



Psychiatric Co-Morbidity among Patients on Rehabilitation for Substances Abuse in Icyizere Centre Kigali, Rwanda

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Abstract. Worldwide practitioners and scholars demonstrated that drugs and/or alcohols addictions associated with mental illnesses. However, little is known on Psychiatric comorbidity among patient's substances abuse in Rwanda. The main objective of this study was to determine the prevalence of psychiatric co-morbidity among the patients with substances abuse in Icyizere centre. This study will be useful to policy markers, community, researchers and professionals to find solution and management of drug consumption among youth. The study was quantitative approach and a cross-sectional study. The target population was 520 patients and the sample of 226 patients was selected using systematic sampling technique. To determine prevalence of psychiatric co-morbidity and substances abuse, descriptive statistics was calculated to show its frequencies and percentages. To determine relationship between psychiatric comorbidity and substances abuse, Pearson correlation was calculated using Statistical Package for Social sciences (SPSS.V.16) for data analysis; and results presented in tables. The results from the present study showed that mostly psychiatric disorders among patients with substances abuse were major depressive disorder 23.3%, followed by Attention Deficit/ hyperactivity disorders 17.7%, posttraumatic stress disorders 10.2%, Generalized anxiety disorders 6.6%, Antisocial personality disorders 6.6%, Panic disorders 5.8%, schizophrenia and psychotic disorders 5.3%, borderline personality disorders 4.9%, social phobia 1.8%, Agoraphobia 0.4% and Suicidality 0.9% . While the most substances abuse were alcohol beverages 89.8%, cannabis 56.6%, tobacco products 39.4%, inhalants 4.4, hallucinogens 2.2 %, opioids 1.3%, cocaine 0.4%, amphetamine types of stimulants 0.4%, and sedatives or sleeping pills 0.4%. A bivariate analysis showed a statistics significant between Suicidality and Tobacco products) $r = -0.281$ and $P < 0.05$ (.000); Suicidality and Alcohol beverages $r = -0.145$ and $P < 0.05$ (.029); Suicidality and Amphetamine type stimulants $r = -0.168$ and $P < 0.05$ (.011); Attention deficit/Hyperactivity disorders and Cocaine $r = 0.144$ and $P < 0.05$ (.031); Attention deficit/Hyperactivity disorders and Sedatives or sleeping pills $r = 0.144$ and $P < 0.05$ (.031); and Major depressive disorders and inhalants (nitrous, glue, petrol, paint



thinner, etc) $r= 0.135$ and $P<.05$ (.043). Other variables were not statistically significant. Researcher recommends Ministry of Health in partnership with Ministry of youth and Information Communication Technology, Ministry of Local government, Ministry of Gender and Family Promotion to focus on prevention, treatment program; and creation of reeducation and drug rehabilitation centers in each district in order to support teenagers and youth. Psychologist/counselors should be deployed in universities and high learning institutions in order to detect early psychiatric disorders and substances abuse among students; and clinics, rehabilitation centers should focus on family or/ systemic therapy

Index Terms- Psychiatric Co-morbidity, Rehabilitation, Patients, Substances Abuse

I. Introduction

This study explores psychiatric comorbidity among young males with psychoactive substance use disorders at the Icyizere Psychotherapeutic Center. Key objectives include identifying comorbid psychiatric conditions and understanding their interrelation with substance use.

Background of the Study

Substance use and mental health issues are frequently linked, with research across the globe indicating a high prevalence of psychiatric disorders among substance users (Maeng et al., 2002). In South Africa, common psychiatric comorbidities among substance users include anxiety disorders, PTSD, and depression (Amina et al., 2014), while studies in Kenya found high rates of depression and anxiety disorders in similar populations, with a range of other psychiatric conditions also present, such as schizophrenia and PTSD (Mathai, 2010).

In Rwanda, youth between 14 and 35 years make up a significant portion of the population and are particularly affected by socio-economic challenges and trauma stemming from the 1994 genocide (NISR, 2014). Many experiences trauma-related issues, with nearly half of the youth population impacted (Rutagengwa, 2006). Substance use among youth in Rwanda is notable, with 52.4% of youth engaging in substance use, though fewer are dependent on alcohol, tobacco, or cannabis (Kanyoni & Gishoma, 2012).

The problem of substance abuse is rising in Rwanda, with increasing cases reported at treatment centers like IWAWA and Ndera Neuropsychiatric Hospital. Comorbid mental health conditions, including depression, PTSD, and personality disorders, are common among those struggling with substance abuse and complicate treatment outcomes due to delayed diagnosis and higher relapse rates (Rodrigues-Liers et al., 2006; Albanese et al., 2006). Previous research in Rwanda noted comorbid major depression and PTSD, especially among those dependent on alcohol and other substances (Munyandamutsa & Mahoro, 2012), yet research on psychiatric co-morbidity within this population remains limited.



This study aims to address this gap by assessing the prevalence and types of psychiatric co-morbidity among patients in rehabilitation for substance abuse at Icyizere Centre, examining the substances commonly abused, and exploring the relationship between substance abuse and psychiatric disorders among these patients. Key questions include identifying common co-morbid psychiatric conditions, substances commonly abused, and the interrelationship between substance abuse and psychiatric disorders in Rwanda.

II. Theoretical Literature

The literature on substance abuse emphasizes the complexity of addiction as a multifaceted issue influenced by psychological, biological, and sociocultural factors. Psychodynamic Theories

Early psychodynamic perspectives suggest that addiction stems from unresolved developmental conflicts, often linked to early childhood experiences of unmet dependency needs (Fenichel, 1954; Freud, 1937). Later, ego psychology and self-theory introduced the idea that substance use compensates for a lack of internal stability and self-integration (Kaufmar, 1990). These theorists argue that individuals might use substances to manage unacceptable impulses and feelings of dependency rooted in early relationships (Straussner, 2011; Shelder & Block, 1990).

1. Behavioral Theories

From a behavioral perspective, addiction is viewed through the lens of reinforcement, with substances either providing positive reinforcement (pleasure) or negative reinforcement (relief from discomfort) (Skinner, 1953). Studies have shown that individuals often use substances to alleviate negative emotions or withdrawal symptoms, with patterns of drug use reinforcing the behavior (King et al., 1993).

2. Biological Theories

Biological theories highlight the role of the brain's reward and punishment systems, noting that certain drugs activate pleasure centers and contribute to compulsive drug-seeking behavior (Fishbein & Pease, 1996; Homberg et al., 2002). Genetic factors are also significant, with research indicating a strong heritability factor in addiction (Bozarth, 1990; Li, 2000).

3. Sociocultural Theories

Sociocultural theories underscore the impact of environmental factors, such as media influence, family dynamics, and peer pressure, on substance use behaviors (Anderson, 2002; Dishion & McMahon, 1998). Theories like cultural identity suggest that personal and social alienation can contribute to drug use as a means of identity alteration, especially in vulnerable social contexts (Anderson & Mott, 1998; Lindesmith, 1938).



4. Empirical Evidence on Comorbidity

Research shows a significant correlation between substance abuse and psychiatric disorders, including anxiety, PTSD, depression, and personality disorders, which often co-occur with substance use (Adamson et al., 2006; Maeng et al., 2002). Studies across various regions, such as the U.S., Australia, and Africa, confirm the commonality of comorbidity, with substances often serving as a self-medication for mental health conditions (Samhsa, 2012; Maling, 2002; Munyandamutsa & Mahoro, 2012).

This theoretical and empirical framework offers insights into the intricate relationship between psychiatric disorders and substance abuse, revealing that interventions must consider underlying psychological, biological, and sociocultural factors to effectively address addiction and its comorbidities.

III. Research Methodology

The methodology chapter for this study details the research procedures for examining psychiatric disorders and substance abuse patterns among patients at the Icyizere Psychotherapeutic Center. Employing a cross-sectional, quantitative design, the study captured data at a single point in time, which is characteristic of cross-sectional methodologies (Babbie, 2001).

The study's target population was 520 patients who sought treatment for substance abuse in late 2014. From this group, a sample of 226 was selected using Yamane's formula for sample size determination, which ensures a representative subset of the population (Yamane, 1967). Systematic sampling was applied, where every third patient was selected after a random start, providing each individual an equal opportunity for inclusion in the sample (Ken, 2004).

Data collection relied on a psychiatric symptoms checklist, translated to ensure cultural and linguistic accuracy. This instrument was informed by established tools such as the Mini International Neuropsychiatric Interview (M.I.N.I.), DSM-V, and ASSIST V3.0. The checklist's reliability was validated through a test-retest method on a sample from the Gikondo Transit Center, while content validity was assured via expert reviews from Mount Kenya University supervisors (Colin & Julie, 2005).

Data were analyzed using SPSS (v16.0), with descriptive statistics (frequencies, percentages) and inferential statistics (Pearson correlation) to explore relationships between psychiatric symptoms and substance use. Ethical considerations included approval from Mount Kenya University's ethics committee, informed consent, confidentiality assurances, and permissions from Ndera Neuropsychiatric Hospital and Icyizere Psychotherapeutic Center.



IV. Demographic Characteristics

The study sampled 226 young males, with most (85%) being single and aged 18-24 (50.9%). Many had low educational attainment (56.2% with only primary education), and over a quarter were unemployed (27.9%). The predominance of young, single males highlights a vulnerable group impacted by traumatic historical events and socio-economic challenges, factors which previous studies (Kanyoni & Gishoma, 2012) suggest may contribute to substance abuse and psychiatric issues.

Findings

Prevalence of Comorbid Psychiatric Disorders

The most common psychiatric comorbidities were major depressive disorders (23.5%) and Attention-Deficit/Hyperactivity Disorder (ADHD) (17.7%). PTSD was also prevalent (10.2%), reflecting the impact of traumatic historical events. Antisocial personality disorder (6.6%) and generalized anxiety disorder (6.6%) were notable as well, with the high rates of antisocial personality disorder potentially linked to insufficient early-life education and support systems. Comparatively, Munyandamutsa and Mahoro (2009) found a similar prevalence of depressive disorders in Rwanda, at 20.5% among the general population.

Substance Use Patterns

Alcohol was the most common substance (89.8%), followed by cannabis (56.6%) and tobacco (39.4%). Alcohol and cannabis use is particularly concerning, given that both substances are associated with increased social and health risks in youth. The high rates of alcohol and cannabis use align with findings from other African countries (Dalu, 2008), underscoring the role of availability and affordability in substance abuse trends (Kanyoni & Gishoma, 2012).

Correlations Between Psychiatric Disorders and Substance Use

Significant correlations were found between suicidality and tobacco use ($r = -0.281$, $p = .029$), alcohol ($r = -0.129$, $p = .000$), and amphetamine stimulants ($r = -0.168$, $p = .011$). Additionally, ADHD showed a significant relationship with cocaine ($r = 0.144$, $p = .031$) and sedatives ($r = 0.144$, $p = .031$). Major depressive disorder correlated with inhalant use ($r = 0.135$, $p = .043$). These correlations suggest that psychiatric disorders can drive substance use as a form of self-medication (King et al., 1993), consistent with findings from the EMCDDA (2013), which reported similar co-morbidities across Europe.

Summary

This study highlights high rates of psychiatric comorbidities, such as depression and ADHD, among young substance abusers, with significant correlations between specific disorders and substance types. Addressing these interconnected issues could improve outcomes for young people in similar high-risk settings.



V. Summary, Conclusions, and Recommendations

Introduction

Chapter Five summarizes key findings, draws conclusions, and provides recommendations for future research and practice based on the study's objectives.

Summary of Findings

This study, conducted with 226 male participants primarily aged 18-24, analyzed co-morbid psychiatric disorders and substance dependence at ICYZERE Psychotherapeutic Center. Most participants were single, with fewer married or separated. The study's objectives were to (1) identify co-morbid psychiatric disorders among substance users, (2) assess substance use and dependence, and (3) determine the relationship between psychiatric disorders and substance use among patients.

Objective 1: Co-morbid Psychiatric Disorders

The study identified various psychiatric disorders, with major depressive disorder as the most prevalent (23.5%), followed by ADHD (17.7%), PTSD (10.2%), generalized anxiety disorder (6.6%), antisocial personality disorder (6.6%), panic disorder (5.8%), schizophrenia and other psychotic disorders (5.3%), borderline personality disorder (4.9%), social phobia (1.8%), suicidality (0.9%), and agoraphobia (0.4%).

Objective 2: Substance Abuse and Dependence

Findings revealed high rates of substance use, with 89.8% having used alcohol, 56.6% cannabis, 39.4% tobacco products, and lower usage rates for cocaine, amphetamines, inhalants, sedatives, hallucinogens, and opioids.

Objective 3: Relationship Between Psychiatric Disorder and Substance Use

Statistical analysis revealed significant correlations between certain psychiatric disorders and specific substances. Suicidality was significantly associated with tobacco, alcohol, and amphetamine-type stimulants; ADHD showed a significant correlation with cocaine and sedatives; and antisocial personality disorder was linked to inhalants.

Conclusions

The study underscores the co-occurrence of psychiatric disorders and substance use among Rwandan youth. Findings indicate that psychiatric disorders can drive substance use as a form of self-medication, complicating intervention and treatment. Enhanced monitoring, prevention, and treatment programs are critical for addressing the burden of substance use and co-morbid psychiatric disorders among young people in Rwanda.

Recommendations

To address the co-morbidity of psychiatric disorders and substance abuse, the study recommends that key ministries, including Health, Youth and ICT, Local Government, and Gender and Family Promotion, develop district-level drug treatment and rehabilitation centers targeting young people involved in substance abuse. The Ministry of Education should establish and enhance guidance and counseling services



in educational institutions with screening tools for early detection of psychoactive substance use and psychiatric disorders. Qualified mental health professionals, including psychiatrists, psychologists, and counselors, should be deployed to schools to support early diagnosis and treatment. Psychosocial clinics and rehabilitation centers, such as ICYZERE Psychotherapeutic Center, should adopt family and community-based approaches, while youth and others with psychosocial challenges are encouraged to seek support to prevent substance dependency.

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