Relationship Between Substance Use Disorder And Clinical Depression Among Women Kenya

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Abstract:
Kenya is the fourth country in Africa with the highest number of people suffering depression, with 1.9 million diagnosed cases. However, few local studies have explored on whether clinical depression is linked to substance use disorder among women in Kenya. The aim of this study was to the evaluation of the relationship between substance use disorder and clinical depression among women in Kenya. This study used a descriptive research design with 12 rehabilitation centres and 217 participants. The Patient Health Questionnaire was used to assess the incidences of clinical depression. The ASSIST test was used in the study to measure substance use disorder. Results of the study illustrated that more than 84 percent of women in these centres experience clinical depression as a result of substance use. There was a positive relationship ($\beta=0.236$, T-value $=1.221$, $p=0.002<0.05$) between clinical depression and substance use. The study concluded that the level of high percentages of clinical depression in women was a critical sign of substance use. It was recommended that the government, NGOs should collaborate to prevent, control and contain increase in substance abuse and especially illicit alcohol.
Keywords: *Clinical Depression, substance Use, Substance Use Disorder, Rehabilitation*

I. Introduction

Clinical depression is a common mental health disorder, defined as a typical but severe mood condition that lasts for at least two weeks and disrupts how a person thinks, feels, and manages daily tasks [1]. Among the major symptoms of clinical depression are depressed moods, loss of interest, feelings of hopelessness, helplessness or worthlessness [2]. Suicide, psychological suffering and a higher chance of developing medical co-morbidities are all connected to clinical depression.

The symptoms can be extremely upsetting for the patient and lead to psychological and professional disabilities, which interfere with their daily lives and hurt both the sufferer and the people caring for them [3]. Clinical depression is among the most crucial health issues facing society due to the social and financial consequences it places on the community. In the year 2020, it was the second most significant contributing factor in the burden of disease worldwide [4].

Globally, the World Health Organization (WHO) estimated that on average about 15% of people worldwide had experienced depression at some point in their life. In addition, WHO particularly estimated 53.2 million cases of clinical depression in 2019, an increase of 27.6% from the previous year to make the overall incidence 3152·9 cases (2722·5 to 3654·5) per 100 000 population. Overall, clinical depression resulted in 49.4 million (33.6-287) years of disability-adjusted life worldwide in 2019 [5]. According to a WHO report, the United States and France have the greatest incidence rates (19.2% and 21%, respectively), while the lowest percentages were found in Israel, Italy, Japan, and Germany among high-income nations, spanning from under seven to ten percent[6].

Substance use disorders are a problem for many African nations on a regional level as well. In Egypt, where almost 6% of secondary school pupils have attempted to engage in drugs, drug use, especially heroin use, is becoming a severe issue [7]. Teenagers in Ethiopia were found to be using drugs significantly more often, according to a poll [8]. In at least sixteen nations, people aged 15 and older misused opiates with prevalence rates varying from 0.01 to 0.8%. Based on the amount spent and the number of people involved, South Africa was one of the top 10 countries in the world for alcohol and drug misuse. Fifteen out of every 100 people had a drug issue, and 25 out of every 100 Rands in circulation were associated with the problem [9].

In Kenya, substance use disorders are a significant issue. According to the National Authority for the Campaign against Alcohol and Drug Abuse (NACADA) report, drug usage and substance use disorder have

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increased dramatically over the past 20 years, affecting all facets of society. In accordance with the report, substance use problem is common and disturbing because so many young people are becoming addicted to drugs every day, and even school-age children use beer, tobacco and bhang. The most affected were those between the ages of 16 and 30, a crucial developmental phase [10]. According to a NACADA report from 2020, the two most widely used substances overall were khat and cannabis, with people aged 25 to 35 having the greatest lifetime and recent use rates. In contrast, persons between the ages of 18 and 24 had nearly three times the lifetime use of cocaine, heroin, and prescription drugs as those 36 years and older did (NACADA, 2020). However, it is notable that the association between clinical depression and substance use disorder is not well-researched in Kenya, hence the need for this study [11].

In Nairobi County, the rate of substance use disorders is highest in Kenya and the county has the largest number of accredited treatment and rehabilitation centres in the country [12]. There are 12 rehabilitation centres which are NACADA accredited in Nairobi County [13]. The most commonly abused substances in the county are alcohol, tobacco and khat (locally called miraa- a stimulant). However, an increased use of illicit drugs such as heroin, cocaine and methamphetamine has been on the increase. The high prevalence of substance use disorder has led to a significant number of individuals in Nairobi County struggling with addiction. According to a report by NACADA, the prevalence of alcohol and drug abuse is 13.9% and 4.4% respectively [14].

II.   Literature Survey

A study in the USA by McHugh et al. investigated the relationship between perceived stress and depression in drug addiction treatment and whether they were associated with a reduction in depression [15]. The study was a secondary analysis of data from the Women's Development Research Group, which sampled 100 men and 58 women. The study collected data for six months after completing treatment, including drug use, perceived stress, and symptoms of depression. The study used a mixed-method model to assess whether substance use and stress levels were associated with changes in clinical complexity. The findings showed that both substance use and perceived stress were associated with subsequent depressive symptoms. The study was conducted in the United States which has a big difference in economic, social and cultural practices compared to those of the Kenyan People. The study also concentrated on respondents who had completed treatment while the current study will focus on people currently in treatment in various rehabilitation centres.

Shim et al. investigated the association between individual symptoms of alcohol use disorder, major clinical depressive disorder and suicidal behaviours in the Korea. The study incorporated analysis of data gathered from Korea Epidemiological Catchment Area Study report. The assessment of the various variables was conducted using the Composite International Diagnostic Interview. The sample size was 907 respondents. The findings indicated that for men, alcohol use disorder symptoms had the strongest influence on suicidal behaviours. However, in women, there was no relationship between alcohol use disorder and major clinical depressive disorder and suicidal behaviours. The conceptual gap was the focus on the association between individual symptoms of alcohol use disorder, major clinical depressive disorder and suicidal behaviours which excluded other substance use and only focused on alcohol. This study aims to investigate the different substances used and how they relate to clinical depression.

In Turkey, Rao et al. investigated the association between substance use disorders and depression in adolescent women as they entered adulthood [17]. A sample of 155 women, aged 17 to 19 years were selected from 3 secondary schools and were followed yearly for 5 years. Results showed that major depression and substance use disorders during follow-up in people with and without a history of major depressive disorder or substance abuse disorders, as well as psychosocial functioning related to substance use disorders were the main end outcomes. In addition, 9.6% of people had a substance use disorder within the previous five years, and 18.7% had experienced one at some point throughout the follow-up period. The chance of substance use disorder diagnosis throughout the trial was considerably elevated by prior substance use disorders. The study however focused on adolescent women, who may have different attributes in comparison to adult women which will be answered as this study will focus on all women of all ages.

In the United States, Malval presented recent research on the powerful and detrimental impact of substance use disorders and clinical depression, and on the high frequency of mental health problems among impoverished women [18]. Nearly 90% of existing benefit claimants between the ages of 27 and 35, face one of five significant obstacles to finding work: a lack of basic skills, substance misuse, physical limitations, depression, or a child with a serious illness or disability. Additionally, 7.3% of respondents reported having generalized anxiety disorder, 14.6% of respondents had post-traumatic stress disorder, and about 26% of respondents had depression. The study however focused on the impact of substance use and the impact of clinical depression, where the relationship between the two was not established which the current study aims to fill this gap.

In a study conducted in Kenya, Iheanacho et al. evaluated the prevalence and associations of depression and substance abuse in adults in the emergency department of Kenyatta referral hospital [19]. This study used the WHO Step-by-Step Surveillance Approach (WHO-STEPS) tool and the Health Questionnaire (PHQ-9) to

conduct a cross-sectional survey and obtain relevant information. Socio-demographic data on smoking and alcohol consumption and the prevalence of depression were collected in a sample of adults. To analyze the data, bivariate and multivariate analyzes were performed for each outcome of interest and socio-demographic data [16]. The research shows that most of the participants experienced severe medical stress associated with current and daily smoking and alcohol consumption. However, there are differences in drug use among adults in the emergency departments of referral hospitals in Kenyatta; the current study focused on women in medical facilities and incorporated other substances that are being used.

Mwangi conducted research in Kenya on the relationships between drug misuse patterns, certain psychosocial situations, and the dangerous sexual behaviour that goes along with it among drug-using females in unofficial urban settlements in Nairobi County [20]. The study employed a mixed technique approach and a cross-sectional study design. Using targeted mobilizer-driven sampling, 306 females who had injected heroin in the year prior and were under the age of 18 were identified. Depression, substance abuse disorder, IPV, and hazardous sexual behaviour all had a prevalence of 88%, 84%, 77.1%, and 69.3%, respectively. Drug usage at the time of substance use commencement was linked with current polysubstance use in people who initiated it (Fisher exact P=0.0001). Substance abuse had a strong correlation with both clinical depression and hazardous sexual conduct. However, the study also focused on drug-using females who resided in shantytowns in Nairobi County, Kenya, which is different from the current study which focuses on rehabilitation centres all over the country.

III. Problem Definition

Reports indicate that the prevalence of clinical depression among women is 32% globally [21]. A recent study carried out by the World Health Organization (WHO) postulates that Kenya is the fourth country in Africa with the highest number of people suffering from depression, with 1.9 million diagnosed cases. Among these, depression affects more women than men. Similarly a report by WHO shows that in Kenya, women are being exposed to addictive substances, law enforcement-related harms, and the possibility of jail more and more due to substance abuse disorder. While the report found that men aged 18 and older had over twice as much substance addiction as adult women, the rate among youngsters aged 12 to 17 was the same for both genders, at 6.9%. In general, a tenth (0.1%) of women in Kenya, representing 2.4 million women in the country and 222,438 in Nairobi County as per the 2019 national population census are prone to substance abuse disorder [23].

However, few local studies have explored whether clinical depression is linked to substance use disorder among women in Kenya. This is the backdrop that motivated the current study to establish the association between clinical depression and substance use disorder.

IV. Methodology

The study design adopted in the study was descriptive research design. The sample size was estimated on the basis of the adoption of Yamane formula of sample size determination [24]. The researcher used a sample size of 234 female patients across the 6 sampled rehabilitation centres across Nairobi County. The 234 participants were selected using a census of all the female patients in rehabilitation centres until the sample saturation was attained. The Patient Health Questionnaire was used to assess the incidences of clinical depression. The ASSIST test was used in the study to measure substance use disorder. The data for clinical depression was collected using the Patient Health Questionnaire while the ASSIST test was used to collect data on substance use disorder.

The specific site of this study was all the 12 rehabilitation centres which are NACADA accredited facilities in Nairobi County. The target population comprised of recovering female patients in all 12 rehabilitation centres located within Nairobi County, Kenya. According to records by NACADA, these centres have a total of 476 women patients [24]. The unit of analysis was the 12 rehabilitation centres that are located within Nairobi County. The study design was ccorrelation research design. The unit of observation was the 476 recovering female patients from the 12 rehabilitation centres.

Data was analyzed using SPSS version 26. Both inferential and descriptive analyses were utilized in this regard. Descriptive analysis involved means, frequency counts, and percentages; while inferential analytics included both regression analysis and Pearson correlation. Regression computation was used to determine whether there exists an association between clinical depression and substance use disorder.

V. Results And Discussions

The relationship between clinical depression and substance use disorder is bi-directional, meaning that people who misuse substances are more likely to suffer from depression, and vice versa. Regression coefficient is the slope as portrayed by the linear relationship between the substance use disorder and clinical depression. This is shown in Table 1.

Table 1: Regression of clinical depression and substance use disorder

		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. Error	B		
1	(Constant)	0.142	.213		8.657	.000
	Level of clinical depression	.643	.051	.358	1.575	.000
	Level of substance used	.451	.038	.544	2.491	.000
	Substance use disorder× clinical depression	.236	.065	.40	1.221	.002

In this case, level of clinical depression showed positive and linear significant relationship with substance use disorder (β=0.643, T-value =1.575, p=0.000 which is valid since it is <0.05). This implies that one unit change in level of clinical depression resulted in 64.3% increase in SUD among women in rehabilitation centres. In addition, level of substance used showed positive and linear significant relationship with substance use disorder (β=0.451, T-value =2.491, p=0.000<0.05). This implies that one unit change in level of substance used resulted in 45.1% increase in SUD among women in rehabilitation centres.

Finally, in an aim to test the hypothesis, the relationship between clinical depression and substance use disorder showed positive and linear significant relationship (β=0.236, T-value =1.221, p=0.002<0.05). This implies that one unit change in this relationship resulted in 23.68% increase in SUD among women in rehabilitation centres. The results therefore indicated that the null hypothesis was rejected because results showed that there was a significant relationship between clinical depression and substance use disorder among women in rehabilitation centres in Nairobi County

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These results complement findings that both substance use disorder and perceived stress among women in USA had strong association with subsequent depressive symptoms [6]. The results also agreed with findings that substance abuse had a strong correlation with both clinical depression and hazardous sexual conduct among drug-using females and live in unofficial urban settlements in Nairobi County [13]. This shows that a strong nexus exists between clinical depression and substance use disorder among women. These results are convergent with the findings that indicated that majority of the respondents exhibited moderate to severe range of clinical depressive disorder associated with current and daily tobacco and alcohol use [9]. This implies that majority of people suffering from substance use disorder were in it on daily or mostly on daily basis. The results support the findings that major depression and substance use disorders during follow-up period was mostly common in people with a history of previous major depressive disorder or substance abuse disorders [11].

The results also support the view of many researchers who reported that substance use is associated with symptoms of depression and that the direction of substance use-depression comorbidity is due to different components [2]. People with major depression and comorbid substance use experience more depression, more serious illness, and worse recovery from both and the increased frequency of suicide attempts.[8] This implies that the chance of elevated desire for substance use disorder was considerably elevated by prior substance use disorders.

These results also support previous studies showing that substance use is associated with depressive symptoms and the direction of substance use-depression comorbidity varies according to individuals. People with major depression and comorbid substance use experience more depression, more severe illness, worse recovery, and a higher frequency of suicide attempts. This implies that the chance of elevated desire for substance use disorder was considerably elevated by prior substance use disorders. The results show that most of the respondents admitted to using the substances they had listed daily or almost daily.

VI. Conclusions

The relationship between clinical depression and substance use disorder showed positive and linear significant relationship. This leads to the conclusion that clinical depression and substance use disorder have a cause-effect relationship. This means that each affects the other and that the relationship is on both sides. This implies that clinical depression will have an effect on substance use disorder and substance use disorder will also cause an effect on clinical depression. It was concluded that there is the existence of the cause effect relationship between clinical depression and substance use disorder. The study recommended that other stakeholders,

including the government and NGOs, work to prevent, control and contain the increase in substance abuse such as cheap alcohol. The study recommended that other stakeholders, including the government and NGOs, work to prevent, control and contain the increase in substance abuse such as cheap alcohol.

VII. Future Scope

For comparison, the researcher suggests that a study should be conducted in other Kenyan counties as this study focuses specifically on the relationship between clinical depression and substance use disorder in Nairobi County, Kenya. Again the researcher would suggest a similar study to be conducted on the integrated treatment of depression and substance abuse in men in other centres in Nairobi County or other counties in Kenya.

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