuno-deficiency Disease Syndrome (2014). The GAP report on people who inject drugs. (1), 30-38

United Nations Office on Drug and Crime (2013) World Drug Report. United Nations Publication. (2)3-17

United Nations Office on Drugs, & Crime. (2004). World Drug Report 2004 (Vol. 1). United Nations Publications. (1) 47-51

World Health Organization (2002). The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST): development, reliability and feasibility. Addiction, 97 (9): 1183-1194.