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## Relationship between Cannabis Abuse, Gender and Age with Suicidal Tendency among Prisoners: Correctional Service Inmates

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### **Abstract:**

Prisoners has long been associated with the vulnerable population at risk of suicide, and there has been significant research to identify associated risk factors in most developed countries but not much in Nigeria especially South-Eastern Nigeria. Hence, the reason for the present study in Enugu, to study the relationship between cannabis abuses, gender, and age with suicidal tendency among prisoners. Two hundred and eight (208) inmates (171 males and 37 females) aged between 20 – 50 years from the Enugu Prison constituted the sample. Two questionnaires: Psychoactive Substance Abuse Questionnaire (Eze, 2006) and Suicidal tendency questionnaire Ozougwu (2006) were used to gather information from the participants and Multiple Linear Regression was employed for the data analyze. The result shows that the relationship between cannabis abuse, gender and age on suicidal tendency are statistically not significant. Also there that neither gender nor age has any significant relationship with suicidal tendency among prison inmates. It is therefore recommended that Nigerian prison service should make sure they organize workshops and training programs for their staff to enable them to do their work effectively. Psychologist working in the prison should constantly schedule group psychotherapy for prison inmates for psycho-education and insight on effects cannabis abuse. The study concludes that even though that the findings of this study indicates that cannabis abuse, gender and age does not have any statistically significant relationship with suicidal tendency among prisoners, more study is required on discovering reasons for suicidal tendency among prisoners. Besides, more effort to education youths and prisoners on the negative impact cannabis abuses on human health: social, economically, psychologically, physically and biologically, irrespective of gender and age.

**Keywords:** Cannabis abuse, gender, age, suicidal tendency, prisoners

## 1. Introduction

### 1.1. Background to the Study

Recently, Nigeria has experienced a very drastic increase in suicide among the general populace. Suicide is a public health issue that is estimated to contribute more than 2% to the global burden of disease by this year 2020, especially in the sub-Saharan African countries where services are scarce (Vijayakumar, Nagaraj, Pirkis & Whiteford,

2005). Each year, approximately 800,000 people die by suicide worldwide (WHO, 2017), representing an annual age-standardized suicide rate of 11.4 per 100 000 population globally and 6.11 per 100, 000 population in Nigeria specifically (Nock, Borges, Bromet, Alonso et al., 2008; WHO, 2017). World Mental Health Survey (WMHS), estimated the rate of suicidal ideation at 9.2% globally (3.2% for Nigeria) and had female, younger age, less educated, unmarried and having a mental disorder as the risk factors (WHO, 2013).

Suicide is the act of deliberately taking one's own life. It is also an attempt to inflict death upon oneself and it is intentional rather than consequential in nature (Fairbairn, 1995). It's a leading cause of death across all age groups. Suicidal thoughts and behaviors among youth warrant particular concern for several reasons. First, the sharpest increase in the number of suicide deaths throughout the life span occurs between early adolescence and young adulthood (Nock, Borges, Bromet, Alonso et al., 2008; WHO, 2017). Second, suicide ranks higher as a cause of death during youth compared with other age groups. It is the second leading cause of death during childhood and adolescence, whereas it is the tenth leading cause of death among all age groups (CDC, 2017). Third, many people who have ever considered or attempted suicide in their life first did so during their youth, as the lifetime age of onset for suicidal ideation and suicide attempt typically occurs before the mid-20s (Kessler, Borges and Walters, 1999). Research has indicated that at least 90% of suicide cases have a mental disorder (including – but not restricted to – personality disorders, drug related disorders, etc. (Arafat, 2019).

Shniedman (2001) viewed suicide as a consequence of Psychic, a strong psychic pain, tension and suffering that makes life intolerable. Shniedman noted four psychological features in those who successfully committed suicide, including- Acute perturbation (general upset), heightened inimicality – (an increase in self – hate) self-loathing, shame, guilt, and self-blame, a sharp and almost sudden constriction of the person's intellectual focus; a tunnelling process, a narrowing of the mind's content, and the idea of cessation – the coming into the person's awareness that it somehow possible to end this terrible and unbearable psychological pain.

Based on his decades of research and clinical experiences, Sheidman (2001) developed what he calls the commonalities of suicide.

- The common purpose of suicide is to seek a solution
- The common goal of suicide is the cessation of consciousness.
- The common stimulus in suicide is intolerable psychological pain.
- The common stressor in suicide is hopelessness or helplessness
- The common cognitive state in suicide is ambivalence
- The common perceptual state in suicide is constriction
- The common action in suicide is aggression
- The common interpersonal act in suicide is communication of intention
- The common consistency in suicide is with life-long coping pattern.

Most people who develop thoughts about suicide have already been diagnosed with depression, bipolar disorders or some other psychiatric disorder (Fowler and Kolata, 1986). Suicidal behaviour almost always occurs in people with depression, bipolar disorders, schizophrenia and drug dependence. People who attempt suicide are often trying to get away from a life time situation that seems impossible to deal with. Many who make suicidal attempts are seeking relief from bad thoughts and feelings, feeling ashamed, guilt or like a burden to others, feel like a victim, feeling of rejection, loss or loneliness (Mueser and Yarnold, 2002). Research has shown that women are more likely than men to attempt suicide. But men are two or four times more likely (depending on the country) to succeed. There is one exception. China-whose 500 daily female suicides account for at least half the world total (Wintemute, 1999). More recently, it is recognized that suicidal ideation can be understood as the result of processes that may be amplified by interactions among neuro-biological, genetic, psychological, social, cultural, and other environmental influences.

Suicide is a major public health concern and factors that can predict or protect against suicidal tendency and behaviours need to be better understood. This is to help in developing prevention and intervention strategies. It is conceivable that cannabis could lead to an increased risk of suicide through a number of different neuro-biological effects, developmental of mental health problems such as depression or psychosis, mood disorder, or social disadvantages that might result from cannabis use (Fowler, Rich & Young, 1986). In recent years, environmental exposures in the form of drug taking have become more prominent in discussions about suicide. This prominence is fuelled in part by media attention to co-occurring drug use and suicide. The drug of which is important to this study is known as Cannabis which is also called Marijuana. A substantial literature in epidemiology and a smaller one in economics identify cannabis use as an important risk factor for suicidal behaviours (Fergusson et al., 2000; Beautrais et al., 1999; Reinhertz et al., 1995; Tekin and Markowitz, 2008).

Cannabis is the most commonly used illicit drug globally (UNODC, 2017). In Nigeria, cannabis has a variety of street names like 'wee-wee', 'grass', 'Igbo', 'kaya', 'ganja' and 'gbana'. It contains some of the longest acting and numerous psychoactive ingredients. The variety of, and contradictory effect it produces has compelled some authors to classify it as a depressant as well as a stimulant. Some authors put it in a class of its own (Eze and Omeje, 1999). Cannabis was linked to criminal activities even before legislations against it were enacted in Nigeria. Cannabis users are bound to face the wrath of the law because of the substance decriminalization.

Contemporary studies have further shown that prisons are a high-risk environment for drug initiation (Mason, Birmingham and Grubin, 1997). Although there are very few studies on substance use among prisoners in Africa as compared to their western counterparts. One of the very few studies on this subject in Africa found that the lifetime drug use among prisoners in Uganda was 65% and that the most commonly abused drugs were tobacco/cigarettes (90%), marijuana (49%), khat/mairungi i.e. *catha edulis* (17%) and alcohol (2%) (Ugandan Prison Service, 2009). There is

increasing evidence for the association between substance use and criminality, including a high prevalence of substance use disorders in prison populations (Mumola, 1997). It has been reported that prisoners have elevated rates of psychiatric disorders compared with the general population, including for depression, and other factors, which are risk factors for elevated suicide rates. (Baillargeon, Penn, Thomas, et al., 2009).

There are over 10 million prisoners worldwide, a population that has been growing by about 1 million per decade (Walnsley, 2009). Prison is a place in which people are physically confined, and usually deprived of a range of personal freedoms. Prison form part of the criminal justice of a state and house convicted felons, usually for longer periods of time than jails. Prisoner may also consist of male and female, but they are put differently in the prison rooms. Age bracket for prisoners is 18 years and 21 years and above respectively, depending on the country and most of the prisoners were young adults (Adesanya, 1997). It has been found that prisoner's abuse substances and the sources of prison drug abuse have been found to emanate from prison officers, other inmates, visitors, (Arrestee Drug Abuse Monitoring Programme, ADAM, 2000). Nigeria, has signed the Nigerian Correctional Service Bill into law. The Act repeals the Nigerian Prisons Service Act. With the signing, the Nigerian Prisons will now be called the Nigerian Correctional Service (Punch Newspaper, 14<sup>th</sup> August, 2019). The renaming of the prison some believe will affect the cognitive pattern of prison inmates. This study set out to fill the knowledge gap by determining the relationship between cannabis abuse, age and gender with suicidal tendency among prisoners in the Enugu state prison service, Enugu state, Nigeria.

## 2. Operational Definition of Terms

- Suicide: This is the act or the intention of deliberately taking one's own life (Fairbain, 1995).
- Suicidal Tendency: It is the likelihood of an individual engaging in deliberate action or thoughts with potentially life threatening consequences as measured by Suicidal Tendency Scale (Ozougwu, 2006).
- Cannabis abuse: It implies the occasional and chronic use of marijuana which leads to physical and mental complication as measured by Psychoactive Abuse Questionnaire (Eze, 2006).
- Prisoner: It means someone who is kept in prison custody (Cord, 1984).
- Gender: This is the categorization of oneself as either male or female.

## 3. Methods

### 3.1. Participants

A total number of 208 prison inmates of Enugu Prisons, Nigeria participated in the study. They were randomly selected. Those who indicated interest to participate freely as volunteers were selected and also motivated with reinforcements. Specifically, they were 37 females and 171 males. Their ages ranged from 20-29 as younger participants and 30-50 as older participants respectively, with the both age group mean as 29.8.

### 3.2. Instruments

Two instruments were used in this study: 1. Suicidal Tendency Scale developed by Ozougwu (2006) 2. Psychoactive Abuse Questionnaire (Eze, 2006). The Suicidal Tendency Scale development procedure proceeded with twenty nine (29) items which was gathered by the researcher. It went further for a face validation which was done by ten (10) Psychology lecturers and one (1) Sociology lecturer in the Faculty of Social Sciences, University of Nigeria. After the face validity, chi-square was solved: it resulted to dropping of four (4) items (the ones that were less than 3.84). Pilot study was also conducted by the use of fifty six (56) inmates of the Nigerian Prison Nsukka, followed by item analysis (an inter-item correlation matrix). This analysis was successfully conducted amounting to another dropping of four (4) items. The result of inter-analysis showed no item duplication. Inter-item correlation ranged from -.37 to .75. Item total correlation showed that four items had less than .30 indexes and were therefore removed from the scale. Item-total correlation of the selected 21 items ranged from .33 to .80 with internal consistency reliability estimate of Cronbach alpha = .92. This shows that the scale is reliable. Results of maximum likelihood factor analysis showed that all the selected items loaded on one factor, with factor loading between .31 and .85, and goodness-of-fit of chi-square = 362.68, df=189, p<.001 which explained 38% variance in the scale. The factor loadings show that the scale has construct validity. The scale is constructed in a 'Likert pattern' which consists of four (4) options ranging from Never, Sometimes, Often and Always that indicate the ranges of suicidal tendency in an individual.

The second instrument is named psychoactive substance Abuse Questionnaire (Eze, 2006). The questionnaire assesses frequency of use of psychoactive substance on a scale of four (4) degrees: never used it, uses it less than three times in a week, have used it more than two times, uses it more than three times in one week and they used it frequently in the past but has stopped. Instructions in the questionnaire required a participant to give a rating between 0 and 4 to each of the substances according to the degrees of the use of each of them. The instrument has content validity and test-retest reliability index of  $r = .61$  ( $N = 55$ ).

### 3.3. Procedure

For easy and effective administration of the questionnaire to the participants, a permission was sort and granted by the prison official give the researcher a maximum cooperation needed, also research assistants (psychology graduates) who work in the prison were employed as research assistants. This study was conducted in one phase; the researcher

administered the instruments to the participants who were selected randomly amongst the awaiting trial mates and the convicted who showed willing interest to participate and signed the consent form. Participants usually found the instructions on the questionnaire adequate and clarifications regarding the academic motive of the study were made on the demand to the participants. Individuals who were not willing to complete the instruments returned them on the arena, some made away with it while those who accepted to complete the instrument either completed them on the spot while some were allowed to submit it later, therefore requiring the researchers re-visit the prison. In spite of the 250 questionnaires distributed, 208 was successfully completed and returned. Some token economy like soaps and biscuits were given to the participants by the researcher after they completed the instruments.

### 3.4. Design/Statistics

#### 3.4.1. Results

Model R	R-Square	Std error of the estimate	df	f	sig
.074	.005	9.6272	3/204	.374	.772 <sup>a</sup>

Table 1: Multiple Linear Regression Summaries of Cannabis, Gender and Age on Suicidal Tendency

a. Predictors (constant) Age level, Cannabis abuse, Gender  
b. Dependent variable: Suicidal tendency

The results of the regression analysis show that cannabis, gender and age on suicidal tendency and accounted for 1% megre variance in suicidal tendency. In other words, the result was confirmed with the result of Anova of the multiple regressions. The result shows that the relationship between cannabis abuse, gender and age on suicidal tendency are statistically not significant.

The result in the table below showed whether cannabis abuse, gender and age have any significant predication on suicidal tendency.

Model	Unstandardized Coefficients		Beta	Standardized coefficients	
	B	Sts Error		t	sig
1 constant	50.417	3.815		13.217	.000
Cannabis abuse	1.886	1.785	.075	1.056	.292
Gender	-.231	1.768	-.009	-.131	.896
Age level	-.121	1.380	-.006	.087	.930

(a) Dependert variable: Suicidal tendency

Table 2: Regression Coefficient of Cannabis Abuse, Gender and Age on Suicidal Tendency

The result in table 2 above shows that cannabis abuse does not have any significant relationship with suicidal tendency.  $\beta = .09$ ,  $t = 1.06$   $p > .05$ .

Gender: The result in the table above shows that gender does not have any significant relationship with suicidal tendency.  $\beta = -.01$ ,  $t = -.13$ ,  $p > .05$ .

Age: level also shows that age do not have any statistical significant relationship with suicidal tendency.  $\beta = -.01$ ,  $t = -.09$ ,  $p > .05$

## 4. Discussion

The aim of this study focused on the relationship between cannabis abuse, gender and age on suicidal tendency among prisoners of Enugu Prison, Nigeria. Two hypotheses were postulated and tested. Current research shows the relationship between cannabis abuse and suicidal tendency. One of the purposes of this study was to determine if there would be any relationship between cannabis abuse and suicidal tendency among prisoners. It was hypothesized that prisoners who abuse cannabis will have suicidal tendency more than the non-abusers. From our results, the statistics were not significant and did not show positive the relationship between cannabis abuse and suicidal tendency among prisoners. Therefore, the hypothesis was accepted, this shows that there is no statistical relationship between cannabis abuse and suicidal tendency among prisoners which was the hypothesis stated earlier in the study. In other words, the findings of this study contradicts the findings of Fowler (1986), Innamorat, Pompili and Ferrari (2008), Borowsky (2001) which found statistically significant relationship between cannabis and suicide. Fergusson et al. (1997) consider the impact of early cannabis use on later suicide attempts (as well as major depression, and anxiety disorder) using the CHDS.

In this study there is no evidence that using cannabis before the age of 16 increases the odds of suicide attempts (or major depression or anxiety disorder) over the ages of 16-18. This study supports the findings that there is no significant relation between cannabis abuse and suicidal tendency. There are multiple reasons why the hypothesis was not

proven correct. This sample was limited to only two groups of prisoners, which are the Awaiting trial mates and the Convicted inmates. It is possible that the result could be significant if sample was drawn from almost all the major groups of prisoners involving the condemned criminal and the lifers. Few years ago, it was found that the prevalence of substance use especially cannabis has been reported within the prison system in Nigeria (as suggested by NDLEA, 1992; and Adesanya, 1997). But the research recorded a maximum number of participant denial of substance abuse of which most of the prisoners rated 'never used it' and the scoring of the drugs abuse was done even at the report of those who accounted to have abused it just on one occasion inside the prison yard. Another reason for obtaining a non-significant result would arise from the inmates fear for the prison staff, security and warders. Their major agitation and desire which resides on freedom can be hindered if any of them is found with illegal substance (cannabis). In avoidance to that, denial was embraced.

Gender was earlier predicted to have no significant relationship on suicidal tendency. A research has been found statistically correlating Gender and Suicide dependence. Women rated higher than males (Wilcox and Conner, 2004). The findings in this study suggest that there is no significant relationship between gender and suicidal tendency; therefore we accept the hypothesis; although no study has been found stating that there is no relationship between gender and suicide. This study tends to be among the first researched in Nigeria, which find no statistical relationship between gender and suicidal tendency. Although age was not hypothesized in this research, the result stated that there is no significant relationship between age and suicide. It also indicated that younger adults represent about 130 population of the participant between the ages of 20-29 while other adults are 78 participants ranging from 30-50 years. This simply means that the number of younger adult out of the whole participants is more than the older adults also indicating the likelihood of younger adults abusing cannabis more than the older adults (Adesanya, 1997).

### **5. Implication of the Findings**

Based on the finding, suicidal tendency has revealed lots of implication for the mental health, the government, and self (perception of an individual in custody). This is because an idle mind is prone to have negative thinking and may tend to have a negative attitude towards life. The suicidal tendency, either ideation or attempted that exists among prisoners can be modified or restructured in a positive direction to enhance good mental abilities devoid of constant feeling of suicidal tendency.

For government officers, being serious in implementing the punishment and bans on drug trafficking in the country and precisely to the prison officers, particularly the prison warden; also reducing the degree at which some illegal or illicit drugs are sneaked inside the prison yard. Providing for the proper health care of the inmates assessing them and detecting some form of psychopathology in them if any. If not taken into consideration, might lead to complete suicide.

### **6. Limitations of the Study**

A shortcoming of this study is that the researchers used a cross-sectional data. This is an issue because mental illness and suicidal behaviours tend to be episodic, making it difficult (in the absence of longitudinal data) to know whether cannabis use preceded or followed poor mental health, and thereby satisfactorily account for reverse causality.

Moreover, it should be noted that the study focused only on age, gender and cannabis abuse, other variables as alcohol and tobacco which also are among the not commonly found substance were not considered. The study did not cut across other Nigerian prisons so as to obtain a comparative result. This has also been recognized as one of the limitations of the study.

Finally, this work represents one of the recent and pious findings in the study of Suicide, Cannabis abuse, Gender, Age and Prison in Nigeria. Presently in Nigeria, the area of this study is scant; this really made the researcher encounter some financial run-down and also brought about a number of obstacles to the progress of the study.

### **7. Recommendation for Further Research**

To fully understand cannabis abuse, gender, age and suicidal tendency, researchers who study cannabis abuse should at the same time explore the role of other substances that are also abused in the prisoner's life, such as alcohol, tobacco, amphetamine, heroin, cocaine; other factors include the prisoners' socio-economic background, spouses or children, and level of education.

Further research should increase the sample size from its present two hundred and eighty participants. This will make for an appreciable representation and fairer results.

Moreover, it is important that any further research on the topic should involve all the groups of prisoners. A study on cannabis abuse and suicide on prisoners should also cut across other Nigerian prisons. This would help in obtaining comparative results.

### **8. Recommendation for Prisons**

Having being exposed to the dangers of cannabis abuse and suicidal tendency among prisoners through the findings of this study, it is therefore recommended that Nigerian prison service should make sure they organize workshops and training programs for their staff to enable them to do their work effectively. They should also give their staff high level of social and financial support in order to discourage the thought of drug trafficking in the prison yard for any reason.

The prisons officers are also encouraged to provide some social amenities and also organize some kind of skilled labour workshops for the prisoners in order to make the inmates feel useful to themselves and to the society both during

the period of serving in the prison till they are being bailed or discharged. This makes it possible for both men and women to productively participate in the production of some skilled product to sustain themselves and their family, for the ideal mind is the devils workshop.

Also, provide an adequate accommodation in the prison which should be mainly based on personal space, so as to improve their mental health outcomes.

There should be scheduled group psychotherapy for prison inmates. This is to help individual battling with addiction before and during imprisonment and also to reduce the rate of suicide among prisoners.

## 9. Compliance with Ethical Standards Conflict of Interest

All authors declare that they have no conflict of interest. All participants filled the consent form to declare their free will to participate in the study. Again, this study was not funded by any person, group or organization.

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