



UNIVERSITY of
RWANDA

COLLEGE OF MEDICINE AND HEALTH SCIENCES
SCHOOL OF MEDICINE AND PHARMACY
DEPARTMENT OF PSYCHIATRY

***DEMOGRAPHIC & CLINICAL PROFILE OF HIV INFECTED PATIENTS
DIAGNOSED WITH MENTAL DISORDERS ATTENDING NDERA NEURO-
PSYCHIATRIC HOSPITAL / HIV CARE UNIT***

Dissertation submitted in partial fulfilment of the requirements for the Degree of

MASTER OF MEDICINE IN PSYCHIATRY

SCHOOL OF MEDICINE AND PHARMACY

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Kigali, August 2021



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August, 2021

DECLARATION

DECLARATION

Title: Demographic and clinical profile of HIV infected patients diagnosed with mental disorders attending Ndera Neuro-psychiatric Hospital/ HIV care unit.

A. Declaration by a candidate

I do hereby declare that this dissertation submitted in partial fulfillment of the requirements for the degree of Master of Medicine in Psychiatry at the College of Medicine and Health Sciences, is my original work and has not previously been submitted elsewhere. Also, I do declare that a complete list of references is provided indicating all the sources of information quoted or cited.

Date and signature of the candidate (student)

4th September 2021, Dr. BIZIMUNGU FRANCOIS



B. Supervisors

Supervisor: Dr. RUTAKAYILE BIZOZA

Co-supervisor: Dr. MUSONI Emmanuel Rwililiza

In my capacity as a supervisor, I do hereby authorize the student **Dr. BIZIMUNGU Francois** to submit his dissertation.

Signature of the Supervisor

Dr. RUTAKAYILE BIZOZA

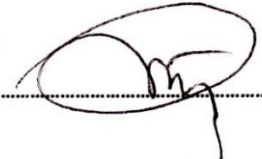
RUTAKAYILE BIZOZA



Signature of the Co-supervisor

Dr. MUSONI Emmanuel Rwililiza

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DEDICATION

This work is kindly dedicated to every person who has constantly helped me during its implementation, it is especially dedicated to all persons living with HIV associated with mental health disorders and those who take care for them. Also to my beloved family.

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May Almighty God bless you all abundantly!

ABSTRACT

Background:

Mental disorders and HIV infection are globally among the serious health problems. In Rwanda, the Ministry of health has done a lot to ameliorate the quality of health service offered to HIV infected people and those who suffer from psychiatric disorders but the prevalence of HIV infection is still higher in people suffering from psychiatric diseases compared with the general population. Little is known about psychiatric disorders in Rwanda especially in relation to HIV but it is known that mental disorders are among the risk factors of contracting HIV.

Objectives:

This research work aimed to assess demographic features and clinical presentation among patients living with HIV diagnosed with mental disorders attending HIV care unit at Ndera Neuro-psychiatric Hospital.

Methods:

A retrospective descriptive study covering 10 years, from 01 January 2010 to 31 December 2020 was conducted at Ndera Neuro-Psychiatric Hospital, HIV care unit. HIV positive patients with psychiatric comorbidities were involved in this study. Data were extracted from the clinical files with electronic records of the patients. Descriptive analysis of demographic and clinical data were performed in form of frequencies using Microsoft excel 2007.

Results:

Data were collected from 117 clinical files of HIV positive patients with psychiatric comorbidities whom the majority were from Gasabo district $n = 42$ (35.89%). Based on gender, the majority of the patients were females $n = 78$ (66.67%) while the males were $n = 39$ (33.33%). According to their level of education, the majority of these patients had done primary school $n = 64$ (54.70%). Considering the age of these patients, the majority were in range of age of 46-55 years $n = 38$ (32.48%). The mean age was 41 years. The most common psychiatric comorbidity among 117 patients was schizophrenia $n = 48$ (41.03%) followed by unspecified psychotic disorders $n = 33$ (28.21%). Adherence to HIV treatment was also assessed and 101 patients (86.32%) were in good adherence while 16 patients (13.68%) were in poor adherence, poor adherence was more

significant in patients with schizophrenia (43.75%) than those with other psychiatric disorders. Mortality rate was 9.40 % and was higher in patients with schizophrenia compared to those with other psychiatric disorders.

Conclusion:

This study showed that schizophrenia followed by unspecified psychotic disorder was the most common psychiatric comorbidity among HIV positive patients diagnosed with mental disorders at Ndera Neuro-psychiatric Hospital/HIV care unit. The highest rate of poor adherence to HIV treatment and mortality were found in HIV positive patients diagnosed with schizophrenia compared to those with other psychiatric comorbidities. The female patients were highly vulnerable to HIV compared to the male patients. Further research studies on the link between mental disorders and HIV could be done. Screening of HIV could be considered as routine laboratory exam to every patient admitted for mental disorders. Training on relationship between mental disorders and HIV could be reinforced.

Key words:

HIV

Mental disorders

AIDS

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LIST OF ABBREVIATIONS

MD: Medical Doctor

USA: United States of America

UR: University of Rwanda

CMHS: College of Medicine and Health Sciences

IRB: Institutional Review Board

M Med: Master of Medicine

HIV/AIDS: Human Immunodeficiency virus / acquired immunodeficiency syndrome

CMDs: Common mental disorders

PLWHIV: Patients living with HIV

YLWH: young people living with HIV

ART: antiretroviral treatment

UNAIDS: United Nations Program on HIV/AIDS

WHO: World Health Organization

DSM5: Diagnostic and statistical manual of mental disorders 5th edition

CDC: Center for disease control

GBD: Global Burden of Disease

PTSD: Post-traumatic stress disorder

CHAPTER I: INTRODUCTION

1.1: Definitions of key term

Psychiatry

Psychiatry is the branch of medicine focused on the diagnosis, treatment and prevention of mental, emotional and behavioral disorders.

Mental disorder

A mental disorder is a syndrome characterized by clinically severe disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning.

HIV

Human immunodeficiency virus (HIV) is an infection that affects the body immune system, specifically the white blood cells called CD4 cells, weakening a person's immunity against infections.

AIDS

Acquired immunodeficiency syndrome, if the CD4 cell count of HIV positive person is less than 200, his immunity is seriously altered, leaving him susceptible to infections. People who have the CD4 count below 200 are considered as having AIDS.

1.2. Background

HIV is a virus which affects the immune system, especially the white blood cells called CD4 cells, weakening a person's immunity against infections. HIV was discovered in 1981 through the male patients diagnosed with Kaposi sarcoma and pneumocystis carinii pneumonia who were known for homosexuality (1). Since that time, more investigations were done by the United States through its Center for Disease control and prevention (CDC) which concluded to Acquired Immune Deficiency Syndrome (AIDS) indicating that the etiology of that new disease was a virus (1). Finally, HIV was discovered in 1983 but the studies revealed that it had been disseminated in the world before discovery of AIDS in United States (1). HIV is classified among the most harmful and wide spread viruses and causes many deaths of people (2). It is still globally a public

health problem(4). Nowadays, there are approximately 38 million HIV infected people in the world and in 2019, 690.000 persons died of HIV infection (2). 70% of infected persons live in Sub Sahara Africa which has also a high mortality rate compared with other parts of the world (3). Sub-Sahara African females are more affected by this epidemic than males (4) . According to the UNAIDS report, Swaziland is the first country to have the highest prevalence of HIV infection in the world while Lesotho becomes the second one and Botswana is the third country in world (5). Since the declaration of the mentioned epidemic, there are 33 million of deaths in the world (2). HIV infection is transmitted from HIV positive person to another person usually through non protected sexual intercourses, sharing injection materials; it may be also be spread from an HIV positive mother to her baby when she is pregnant or during delivery and breast feeding (1). Mental disorders are also among the public health challenges in the world (6). Globally, epidemiological data show that serious psychiatric illnesses like schizophrenia, schizoaffective, bipolar and depressive disorders are the common public health challenges among psychiatric disorders (7). They are highly prevalent in young adult hood. A conducted study in USA, in 2018 showed that prevalence rate of mental disorders was estimated to be between 8.3 and 12.4% among people who were between 18 and 33 years old (8). Mental disorders remain a serious problem especially in low and middle income countries where their management is not adequate in comparison with the developed countries (9). In Rwanda, after 1994 genocide against Tutsi, many people were affected by mental disorders; depressive disorder and PTSD were the most prevalent psychiatric diseases (10). Several studies have revealed that genetic and environmental risk factors are involved in etiologies of mental disorders (11). Mental disorders often cause permanent and irreversible disability (12). A conducted research study in China, in 2017 revealed that 6.3% of disability was caused by mental disorders (13).Depression, bipolar disorder, schizophrenia and drugs abuse are the most common mental disorders to cause the disability (12). Among them, according to the GBD, schizophrenia and bipolar disorder are associated with highest rate of disability compared to other psychiatric disorders (14). A connection between psychiatric disorders and HIV infection was revealed by different studies (2). In general, the prevalence of psychiatric comorbidities in HIV infection is more elevated than that of other chronic diseases (13).

I.3. Problem statement and study justification

To our knowledge, little is known about HIV infection in patients diagnosed with psychiatric conditions in our setting. Ndera Neuro-psychiatric Hospital has HIV care unit which offers health care to the HIV infected patients and psychiatry department which assumes management of psychiatric disorders but clinical and demographic characteristics of HIV infected patients with comorbid mental disorders are not well known.

This study was about to know these characteristics (demographic and clinical presentation) of HIV infected people suffering from psychiatric disorders who are followed up at Ndera Neuro-psychiatric Hospital/ HIV care unit in order to plan the strategies to ameliorate the quality of health care to this people who undergo a high vulnerability.

I.4. Research question

What are the demographic and clinical characteristics among HIV positive patients diagnosed with psychiatric disorders attending HIV care unit at Ndera Neuro-psychiatric Hospital?

I.5 Study objectives

1.5.1 General objectives

The goal of this work focused on the assessment of demographic characteristics and clinical presentation among patients living with HIV and diagnosed with mental disorders attending HIV care unit at Ndera Neuro-psychiatric Hospital.

1.5.2. Specific objectives

Specifically, the targets of this work were the following:

1. To determine demographic characteristics among HIV positive patients suffering from psychiatric disorders in HIV care unit at Ndera Neuropsychiatric Hospital.
2. To determine the most common psychiatric comorbidity among HIV positive patients suffering from psychiatric disorders in HIV care unit at Ndera Neuro-psychiatric Hospital.
3. To assess the adherence to HIV treatment and mortality rate for HIV positive patients suffering from psychiatric disorders in HIV care unit at Ndera Neuro-psychiatric hospital.

I.6.Relevance of the study:

This study gave a demographic and clinical information about HIV positive patients with psychiatric comorbidities, which shall help the clinicians to improve the quality of health care that they offer to these vulnerable people.

It should also motivate everyone who is interested in doing a further research related to the link between mental disorders and HIV.

CHAPTER II: LITTERATURE REVIEW

Mental disorders remain globally the public health problem in different parts of the world (15). They are classified among the most common diseases which are associated with disability in general population (16). In 2016 7% of disability was reported to be caused by psychiatric disorders like schizophrenia, mood disorders and other severe psychiatric conditions (15). In addition, they are often associated with un-employment “Mojtabai 2015” and disfunction in other domains such as education, interpersonal relationships, social life and so on (26). In USA, a half of adolescent people failure secondary school because of mental disorders (8). In 2016, it was estimated that the prevalence of psychiatric disorders was 4% in the world (15). Schizophrenia affects about 0.4% of the general population and is usually associated with high rate of disability compared with other psychiatric disorders in the world (7). The connection between HIV and mental disorders was explored in 1990 (17). It was documented that there is a reciprocal relation between HIV/AIDS and psychiatric disorders. Firstly, HIV positive people run a risk of developing mental disorders like mood and psychotic disorders, dementia either due to the process of HIV infection or to the secondary infection (18). Mental disorders and neuropsychiatric presentation of HIV are mostly an association of complex biological, psychological and social condition related to the HIV infection (19). Considering the rate of comorbid psychiatric disorders in people with preexisting HIV, depression is among the most common psychiatric comorbidities (19). It has been documented that in USA the prevalence of major depression is estimated from 16.2 to 36% in people living with HIV while it is 4.2% in general population (15). Depression is the most prevalent comorbid psychiatric disorder in PLWHIV in sub-Saharan Africa, its prevalence rate ranges from 9 to 32% while in Nigeria, the rate of depressive disorder is also elevated in PLWHIV with prevalence of 28.2% (12). On the other hand, the studies conducted in USA and other developed countries revealed that the persons with mental disorders run a high risk of contracting HIV infection than other people (5). This high risk is due their homelessness, inability to make decision, high risk sexual behavior, substances abuse, etc.(5). It was documented that hypersexuality which may occur in exacerbation period of mental disorders leads to the high risk of contracting HIV (2). However, this sexual behavior is associated with high risk of HIV spread to other people through the unprotected sexual intercourses (2). Considerable evidences showed that prevalence rate of HIV among people diagnosed with preexisting severe mental disorders was from 1% to 24% in 2013(18). Comorbid mental disorders are among the main causes of poor

adherence to HIV treatment which is associated with poor outcomes (20). A conducted study in USA, in 2009 concluded that HIV positive people with a diagnosis of schizophrenia and other psychosis were less adherent to HIV treatment and had poor outcome than those diagnosed with other comorbid mental disorders (17). A research study was conducted in Philadelphia, in 2014 by Michael B. Blank and David S. Metzger and found that HIV prevalence in patients with mental disorders was 4.8% and was higher compared to the one found in general population (1.4%). In addition, the majority of those people were suffering from schizophrenia (18). Based on gender, a conducted research study in Botswana showed that female people with psychiatric disorders run a higher risk of contracting HIV compared with the males diagnosed with mental disorders with the following percentage 21%, 15% respectively (5). Another study was conducted in Pretoria in 2016 at Weskopies Hospital in psychiatric unit and revealed that psychotic disorders was found to be the most common comorbid mental disorder (53.33%) among psychiatric patients living with HIV. Based on gender, the same study found a higher rate (54%) of HIV positive female patients diagnosed with comorbid mental disorders compared to the male patients (46%) (12). In addition, the majority of the total of those patients was unemployed (84%) and single (85%) in that study (12). Transmission of HIV for male to female is higher than HIV transmission rate for female to male. Social and biological risk factors could justify this high vulnerability of the women (12).

In 2018 a retrospective study was conducted in Botswana by Philip R. Opondo and his colleagues to evaluate HIV prevalence among the patients who were admitted at Main psychiatric referral Hospital and concluded that HIV prevalence was more elevated in psychiatric patients (29%) than in general population. HIV seroprevalence was also found to be extremely higher in female psychiatric patients (53%) compared with male psychiatric patients (19%). These women were more vulnerable to HIV in comparison with the women in general population 29% ($p=0.017$) (5). HIV prevalence was more elevated in patients with schizophrenia (55%) than patients with other psychiatric conditions it was followed by mood disorder and substance use disorder which had the same rate 18% (5). The similar results were found through a cross-sectional study which was conducted in Uganda, Butabika hospital, in 2013 by Patric Lundberg to evaluate HIV seroprevalence in admitted patients who were severely suffering from psychiatric illnesses and revealed that there was a significant rate of HIV in persons suffering from psychiatric diseases compared with the general population. Based on gender, HIV seroprevalence was elevated in women with mental disorders (14.3%) compared to the men with mental disorders (7.3%). Women

with mental disorder were more vulnerable to HIV in comparison with the women in general population who had seroprevalence rate of 8.3% for HIV. Considering the types of mental disorders, HIV prevalence was found elevated in people with schizophrenia compared to those with other mental disorders (21).

In 2018 and 2019 another study was conducted in Kenya to assess the common psychiatric diseases among YLWH and found an elevated prevalence rate of psychiatric diseases in this people compared to their peers who were not HIV infected and the most common psychiatric comorbid illness was depressive disorder with prevalence of 29% in YLWH while it was 12% for their peers who were not HIV infected (22).

There is a poor adherence to ART and negative outcomes in PLWH associated with comorbid mental disorders compared with people without mental disorders. Some studies showed that risk of mortality was higher in HIV patients diagnosed with mental disorders than those without (23).

In Rwanda, according to RBC, prevalence rate of HIV is about 3%. In 2016 depression was the most common comorbid psychiatric condition in people living with preexisting HIV in Rwanda (24). To the best of our knowledge, no research work was specifically conducted in a psychiatric setting in Rwanda to evaluate HIV prevalence among patients with mental disorders but in our daily clinical activities we find a significant number of patients suffering from mental disorders with HIV.

CHAPTER III: METHODOLOGY

This chapter of methodology contains all details about the description of the study, study design and site, population, criteria for inclusion and exclusion of the study, method used for data collection, data management and analysis and finally the ethical considerations of this research study.

3.1. Study description

This research work was conducted using a retrospective descriptive study covering 10 years, from 01 January 2010 to 31 December 2020. This study aimed to assess demographic and clinical presentation of HIV positive patients suffering from mental disorders in HIV care unit at Ndera Neuro-psychiatric Hospital.

3.2. Study design

A designed questionnaire was used as data collection tool to collect all relevant information from the clinical files and electronic records of the patients since their enrolment in HIV care unit focusing on sociodemographic and clinical elements. The questionnaire was in all most useful language used in Rwanda (English, Kinyarwanda and French).

The following steps were followed during this study:

- Submission of research protocol the IRB
- Request of ethical clearance to the Ethics Committee of Ndera Neuro-psychiatric Hospital
- Data collection
- Data entry and analysis using epi data, excel and graphical technique respectively

3.3. Study Site

The selected site for this research was HIV Care Unit of Ndera Neuro-psychiatric Hospital located in Kigali-Rwanda. This Hospital was founded in 1968 by the Community of Brothers of Charity Congregation under the request of the Government of Rwanda and Roman Catholic Church and was inaugurated in 1972. HIV Care Unit of Ndera Neuro-Psychiatric Hospital has the aim of providing care to the people with mental illness living with HIV/AIDS since December 2008.

3.4. Population of the study

The study population of this study was all enrolled HIV infected patients with comorbid mental disorders, both males and females aged from 15 years attending Ndera Neuro-psychiatric hospital/HIV care unit from 01 January 2010 to 01 December 2020.

3.4.1. Inclusion criteria

All enrolled HIV infected patients with comorbid mental disorders who were followed up in HIV care unit at Ndera Neuro-psychiatric Hospital from 01 January 2010 to 31 December 2020.

3.4.2 Exclusion criteria

1. Patients who were not HIV infected and/or without any psychiatric comorbidity.
2. Patients who were not enrolled in HIV care unit at Ndera Neuro-psychiatric Hospital.
3. Patients who were not followed up in HIV care unit at Ndera Neuro-psychiatric Hospital during the period of the study
4. Patients whose demographic and clinical data are not well documented.

3.4.3. Sampling

From 01 January 2010 to 31 December 2020 a total of enrolled HIV positive patients with comorbid mental disorders were 135 in HIV care unit at Ndera Neuro-psychiatric Hospital. But among them 18 persons were excluded from the study because the inclusion criteria were not fulfilled for them. However, 117 HIV positive patients presenting with diagnosis of mental disorders meeting criteria for DSM5 were included in this study. A patient was defined as HIV infected if the HIV enzyme linked Immune sorbent assay (HIV ELISA) test was positive at the time of his or her enrolment.

3.5. Study procedure

3.5.1. Data collection methods

A designed questionnaire titled Demographic and Clinical Profile of HIV Infected Patients with Mental Disorders attending Ndera Neuro-psychiatric Hospital/HIV care Unit was used by the researcher with designated data collectors (mental health nurses trained on data collection and use of the questionnaire) as data collection tool to collect all relevant information from patient's

clinical file and electronic records since their enrolment in HIV care unit. The questionnaire was in all most useful languages in Rwanda (English, Kinyarwanda and French).

3.5.2. Data management and analysis

Data management and analysis were done after collecting data. The data were entered into database using excel / Epi Data and the questionnaires containing information were kept safely with a full confidence, nobody was able to access the data except the researcher. Analysis of the collected data was done by using excel and graphical technique (tables and graphs).

3.6. Ethical considerations

Confidentiality was respected using a code number for each questionnaire paper which corresponded to the patient file. No names of the patient were appeared on the questionnaire. Ethical clearance was delivered by the UR through CMHS Institutional Review Board (IRB) and ethical committee of Ndera Neuro-psychiatric Hospital. Data collection was started after ethical approval from the abovementioned institutions.

CHAPTER IV: RESULTS

4.1: Introduction

This chapter shows the results and analysis of all information from the clinical files and electronic records of the patients who were involved in this study. The study findings are presented under socio-demographic characteristics, the most common psychiatric comorbidity, the adherence to HIV treatment and mortality rate for HIV positive patients with psychiatric comorbidities in HIV care unit at Ndera Neuro-psychiatric Hospital within 10 years, from 01 January 2010 to 31 December 2020.

4.2: Socio-demographic features

The socio demographic features are shown in the table 4.1 below.

Table 4. 1: Sociodemographic characteristics of the patients

Socio-demographic data			
	Category	Frequency	Percentage
Gender	Male	39	33.33%
	Female	78	66.67%
Group of age	Below 15 Year	0	0%
	15-25 Years	5	4.27%
	26-35 Year	26	22.22%
	36-45 Years	33	28.21%
	46-55 Years	38	32.48%
	56-65 Years	12	10.26%
	Above 65 Years	3	2.56%
Civil status	Single	43	36.76%
	Married	24	20.51%
	Separated	24	20.51%
	Divorced	0	0%
	Widowed	26	22.22V
Educational level	None	21	19.95%

	Primary School	64	54.70%
	Junior Secondary School	1	0.85%
	Senior Secondary School	23	19.66%
	Vocational Studies	5	4.27%
	University: A1,A0	3	2.56%
	Master's Degree	0	0%
	PHD	0	0%
	Other	0	0%
Employment status:			
	Employed	9	7.69%
	Un-Employed	85	72.65%
	Retired	4	3.42%
	Student	0	0%
	Self Employed	19	16.24%
Place of Residence (District)			
	Nyarugenge	13	11.12%
	Kicukiro	25	21.37%
	Gasabo	42	35.89%
	Rwamagana	8	6.84%
	Huye	19	16.24%
	Kamonyi	2	1.72%
	Gisagara	2	1.72%
	Rubavu	1	0.85%
	Gicumbi	1	0.85%
	Nyanza	1	0.85%
	Ruhango	1	0.85%
	Muhanga	1	0.85%
	Bugesera	1	0.85%

From the table 4.1, the results show that a total number of the patients were 117 whereby 78 representing 66.76 % were females while 39 of them were males representing 33.33%. Considering the age, a high number of patients was in the range of 46 - 55 years old where 38 patients representing 32.48 % of the total number were in that range followed by a group ranging between 36 to 45 years with a percentage of 28.21%. The table also shows that most of patients were single with a total number of 43 (36.76%) patients followed by widowers with 26 patients

representing 22.22%. Among 117 patients, the majority (n = 64) had done primary school as education level representing 54.7% followed by 23 patients and 21 having Senior Secondary school and those with no education level respectively. Based on occupation, most of the patients were un-employed followed by self-employed with n = 85 (72.65%) and 19(16.24%) of the patients respectively while 4 patients representing 3.42% were retired. Based on residence district, out of 117 patients, 42 of them representing 35.89% were from Gasabo District as place of residence, n = 25 (21.37%) were from Kicukiro, n = 19 (16.24%) and n = 8 (6.84%) were from Nyarugenge and Rwamagana respectively while 2 patients representing 1.72% were from Rubavu the same number to Gicumbi district. Other districts Nyanza, Ruhango, Muhanga and Bugesera had 1 patient representing 0.85% for each district as shown by table 4.1 above.

Table 4.2: Clinical characteristics of the patients

clinical Characteristics			%
HIV infection stage	I	107	91.45%
	II	3	2.56%
	III	2	1.72%
	IV	5	4.27%
Comorbid psychiatric disorders	Schizophrenia	48	41.03 %
	Unspecified psychotic disorder	33	28.21%
	Depression	11	9.40%
	Bipolar disorder	8	6.84%
	Alcohol use disorder	6	5.13%
	Schizoaffective disorder	3	2.56%
	Substance induced psychotic disorder	2	1.72%
	Autism spectrum disorder	2	1.72%
	Cannabis use disorder	1	0.85%
	Mania	1	0.85%
	PTSD	1	0.55%
	Substance use disorder	1	0.85%
Adherence to HIV treatment	Good Adherence	101	86.32%
	Poor adherence	16	13.68%
Outcome	Those who were still alive	106	90.60%
	Those who died	11	9.40%

The findings regarding clinical information are presented in table 4.2 and indicates that most of patients were in stage one of HIV Infection with a total number of 107 patients representing (91.45%) followed by stage 4, 2 and 3 where 5 patients (4.27%) were found in stage 4; 3 patients (2.56%) in stage 2 and 2 patients (1.72%) in stage 3. By considering comorbid Psychiatric disorders, most of patients were suffering from schizophrenia with 48 patients representing 41.03% followed by unspecified psychotic disorder with 33 patients representing 28.21%. Depression with 11 patients representing 9.40%, Bipolar disorder with 8 patients representing 6.84%, Alcohol use disorder with 6 patients representing 5.13%, Schizoaffective disorder with 3 patients representing 2.56%, Substance induced psychotic disorder with 2 patients representing 1.72% the same rate was found in Autism spectrum disorder. Cannabis use disorder, Mania, PTSD and Substance use disorder, each one had affected 1 patient representing 0.85%. Table 4.2 above also shows that 86.32% of the patients were in good adherence to HIV treatment while 13.68% of them were in poor adherence. Among 117 patients, 11 of them died representing 9.40% while 106 of them representing 90.60% were still alive.

4.3: Most common psychiatric comorbidity among HIV infected patients diagnosed with mental disorders

All information regarding comorbid psychiatric disorders are summarized and represented in table 4.3 and figure 4.1 respectively.

Table 4.3: Distribution of psychiatric comorbidities among HIV infected patients based on gender

		Male			Female		
	Rank	Diagnosis	Total	Frequency	Percentage	Frequency	Percentage
Comorbid psychiatric disorders	1	Schizophrenia	48	11	22.92%	37	77.08%
	2	Unspecified psychotic disorder	33	10	30.30 %	23	69.7%
	3	Depression	11	4	36.36%	7	63.64 %
	4	Bipolar disorder	8	3	37.5 %	5	62.5%
	5	Alcohol use disorder	6	5	83.33%	1	16.67%
	6	Schizoaffective disorder	3	0	0 %	3	100 %
	7	Substance induced psychotic disorder	2	1	50%	1	50%
	8	Autism spectrum disorder	2	2	100%	0	0%
	9	Cannabis use disorder	1	1	100%	0	0%
	10	Mania	1	1	100%	0	0%
	11	PTSD	1	1	100%	0	0%
	12	Substance use disorder	1	0	0%	1	100%

As seen from the table 4.3, Schizophrenia was the most common comorbid psychiatric disorder in HIV positive patients diagnosed with comorbid mental disorders and ranked as number one with a total number of 48 patients representing (41.03%) followed by unspecified psychotic disorder, Depression, Bipolar disorder, Alcohol use disorder with n = 33(28.21%), n = 11(9.40%), n = 8(6.84), and n = 6(5.13%) patients respectively. Schizoaffective disorder is ranked number 6 with total number of 3 patients representing 2.56% followed by substance induced psychotic disorder

with total number of 2 patients representing (1.72%), Autism spectrum disorder 2 patients representing also 1.72% followed by Cannabis use disorder, Mania, Post traumatic stress disorder, substance use disorder which had 1 patient representing 0.85% for each disease as shown in the above table. Based on gender, Schizophrenia was found to be the most prevalent psychiatric comorbidity in HIV positive patients, its number was more higher in female patients than male patients. n = 37 (77.08%) of HIV positive female patients had schizophrenia while n = 11 (22.92%) of HIV positive male patients had schizophrenia.

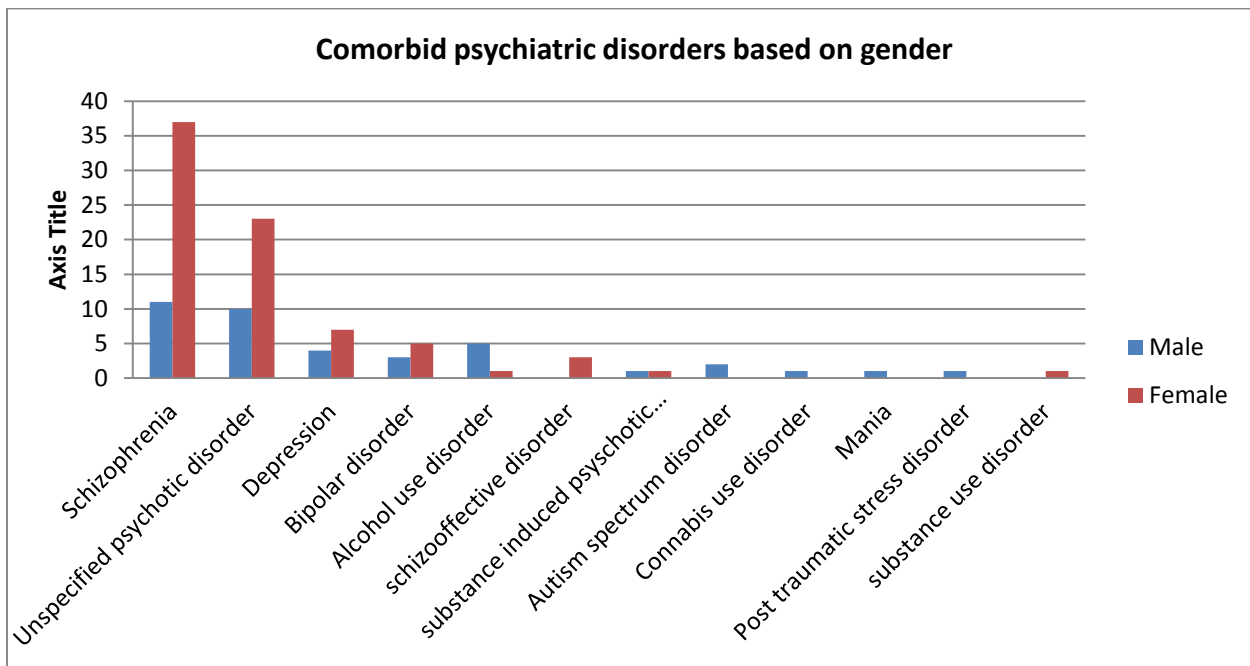


Figure 4.1: Common psychiatric comorbidity among HIV infected patients based on gender

Figure 4.1 represents the frequency of the common psychiatric comorbidities among HIV infected patients based on the gender. As seen from the table, females have a high number with 78 patients representing 66.66%. By focusing on the 5 first rankings, the figure shows that among 48 patients suffering from Schizophrenia, n = 37 were females representing 77,08% while n = 11 (22.92%) of them were males. 33 patients suffering from unspecified psychotic disorder, n = 23 of them were females representing 69.7% while n = 10 (30.3%) were males. The patients suffering from depression were n = 11 where n = 4 and n = 7 are males and females respectively. Among 8 patients suffering from bipolar disorder, males were 3 representing 37.5% while n = 5 (62.5%) of them were females. Patients having alcohol use disorder were n = 6 where 5 were males and 1 female.

4.4: Adherence to HIV treatment for HIV positive patients with mental disorders

The results of adherence to HIV treatment for all patients are indicated in table 4.4 and figure 4.2 below:

Table 4.4: Adherence to HIV treatment based on common psychiatric comorbidity

Adherence to HIV treatment					
Comorbid psychiatric disorders	Total	Good adherence	Percentage	Poor adherence	Percentage
Schizophrenia	48	41	85.4%	7	14.6
Unspecified psychotic disorder	33	29	88%	4	12%
Depression	11	10	91%	1	9%
Bipolar disorder	8	8	100%	0	0.0%
Alcohol use disorder	6	4	67%	2	33%
Schizoaffective disorder	3	3	100%	0	0.0%
Substance induced psychotic disorder	2	0	0.0%	2	100%
Autism spectrum disorder	2	2	100%	0	0.0%
Cannabis use disorder	1	1	100%	0	0.0%
Mania	1	1	100%	0	0.0%
PTSD	1	1	100%	0	0.0%
Substance use disorder	1	1	100%	0	0.0%

Table 4.4 shows the adherence to HIV treatment of patients in each comorbid psychiatric disorder. As seen from the table, most of patients were in good adherence with a total number of 101 patients representing 86.32% while other 16 patients were in poor adherence. By considering only the 2 first comorbid psychiatric disorder, it is indicated that among 48 patients suffering from Schizophrenia, 41 of them representing 85.42% were in good adherence while 14.58 % (7) were in poor adherence. Among patients suffering from unspecified psychotic disorder, 29 of them

were in good adherence while 4 of were in poor adherence representing 87.88 % and 12.12% respectively.

Figure 4.2 below also shows that 86 % of patients were in good adherence to HIV treatment while 14 % were in poor adherence to HIV treatment.

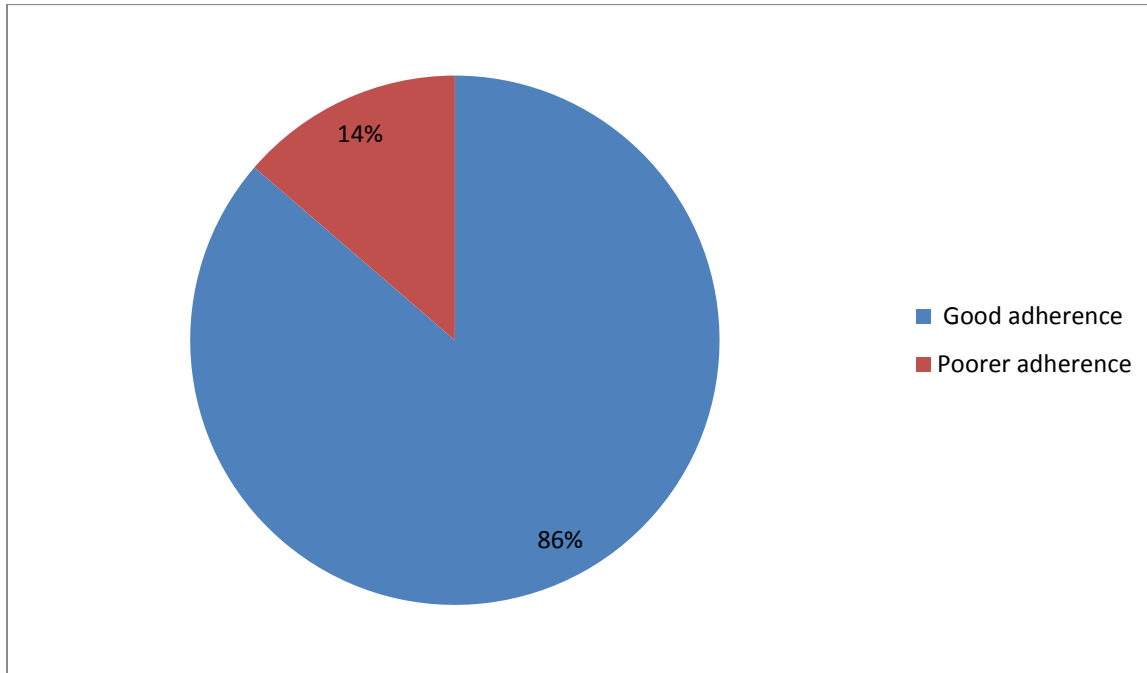


Figure 4.2. Percentage of patients based on adherence to HIV treatment

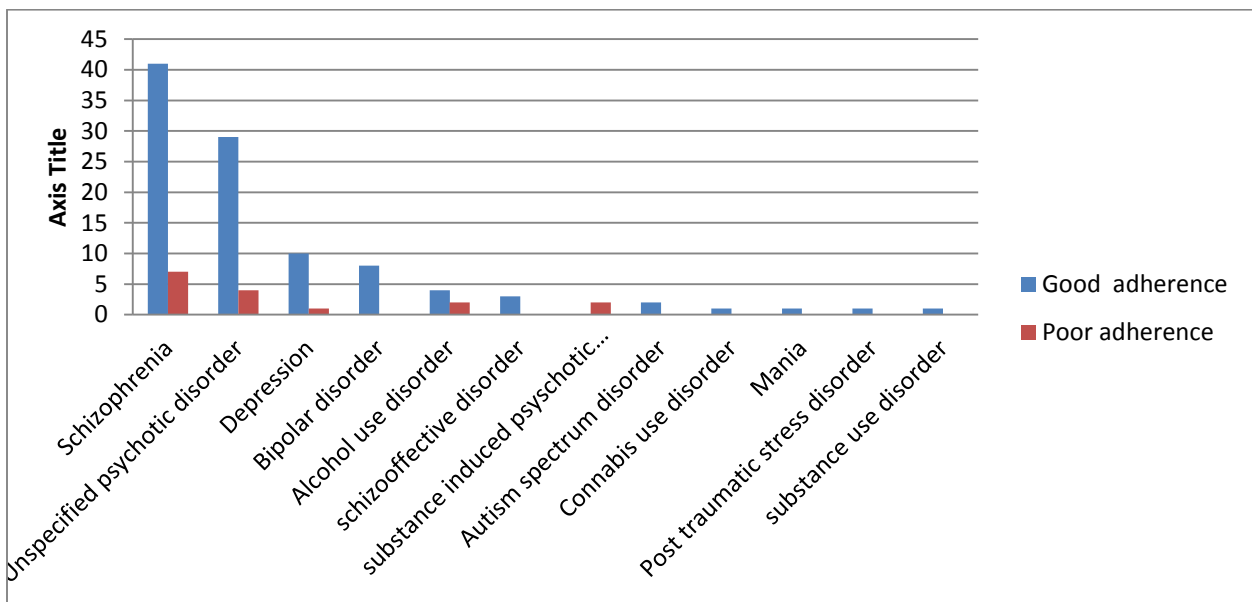


Figure 4.3: Variation of adherence to HIV treatment among comorbid psychiatric disorders

The figure above shows the variation of adherence to HIV treatment among comorbid psychiatric disorders. From that figure, it can be seen that most of patients were in good adherence. On the side of poor adherence, high number of patients with poor adherence were those suffering from Schizophrenia followed by unspecified psychotic disorder as shown by the figure 4.3.

4.5: Mortality rate for HIV positive patients diagnosed with mental disorders

Table 4.5 and figure 4.3 show the mortality rate for HIV positive patients diagnosed with mental disorders focusing on the common psychiatric comorbidities

Table 4.5: Mortality rate for HIV positive patients based on the common psychiatric comorbidities

Comorbid Psychiatric Disorders	Total	Those who were still alive	Those who died
Schizophrenia	48	43	5
Unspecified psychotic disorder	33	29	4
Depression	11	9	2
Bipolar disorder	8	8	0
Alcohol use disorder	6	6	0
Schizoaffective disorder	3	3	0
Substance induced psychotic disorder	2	2	0
Autism spectrum disorder	2	2	0
Connabis use disorder	1	1	0
Mania	1	1	0
PTSD	1	1	0
Substance use disorder	1	1	0
Total	117	106	11

As shown by the above table, it is indicated that among 117 patients, 11 of them were died while 106 were still alive. Based on comorbid psychiatric disorders ranking, it is indicated in that table that a high number of died patients were suffering from Schizophrenia with a total number of 5 patients followed by unspecified disorder with 4 died patients and depression with 2 died patients.

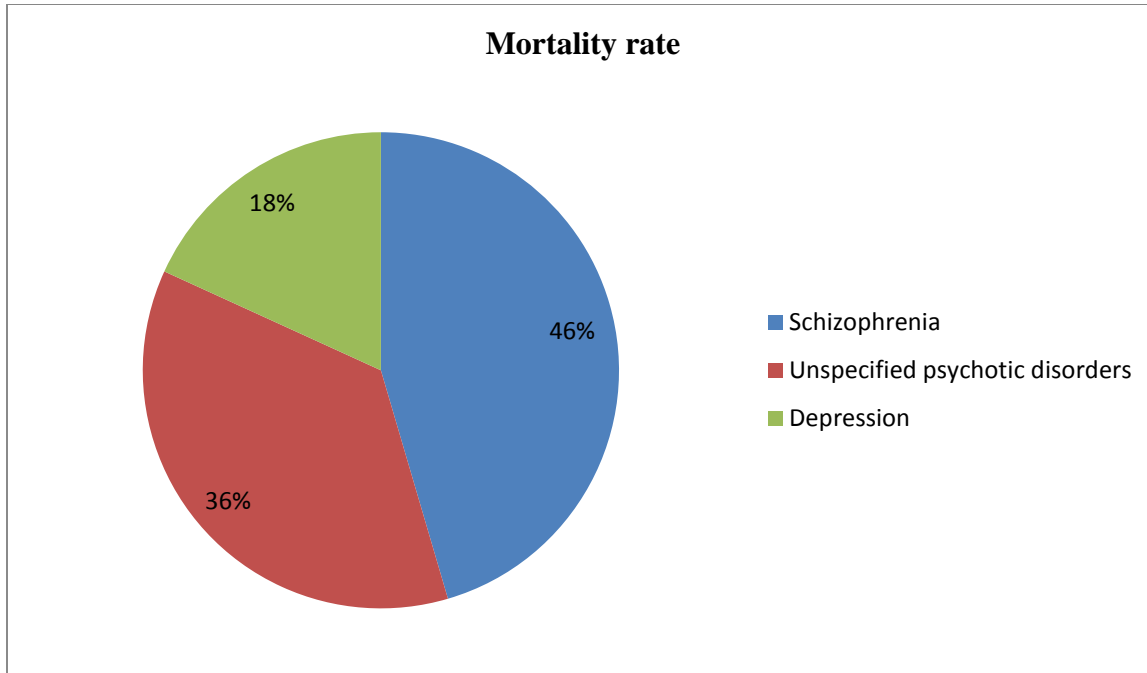


Figure 4.4: Mortality rate based on comorbid psychiatric disorders

As shown by the figure above, the mortality rate based on psychiatric comorbidities for HIV infected patients. The figure indicates that most of patients who died were suffering from Schizophrenia 46% of all died patients followed by unspecified psychotic disorder (36%) and depression (18%).

CHAPTER V: DISCUSSION

The target of this research work was to assess the demographic and clinical features of HIV positive patients diagnosed with comorbid mental disorders at Ndera Neuro-psychiatric Hospital, HIV care unit.

This research study revealed that the majority of the patients were in range of age between 46-55 years where 38 patients were found in this range representing 32.48% of the total number of the patients followed by a group of 33 patients ranging between 36 and 45 years with a percentage of 28.21% followed by a group of 26 patients ranging between 26 and 35 years representing 22.22% and a group of 12 patients ranging between 56 and 65 years representing 10.26%, 5 patients ranging between 15 years and 25 years representing 4.27% the last group was composed of 3 patients who were above 65 years representing 2.56 %. The mean age was 41 years

Based on residence district, among 117 patients, most of patients were from Gasabo District as place of residence with a total number of 42 patients representing 35.89% followed by 25 patients from Kicukiro District representing 21.37%. In general, the results revealed that the majority of the patients were from Kigali Town. Based on gender, the majority of patients were females, n=78 representing 66.76 % of all patients. These results are similar to the findings from other previous research studies who concluded that among the patients with psychiatric conditions, the females were more vulnerable to HIV than the males. The example is a conducted study by Philip R Opondo in a psychiatric hospital, Botswana, 2013 which found that HIV rate among patients admitted for mental disorders was more elevated among female patients (53%) than in male patients (19%). By considering the marital status and occupation this study revealed that the majority of patients were single (36.76%) and unemployed (72.65%) it is also similar to the findings from several previous studies which revealed that psychiatric disorders are associated with dysfunction in some domains which may lead a significant un-employment for effected people. By considering the education level, the majority of the patients had done primary school (54.70%) this is could be due to the fact that many patients were suffering from schizophrenia and other psychosis which are associated with cognitive impairment and usually occurs in in early childhood. This study found also that among 117 HIV positive patients, the most common psychiatric comorbidity was Schizophrenia (41.03%) followed by unspecified psychotic disorder (28.21%). These results have the similarity with several previous study like the one conducted by

Shren Chetty and Kalai Naidu intitled ‘’ Clinical presentation of HIV infected patients in a Psychiatric Hospital in South Africa’’ which found that the most common psychiatric comorbidity among those patients was Psychotic disorder (53.33%).

Another study which found the similar findings is the one which was conducted in Uganda, Butabika hospital, in 2013 to evaluate HIV prevalence rate in patients with mental disorders and found that HIV was more prevalent in women than men. 14.3% of HIV infection in women while it was 11.3% in men. The same study concluded also that the rate of HIV infection was higher in patients with schizophrenia compared to other psychiatric patients.

By considering adherence to HIV treatment, among 117 patients, 101 of them were in good adherence representing 86.32% while 16 patients were in poor adherence representing 13.68%.

A high number of people who showed poor adherence to HIV treatment were diagnosed with Schizophrenia with a total number of 7 patients representing 85.42% of all patients with poor adherence to HIV treatment.

Based on outcome, 106 patients were still alive representing 90.60% of all patients while 11 patients died representing 9.5% of all patients. A high number of those who died had a diagnosis of Schizophrenia with 5 patients representing 45.45% of all died patients. These findings are also similar to the previous studies about psychiatric patients living with HIV which were conducted in different parts of the world and found that HIV positive patients with schizophrenia are less adherent to HIV treatment than HIV positive patients with other psychiatric disorders. In addition, those studies revealed poor outcome (high mortality) in these HIV positive patients with schizophrenia compared with other HIV positive psychiatric patients.

Study limitation

A time table of the activities for this research work was not respected because of abnormal situation due to the COVID-19 pandemic.

CHAPTER VI: CONCLUSION AND RECOMMENDATIONS

VI.1. Conclusion

This study revealed that the most common psychiatric comorbidity among HIV infected patients at Ndera Neuro-psychiatric Hospital/HIV care unit was schizophrenia. Based on gender, a significant number of the patients was represented by the females. Elevated rate of poor adherence to HIV treatment and mortality rate were found in HIV positive patients diagnosed with schizophrenia compared to those with other mental disorders.

VI.2 Recommendations

To the Ministry of Health:

- To organize a special training for health care providers (physicians and nurses) about the link between mental health disorders and HIV
- To organize a training for community health workers about diagnosis of the most common mental disorders and motivation of the families which host the psychiatric patients to take them to the hospital instead of leaving them wandering into the streets.

To Ndera Neuro-psychiatric Hospital:

- Routine screening of HIV for every admitted patient diagnosed with mental disorder is suggested
- Psycho-education of the psychiatric patients with their families about HIV and mental health disorders is suggested.

To the CMHS, University of Rwanda:

It is suggested to conduct a large research study about Mental disorders and HIV in Rwanda

REFERENCES

1. Georgios K. Nikolopoulos, Evangelia-Georgia Kostacic, Dimitrios ParaskeviscaHellenic. Overview of HIV molecular epidemiology among People who Inject Drugs in Europe and Asia. ; 2016 December.
2. Marina Nosik , Vyacheslav Lavrov , Oxana Svitich. HIV Infection and Related Mental Disorders. Brain Science. 2021.
3. Echezona E. Ezeanolue, Theddeus Iheanacho , Isaac A. Adedeji, Ijeoma Uchenna Itanyi, Babayemi Olakunde1, Dina Patel, et al. Opportunities and challenges to integrating mental health into HIV programs in a low and middle income country: insights from the Nigeria implementation science Alliance. BMC Health Services Research; 2020.
4. Elizabeth Buckingham, Ezra Schrage, Francine Cournos. Why the Treatment of Mental Disorders Is an Important Component of HIV Prevention among People Who Inject Drugs. Advances in Preventive Medicine. 2013; Volume 2013, Article ID 690386, : p. 9 pages.
5. Philip R Opondo, Ari R Ho-Foster, James Ayugi, Bechedza Hatitchki, Margo Pumar, Warren B Bilker, et al. HIV PREVALENCE AMONG HOSPITALIZED PATIENTS AT THE MAIN PSYCHIATRIC REFERRAL HOSPITAL IN BOTSWANA. University of Pennsylvania o/a Botswana; 2019.
6. Raghid Charara, Mohammad Forouzanfar, Mohsen Naghavi, Maziar Moradi-Lakeh, Ashkan Afshin1, Theo Vos, et al. The Burden of Mental Disorders in the Eastern Mediterranean Region, 1990-2013. Burden of Mental Disorders in EMR. 2017 January 17.
7. Getinet Ayano , Sileshi Demelash, Zegeye yohannes, Kibrom Haile, Mikiyas Tulu, Dawit Assefa, et al. Misdiagnosis, detection rate, and associated factors of severe psychiatric disorders in specialized psychiatry centers in Ethiopia. ; 2021.
8. Kristin Gustavson, Ann Kristin Knudsen, Ragnar Nesvåg, Gun Peggy Knudsen, Stein Emil Vollset, Ted Reichborn-Kjennerud. Prevalence and stability of mental disorders among young adults: findings from a longitudinal study. BMC Psychiatry. ; 2018.
9. Oliviette Muhorakeye, Emmanuel Biracyaza. Exploring Barriers to Mental Health Services Utilization at Kabutare District Hospital of Rwanda: Perspectives From Patients. Frontiers in Psychology. 2021 22 March; Volume 12 | Article 638377.
10. Stephanie L. SmithID, Molly F. Franke, Christian Rusangwa, Hildegard Mukasakindi, Beatha Nyirandagijimana, Robert Bienvenu, et al. Outcomes of a primary care mental health implementation program in rural Rwanda: Aquasi-experimental implementation effectiveness study. PLOS ONE. 2020 February 21.
11. Alan S. Brown, M.D., M.P.H. Epidemiologic studies of exposure to prenatal infection and risk of schizophrenia and autism. University New York State Psychiatric Institute New York, NY, USA; 2012 October.

12. Shren Chetty , Kalai Naidu. CLINICAL PRESENTATION OF HIV-INFECTED PATIENTS IN A PSYCHIATRIC HOSPITAL IN SOUTH AFRICA. 2018: p. 29-36.
13. Li-Li Shang, Yue-Qin Huang, Zhao-Rui Liu, Hong-Guang Chen. A Cross-sectional Survey of Disability Attributed to Mental Disorders and Service Use in China. *Chinese Medical Journal*. 2017 June 20; 130(12): p. 1441-1445.
14. William W. Eaton, Silvia S. Martins, Gerald Nestadt, O. Joseph Bienvenu, Diana Clarke, Pierre Alexandre. The Burden of Mental Disorders. *oxfordjournals.org*. 2008 September 19; Vol. 30: p. 1–14.
15. Petra C. Gronholm , Neerja Chowdhary, Corrado Barbui, Jayati Das-Munshi, Kavitha Kolappa, Graham Thornicroft, et al. Prevention and management of physical health conditions in adults with severe mental disorders: WHO recommendations. *International Journal of Mental Health Systems*. 2021.
16. Jordi Alonso, M.D., Ph.D., Philippe Mortier, Ph.D., Randy P. Auerbach, Ph.D., Ronny Bruffaerts, Ph.D., Gemma Vilagut, Ph.D., Pim Cuijpers, Ph.D., et al. Severe Role Impairment Associated with Mental Disorders: Results of the WHO World Mental Health Surveys International College Student Project. ; 2019 September 01.
17. Natasha Dalseth, Regina Szucs Reed, Michael Hennessy, Marlene M. Eisenberg, Michael B. Blank. Does Diagnosis Make a Difference? Estimating the Impact of an HIV Medication Adherence Intervention for Persons with Serious Mental Illness. *AIDS Behav*. Author manuscript. 2018 December 05.: p. 65–275.
18. Michael B. Blank, PhD, Seth S. Himelhoch, MD, MPH, Alexandra B. Balaji, PhD, David S. Metzger, PhD, Lisa B. Dixon, MD, MPH, Charles E. Rose, PhD, et al. A Multisite Study of the Prevalence of HIV With Rapid Testing in Mental Health Settings. *American Journal of Public Health*. 2014 December ; Vol 104(12).
19. Andrew Drury, Selena Gleadow-Ware, Sheila Gilfillan, Jen Ahrens. HIV and mental illness in Malawi and the neuropsychiatric sequelae of efavirenz. *Malawi Medical Journal*. 2018 March 2;: p. 40-45.
20. A.S. Dessauvague, A. Jörns-Presentati, A.-K. Napp, D.J. Stein, D. Jonker, E. Breet , et al. The prevalence of mental health problems in sub-Saharan adolescents living with HIV: a systematic review. *Global Mental Health*. : p. 1–13.
21. Patric Lundberg, Noeline Nakasujja, Seggane Musisi, Anna Ekéus Thorson, Elizabeth Cantor-Graae, Peter Allebeck. HIV prevalence in persons with severe mental illness in Uganda: a cross-sectional hospital-based study. *International Journal of Mental Health Systems*. 2013.
22. Moses K. Nyongesa , Paul Mwangi, Michael Kinuthia, Amin S. Hassan, Hans M. Koot, Pim Cuijpers. Prevalence, risk and protective indicators of common mental disorders among young people living with HIV compared to their uninfected peers from the Kenyan coast: a cross-sectional study. *BMC Psychiatry*; 2021.

23. Adebobola Bashorun, Patrick Nguku, Issa Kawu, Evelyn Ngige, Adeniyi Ogundiran, Kabir Sabitu, et al. A description of HIV prevalence trends in Nigeria from 2001 to 2010: what is the progress, where is the problem? *Pan African Medical Journal*. 2014; 18(Supp 1)(3).
24. Mary C. Smith Fawzi, ScD, Lauren Ng, PhD, Fredrick Kanyanganzi, MBA, Catherine Kirk, MPH, Justin Bizimana, MS, Felix Cyamatore, MD, MPH, et al. Mental Health and Antiretroviral Adherence Among Youth Living With HIV in Rwanda. *American Academy of Pediatrics*. 2016 October; 138(4.DOI: 10.1542/peds.2015-3235).

APPENDIX

DATA COLLECTING TOOL: DEMOGRAPHIC AND CLINICAL PROFILE OF HIV INFECTED PATIENTS WITH MENTAL DISORDERS ATTENDING NDERA NEURO-PSYCHIATRIC HOSPITAL/ HIV CARE UNIT

Questionnaire

Instructions: Tick [] and complete where it is applicable .

PART A: General information:

1. Age

Groups of age:

- Below 15 year []
- 15-25 years []
- 26-35 year []
- 36-45 years []
- 46-55 years []
- 56-65 years []
- Above 65 years []

2. Sex:

- Male []
- Female []

3. Place of residence (District):.....

4. Civil status:

- Single []
- Married []
- Separated []
- Divorced []
- Widowed []

5. Educational level:

- None []
- Primary school []
- Junior secondary school []
- Senior Secondary school []
- Vocational studies[]
- University: A1[] A0 [], Bachelor's degree[]
- Master's degree [] PHD[]
- Other []

6. Employment status:

- Employed []
- Un-employed []
- Retired []
- Student []
- Self employed []

PART B: Clinical information:

1. Diagnosis of HIV infection:

- Date of diagnosis (Positive HIV test):.....
- If married what is HIV status of his/her spouse? HIV+[] HIV-[]
- HIV infection stage:.....
- Current treatment:.....
- Current viral load.....
- Date of start of treatment:.....
- Adherence to treatment:
 - Good adherence []
 - Poor adherence []
 - Lost []

2. Diagnosis of comorbid psychiatric disorders according to DSM5:.....

- Age at onset of the first symptoms:.....

3. Other chronic comorbidity or comorbidities:

- Yes []
- No []

If yes, specify:.....

4. Is the patient still alive?

- Yes [] No []

If no what should be the cause of his/her death ?.....

Outil de collection des données: Questionnaire

Instructions: Cochez [] ou compléter si c'est applicable.

PARTIE A: Information générale

1. Age

Groupe d'âge:

- Moins de 15 ans []
- 15-25 ans []
- 26-35 ans []
- 36-45 ans []
- 46-55 ans []
- 56-65 ans []
- Plus de 65 ans []

2. Sexe:

- Masculin []
- Feminin []

3. Lieu de résidence (District):.....

4. Etat civil :

- Célibataire []
- Marié(e) []
- Séparé(e)[]
- Divorcé(e) []
- Vef(ve) []

5. Niveau d'éducation:

- N'a pas étudié []
- Ecole primaire []
- Etudes secondaires, tronc commun []
- Etudes secondaires supérieures []

- Etudes techniques []
- Université: A1 [], A0 [], Licence [] Maitrise [] PHD []
- Autres []

6. Emploi:

- Employé(e) []
- Chaumage []
- Pensionné(e) []
- Etudiant(e) []
- Privé(e) []

PARTIE B: Information clinique

1. Diagnostic de VIH:

- Date de diagnostic (Test de HIV positif):.....
- Si marié(e) quelle est la sérologie retrovirale du conjoint(e) HIV+[] HIV-[]
- Stade d'infection VIH:.....
- Traitement en cours:.....
- Charge virale récente:.....
- Date de début de traitement:.....
- Adhérence au traitement de VIH:
 - Bonne adhérence []
 - Adhérence pauvre []
 - Abandon

2. Diagnostic des comorbidités psychiatriques selon le DSM5.....

- Age a l'apparition des premier symptomes.....

3. Autres comorbidités chroniques:

- Oui []
- Non []

Si oui, specifier:.....

4. Le (La) patient (e) est encore en vie?

- Oui [] Non [] si non, quelle serait la cause de sa mort.....

Urupapuro rwo kwegeranya amakuru (Questionnaire)

Amabwiriza: Shyiraho aka kamenyetso [√] unuzuze ahari utudomo aho ubona bishoboka.

IGIKA CYA A: Amakuru rusange

1. Imyaka y'amavuko.....

Icyiciro cy'imyaka:

- Minsi y'imyaka 15 []
- Imyaka 15-25 []
- Imyaka 26-35 []
- Imyaka 36-45 []
- Imyaka 46-55 []
- Imyaka 56-65 []
- Hejuru y'imyaka 65 []

2. Igitsina:

- Gabo []
- Gore []

3. Aho atuye (Akarere):.....

4. Irangamimerere:

- Ingaragu []
- Arubatse []
- Ntabana n'uwo bashakanye []
- Yatandukanye n'uwo bashakanye []
- Umupfakazi []

5. Amashuri yize:

- Ntiyigeze yiga []
- Amashuri abanza []
- Amashuri yisumbuye, icyiciro cya 1 []
- Amashuri yisumbuye, icyiciro cya 2 []
- Amashuri y'imyaka []
- Kaminuza, icyiciro cya 1 [] cya 2 [] cya 3 [] cya 4 []

- Ibindi []
- 6. Akazi:
 - Afite akazi []
 - Nta kazi afite []
 - Ari muri pansiyu []
 - Ni umunyeshuri []
 - Arikorera []

IGIKA CYA B: Amakuru yerekeranye n’uburwayi

1. Ubwandu bw’agakoko gatera SIDA:

- Itariki yamenyeye ko yanduye:.....
- Niba yarashatse, uwo bashakanye ahagaze ate, yaranduye[] ntiyanduye[]
- Ikicro cy’ubwandu bwa SIDA umurwayi arimo:.....
- Imiti afata cy’ubwandu:.....
- Ingano ya virusi aheruka kugira mu maraso:.....
- Itariki yatangiriyeho imiti:.....
- Ubwitabire mu gufata imiti:
 - Arayifata buri gihe[]
 - Hari igihe ayihagarika
 - Yarayihagaritse burundu []

2. Uburwayi bwo mu mutwe afite ugendeye kuri DSM5.....

- Imyaka yari afite agira ibimenyetso bya mbere by’uburwayi.....

3. Hari izindi ndwara zidakira yaba afite:

- yego []
- oya []

Niba ari yego, zivuge:.....

4. Umurwayi aracyariho?

- Yego [] Oya []

Niba atakiriho, yaba yarishwe n’iki?.....