

# THE PREVALENCE OF HIV INFECTION AMONG CANNABIS-ABUSED PSYCHIATRIC PATIENTS: THE CASE OF FEDERAL PSYCHIATRIC HOSPITAL, CALABAR

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## ABSTRACT

This study investigated the prevalence of HIV infections among Cannabis-Abused patients in Federal Psychiatric Hospital, Calabar. Three hypothesis were formulated to give direction to this investigation. The design adopted for this study was ex-post facto. Population of this study consisted of 334 patients admitted into the Federal Psychiatric Hospital Calabar from 2002 to 2006 as a result of cannabis-induced psychosis, out of which 169 were selected as sample using purposive random sampling technique. Data collection were carried out using a structured questionnaire called “**Prevalence of HIV infection and Cannabis-Abused Questionnaire**” (P.H.I.C.Q.), while data obtained were subjected to statistical analysis using contingency chi-square ( $\chi^2$ ) technique. Results of the analysis indicated that there is a significant influence of cannabis use on mental health of psychiatric patients; there is a significant influence of knowledge of HIV/AIDS on sexual behaviour of psychiatric patients and there is a significant influence of HIV/AIDS infection on aversive behaviour of psychiatric patients. This calls for a concerted effort on the management of the hospital to mobilize staff members to embark on awareness campaign on the dangers of cannabis use and HIV/AIDS infection as well close monitoring of the activities of the patients.

**KEY WORDS:** HIV Infection, Cannabis sativa, psychiatric patients.

## INTRODUCTION

Studies indicate that the perception of risk is important in aversive behaviour and the riskier the outcome, the more negative one becomes toward the behaviour<sup>1</sup>. The implication is that where perception of risk is absent or impaired by a psychotic condition, there would be a possible decrease in aversive behaviour.

It is estimated that in the year 2004, 4% of the worldwide population used Marijuana<sup>2a</sup>. These data also give an indication of frequency of drug use: 200 million people (4.9%) annually, 110 million people (2.7%) monthly, and 25 million people (0.6%) more than once a month. The 25 million people, who use illegal drugs frequently, are usually known as problem drug users. The frightening statistics is an indication that at least a percentage of the population is at risk or may be unable to make informed decision on major aspects of their life's choice particularly due to altered perceptual abilities. These figures do not include the greater number of the youths who suffer from various social dysfunctions leading to debilitating and sometimes permanent psychological trauma and even death, due to the use of cannabis. The paradox however, remains that most individuals who indulge in the use of cannabis do so secretly and most times in hiding, away from the views of other non-users. Brodbeck et al (2008)<sup>2b</sup>. By

this act, one could reason that most of these users have a fair knowledge of the detrimental effect but however, damned its consequences .

## RESEARCH PROBLEM:

Drug use continues to have a major impact on the global pandemic of Human Immune – Deficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), both through recreational drug user having unsafe sex while intoxicated. HIV is said to be transmitted very efficiently through blood transfer making needle sharing among injecting drug users extremely risky. Hospital records only point to the presence of a problem and do not give us a true picture of the extent of the problem. The reasons are not far – fetched. Many of our sick people are not always found in the hospitals because, most of them may not go to the hospital for help, many may seek help from traditional healers, healing churches and private practitioners who may not be equipped to manage drug-related cases in terms of equipment and trained personal. A large proportion of these persons get no help at all and many of them ultimately end up as destitute or psychotic vagrants found along our streets, motor parks, post offices and other public places constituting an aberration of societal aesthetics as most of them even die as a result of opportunistic infections. According to Obot<sup>3</sup>,

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the most feared consequence of drug use is the transmission of the Human Immune Deficiency Virus (HIV) that leads to Acquired Immune Deficiency syndrome (AIDS).

As a stimulant, cannabis is said to increase psychomotor activity leading to rapid heart beat causing strain for users with heart disorders and can also result in it, cannabis particularly acts on the central nervous system (brain) impairing cognitive ability of the user<sup>4</sup>. Though, cannabis smoking does not produce physical dependence as reported by Obot, some users become psychologically dependent on it. They use cannabis in order to "feel good" and will therefore, show a desire for it in certain situations and when experiencing negative moods. It has been observed that people who are judged to be mentally unstable tend to be psychologically dependent on cannabis than people with no psychological tendencies. This may explain the association between cannabis use and mental illness which has been consistently reported in Nigeria. Other social implications of cannabis-use according to Oginni, "among the many side effects of hemp is its capacity to make a deviant of its user"

Several studies conducted in Nigeria, beginning from the earliest ones by Asuni<sup>5</sup> and Lambo<sup>6</sup>, implicate cannabis use in the onset of psychosis<sup>7/8</sup>. They observed that most healthy individuals with no previous family history of mental illness became victims of mental dysfunction following a consistent contact with cannabis-use. The continued desire to "feel good" by these individuals most often propel them to sustain the use of cannabis in order to maintain their euphoric state, which may affect their perceptual ability leading to risky behaviours.

In spite of these overwhelming negative effect of cannabis use, one wonders why there is still so much craving for it? It is of interest to know at what stage the consumption of cannabis could interfere with the users' cognitive ability? Or what are the perceived benefits of cannabis-use? What is the relationship between cannabis-use and sexual urge of its users? These and many more are the questions this study will attempt to answer.

#### **HYPOTHESES:**

1. There is no significant influence of cannabis use on mental illness of psychiatric patient.
2. There is no significant relationship between knowledge of HIV/AIDS and risky sexual behaviour among psychiatric patients.

3. There is no significant influence of HIV/AIDS infection on aversive behaviour of psychiatric patients.

#### **METHODOLOGY:**

This study was carried out in Calabar, the capital of Cross River State of Nigeria. It is a home of Federal Psychiatric Hospital, Calabar. The hospital was established in 1903 in association with St. Margaret's Hospital (now University of Calabar Teaching Hospital). It was declared by order No. 9 of 1904 (old Southern Nigeria series), gazetted as a lunatic asylum and later named a full-fledged hospital the same year.

It was a state-owned psychiatric hospital until 1995, when Federal Government under late Gen. Sani Abada converted it to a Federal Government owned Psychiatric Hospital. Currently it is one of the sub-hospitals owned by the Federal Government of Nigeria. It has a 120 bed capacity.

The design adopted for this study was *ex post facto*, while the population consisted of 334 patients admitted into the Federal psychiatric Hospital Calabar from 2002 to 2006 as a result of cannabis-induced psychosis. 169 patients were selected as sample size using purposive random sampling technique.

The instrument used for data collection was a structured questionnaire prevalence of HIV infection and cannabis-abused questionnaire meant to obtain Primary (P.H.I.C.Q) data, while Secondary data were obtained from the medical records of the subjects.

The validation of the instrument was established by experts in measurement and evaluation, while the trial test gave reliability coefficient estimate of 0.83 which showed that the questionnaire was reliable in carrying out this study successfully.

Administration of the questionnaire was carried out personally to the sampled subjects, and this measure gave a 100 percent return rate.

Chi-square ( $X^2$ ) statistical analysis was employed in analyzing data obtained from the questionnaire.

#### **RESULTS**

##### **HYPOTHESIS ONE:**

There is no significant influence of cannabis use on mental illness of psychiatric patients. The independent variable is cannabis use while the dependent variable is mental illness. Chi-square ( $X^2$ ) statistical analysis is used to analyze data from these variables. A summary of the result is presented in table 1.

**TABLE 1**

Chi-square ( $X^2$ ) analysis of the influence of cannabis use on mental illness of psychiatric patients.

Relationship between Cannabis-use and the cause of mental illness								$(X^2)$ value
	Minor		Full		Extreme		Total	
	Fo	fe	fo	fe	fo	fe		
High	23	22.0	13	20.06	84	77.4	120	11.78*
Low	8	9.0	16	8.4	25	31.6	49	
Total	31		29		109		169	

Fe figure represent the expected values.

\*Significant of 0.05,  $df = 2$ , critical  $X^2$  values = 5.991,  $N = 169$ . The result presented in this table revealed that the calculated  $X^2$  values of 11.28 is found to be greater than the critical  $X^2$  values of 5.991 at 0.05 alpha level of significance and 2 degrees of freedom. Therefore the null hypothesis is rejected and the alternate hypothesis upheld. With this result therefore, there is a significant influence of cannabis use on mental illness of the psychiatric patients.

**HYPOTHESIS TWO:**

There is no significant influence of knowledge of HIV/AIDS on sexual behaviour among psychiatric patients. The independent variable is knowledge of

HIV/AIDS while the dependent variable is sexual behaviour. Chi-square ( $X^2$ ) statistical model is used to analyse data obtained from the two variables. A Summary of the results is presented in Table 2

**TABLE 2**

Chi-square ( $X^2$ ) analysis of the influence of knowledge of HIV/AIDS on sexual behaviour of psychiatric patients.

The relationship between level of HIV/ AIDS knowledge and sexual behaviour

Level of knowledge of HIV/AIDS	Minor		Full		Extreme		Total	$X^2$ value
	Fo	fe	fo	fe	fo	fe		
Good	22	21.9	9	14.2	78	72.9	109	6.381*
Poor	12	12.1	13	7.8	35	40.1	60	
Total	34		22		113		169	

\*Significant of 0.05,  $df = 2$ , critical  $X^2$  values = 5.991,  $N = 169$ . The results presented in this table indicated that the calculated  $X^2$  values of 6.381 is found to be higher than the critical  $X^2$  values of 5.991 at 0.05 alpha level of significance and 2 degrees of freedom. This finding made the null hypothesis to be rejected while alternate hypothesis upheld. This result implies that there is a significant influence of knowledge of HIV/AIDS on sexual behaviour of psychiatric patients.

**HYPOTHESIS THREE:**

There is no significant influence of HIV/AIDS infection on aversive behaviour of psychiatric patients. The independent variable is HIV/AIDS infection while the

dependent variable is aversive behaviour. Chi-square ( $X^2$ ) statistical model is used to analyse data obtained from the two variables. A summary of the result is presented in table 3.

TABLE 3

Chi-square ( $X^2$ ) statistical analysis of the influence of HIV/AIDS infection on aversive behaviour of psychiatric patients.

Level of HIV/AIDS Category of Aversive

Infection	Minor		Full		Extreme		Total	$X^2$ value
	Fo	fe	fo	fe	fo	fe		
Major	21	21.6	14	20.6	83	75.4	118	10.11*
Minor	10	9.4	16	9.1	25	32.6	51	
Total	31		30		103		169	

\*Significant of 0.05,  $df=2$ , critical  $X^2$  values = 5.991,  $N = 169$ . The result presented in this table revealed that the calculated  $X^2$  values of 10.11 is observed to be higher than the critical  $X^2$  values of 5.991 at 0.05 alpha level of significance and 2 degrees of freedom. With this result the null hypothesis was rejected while the alternate hypothesis upheld. This means that there is a significant influence of HIV/AIDS infection on aversive behaviour of psychiatric patients.

### DISCUSSION OF RESULTS:

The result of hypothesis one had it had that there is a significant influence of Cannabis use on mental health of psychiatric patients. With this result, the null hypothesis was rejected while the alternative hypothesis was retained.

This result suggests that cannabis use has an impact on mental health of psychiatric patients. That is people who use cannabis are likely to suffer mental illness. Put differently, cannabis use contributes to mental illness of psychiatric patients. It therefore follows that one of the major causes of mental illness could rest at the door of cannabis use.

Most studies reviewed implicated cannabis use as the reason of admitting some young adults into the psychiatric hospital. Notable among them is Obot whose study pointed out that one of the dangers posed by cannabis use especially among young smokers is a tendency to lose interest in achieving one's goal. According to him, when an individual is unable to achieve his life's goal, such an individual is likely to become a social misfit leading to frustration, which in extreme cases may need a psychiatric attention.

Furthermore, this finding agrees with the results of Lambo and Boroffka study, which revealed that most of the causes of mental illness of patients admitted in psychiatric hospital are traceable to cannabis use. Akin to this is the results of the review of the medical records of the respondents in this study, which indicated that cannabis is the most commonly abused drug by our youths. This is because its consumption has been on the increase as a result of the fact that it is found everywhere and at affordable price. So, it therefore implies that high rate of mental illness among youths and adults could be linked to increase in take of cannabis use. Thus cannabis is a drug that can easily cause human brain to lose focus, and as such lead to derangement.

Hypothesis two findings reveal that there is a significant influence of knowledge of HIV/AIDS on sexual behaviour among psychiatric patients. Thus, the null hypothesis was rejected while the alternative hypothesis was upheld.

By implication, this finding had it that knowledge of HIV/AIDS can affect sexual behaviour of psychiatric patients. That is, those of them who are infected with the

virus can deliberately engage in sexual acts so as to pass the virus to others. On the other hand, their knowledge of HIV/AIDS can enable them checkmate their sexual activities. That is, they have the tendency of abstaining from indiscriminate sexual intercourse for fear of contacting the virus.

This finding falls in consonance with the outcome of Ajuwon's study, which discovered that most Nigerians perceived themselves to be at low risk of HIV infection even though they are engaging in high risk sexual behaviour<sup>9</sup>. In contrast, Isiugo-Abanihe found that most people view the dangers posed by HIV/AIDS with fatalism, arguing that no man exists forever and that one will eventually die of something, the new diseases not withstanding<sup>10</sup>. That is the threat of HIV/AIDS is not sufficient to make them damage their sexual behaviour.

From this finding therefore, it can be deduced that knowledge of HIV/AIDS can produce positive or counterproductive effect. That is where psychiatric patients are involved; their knowledge of HIV/AIDS can be for their own good or to their detriment. It is on this basis that their knowledge of HIV/AIDS can significantly influence positively or negatively their sexual behaviour.

The result of hypothesis three indicated that there is a significant influence of HIV/AIDS infection on aversive behaviour of psychiatric patients. Thus, the null hypothesis was rejected while the alternative hypothesis is retrained.

These result suggests that HIV/AIDS infection can bring about aversive behaviour among psychiatric patients. It also shows that psychiatric patients can engage in aversive behaviour such as unprotected sexual intercourse with at least more than one partner. The reason for this finding may be that, the infected psychiatric patient may feel that since HIV/AIDS is terminal, they may engage indiscriminate and unprotected sex so that they will not die alone. This line of reasoning may be observed among youths who may feel frustrated as a result of untimely and uncalled for death which stares them in the face as a result of being infected with HIV/AIDS.

The opinion of Dixon led credence to this finding. He averred that the more sexual partner a person has greater the risk of becoming infected with HIV/AIDS<sup>11</sup>. Similarly Berkman et al study outcome is in agreement with this finding<sup>12</sup>. His study revealed that

condom use was frequent among those who had multiple sex partners. It, therefore, follows that psychiatric patients who indulge in aversive behaviour of having multiple sexual partners are susceptible to HIV/AIDS infection.

## CONCLUSION

From the results of this study, the following conclusions were drawn. There is a significant influence of cannabis use on mental illness of psychiatric patients; there is a significant influence of knowledge of HIV/AIDS on sexual behaviour of psychiatric patients; there is a significant influence of HIV/AIDS infection on aversive behaviour of psychiatric patient. From these, it can be inferred that cannabis use exacerbates psychiatric symptoms and provides a false sense of security, and under it influence, the psychiatric patient is likely to engage in indiscriminate sexual behaviours. It was also clearly shown that aversive behaviour can result from mental illness, which in turn exposes patients to indulge in greater risk taking in sexual behaviour with the consequence of higher incidence of HIV/AIDS infection.

## RECOMMENDATIONS

Based on the findings of this study, the following recommendations are put forward.

1. The authorities of Federal Psychiatric Hospital Calabar should establish a Voluntary Counselling and Testing (VCT) or what is popularly known as heart-to-heart centre where patient will have the opportunity to interact with trained counsellors for the purpose of knowing their sero-status.
2. The Hospital should mobilize members of staff to carry out public awareness campaign, apart from the routine health talk given to patients on admission, on the danger of cannabis use and HIV/AIDS.
3. The psychiatric patients should be meaningfully engaged while in the hospital by means of diversionary therapies such as football, scrabble, lawn and table tennis so as to capture patient's interest.
4. The hospital should maintain a comprehensive data base of all patients and their causes of illness. This could assist in evolving preventive measures for mental illness.

## REFERENCES

- Fishbein. M., Chan, D. K., Reilly, K. O., Schnell, D., Beekter, C and Cohn, D., 1993. Factors Influencing gay men's attitudes, substance, norms and intention with respect of performing sexual behaviours. *Journal of Applied Social Psychology*, 23, (6): 417-438.
- Gil, A. G., Wanger, E. F and Tubman, J. G., 2004. Excitability, Pain reduction and Psychomotor effect of Marijuana. *American Journal of Public Health*, 94, (9): 346-372.
- Brodbeck, A., Matter, C and Tubman, V., 2008. *American Journal of public Health* September, 94, (9): 157-161.
- Obot, I., 1999. *Licit and Illicit Drugs; Essentials of Substance Abuse*, Lagos Malthouse Press.
- Oginnin, B and Akinrimade, S., 2007. *The Story of Nigeria's Hemp Market*, Sunday Sun page 31, April 22,
- Asuni, t., 1964. Sociopsychiartric problems of cannabis in Nigeria. *Bulletin on Narcotics*. 16, (2): 17.
- Lambo, T. A., 2005. Medical and social problems of drug addiction in West Africa; the West Africa *Medical Journal*, 14, 236-254.
- Boroffka, A., 2006. Mental illness and Indian hemp in Lagos, East Africa *medical Journal*. 43 (9), 377-384.
- Obot, I., 2008. *How to keep your child off drug; A prevention guide for parents, guardian and teachers*, Jos, CRISA Publication
- Ajuwon, A. J., 2007. *Socio-cultural practices that may favour the transmission of AIDS in rural Yoruba Community, Implication for Health Education, An MPH Dissertation of University of Ibadan.*
- Isuigo-Abanihe, U., 1996. *Women and family Planning Practice in Nigeria* in Oke, F. A. & Owumi, B. E. (eds). *Reading in Medical Sociology*. PP. 104-129. Ibadon, Resource Development and Management Services.
- Dixon, P., 2009. *the truth about AIDS*, London, ACET. International Alliance.
- Berkman, B., Pilowsky, A., Zybert, O. and Susser. 2005. The impact is substance dependence on HIV sexual risk-reduction among menwith severe mental illness, *AIDS CARE* 17(5):

