ECONOMIC BURDEN AND QUALITY OF LIFE OF MENTAL ILLNESS AMONG PATIENTS IN LOW DENSITY WARD, IN FEDERAL NEURO-PSYCHIATRIC HOSPITAL, USELU, EDO STATE

BY

NWANKWO ONYINYE
BMS1601911

DEPARTMENT OF NURSING SCIENCE
SCHOOL OF BASIC MEDICAL SCIENCES
UNIVERSITY OF BENIN,
BENIN CITY.

JANUARY, 2023

ECONOMIC BURDEN AND QUALITY OF LIFE OF MENTAL ILLNESS AMONG PATIENTS IN LOW DENSITY WARD, IN FEDERAL NEURO-PSYCHIATRIC HOSPITAL, USELU EDO STATE.

BY

NWANKWO ONYINYE
BMS1601911

DEPARTMENT OF NURSING SCIENCE, SCHOOL OF BASIC MEDICAL SCIENCES, AND COLLEGE OF MEDICAL SCIENCES.
UNIVERSITY OF BENIN,BENIN CITY,EDO STATE.

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF BACHELOR OF NURSING SCIENCE (B. NSC) SCHOOL OF BASIC MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY

JANUARY, 2023

DECLARATION

This is to declare that this research project titled "**ECONOMIC BURDEN AND QUALITY OF LIFE OF MENTAL ILLNESS AMONG PATIENTS IN LOW DENSITY WARD, IN FEDERAL NEURO-PSYCHIATRIC HOSPITAL, USELU, EDO STATE"** was carried out by **NWANKWO ONYINYE** is solely the result of my work except where acknowledged as being derived from other person(s) or resources

Matriculation Number: _____

DEPARTMENT OF NURSING SCIENCE, SCHOOL OF BASIC MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN **CITY**

SIGNATURE: _____

CERTIFICATION

This is to certify that the project is done by **NWANKWO ONYINYE** with matriculation number **BMS1601911**, a student of the Department of Nursing, School of Basic Medical Sciences, University of Benin, Benin city. This work was supervised by **MRS FELICIA .E. AMIEGHEME** and all corrections has been effected and approved for the award of **Bachelor of Nursing Science Degree**.

SIGNATURE:_____

NAME:MRS FELICIA .E. AMIEGHEME. DATE:_____

(Project Supervisor)

SIGNATURE:_____

NAME:DR (MRS) J.N. OKO- OSE DATE:_____

(Head of Department)

SIGNATURE:_____ DATE_____

EXTERNAL EXAMINER

ABSTRACT

Economic burden and quality of life of mental illness has helped defined the magnitude of their negative effects on the household, community and National economy. This study is aimed at assessing the economic burden and quality of life of mental illness among patients in low density ward, uselu Federal Neuro-psychiatric hospital, Benin-city.The Health Belief Model served as the theoretical study framework.The study used a descriptive cross sectional non experimental survey research design,the study was carried out among patients in low density ward in uselu Federal Neuro-psychiatric hospital, Benin-city.A sample size of 147 participants was determined using the Taro Yamane formula(N/1+N(e)² which comprises of mentally ill patients receiving treatment in low density ward in uselu Federal Neuro-psychiatric hospital, Benin-city. Convenient sampling technique was used in selecting the respondents into the study. The instrument for data collection was well structured questionnaire developed by the researcher and validated by supervisor, a psychiatric nurse and other local experts. It consisted of 33 well structured questions, divided into four(4)sections;A contains socio-demographic information of the respondents,B contained direct medical cost of mental illness incurred by patients and household,C contained the indirect medical cost of mental illness and D contained the impact of mental illness on patients quality of life. A 100% return rate was obtained. Data was analyzed using SPSS version 24.0 and descriptive statistics was used. A p value of $p<0.05$ was considered statistically significant. Ethical approval was obtained from the institution and participants were given informed consent to apprehend their signature. No statistically significant association existed between health insurance scheme and quality of life ($p>0.478$). This study assessed the economic burden and quality of life of mental illness among patients in low density ward in uselu Federal Neuro-psychiatric hospital, Benin-city. The result shows that majority of the respondents have a fair level of quality of life.Government and multinational agencies should take concerted efforts to ensure reduced cost of treatment of mentally ill patients.

Keywords: Economic burden, quality of life, mental illness,low density ward, and health insurance scheme

DEDICATION

This research project work is dedicated to God Almighty for his grace and protection through the period of this research and also to my beloved parents Mr and Mrs Basil Nwankwo for their love and support.

ACKNOWLEDGEMENT

Appraises, gratitude and thanks are to Almighty God for his provision of knowledge, aspirations and good health required to carry out this project and for making my little effort great.

I wish to express my sincere appreciation, heartfelt gratitude, profound respect and immense indebtedness to my project supervisor Mrs. Felicia.E. Amiegheme for her scholastic guidance, inspiration, constructive criticism and valuable suggestions during the entire period of this project work. My immense gratitude also goes to the Head of Department, Nursing Science, Dr (Mrs) Josephine Oko-Ose and to my academic advisor, Prof. Fidelis U. Okafor, Dr.(Mrs) Roselynd. E. Esewe, Dr. (Mrs) Juliana. A. Afemikhe, Dr. (Mrs) Christe A. Enuku, Dr. (Mrs) C . E. Omorogbe, Dr. T. A. Ehwarieme, Mrs Mary.A. Iniomor, Mrs H.E. Natufe, Mrs Sarah Bolaji, Mrs C. Edo-Osagie, Mrs E.N. Oyana, Mrs C. I. Elusoji, Rev. Sr. Joan .N. Chukwurah, Mrs R.L. Lawal, Mrs I.N. Orobiyi, Mrs V.C. Chegwe, Mrs A.S. Usoh-Irabor and non academic staffs and technologist and external examiners for the knowledge impacted on me.

My acknowledgement will not be complete if I do not acknowledge my respectable parents Mr and Mrs Basil Nwankwo and siblings whose assistance spiritually, morally and financially which are invaluable kept me going. I also wish to appreciate my priceless friends Uwa, Nyore,Sandra,Chidinma and Mr Micheal Eyeregba for their relentless efforts to make sure this project was a success.

TABLE OF CONTENTS

COVER PAGE	I
TITLE PAGE	II
DECLARATION	III
CERTIFICATION/APPROVAL PAGE	IV
ABSTRACT.	V
DEDICATION	VI
ACKNOWLEDGEMENT	VII
TABLE OF CONTENTS	VIII
LIST OF TABLE	X
LIST OF FIGURE	XI

CHAPTER ONE : INTRODUCTION

1.1. Background of the Study	1
1.2. Statement of Problem	3
1.3. Aim/Broad Objective	4
1.4. Objectives	4
1.5. Research Questions	4
1.6. Hypotheses	5
1.7. Significance of the Study	5
1.8. Scope of the Study/Delimitation	6
1.9. Operational Definition of Terms	6

CHAPTER TWO : LITERATURE REVIEW

2.1. Conceptual review of mental illness	8
2.2. Common types of mental illness	9
2.3. Causes/Risk factors of mental illness	13
2.4. Diagnosis and Treatment	16
2.5. Prevention and Control	20
2.6. Effects of mental illness on individuals and populations	20

2.7. Empirical Review 26
2.8. Theoretical Review 33

CHAPTER THREE : RESEARCH METHODOLOGY

3.1. Research Design 37
3.2. Research Setting 37
3.3. Target Population 38
3.4. Sampling Technique 39
3.5. Sample Size 39
3.6. Instrument for Data Collection 40
3.7Validity of instruments 40
3.8. Reliability of Instruments 40
3.9. Method of Data Collection 41
3.10. Method of Data Analysis ` 41
3.11.Ethical Consideration 42

CHAPTER FOUR: DATA PRESENTATION

4.1. Presentation of Data 44
4.2. Hypothesis Testing 52

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.1. Discussion of findings 53
5.2. Summary 55
5.4. Implication of findings to Nursing 56
5.3. Limitations of the study 57
5.5. Conclusion 57
5.6. Recommendation 57
5.7. Suggestions for further studies 58

REFERENCES **59**

APPENDICES 62

LIST OF TABLES

4.1. Demographic variables of respondents 44

4.2. Direct medical cost of respondents 46

4.3. Indirect medical cost of respondents 48

4.4. Quality of life of respondents 50

4.5 Association between health insurance scheme and quality of life 52

LIST OF FIGURES

Figure 2.1. Origin of health Belief Model (Rosenstock & Irwin 1974) 33

Figure 2.2 Factors of Health Belief Model 35

Figure 4.1. Quality of life of respondents 51

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Mental illness is an important public health issue and a major contributor to disabilities and deaths in the global burden of disease (Malik & Khan, 2016). It is a major public health issue and represents a significant burden of disease. The economic consequences of mental ill-heath are far greater than the general ill-health consequences. Based on the most complete and current data available mental and substance use disorders constituted 10.4% of the global burden of disease and were the leading cause of years lived with disability among all disease groups (Trautmann, Rehm & Wittchen, 2016). The incidence and prevalence of mental illness remain significantly higher in the developing world including Nigeria (Agboola et al, 2018).

Mental illness describes a diverse range of behavioral, psychological and low-prevalence conditions including eating disorders and severe personality disorder that causes either suffering or a poor ability to function in ordinary life altering mood, thinking and behavior (Doran & Kinchin, 2017). It is a class of conditions which incur a significant use of health care resources, lost productivity, and human suffering. It is a global disease that consumes resources. The cost of mental illness treatment globally is reported to be high. Records have it that developed countries spend more on mental illness treatment than developing countries; for example in Australia, National Mental Health Reports(2013) suggests that outlays by governments and health insurers on mental health services in 2010–11 totaled approximately $6.9 billion, representing 7.7% of all government health spending with an with an additional approximately $4.63 billion spent by the Australian Government on providing other support services for people with mental illness, including income support, housing assistance,

community and domiciliary care, and employment and training opportunities ((Doran & Kinchin, 2017). Common Mental disorders include anxiety, attention-deficit/hyperactive disorder, conduct disorder, depression, psychosis, bipolar disorder, eating disorder, schizophrenia and suicide with Major depressive disorder (MDD) being the largest contribution, accounting for approximately 40% of years lived with disability in this group (Trautmann, Rehm & Wittchen, 2016).

Mental health problems appear to be increasing in Africa. Between 2000 and 2015 the continent's population grew by 49%, yet the number of years lost to disability as a result of mental and substance use disorders increased by 52% (The Lancet Global Health, 2018). In 2015, 17·9 million years were lost to disability as a consequence of mental health problems. Such disorders were almost as important a cause of years lost to disability as were infectious and parasitic diseases, which accounted for 18·5 million years lost to disability. According to Duthé, Rossier, Bonnet, Soura and Corker, (2016), WHO in 2007 reported that, in developing countries especially Sub-Saharan Africa, Mental and substance use disorders accounts for 19% of all disability-associated burden of diseases. Owing to the fact that most mental illness are not easily detected in the early stages of the disease, when many are more easily treatable leading to progression into the critical stage (Duthé et al, 2016). The specific economic challenges relating to mental illness control in the developing world are exacerbated by other related phenomena; which include inadequate health systems infrastructure, scarcity of specialized skills (and specialists), high diagnostic and treatment costs, and the resulting inability to provide lengthy, complex personalized treatment regimens and follow-up care as necessary (Duthé et al, 2016).

In Nigeria provision of care for people with mental illness is grossly inadequate and supply of medication is not funded by the government (Agboola et al, 2018). Primary care for mental health in Nigeria is at best nascent due to years of neglect, low manpower and perhaps worsened by the

prevailing preference for spiritual or traditional care by people in the community. Modern health care services in this part of the world are concentrated in urban areas along with the healthcare professionals and facilities which further creates an imbalance of need and access (Agboola et al, 2018). Despite this, modern psychiatric hospitals are not readily patronized even by urban dwellers due to the stigma of mental illnesses and the high cost of care which affects their quality of life as the cost of treatment of the illness are usually paid for by affected individuals or their family. All these reflect the economic burden and quality of life of mental illness.

1.2 STATEMENT OF PROBLEM

There is dearth of evidence on the cost of treatment of various mental illnesses and the magnitude of their negative effects on the household, community and national economy at large (Agboola et al, 2018). In Nigeria, the health insurance coverage is still very low (5%) and mental illness treatment is not in the benefit package and there are no form of exemptions. Treatment of mental illness could be long-term especially those with major mental illness and it could be associated with high costs to the individual and the society at large (Agboola et al, 2018). This is further compounded by the fact that 40% of Nigerians live below poverty line of 1 dollar per day (National Bereau of Statistics, 2020). Little is known about the economic burden and quality of life of mental illnesses considering the magnitude of their negative effects on the individual, household, community and national economy at large.

In Federal Neuro-Psychiatric Hospital about 10 patients have had to sign against medical advice within 8 months as a result of their inability to cope with the cost of their investigations/treatment. Some of the patients have to forgone appointment due cost of drugs. Uselu federal Neuro-Psychiatric Hospital is a major Centre in Edo State, with facilities for screening and treatment.

Given the incidence of various mental illnesses and the national government decision to address it, a study of how households are affected by mental illness will aid in the formulation of policies that may help to prevent households from being pushed into poverty. Therefore, this study will be undertaken to determine the economic burden and quality of life of mental illness among patients in low density ward, in Federal Neuro-psychiatric hospital, uselu, Benin city.

1.3 AIM/BROAD OBJECTIVE OF STUDY

The aim of this study was to determine the Economic burden and quality of life of mental illness among patients in low density ward in Uselu Federal Neuro-Psychiatric Hospital, Benin city, Edo State.

1.4 OBJECTIVES

1. Determine the direct medical cost of mental illness incurred by patients and their households in Uselu federal Neuro-Psychiatric Hospital.
2. Assess the indirect medical cost of mental illness incurred by patients and their households in Uselu federal Neuro-Psychiatric Hospital.
3. Examine the impacts of mental illness on patient quality of life.

1.5 RESEARCH QUESTIONS

1. What are the direct medical costs incurred by patients and their households in Uselu federal Neuro-Psychiatric Hospital ?
2. What are the indirect medical cost of by patients and their households in Uselu federal Neuro-Psychiatric Hospital ?
3. What are the impacts of mental illness on patient quality of life ?

1.6 RESEARCH HYPOTHESES

The null hypothesis is denoted by HO and alternative hypothesis is denoted by H1. In carrying out the objectives of the study, the following hypotheses will be used:

1. HO: There is no significant association between health insurance scheme and patient quality of life.
2. H1: There is a significant association between health insurance scheme and patient quality of life.

1.7 SIGNIFICANCE OF THE STUDY

i. It will help substantiate the need to amend the act governing the National Health Insurance Scheme to make it compulsory and particularly for patients with mental illnesses.

ii. The findings of this study will help to reveal the direct and indirect costs of treatment borne by mentally ill patients and their household.

iii. The findings will serve as a tool to advocate for the inclusion of mental illness care into the National Policy Agenda and to source for support from both governmental and non-governmental bodies towards the management of various mental illnesses.

iv. It will provide a better understanding of the economic impact of the disease and challenge to health care providers towards rendering qualitative cost-effective care that will shorten the stay of patients in the hospital: and reduce the frequency of visits to the health care facility thereby reducing cost of health care of these patients.

v. The findings will serve as a tool to advocate for integration of mental health in primary healthcare. This will not only save resources but also improve the quality of life of the patient through timely and cost efficient management of mental illnesses.

vi. The findings will assist policy makers and other stake holders in decision making, particularly towards resource allocation and research funding.

1.8 SCOPE OF THE STUDY/DELIMITATION

The study focuses on the economic burden and quality of life of mental illness among patients in low density ward, in Federal Neuro-Psychiatric hospital,Uselu, Edo State.

The study was delimited to all those who had been diagnosed of mental illness and have been receiving treatments in low density ward in Uselu Federal Neuro-Psychiatric Hospital, Benin city, Edo State within the past one year. Both males and females within the ages of 18 years and above was studied. Out-patients and in-patients was also studied. Insignificant cost of mental illness was not included in this study.

1.9 OPERATIONAL DEFINITION OF TERMS

Economic Burden: refers to both medical and non-medical costs incurred by mentally ill patient in the management of their ailment. It is classified into direct and indirect costs.

Direct cost (financial cost): This has to do with cost related to investigations, diagnoses, treatment, admissions, follow up costs and travel cost.

Indirect cost: They are those things that will be forgone for the sake of this illness e.g. time spent travelling, waiting time in hospital, time spent out-of-work, time accompanying relative, time lost through premature death or premature retirement.

Mental illness: A wide range of conditions that affect mood, thinking and behavior.

Cause of mental disorder: Refers to action, phenomenon or a condition that gives rise to mental disorders.

Quality of life: This refers to the standard of health, comfort and happiness experienced by an individual and group.

Patient: A person who is Ill and undergoing treatment in a health facility.

Low density: A reduced level of mental illness in which the individual is alert and can expressed his or herself in an organized and descent manner.

Ward: A place where patients are nursed or receiving Treatment.

Health Insurance Scheme: Is an insurance that covers the whole or a part of the risk of a person incurring medical expenses

CHAPTER TWO

LITERATURE REVIEW

This chapter presents review of literatures relevant to this work on economic burden of mental illness. The literature will be reviewed under Conceptual, Empirical and Theoretical reviews.

2.1. CONCEPTUAL REVIEW OF MENTAL ILLNESS

Mental disorder, or illness, refers to a state of deviations from normal thoughts, reasoning, feelings, attitudes, and actions that are by their subjects, or by others, considered socially or personally dysfunctional and apt for treatment. It also refers to mental and emotional impairments; which comprises of mental retardation, organic brain disease, and learning disabilities (Tesfamariam et al, 2018). It is a major public health issue and represents a significant burden of disease. It is a disruptive and life-threatening experience that affects the patients and their significant others.

Mental illness can affect every race, and all ages; it has no respect for one's status. Mental disorders are among the most prevalent health problems affecting the adult population. The Global Burden of Disease Study 2015 (GBD 2015) estimated that seven of the top 25 causes of years lived with disability (YLD) globally were mental disorders, with major depressive disorder (MDD) ranked second and anxiety disorders ranked ninth (Gustavson, Knudsen, Nesvåg, Knudsen , Vollset & Kjennerud, 2018). Signs and symptoms presented depend on the type of mental illness. Some of the common signs and symptoms present include:

i. Confused thinking or reduced ability to concentrate
ii. Excessive fears or worries, or extreme feelings of guilt
iii. Extreme mood changes of highs and lows
iv. Withdrawal from friends and activities
v. Significant tiredness, low energy or problems sleeping

vi. Detachment from reality (delusions), paranoia or hallucinations

vii. Inability to cope with daily problems or stress

viii. Trouble understanding and relating to situations and to people

ix. Problems with alcohol or drug use

x. Major changes in eating habits

xi. Sex drive changes

xii. Excessive anger, hostility or violence

xiii. Suicidal thinking

2.2. COMMON TYPES OF MENTAL ILLNESS

Some of the common mental illnesses are:

1. **Depression:** This refers to a wide range of mental health problems characterized by the absence of a positive affect (a loss of interest and enjoyment in ordinary things and experiences), low mood and a range of associated emotional, cognitive, physical and behavioral symptoms (Kendrick et al, 2018). Distinguishing the mood changes between clinically significant degrees of depression (for example, major depression) and those occurring 'normally' remains problematic and it is best to consider the symptoms of depression as occurring on a continuum of severity. Depression is a significant contributor to the global burden of disease and affects people in all communities across the world. The World Mental Health Survey conducted in 17 countries found that about 1 in 20 people were reported to have an episode of depression in the year 2013 (Amiegheme, Adeyemo and Ikhimi, 2017). Common symptoms of depression include; significant weight loss when not dieting, or weight gain, sleeplessness or excessive sleepiness, psychomotor agitation or retardation, loss

of energy, feelings of worthlessness or guilt, reduced ability to concentrate, and reoccurring thoughts of death or suicide.

2. **Generalized anxiety disorder**: The essential feature of generalized anxiety disorder is excessive anxiety and worry (apprehensive expectation), occurring on more days than not for a period of at least 6 months, about a number of events or activities (Kendrick et al, 2018). The person with generalized anxiety disorder finds it difficult to control the anxiety and worry, which is often accompanied by restlessness, being easily fatigued, having difficulty concentrating, irritability, muscle tension and disturbed sleep (Kendrick et al, 2018). Some people with generalized anxiety disorder may become excessively apprehensive about the outcome of routine activities, in particular those associated with the health of or separation from loved ones. Some people often anticipate a catastrophic outcome from a mild physical symptom or a side effect of medication. Demoralization is said to be a common consequence, with many individuals becoming discouraged, ashamed and unhappy about the difficulties of carrying out their normal routines. GAD is often comorbid with depression and this can make accurate diagnosis problematic (Wittchen et al., 2017).
3. **Panic disorder:** People with panic disorder report intermittent apprehension, and panic attacks (attacks of sudden short-lived anxiety) in relation to particular situations or spontaneous panic attacks, with no apparent cause. They often take action to avoid being in particular situations in order to prevent those feelings, which may develop into agoraphobia (Breier et al., 2015). The frequency and severity of panic attacks varies widely. Situational triggers for panic attacks can be external (for example, a phobic object or situation) or internal (physiological arousal). A panic attack may be unexpected (spontaneous or uncued), that is, one that an individual does not immediately associate with a situational trigger

4. **Obsessive-compulsive disorder (OCD**): This is characterized by the presence of either obsessions or compulsions, but commonly both (Kendrick et al, 2018). An obsession is defined as an unwanted intrusive thought, image or urge that repeatedly enters the person's mind. Obsessions are distressing, but are acknowledged as originating in the person's mind and not imposed by an external agency. They are usually regarded by the individual as unreasonable or excessive. Common obsessions in OCD include contamination from dirt, germs, viruses, body fluids and so on.(Lochner & Stein, 2017). Compulsions are repetitive behaviors or mental acts that the person feels driven to perform. A compulsion can either be overt and observable by others, or a covert mental act that cannot be observed. m. Common compulsions include checking (for example, gas taps), cleaning, washing, repeating acts, mental compulsions (for example, repeating special words or prayers in a set manner), ordering, symmetry or exactness, hoarding/collecting and counting (Foa et al., 2016).
5. **Substance Abuse**:This is the indiscriminate use of drugs or a pattern of harmful use of any substance for mood altering purposes. It is a mental disorders that affects a person brain and behaviour, leading to a person's inability control their use of substance such as legal or illegal drugs, alcohol or medication.
6. **Post-traumatic stress disorder (PTSD):** PTSD often develops in response to one or more traumatic events such as deliberate acts of interpersonal violence, severe accidents, disasters or military action (Kendrick et al, 2018). Those at risk of PTSD include survivors of war and torture, of accidents and disasters, and of violent crime (for example, physical and sexual assaults, sexual abuse, bombings and riots), refugees, women who have experienced traumatic childbirth, people diagnosed with a life-threatening illness, and members of the armed forces, police and other emergency personnel. Symptoms include flashbacks in which the person acts

or feels as if the event is recurring; nightmares; and repetitive and distressing intrusive images or other sensory impressions from the event. Reminders of the traumatic event arouse intense distress and/or physiological reactions (Foa et al., 2018).

7. **Specific phobias**: A specific phobia is an unwarranted, extreme and persistent fear of a specific object or situation that is out of proportion to the actual danger or threat (Humphris et al., 2016). The fear and anxiety occur immediately upon encountering the feared object or situation and tend to lead to avoidance or extreme discomfort. The person with a specific phobia recognizes that the fear is excessive, unwarranted or out of proportion to the actual risk. Specific phobias result in significant interference with the activities of daily life (Kendrick et al, 2018).
8. **Schizophrenia**: this is described as a psychological disorder, that is characterized by disturbance in thought processes, perception and affect which result in severe deterioration of social and occupational functioning (Okolo et al., 2016). It is a complex multifaceted disorder that can take one of many forms. Symptoms of schizophrenia generally appear in the late adolescence or early adulthood although they may occur in middle or late adult life (Okolo et al., 2016). The premorbid personality usually indicates social and sexual maladjustment or schizoid or borderline personality characteristics. Examples are disorganized schizophrenia, catatonic schizophrenia, paranoid schizophrenia, undifferentiated schizophrenia, residual schizophrenia and schizo-affective disorder (Okolo et al., 2016).

2.3. CAUSES/RISK FACTORS OF MENTAL ILLNESS

1. **Biochemical factors:** Certain biochemical changes have been identified to be responsible for the cause of mental illness (Okolo et al., 2016). It has been discovered that the level of dopamine and serotonin concentration in certain individuals are responsible for their

breakdown. E.g in schizophrenic patients, the density of the dopamine receptors has been found to be increased in the nucleus. Also depressive illness is characterized by and may be low concentration of 5-hydroxytryptamine ta crucial sites in the brain (Okolo et al., 2016).

2. **Hereditary or genetic factor:** No definite statement can be made about the influence of hereditary on the development of psychiatric illness because similar psychiatric reactions among the members of the same family may be a response to the environmental factors within the family rather than hereditary. However the study of identical twins reared under different environmental conditions showed the convincing evidence of genetic role in the causation of psychiatric disorders (Okolo et al., 2016). E.g. In schizophrenia, the incidence is as high as 80%, while in manic depression is as high as 96%.
3. **Environmental factors:** The environment the individual lives in can affect his mental health, thereby making him mentally fit or otherwise (Okolo et al., 2016). For instance in children the action of erratic mothers, alcoholic fathers, over protective parents can predispose them to mental illness or make them to become maladjusted in later life. It is also believed that psychotic reactions among the same family members maybe a response to environmental factors within the family, for example when parents response to stress in a unusual way, their offspring also learn to respond in a similar way (Okolo et al., 2016).
4. **Interpersonal factors:** This refers to the relationship that individual develops with the significant others or persons in their environment (Okolo et al., 2016). Actually, the development of positive feelings is dependent on the kind of interpersonal relationship develop between the individual and the significant people in his environment during his early life. e.g. the early family relationship with father and mother influence the individual's ability to cope with problems in the adult life (Okolo et al.,2016).

5. **Sex related factors:** Certain psychiatric disorders are predominantly found in women (Okolo et al., 2016). For example puerperal psychosis, somatization and anorexia nervosa are exclusively found in women. This is because the different phase of a woman's reproductive life renders her vulnerable to emotional disturbance. E.g In peuparium a woman is more likely to become mentally ill, menopause she is more likely to present sleeplessness, excitability, depression and irritability and so on (Okolo et al., 2016).
6. **Circulatory factors:** Certain circulatory deficiencies such as arteriosclerosis and atherosclerosis especially of those supplying the brain can contribute to the cause of mental illness. The resultant effect of the above circulatory disorders can lead to atrophy thereby depriving some of the functional areas of the brain of adequate blood supply (Okolo et al., 2016).
7. **Head trauma/injury:** Brain injury or traumatic brain damage is one of the commonest problems to which human beings react with abnormal intelligence, epilepsy and some of abnormal behavior. Traumatic conditions to the brain may result in permanent damage and cause dementia (Okolo et al., 2016).
8. **Brain tumor:** Brain tumor is an organic condition which is often accompanied by a verity of both mental and physical symptoms depending on the personality of the individual affected, the type of tumor, size and location. As a result of the tumor pressing on the brain, smooth transmission of impulses become very difficult leading to abnormal behavior (Okolo et al., 2016).
9. **Constitutional factors:** This refers to that aspect of physique, personality and intelligence which are less rigidly fixed (Okolo et al., 2016). The ideals of constitution implies that there are more or less fixed disposition towards the development of certain characteristics but

whether these characteristics actually develops or not may be dependent on the factors outside the individual as certain physique has affinity for certain psychiatric illness. Personality trait which make an individual unique makes him react to situation differently E.g sensitive, schizoid, neurotic personality may react to situation with exaggerated anxiety while some absorbed and shake it off at fast (Okolo et al.,2016).

10. **Endocrine factors**: Endocrine gland together with involuntary system in harmony to regulate the activities and I influence the metabolism of the individual. Therefore any deviation from normal may manifest in abnormal symptoms. E.g overproduction adrenocorticotrophic hormone may produce psychiatric reactions in some individual (Okolo et al., 2016).
11. **Toxic substance:** Toxic substances both endo and sero-toxims are capable of causing disturbances to the brain function and producing psychiatric illness (Okolo et al, 2016). These substances include; alcohol, indian hemp, heroin, cocaine and so on. Sudden withdrawal of these substances will produce unwanted physical and psychological symptoms while prolonged excessive usage will cause psychological dependences and cerebral degeneration (Okolo et al., 2016).
12. **Infections:** infections are capable of causing mental disorders E.g encephalitis may cause specific pathology and may lead to both physical and psychological disorders depending on the causative organism, age and the personality (Okolo et al., 2016). Other infections includes; Hiv/Aid, syphilis and so on.

2.4. DIAGNOSIS AND TREATMENT

All mental health clinicians who diagnose psychiatric disorders use the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). The DSM-IV-TR describes all mental disorders, outlining specific diagnostic criteria for each based on clinical experience and research (Videbeck,

2011). A multi-axial classification system that involves assessment on several axes, or domains of information, allows the practitioner to identify all the factors that relate to a person's condition. According to Videbeck, (2011, P.3), these domains include:

i. Axis I is for identifying all major psychiatric disorders except mental retardation and personality disorders. Examples include depression, schizophrenia, anxiety, and substance-related disorders.

ii. Axis II is for reporting mental retardation and personality disorders as well as prominent maladaptive personality features and defense mechanisms.

iii. Axis III is for reporting current medical conditions that are potentially relevant to understanding or managing the person's mental disorder as well as medical conditions that might contribute to understanding the person.

iv. Axis IV is for reporting psychosocial and environmental problems that may affect the diagnosis, treatment, and prognosis of mental disorders. Included are problems with the primary support group, the social environment, education, occupation, housing, economics, access to health care, and the legal system.

v. Axis V presents a Global Assessment of Functioning, which rates the person's overall psychological functioning on a scale of 0 to 100. This represents the clinician's assessment of the person's current level of functioning; the clinician also may give a score for prior functioning (e.g., highest Global Assessment of Functioning in the past year or 6 months ago).

All clients admitted to a hospital for psychiatric treatment will have a multi-axial diagnosis using the DSM-IV-TR.

Treatment for mental illnesses depends on the type of mental illness that is affecting the individual. Some of the common treatment includes;

a. **Pharmacological therapy:** This refers to the use of drugs in the treatment of mental illness. Some of the commonly used drugs include;

   i. **Neuroleptics:** Drugs in this group produces calming effects by exerting their effects on the limbic system, hypothalamus and the reticular activating system (Okolo et al., 2016). These drugs act by blocking dopamine receptors in the brain thereby depressing the areas of the brain controlling activities and aggression (Okolo et al., 2016). These drugs are usually indicated for schizophrenia, bipolar affective disorders, senile confusional state and so on. Examples of these drugs are; phenothiazine, butyrophenone and thioxanthiene.

   ii. **Anxiolytics:** These drugs are used I the treatment of anxiety state hence called anxiolytics (Okolo et al., 2016).most of these drugs help in inducing sleep, relieve convulsion by relaxing the spacity of the skeletal muscles as well as relieving anxiety. Examples include benzodiazepines, babiturates and non-barbiturates. These drugs acts by potentiating the action of Gamma Amino Butyric Acid(GABA), which is an inhibitory neurotransmitter thereby inhibiting cortical stimulation (Okolo et al., 2016).

   iii. **Antidepressants**: these are drugs which increases nervous alertness, energy and drive. They alleviate depressive mood. Examples are selective serotonin reuptake inhibitors, mono amine oxidase inhibitor and tricyclic (Okolo et al., 2016).

   iv. **Anticonvulsants:** they are drugs used in the management of epilepsy and convulsions (Okolo et al., 2016). Examples are; phenonarbitone, phenytone sodium, carbamazepine and so on. These drugs acts by inhibiting ascending conduction of

impulses in the reticular formation which controls CNS arousal thereby decreasing the spread of seizure activity in the hypothalamus, thalamus and limbic system (Okolo et al., 2016).

v. **Anti parkisonian.** These drugs are used in the treatment of Parkinson disease (okolo et al., 2016). In Parkinson's disease, the corpus striatum and the related areas of the midbrain and cerebellum are depleted of a substance called dopamine. These result in imbalance of cholinergic activities resulting in some distressing symptoms like excessive salivation, muscle rigidity and spasm. Examples of these drugs are; bezhexol, biperidin, benztropine, orphenadrine, levodopa, carbidopa and amantadine.

b. Psychotherapy: Psychotherapy or communication therapy is a process of verbal communication between two or more people and a non-physical type of treatment involving psychological means (Okolo et al., 2016). It is the treatment of mental or emotional disorders through psychological rather than emotional methods. Psychotherapy can be done with individuals or with groups (Okolo et al., 2016). It is aimed at establishing a greater awareness of the patients inner self, his impact and interaction with the world at large, thus relieving distress, promoting efficiency of the mind and improving g the patients adaptation to the group and to the environment in which he lives for the mutual benefit of all concerned. Examples are individual therapy, insight, group, psychodrama and so on.

c. Behavioral therapy: This is defined as the attempt to alter human behavior and emotion in a beneficial manner according to the law of modern learning therapies. It is based on the theory that certain neurotic symptoms such as morbid fear and anxiety result from faulty learning (Okolo et al., 2016). This type of therapy may help people understand their morbid fear and

impulses and to learn new behavior and pattern which are more generally acceptable (Okolo et al., 2016).

d. **Electroconvulsive therapy (ECT):** This is a physical treatment in which there is induction of a convulsion by the passage of an electrical current through the brain via saline electrodes across the temples (Okolo et al, 2016). ECT mechanism of actions is not known but it has a bipolar action; it elates the mood for the depressed and calm the elated (Okolo et al, 2016). For depressive patients, ECT often is effective in cases where trials of a number of antidepressant medications do not provide sufficient relief of symptoms (Bhowmik, 2015). This procedure probably works, by a massive neurochemical release in the brain due to the controlled seizure. Often highly effective, ECT relieves depression within one to two weeks after beginning treatments in many people. After ECT, some patients will continue to have maintenance ECT, while others will return to antidepressant medications or have a combination of both treatments.

2.5. PREVENTION AND CONTROL

Clinical mental health counselors play a key role in promoting the mental and physical health of their clients (Miller, 2015). In addition to behavioral health interventions, population-based public health interventions can also create major improvements in mental health and reduce the burden of mental illness. Prevention of mental illness can take primary approach which is cost effective and involves identifying modifiable risk and protection factors, with strategies to minimize the former and enhance the latter. Primary prevention practices take place across diverse settings; funding to support these activities often comes from a wide range of sources. They include; physical fitness, avoid illicit use of substances, adequate diet and so on (Miller, 2015). Secondary Prevention interventions aim to reduce the progression of a mental health disorder, through screening, early identification, and brief

treatment (Miller, 2015). Primary care providers are encouraged or mandated to screen for behavioral health problems such as depression, anxiety, trauma, and substance abuse, greater numbers of individuals can be provided with timely care by a range of mental health professionals (Miller, 2015). Tertiary prevention focuses on improving functioning, minimizing the impact of an illness, and helping to prevent or delay further complications for people with mental health disorders and illnesses. Regardless of the approach used, emphasis on mental illness prevention should be placed on the risk factors and the prevalence of a mental illness type in a country based on their situation analysis.

2.6. EFFECTS OF MENTAL ILLNESS ON INDIVIDUALS AND POPULATIONS

The World Health Organization (WHO) recognizes the importance of psychological well-being, defining health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2013). In 2018, of the estimated 792 million people worldwide living with mental or behavioral disorder (roughly 10.7% of the global population), 178 million were drug or alcohol dependent, 20 million were diagnosed with schizophrenia, and 264 million suffered from depression (Ritchie & Roser, 2018).

Though most efforts to improve global mental health focus on improving care for individuals living with psychological disorders, the WHO stresses that a comprehensive definition of mental health should extend beyond the absence or presence of diagnosable psychological disorders to include "subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and recognition of the ability to realize one's intellectual and emotional potential" (Ritchie & Roser 2018). Although the following modules will focus on the public health implications of psychological disorders, mental health delivery programs should utilize this more inclusive definition of mental health.

While it is often overlooked as a public health issue due to a historical focus on communicable and more immediately life-threatening diseases (such as HIV/AIDS and malaria), mental health has profound effects on an individual's quality of life, physical and social well-being, and economic productivity (Ritchie & Roser, 2018). Because psychological disorders also affect families and communities of the mentally ill, understanding the effects of mental illness on individual patients and social systems is necessary for the improvement of mental health care systems and the development of effective mental health care delivery programs.

- **Effects of Psychological Disorders on the Patient**

Individuals with psychological disorders are at greater risk for decreased quality of life, educational difficulties, lowered productivity and poverty, social problems, vulnerability to abuse, and additional health problems. Education is often compromised when early-onset mental disorders prevent individuals from completing their education or successfully pursuing a career. Kessler et al. (2015) found that individuals with a psychological disorder were significantly less likely to complete high school, enter college, or receive a college degree, compared to their peers without mental illness. In addition, psychological disorders result in lowered individual productivity due to unemployment, missed work, and reduced productivity at work. A 2011 study found that five to six million U.S. workers aged 16 to 54 years "lose, fail to seek, or cannot find employment" due to mental illness. Of mentally ill individuals who were employed, mental illness was estimated to reduce their annual income by $3,500 to $6,000 (Marcotte & Wilcox-Gok, 2011). Reduced earnings and decreased employment potential put mentally ill individuals at an increased risk of poverty. As Lund et al. (2011) explain, mental illness and poverty "interact in a negative cycle", in which poverty acts as a risk factor for mental illness, and mental illness increases the risk that individuals will "drift into or remain in poverty". This negative cycle may also contribute to high rates of homelessness among

individuals with mental illness; the Substance Abuse and Mental Health Services Administration estimates that 20 to 25 % of the U.S. homeless population suffers from severe mental illness, while only 6% of the general U.S. population is severely mentally ill (National Institute of Mental Health, NIMH; 2019).

Psychological disorders can also contribute to other health problems and stressors. For instance, patients with comorbid depression (depression co-occurring with another health condition) are three times less likely to adhere to medical treatment regimens than are non-depressed patients. Furthermore, mentally ill individuals are vulnerable to low-quality care, abuse, and human rights violations, particularly in low-income areas with limited mental health care resources (WHO, 2013). Mentally ill individuals and their families may also experience significant social stigma and discrimination.

- **Effects of Psychological Disorders on Families/Caregivers**

The burden of caring for a mentally ill individual often falls on the patient's immediate family or relatives. Families and caregivers of individuals with psychological disorders are often unable to work at full capacity due to the demands of caring for a mentally ill individual, leading to decreased economic output and a reduction in household income. Loss of income and the financial costs of caring for a mentally ill person put these households at an increased risk of poverty. Family members may also experience significant and chronic stress due to the emotional and physical challenges of caring for a mentally ill family member (WH0, 2013). Family members of mentally ill individuals are faced with a considerable amount of emotional upheaval; parents are tasked with readjusting parental methods and expectations, while partners must exude a considerable amount of patience and empathy in order to provide appropriate care. These responsibilities may weigh heavily upon the family members, depending on individual experience and culture, and must be given equal

importance when discussing the residual effects of mental illness on society (American Psychological Association, 2015).

For instance, a 2016 study in Botswana investigated the experiences of families caring for a mentally ill family member. The study was conducted using in-depth interviews, focus group discussions, and field observations in Gaborone, the capital city, and Molepolole, a rural village. Although the extended family structure common in Botswana allowed for distribution of caregiver responsibilities, most families reported that lack of financial and medical resources at the family and community levels made it difficult and stressful to provide adequate care (Seloilwe, 2016). In South Africa, in-depth interviews with eight family caregivers in Limpopo revealed that many caregivers felt that their own physical and mental well-being was at risk, particularly when caring for a violent or destructive family member. Caregivers also reported social isolation due to their family member's mental illness, as caregiving duties prevented them from attending social events such as funerals and church services (Mavundla, Toth, & Mphelane, 2019). Particularly in rural areas lacking community resources for the mentally ill, the degree of satisfaction with family functioning (perception of "family burden") and the size of a caregiver's support network may significantly influence patient functioning, with increased support improving patient outcomes even in cases with high reported family burden (Kohn-Wood & Wilson, 2015).

- **Effects of Psychological Disorders on Society**

Although the specific societal impact of mental illness varies among cultures and nations, untreated mental illness has significant costs to society. In 2011, the WHO estimated that mental health problems cost developed nations between three and four % of their GNP (gross national product). A 2018 Lancet Commission report on mental health has stated that mental disorders are on the rise in every country in the world and will cost the global economy an estimated $16 trillion by 2030. The

economic cost is primarily due to early onset of mental illness and lost productivity, with an estimated 12 billion working hours lost due to mental illness every year (Patel, Saxena, Lund, Thornicroft, Baingana, & Bolton, 2018). In 2017, a Harvard Medical School study estimated that the United States lost more than 4 million workdays and experienced 20 million "work cutback days" (days of impaired workplace performance) due to mental illness (Kessler & Frank, 2017)

In addition, psychological disorders can exacerbate other public health issues, increasing the burden on national economies and impeding international public health efforts. According to a 2020 WHO report, around 13 million people inject drugs globally, and 1.7 million of them are living with HIV. Injectable drugs accounts for approximately 10% of HIV infections globally and 30% of those outside of Africa. Regional HIV prevalence rates are high in people who inject drugs in all parts of the world (up to 15.5% in East and Southern Africa) (WHO 2013). People who use drugs are also disproportionately affected by hepatitis C. The estimated global prevalence of hepatitis C in people who inject drugs is 67%. Further, worldwide, there are approximately 2.2 million HIV–hepatitis C virus co-infections of which more than half are in people who inject drugs. Mental illnesses are also associated with increased risk of non-adherence to medical regimens for other health conditions. For infectious diseases, improper or incomplete use of medication can lead to drug resistance, which may have "profound public health implications" for the global community (WHO, 2020). Furthermore, maternal depression may put infants at increased risk of low birth weight, childhood health problems, and "incomplete immunization", all of which are risk factors for childhood mortality (Patek, 2017).

Although the majority of individuals with mental illness do not exhibit dangerous behaviors, violence and incarceration among mentally ill individuals can place a significant financial and social burden on communities and nations. Worldwide, approximately 10 million people are incarcerated, and the WHO reports that the prevalence of mental health problems is "very high", especially among female

inmates (van den Bergh, Gatherer, Fraser, Moller, 2011). In the U.S. in the late 2000s, nearly one million adults with serious psychological disorders were incarcerated annually. A study in the Pinellas Country, Florida jail found that not having outpatient mental health treatment was significantly associated with increased risk of misdemeanor arrests and days incarcerated, and having a substance abuse disorder was associated with more days in jail, which is consistent with national incarceration statistics (Constantine, Andel, Petrila, Becker, Robst, Teague, Boaz & Howe, 2020). National data from the 2012 Survey of Inmates in Local Jails revealed that homelessness was significantly more prevalent among the inmate population as compared to the general U.S. adult population, and inmates who had been homeless were significantly more likely than were other inmates to have mental health and substance abuse problems. The authors posit that the relationship between homelessness and mental illness "may reflect limited access to mental health services, particularly inpatient services", due to deinstitutionalization in the United States, which has resulted in limited availability of psychiatric hospital beds, and strict criteria for hospitalization (Greenberg & Rosenheck, 2018). The WHO recommends that developing and developed nations adopt more comprehensive preventative and interventional mental health programs to reduce the negative effects of mental illness on patients and their local and global communities (WHO, 2013).

2.7. EMPIRICAL REVIEW

Direct medical cost of mental illness incurred by patients

According to another study on the Economic burden of mental disorders by Łaszewska, Wancata, Jahn and Simon (2020), it was discovered that Information about the scope of mental disorders (MDs), resource use patterns in health and social care sectors and economic cost is crucial for adequate mental healthcare planning. The study provides the first representative estimates about the overall utilisation of resources by people with MDs and the excess healthcare and productivity loss

costs associated with MDs in Austria. Data were collected in a cross-sectional survey conducted on a representative sample (n = 1008) between June 2015 and June 2016. Information on mental health diagnoses, 12-month health and social care use, medication use, comorbidities, informal care, early retirement, sick leave and unemployment was collected via face-to-face interviews. Generalised linear model was used to assess the excess cost of MDs. The healthcare cost was 37% higher ($p = 0.06$) and the total cost was twice as high ($p < 0.001$) for the respondents with MDs compared to those without MDs. Lost productivity cost was over 2.5-times higher ($p < 0.001$) for those with MDs. Participants with severe MDs had over 2.5-times higher health and social care cost ($p < 0.001$) and 9-times higher mental health services cost ($p < 0.001$), compared to those with non-severe MDs. The presence of two or more physical comorbidities was a statistically significant determinant of the total cost. Findings suggest that the overall excess economic burden on health and social care depends on the severity of MDs and the number of comorbidities. Both non-severe and severe MDs contribute to substantially higher loss productivity costs compared to no MDs. Future resource allocation and service planning should take this into consideration.

Also, according to another study on Economics and mental health by Knapp and Wong (2020) at Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science, London, UK; School for Social Care Research, National Institute for Health Research, UK; Department of Social Work and Social Administration, University of Hong Kong, Hong Kong, It was revealed that Economics and mental health are intertwined. Apart from the accumulating evidence of the huge economic impacts of mental ill-health, and the growing recognition of the effects that economic circumstances can exert on mental health, governments and other budget-holders are putting increasing emphasis on economic data to support their decisions. Here we consider how economic evaluation (including cost-effectiveness analysis, cost-utility analysis and related

techniques) can contribute evidence to inform the development of mental health policy strategies, and to identify some consequences at the treatment or care level that are of relevance to service providers and funding bodies. We provide an update and reflection on economic evidence relating to mental health using a lifespan perspective, analyzing costs and outcomes to shed light on a range of pressing issues. The past 30 years have witnessed a rapid growth in mental health economics, but major knowledge gaps remain. Across the lifespan, clearer evidence exists in the areas of perinatal depression identification-plus-treatment; risk-reduction of mental health problems in childhood and adolescence; scaling up treatment, particularly psychotherapy, for depression; community-based early intervention and employment support for psychosis; and cognitive stimulation and multicomponent carer interventions for dementia. From this discussion, we pull out the main challenges that are faced when trying to take evidence from research and translating it into policy or practice recommendations, and from there to actual implementation in terms of better treatment and care.

Furthermore, according to another study on the Economic burden of the therapeutic management of mental illnesses and its effect on household purchasing power by Agboola, Esan, Afolabi, Soyinka, Oluwaranti, and Adetayo at Federal Neuropsychiatric Hospital Aro, Abeokuta, Ogun state, Nigeria, It was discovered that cost or burden of illness studies for mental illnesses has helped define the magnitude of their negative effects on the household, community and national economy. Despite its many benefits, there is a paucity of these studies among Nigerians being managed for mental illnesses. This study was aimed at assessing the economic burden of mental illnesses and its effect on household purchasing power. The study was descriptive cross-sectional in design conducted among 284 out-patients with five categories of mental illnesses at the Neuropsychiatric Hospital, Aro recruited via a systematic sampling technique. Data collection was quantitative using a semi-structured interviewer-administered tool. Participants provided the actual direct costs and estimates of

indirect costs incurred during their most recent inpatient admission and their first clinic visit after discharge. Parametric and non-parametric statistical tests were conducted on the direct and estimated indirect costs respectively after testing them for normality using the Q-Q plot with statistical significance determined at $p<0.05$. Almost 96% of respondents finance their healthcare costs by themselves or their family with >50% earning <US$1.8 per day. Their mean direct and estimated indirect costs were (US $23.1±US$11.3 and US$15±US$28). There were no statistically significant differences in the mean direct and estimated indirect costs incurred by participants across the categories of mental illnesses. A significantly higher proportion of participants could afford the essential goods (88%) compared to those who could afford luxurious goods (29%) with $p<0.001$. The mean direct costs incurred by those who could afford the essential and luxurious goods were significantly higher than those who could not, following a t-test. The median estimated indirect costs incurred by those who could not afford luxurious goods differed significantly from those who could with the Mann Whitney U-test. Participants with mental illnesses face a high economic burden in managing their condition with the majority unable to afford luxurious goods. Affordability was also associated with incurring more direct costs.

Indirect medical cost of mental illness incurred by patients

According to a study by World Health Organisation (WHO, 2013) on the Economic burden of Mental Illness, the result shows that given the prevalence of mental health and substance-dependence problems in adults and children, it is not surprising that there is an enormous emotional as well as financial burden on individuals, their families and society as a whole. The economic impacts of mental illness affect personal income, the ability of ill persons – and often their caregivers – to work, productivity in the workplace and contributions to the national economy, as well as the utilization of treatment and support services. The cost of mental health problems in developed countries is

estimated to be between 3% and 4% of GNP. However, mental disorders cost national economies several billion dollars, both in terms of expenditures incurred and loss of productivity. The average annual costs, including medical, pharmaceutical and disability costs, for employees with depression may be 4.2 times higher than those incurred by a typical beneficiary. However, the cost of treatment is often completely offset by a reduction in the number of days of absenteeism and productivity lost while at work.

Also, according to another study on the Economic burden of mental disorders by Xu, Wang, Wimo and Qiu (2016), it was discovered that Mental disorders represent a major contributor to disease burden worldwide. It sought to quantify the national economic burden of mental disorders in China. Methods include a prevalence-based, bottom-up approach to estimate the economic costs of mental disorders in 2005–2013 in China. Prevalence data were derived from a national survey. Cost data were derived from the electronic health records of two psychiatric hospitals that consisted of 25,289 outpatients (10 %) and inpatients (90 %) who were diagnosed with a mental disorder. Cost items included direct medical costs, direct non-medical costs, and indirect costs. The results revealed that the total annual costs of mental disorders in China increased from $1,094.8 in 2005 to $3,665.4 in 2013 for individual patients, and from $21.0 billion to $88.8 billion for the whole society. The total costs of mental disorders in 2013 accounted for more than 15 % of the total health expenditure in China, and 1.1 % of China's gross domestic product. If the needs of the professional care for all patients with mental illnesses were fully met, the potential economic costs would have been almost five times higher than the actual estimated costs. The conclusions were mental disorders imposes a huge economic burden on individuals and the society in China. A nation-wide strategic action plan for preventing mental disorders and promoting mental health and well-being is in urgent need to reduce the individual and societal costs of mental illnesses.

Impact on Patient with Mental Illness on their Quality of Life

According to a study by Connell, Brazier, O'Cathain, Lloyd-Jones and Paisley (2012) on impact of mental illness on quality of life of people, it was identified that six domains: well-being and ill-being; control, autonomy and choice; self-perception; belonging; activity; and hope and hopelessness. Firstly, symptoms or 'ill-being' were an intrinsic aspect of quality of life for people with severe mental health problems. Additionally, a good quality of life was characterised by the feeling of being in control (particularly of distressing symptoms), autonomy and choice; a positive self-image; a sense of belonging; engagement in meaningful and enjoyable activities; and feelings of hope and optimism. Conversely, a poor quality life, often experienced by those with severe mental health difficulties, was characterized by feelings of distress; lack of control, choice and autonomy; low self-esteem and confidence; a sense of not being part of society; diminished activity; and a sense of hopelessness and demoralization.

Also, according to another study by Ryg (2016) on the impact of mental illness (Dementia) on patient quality of life, it was discovered that there is an increase in the amount of people becoming diagnosed with dementia. With the increase, a concern had been created in regards to maintaining a person's quality of life and intervention strategies to properly maintain their quality of life. The systematic review was set up using peer-reviewed articles published after 2001. The database SocINDEX was used to conduct the search for articles using the terms; "dementia and intervention strategies," "dementia and non-pharmacological interventions," "caregiver support," "dementia and medications," and "dementia and behavioral interventions." Out of these searches, 32 articles satisfied criteria for inclusion and were used in the final systematic review. Four themes emerged from the research synthesis regarding what intervention strategies can improve the quality of life for patients with dementia: 1) Validating the Patient's Sense of Self; 2) The Relationship between

Caregiver and Patient 3) The Impact on Patient's Daily Routine and 4) Depression and Mental Health. The research suggests the importance of including several factors and perspectives in intervention strategies with dementia patients. Moving forward, more research is required with patients with dementia to better understand the impact of interventions with this population. Exploring potential risks of pharmacological interventions as well as the connection between dementia and mental health are also important areas for further study.

Futhermore, according to another study by World Health Organisation (WHO, 2013) on the Economic burden of Mental Illness, it was discovered that as many as 450 million people suffer from a mental or behavioural disorder, nearly 1 million people commit suicide every year, four of the six leading causes of years lived with disability are due to neuropsychiatric disorders (depression, alcohol-use disorders, schizophrenia and bipolar disorder). One in four families has at least one member with a mental disorder, Family members are often the primary caregivers of people with mental disorders. The extent of the burden of mental disorders on family members is difficult to assess and quantify, and is consequently often ignored. However, it does have a significant impact on the family's quality of life. In addition to the health and social costs, those suffering from mental illnesses are also victims of human rights violations, stigma and discrimination, both inside and outside psychiatric institutions.

2.8. THEORETICAL REVIEW

This is based on Health Belief Model

The Health Belief Model

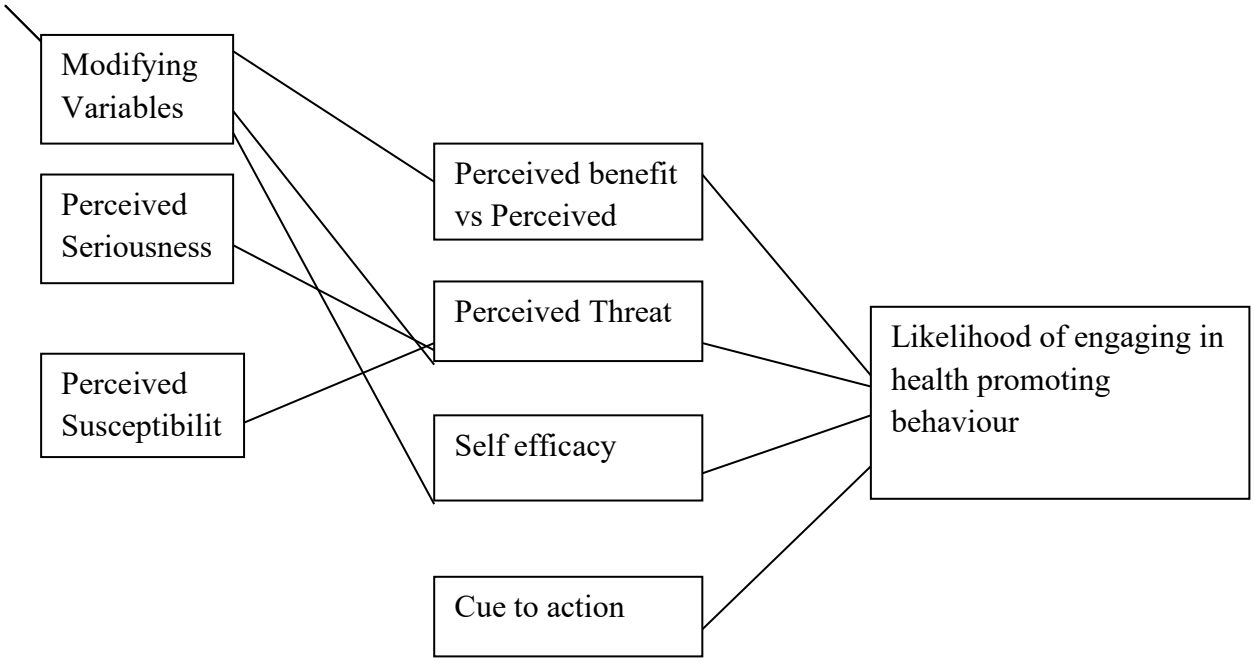

Figure 2.1: Origins of health belief model (Rosenstock & Irwin 1974)

The Health Belief Model (HBM) was developed in the early 1950s by social scientists at the U.S. Public Health Service in order to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease. Later uses of HBM were for patients' responses to symptoms and compliance with medical treatments. The HBM suggests that a person's belief in a personal threat of an illness or disease together with a person's belief in the effectiveness of the recommended health behavior or action will predict the likelihood that the person will adopt the behavior. The HBM derives from psychological and behavioral theory with the foundation that the two components of health-related behavior are;

1. The desire to avoid illness, or conversely get well if already ill
2. The belief that a specific health action will prevent, or cure, illness.

Ultimately, an individual's course of action often depends on the person's perceptions of the benefits and barriers related to health behavior. The Health Belief Model (HBM) is one of the most widely used conceptual frameworks for understanding health behavior. Developed in the early 1950s, the model has been used with great success for almost half a century to promote greater condom use, seat belt use, medical compliance, and health screening use, to name a few behaviors. The HBM is based on the understanding that a person will take a health-related action (i.e, Compliance to occupational therapy) if that person:

1. Feels that a negative health condition (i.e mental illness) can be avoided,
2. Has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e adhering to occupational therapy to prevent complications of mental illness).
3. Believes that he/she can successfully take a recommended health action (i.e he/she can take anti-hypertensive drugs and with confidence).

The Health Belief Model is a framework for motivating people to take positive health actions that uses the desire to avoid a negative health consequence as the prime motivation. For example, HIV is a negative health consequence, and the desire to avoid HIV can be used to motivate sexually active people into practicing safe sex. Similarly, the perceived threat of a social withdrawer can be used to motivate a person with mental illness into engaging more in occupational therapy often and adhere strictly to their medication. It's important to note that avoiding a negative health consequence is a key element of the HBM. For example, a person might increase vocational skills to look good and feel better. That example does not fit the model because the person is not motivated by a negative health outcome — even though the health action of getting more vocational skills is the same as for the

person who wants to avoid a mental illness. Health: A Guide for Health Promotion Practice" (1997), presents definitions and applications for each of the six key concepts.

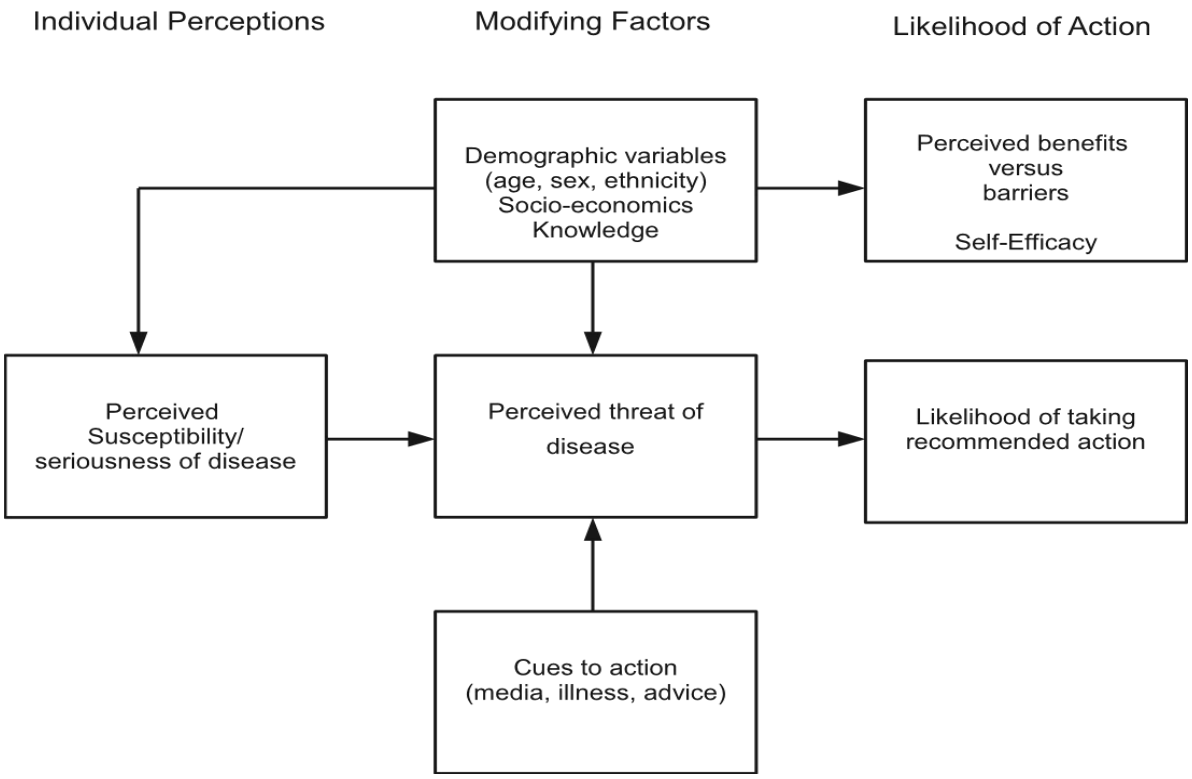

Figure 2.2: Factors of Health belief model

Applications to the study

The health belief model has been used to develop effective interventions to change health-related behaviors by targeting various aspects of the model's key construct (Christopher, 2010).

Perceived severity: The main objectives of this study is to determine the economic burden of mental illness among mentally ill patients receiving treatment in Uselu Federal Neuro-Psychiatric Hospital, Edo State.

Substance abuse poses several complications that may threaten an individual's health, this complications can be avoided if the patient's knowledge of substance abuse is positive as

complication may occur as a result of non-compliance to safety tips and avoidance of abusive substance.

Perceived benefits: According to this study, knowledge (on substance abuse) towards their health is determined by the benefit they get from engaging in the practices. If compliance to their therapeutic regimen put them at the peak of their health then the rate of compliance is highly understood.

Perceived severity: Medical imaging may pose some serious medical complications that may threaten an individual's health, this complications can be avoided if the patient's knowledge of radiation safety is positive as complication may occur as a result of non-compliance to safety measures..

Perceived benefits: According to this study, patient's (undergoing medical imaging) knowledge towards their health is determined by the benefit they get from engaging in the practices. If compliance to their therapeutic regimen put them at the peak of their health then the rate of compliance is highly understood.

Perceived barrier: As indicated in this study, various factors that affects compliance were stated and some respondents concurred that some of those factors hindered their attitude towards their health (compliance). Barriers are obstacles that promote negative knowledge towards their health and this should be dealt with and reduced to the minimal level.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter was discussed under the following subheadings: Research design, Research setting, Target population, Sample size, Sampling technique, Instrument for data collection, Validity of instruments, Reliability of instruments, Method of data collection, Method of data analysis and Ethical Consideration.

3.1. RESEARCH DESIGN

This study was aimed at assessing the Economic burden and quality of life of mental illness among patients in low density ward in Uselu Federal Neuro-Psychiatric Hospital, Benin city, Edo State. The descriptive cross sectional non-experimental survey research design was adopted for this study because it helped the researcher get adequate information regarding the research problem.

3.2. RESEARCH SETTING

This study was carried out among mentally ill patients in low density ward. It aimed at assessing the Economic burden and quality of life of mental illness among patients in low density ward, in Federal Neuro-Psychiatric Hospital, Uselu,Benin city, Edo State.

The Federal Neuro-Psychiatric Hospital, Uselu, is a scheduled Parastatal of the Federal Ministry of Health. The Psychiatric Hospital, Benin came into being in 7th December, 1964 by the mid-western region (Bendel State, now Edo State). In October, 1975 the Federal Military Government took over the hospital from the then Bendel State Government. When an Interim Management board for Psychiatric Hospitals under the Federal Ministry of Health was inaugurated in 1977, the name Nervous Diseases Clinic, Uselu, as it was then called changed to Psychiatric Hospital, Uselu, Benin City, by Decree No. 42 of 1979 which established the Psychiatric Hospitals Board. The hospital is made of seven departments. They include: Clinical Services, Administration, Nursing Services,

Pharmacy, School of Nursing, Accounts and Audit. Some of these departments (Administration and Clinical Services) are further subdivided into units: maintenance, Security, catering, Health records, Laboratory, Social welfare, Occupational therapy, Library and Store. These departments render the following services:

- Conduct clinical investigations of mental related cases
- Carry out mental and physical examinations and findings
- Counselling of the persons who have mental related symptoms
- Administration of drug to patients
- Carry out radioactive services (X-Ray)
- Training of medical students who want to specialise in psychiatry
- Provides psychological advices on disorder resulting from general medical conditions (Organic brain Disorder etc.

3.3. TARGET POPULATION

The target populations for this study consist of 200 respondents which comprises of mentally ill patients receiving treatments in low density ward in Uselu Federal Neuro-Psychiatric Hospital, Benin city, Edo State.This target population was chosen because they meet the criteria to be subjects of the research study.

3.4. SAMPLING TECHNIQUE

The researcher used convenient sampling technique in selecting the respondent into the study among mentally ill patients receiving treatment in Uselu Federal Neuro-Psychiatric Hospital, Edo State.

Convenient sampling technique is a non-probability method in which the researcher is at will to choose the most conveniently and economically available persons or objects as sample for the study, that is, according to who is available in no particular order. The researcher chose this method because the respondents are always not available at the same time, therefore the instruments was conveniently distributed to the available respondents. The researcher selected whosoever was closest and easiest. The sample size was selected among mentally ill patients receiving treatment in low density ward, in Federal Neuro-Psychiatric Hospital, Uselu, Benin city, Edo State.

3.5. SAMPLE SIZE

The sampling size was the numbers of subjects or participants required and to which the study findings was generalized.

A sample size of 147 patients was determined using the formula; $n = \frac{N}{1+N(e)^2}$

By (Taro Yamane,1967).

Where;

n = required sample

N = total population (sample frame)

e = error of tolerance which is 0.05 at 95% confidence level

1 = constant (Appendix 1)

$$n=\frac{200}{1+200(0.05)^2}$$

$$n=\frac{200}{1+200(0.0025)}$$

$$n=\frac{200}{1+0.5}$$

$$n=\frac{200}{}$$

1.5

n=133.3

In order to cater for attrition or non response, 10% provision was made i.e

10% Attrition=13.3

Minimum sample size=133.3+13.3=146.6

n=147patients approximately

3.6. INSTRUMENT FOR DATA COLLECTION

Structured questionnaire was the instrument used for data collection for this study.

The items was constructed in a close-ended form where the respondents have to tick appropriately the option that suits their best knowledge, with the last Section in an open ended Yes/No format. The questionnaires will be divided into section A, B, C and D to address the research questions under investigation. Section A contained demographic information of the respondents, while section B, C and D contained item statements related to the research questions raised to guide the study.

3.7. VALIDITY OF INSTRUMENTS

Validity refers to the degree to which a research instrument measures what it intends to measure (Jesse, 2012). The questionnaire adopted was properly organized, structured and simplified by the researcher under the guidance of the supervisor, a psychiatric nurse,expert in Biostatistics and other local experts, before it was distributed.The questionnaire measured what it was supposed to measure and this ensured its validity.

3.8. RELIABILITY OF INSTRUMENTS

Reliability refers to the degree to which assessment tool produces stable and consistent result (Davidson, 2011). According to Jessen(2012), the reliability of a measuring tool can be assessed in

various ways. A reliable instrument is one that can produce the same results if behaviour is measured again by the same scale (Davidson, 2011).

A pilot study was carried out and then tested to test the reliability of the questions by administering same questionnaire to 15 (10% of the total sample size) mentally ill patients receiving treatment in Psychiatric ward, University of Benin Teaching Hospital (UBTH), Edo state. The Cronbach Alpha realizability technique was employed in this study. Reliability was upheld by Using the same instrument to collect data from the respondents and clarifications was done so that they did not misunderstand the items in the questionnaire. In this study, the reliability testing was carried out such that 15 questionnaires were distributed to UBTH psychiatric ward not selected for this study and their responses was analysed for reliability.The Cronbach Alpha value greater than 0.6 was considered reliable . The coefficient of reliability obtained by section(B, C and D)0.773,0.766 and 0.821, the result falls between a correlation coefficient of 0.6 - 0.9, it showed that the instrument was reliable.

3.9. METHOD OF DATA COLLECTION

The Researcher self-administered 147 well-structured questionnaires containing questions relating to this research study to sample survey at Uselu Federal Neuro-Psychiatric Hospital, Edo state, while responses (data) being filled out in the questionnaire was formally and immediately gathered as the respondents was guided on how to answer the questions.The distribution and collection of filled questionnaires from the respondents took place from June to August, 2021.

3.10. METHOD OF DATA ANALYSIS

Data analysis is a mechanism for reducing and organizing data to produce findings that requires interpretation by the researcher(Jessen, 2012). All data was coded,entered and analysed using Statistical Package for Social Sciences (SPSS) version 26.0 spread sheet. Data was presented using

frequency and percentage in tables. Hypotheses testing was tested using Chi- square test of association, Students t-test to compare mean differences. The level of significance was set at $p<0.05$.

3.11. ETHICAL CONSIDERATION

The Ethical principle of research include certain requirements for the researcher. The research information given by the participants, voluntary and autonomous participation and the possibility to withdraw at anytime they wish(Polit & Hungter 2014 Pp 416-417).

The principle of voluntary participation, maintenance of anonymity and confidentiality was maintained throughout the study. The respondents were not forced to participate in the study and their views and interests was handled with utmost confidentiality. Letter of introduction and written permission to carry out this study was obtained from the Ethical committee of Federal Neuro-psychiatric hospital,uselu Benin city, Edo State. A written consent was given to the participants which entailed participants appending his/her signature in a consent form, the purpose and benefits of this study was explained to the participants to obtain their inform consent.

The data was used strictly for the purpose of this study. No falsification of results and authors works used was referenced.

CHAPTER FOUR

RESULTS PRESENTATION

Table 4.1: Demographic characteristics of respondents

Attributes	Frequency	Percentage
Sex		
Male	98	67.1
Female	49	32.9
Age		
Less than 30 years	38	26.0
30-39 years	46	31.5
40-49 years	32	21.2
50-59 years	18	12.3
60 years and above	13	8.9
Marital status		
Single	44	30.1
Married	54	37.0
Divorced	42	28.1
Widowed	7	4.8
Educational qualification		
No formal education	13	8.2
Primary	22	15.1
Secondary	54	37.0
Tertiary	58	39.7
Ethnicity		
Bini	44	13.7
Esan	37	25.3
Hausa	15	10.3
Igbo	25	17.1
Yoruba	21	30.1
Others	5	3.4
Employment status		
Employed	32	21.9
Unemployed	33	21.9
Retired	12	8.2
Self-employed	59	40.4
Schooling	11	7.5
Religion		
Christian	90	61.6
Muslim	48	32.2
Others	9	6.2
Place of residence		
Rural	34	22.6

Urban	65	44.5
Semi urban	48	32.9
Living arrangements		
Alone	54	36.3
With parents	34	23.3
With spouse	50	34.2
With others	9	6.2
Health insurance scheme		
Yes	38	25.3
No	109	74.7

Table 4.1 shows demographic data of respondents. Ninety-eight (67.1%) were males, 49(32.9%) were females, most respondents 46(31.5%) were 30-39 years, majority 54(37%) were married, 58(39.7%) had tertiary education, 44(30.1%) were Bini's, 59(40.4%) were self-employed, 90(61.6%) were Christians, 65(44.5%) lived in urban arears, 54(36.3%) lived alone, 109(74.9%) had no health insurance scheme.

4.1 Answers to Research Questions

Table 4.2: Direct Medical Cost

	Frequency	Percentage
Type of mental illness, please specify		
Depression	35	24.0
Substance abuse	29	19.2
Post-traumatic stress disorder	22	15
Disorganized schizophrenia	9	6.2
Peuperium psychosis	8	5.5
Others	44	30.1
Duration of illness since onset		
Less than 6 months	40	27.4
Within 1 year	39	26.7
Within 2-3 years	24	16.4
Within 4-5 years	16	10.3
More than 5 years	28	19.2
How long have you been receiving treatment for mental illness		
Less than 6 months	51	34.9
Within 1 year	27	18.5
Within 2-3 years	26	17.8
Within 4-5 years	18	11.6
More than 5 years	25	17.1
How often do you come for check-up appointment		
Weekly	64	44.1
2 Weekly	50	34.5
4 Weekly	24	15.9
6 Weekly	4	2.8
8 Weekly	4	2.8
Cost incurred for your treatment monthly in current health care facility in naira		
Less than 50,000	3	1.4
50,000-100,000	3	2.1
100,000-150,000	80	18.5
150,000-200,000	27	54.8
More than 200,000	34	23.3
Cost incurred for test and radiological imaging monthly in current health care facility		
Less than 50,000	46	31.5
50,000-100,000	63	42.5
100,000-150,000	19	13.0
150,000-200,000	15	10.3
More than 200,000	4	2.7
Currently involved in alternative treatment		
Yes	93	63.0
No	54	37.0
Cost incurred for your treatment monthly in current health care		

facility in naira		
Less than 50,000	38	40.0
50,000-100,000	16	16.8
100,000-150,000	20	20.0
150,000-200,000	16	16.8
More than 200,000	6	6.3

Table 4.2 shows direct medical cost of mental illness incurred by patients and household. Most commonly reported mental illness by 35(24%) was depression, 40(27.4%) reported their duration of illness was less than 6 months, 51(34.9%) have been receiving treatment less than 6 months, 64(44.1%) came for check-up appointment weekly, majority 80(54.8%) have incurred N100,000-150,000 for their monthly treatment in the health facility, 63(42.5%) have incurred N50,000-100,000 for test and radiological imaging monthly in current health care facility, 93(63%) reported they were currently involved in alternative treatment, 38(40%) reported they incurred less than N50,000 monthly for alternative treatment.

Table 4.3: Indirect Medical Cost

	Frequency	Percentage
Days of absence from work in the past one month		
Less than 10 days	42	28.1
10-15 days	48	32.9
15-20 days	15	10.3
Above 20 days	42	28.8
Employment status of the person that accompanies you for treatment regularly		
Business	57	39.0
Civil servant	14	9.6
Driver	13	8.9
Nurse	24	15.8
Self-employed	34	23.3
Others	5	3.4
Relationship with the individual above		
Parent	40	27.4
Colleagues	4	2.1
Spouse	43	29.5
Relatives	50	34.2
Friends	7	4.8
Others	3	2.1
Waiting time to see medical practitioner on appointment date		
Less than 20 mins	34	23.3
20-40 mins	13	8.2
40-60 mins	30	20.5
Above 1 hour	70	47.9
Cost of care, time and medical services monthly in current health care facility in naira		
Less than 50,000	2	1.4
50,000-100,000	19	13.1
100,000-150,000	42	28.3
150,000-200,000	50	34.5
More than 200,000	33	22.8

Table 4.3 shows indirect medical cost of mental illness incurred by patients and household. It was reported by 48(32.9%) that they have been absent from work between 10-15 days, 57(39%) reported the person that accompanied them for treatment regularly was into business, 50(34.2%) reported the individual who accompanied them was their relative, 70(47.9%) reported waiting time to see medical

practitioner on appointment date was above an hour, 50(34.5%) reported that cost of care, time and medical services monthly was N150,000-200,000.

Table 4.4: Quality of Life of respondents

	Strongly disagree	Disagree	Agree	Strongly agree	Mean	Remark
On the whole I am satisfied with myself	92(63.0)	13(8.9)	22(15.1)	19(13.0)	1.78	Negative
At times I think I am no good at all	43(29.5)	52(35.6)	37(25.3)	14(9.6)	2.15	Negative
I feel that I have a number of good qualities	79(54.1)	45(30.8)	17(11.6)	5(3.4)	1.64	Negative
I am able to do things as well as most other people	80(54.8)	46(31.5)	16(11.0)	4(2.7)	1.62	Negative
I feel I do not have much to be proud of	32(21.9)	31(21.2)	61(41.8)	22(15.1)	2.50	Positive
I certainly feel useless at times	26(17.8)	43(29.5)	43(29.5)	34(23.3)	2.58	Positive
I feel that I am a person of worth, at least on an equal plain with others	75(51.4)	32(21.9)	21(14.4)	18(12.3)	1.88	Negative
I wish I could have more respect for myself	77(52.7)	52(35.6)	12(8.2)	5(3.4)	1.62	Negative
All in all, I am inclined to feel that I am a failure	21(14.4)	18(12.3)	60(41.1)	47(32.2)	2.91	Positive
I take a positive attitude toward myself	76(52.1)	43(29.5)	16(11.0)	11(7.5)	1.74	Negative

Table 4.4 shows the impact of mental illness on patient quality of life. On the whole I am satisfied with myself had a mean of 1.78, at times I think I am no good at all had a mean of 2.15, I feel that I have a number of good qualities had a mean of 1.64, I am able to do things as well as most other people had a mean of 1.62, I feel that I am a person of worth, at least on an equal plain with others had a mean of 1.88, I wish i could have more respect for myself had a mean of 1.62, I take a positive attitude toward myself had a mean of 1.74. From the above stated means which were not significant at 2.5 it indicates that mental illness negatively affected respondent's quality of life.

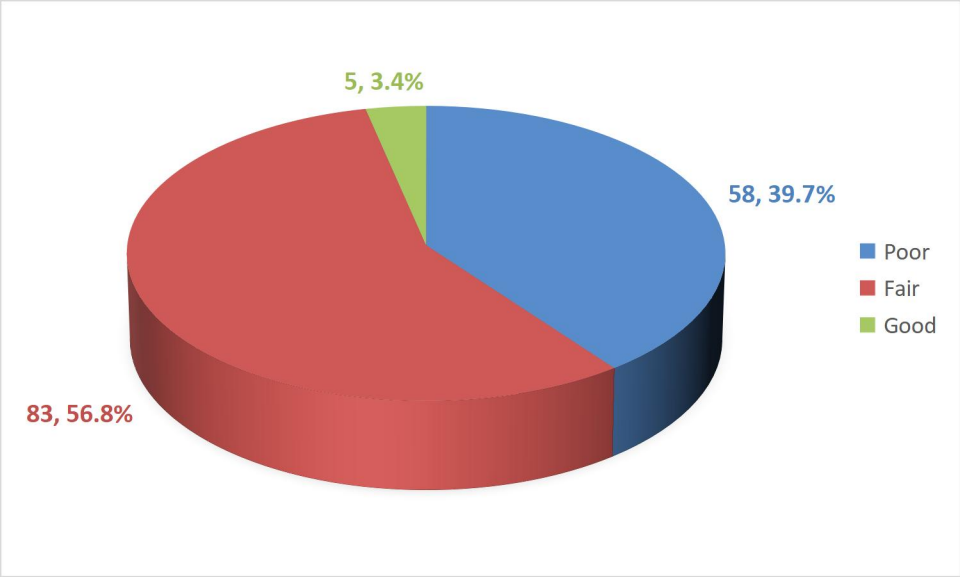

Figure 4.1: Quality of Life of respondents

Figure 4.1 gives a summary of respondent's quality of life, most respondents 56.8% had a fair level of quality of life,39.7% had a poor level of quality of life while minority 3.4% had a good level of quality of life.

4.2 Hypothesis Testing

Hypothesis One: There is no significant association between health insurance scheme and quality of life

Table 4.5: Association between health insurance scheme and quality of life

	Poor	Fair	Good	χ^2	p
Health insurance scheme					
Yes	12(32.4)	23(62.2)	2(5.4)	1.477	0.478
No	46(42.2)	60(55.0)	3(2.8)		

Table 4.5 shows the association between health insurance scheme and quality of life. It shows that there is no significant association ($p>0.05$) between access to health insurance and quality of life of the respondents. We therefore accept the null hypothesis.

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter provides the discussion of findings in accordance to the stated objectives and hypothesis, implications for nursing, limitations of the study, summary, conclusion, recommendation and suggestion for further studies.

5.1 Discussion of Findings

Direct medical costs

Findings of this study shows that the most commonly reported mental illness by 35(24%) was depression, 40(27.4%) reported their duration of illness was less than 6 months, 51(34.9%) have been receiving treatment less than 6 months, 64(44.1%) came for check-up appointment weekly, majority 80(54.8%) have incurred N100,000-150,000 for their monthly treatment in the health facility, 62(42.5%) have incurred N50,000-100,000 for test and radiological imaging monthly in current health care facility, 92(63%) reported they were currently involved in alternative treatment, 38(40%) reported they incurred less than N50,000 monthly for alternative treatment.

In relation to the present study the research done by Zhang, Sun, Zhang, Zhang, and Chen (2018) in China revealed that the average annual total direct medical costs per patient was 41,972.4 Chinese Yuan (CNY) ($6852.5). The inpatient costs remained as the key component of total medical costs. Similarly, a study carried out in the United States by Cloutier, Aigbogun, Guerin, Nitulescu, Ramanakumar, Kamat, and Henderson (2016) found that the economic burden of schizophrenia was estimated at $155.7 billion ($134.4 billion-$174.3 billion based on sensitivity analyses) for 2013 and included excess direct health care costs of $37.7 billion (24%).

Indirect medical costs

Evaluation of indirect medical costs among respondents showed that 48(32.9%) have been absent from work between 10-15 days, 57(39%) reported the person that accompanied them for treatment regularly was into business, 50(34.2%) reported the individual who accompanied them was their relative, 70(47.9%) reported waiting time to see medical practitioner on appointment date was above an hour, 50(34.5%) reported that cost of care, time and medical services monthly was N150,000-200,000. In contrast, a study by Agboola, Esan, Afolabi, Soyinka, Oluwaranti, and Adetayo (2018) in Nigeria revealed that the minimum and maximum estimated indirect costs were ₦1000 (US$2.7) and ₦90,000 (US$ 240) respectively. The mean estimated indirect costs were (₦5,626.80 (US$ 15) ± ₦10, 511.80 (US$ 28) S.D) while the median estimated indirect costs were (₦1500 (US$4) with ₦1500 (US$ 4) inter-quartile range). When the median estimated indirect costs across the various disease categories were ranked and compared, it was found not to be statistically significant. Similarly, indirect costs was found to be of $117.3 billion (76%) in the United States by Cloutier, Aigbogun, Guerin, Nitulescu, Ramanakumar, Kamat, and Henderson (2016).

Impacts of mental illness on patient quality of life

In this study, most respondents had a fair level of quality of life, some had a poor level of quality of life while few had a good level of quality of life. A 2016 study in found that although the extended family structure common in Botswana allowed for distribution of caregiver responsibilities, most families reported that lack of financial and medical resources at the family and community levels made it difficult and stressful to provide adequate care (Seloilwe, 2016). In South Africa, caregivers reported social isolation due to their family member's mental illness, as caregiving duties prevented them from attending social events such as funerals and church services (Mavundla, Toth, &Mphelane, 2019). Particularly in rural areas lacking community resources for the mentally ill, the degree of

satisfaction with family functioning (perception of “family burden”) and the size of a caregiver’s support network may significantly influence patient functioning, with increased support improving patient outcomes even in cases with high reported family burden (Kohn-Wood & Wilson, 2015).

Results from this research shows that 109(74.7%) have no health insurance scheme while 38(25.3%) have health insurance scheme and also the result from the hypothesis shows that there is no significant association between health insurance scheme and quality of life. According to Owumi, B.E.,Omorogbe, C.E and Raphael,S.C (2013). Findings revealed a high level of awareness of the scheme among the employees while employees perceived their health status as good following the usage of the health care service under the scheme, another study done by Odo, Emmanuel and Ukawuilulu, John Obioma(2019) in Abuja, Nigeria revealed that National Health insurance scheme has impacted positively on the health status of civil servants in Abuja and similarly,a study carried out in Ethiopia by Gebru and Lentiro(2018) found out that there was a positive impact on insured patients compared to uninsured patients. In contrast to this study which states that there is no significant association between health insurance scheme and patient quality of life due to the following reasons; Firstly,the most of the patients are not insured due to lack of awareness; Secondly,they are mentally ill patients. Therefore, health education needs to be done about National Health insurance scheme so as to create room for more involvement which will lead to better quality of life because the cost of drugs and diagnostic investigations is very expensive so they need health insurance scheme to meet up with treatments.

5.2. Summary

This study seeks to assess the Economic burden and quality of life of mental illness among patients in low density ward in Uselu Federal Neuro-Psychiatric Hospital, Benin city, Edo State. The study was

outlined into five chapters. Chapter one of this study dealt with the introduction of the topic, statement of problem, objectives of the study, research questions, hypotheses and scope of study, the significance of the study and operational definition of terms. Relevant literature were reviewed in chapter two on the subject under discourse, theoretical framework and empirical review of related studies were also discussed in this chapter. Chapter three dealt with research methodology which adopted the descriptive cross sectional survey research design and convenient sampling method was used to select one hundred and forty seven mentally ill patients in low density ward,in Federal Neuro-Psychiatric Hospital, Uselu, Benin city, Edo State. A well-structured questionnaire was used as instruments of data collection. Analysis and interpretation of data were discussed in chapter four, tables with percentage and means represented information. The result from the study shows that majority of the respondents had a fair level of quality of life.

5.3 Implication to Nursing

1. Evidence from this study could guide nurses to attend to mentally ill patients and their families in a manner that meets their expectation thereby leading to better quality of care, life and reduction in medical costs.
2. It will help nurses clear the misconceptions of patients as it pertains to management of mental illness and educate patients on the need and importance of health insurance scheme so as to prevent patients and household from been thrown into poverty.
3. Nurses could better ensure delivery of quality health service to patients by reducing factors that prevents their acceptance of care or educating them on ways to prepare for them.

5.4. Limitations of the study

1. Time Consumption: Because the patients went out for recreational and vocational therapy, collection of relevant data from the selected sample was almost difficult and time consuming.

2. Attitude of Patients: Negative attitude of patients towards the researcher. Some patients said they were too busy,hence cannot fill the questionnaire while some did not respond at all.

3. Low level of education: Some patients cannot read while few that can read cannot understand what they read.

5.5 CONCLUSION

This study assessed the Economic burden and quality of life of mental illness among patients in low density ward in Uselu Federal Neuro-Psychiatric Hospital, Benin city, Edo State. The result shows that majority of the respondents had a fair level of quality of life. The study however also identified that there is no significant association ($p>0.05$) between access to health insurance and quality of life of the respondents**.**

5.6 RECOMMENDATIONS

i. Government and multinational agencies should make concerted efforts to ensure reduced costs of treatment of mentally ill patients.

ii. A comparative study can be conducted among patients from other health facilities asides those attending the Uselu Federal Neuro-Psychiatric Hospital.

iii. Government and other registered agencies should make efforts to implement the management of mentally ill patients in primary health Care centers.

5.7. SUGGESTIONS FOR FURTHER STUDY

1. Further study should be carried out in other parts of the state to examine the general economic burden and quality of life of mental illness in the state.

2. Also, further study should be carried out to determine the effects of implementation of health insurance scheme in the management of mental illness.

REFERENCES

Agboola, A. A., Esan, O. T., Afolabi, O. T., Soyinka, T. A., Oluwaranti, A. O., & Adetayo, A. (2018). Economic burden of the therapeutic management of mental illnesses and its effect on household purchasing power. *PloS one*, *13*(9), e0202396

American Psychological Association. (2015). How to cope when a loved one has a serious mental illness. http://www.apa.org/topics/serious-mental-illness.

Constantine, R., Andel, R., Petrila, J., Becker, M., Robst, J., Teague, G., Boaz, T., Howe, A. (2020). Characteristics and experiences of adults with a serious mental illness who were involved in the criminal justice system. Psychiatric Services, 61(5): 451-458.

Cloutier, M., Aigbogun, M. S., Guerin, A., Nitulescu, R., Ramanakumar, A. V., Kamat, S. A., ... & Henderson, C. (2016). The economic burden of schizophrenia in the United States in 2013. *The Journal of clinical psychiatry*, *77*(6), 0-0.

Gebru,Lentiro(2018).Health and Quality of life outcome.16:110. https://doi.org/10.1186/s/12955-018-09463.

Greenberg, G.A., Rosenheck, R.A. (2018). Jail incarceration, homelessness, and mental health: a national study. Psychiatric Services, 59(2): 170-177.

Kessler, R.C., Foster, C.L., Saunders, W.B., Stang, P.E. (2015). Social consequences of psychiatric disorders, I: Educational attainment. American Journal of Psychiatry, 152(7): 1026–1032.

Kessler, R.C., Frank, R.G. (2017). The impact of psychiatric disorders on work loss days. Psychological Medicine, 27(4): 861–873.

Kohn-Wood, L.P., Wilson, M.N. (2015). The context of caretaking in rural areas: family factors influencing the level of functioning of seriously mentally ill patients living at home. American Journal of Community Psychology, 36(1-2): 1-13.

Lund, C., DeSilva, M., Plagerson, S., Cooper, S., Chisholm, D., Das, Jishnu, Knapp, M., Patel, V. (2011). Poverty and mental disorders: breaking the cycle in low-income and middle-income countries. Lancet, 378: 1502-14.

Marcotte, D.E., Wilcox-Gok, V. (2011). Estimating the employment and earnings costs of mental illness: Recent developments in the United States. Social Science & Medicine, 53 (1): 21-27.

Mavundla, T.R., Toth, F., Mphelane, M.L. (2019). Caregiver experience in mental illness: a perspective from a rural community in South Africa. International Journal of Mental Health Nursing, 18: 357-367.

National Institute of Mental Health. “Statistics.” March 2019. https://www.nimh.nih.gov/health/statistics/mental-illness.shtml.

Odo, Emmanuel, Ukawuilulu, John Obioma.(2019). Evaluation of impact of National Health insurance scheme on the civil servants health status in Abuja, Nigeria. International Journal of public Administration and management of research,5(2):50-63

Owumi, B.E., Omorogbe, C.E and Raphael, S.C (2013). An Evaluation of the impact of National Health insurance scheme on employee health status at the University of Ibadan, African Journal of social sciences.

Patek, V. (2017). Mental health in low- and middle-income countries. British Medical Bulletin, 81-82: 81-96.

Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P. (2018). The Lancet Commission on global mental health and sustainable development. The Lancet. doi: https://doi.org/10.1016/S0140-6736(18)31612-X.

Ritchie, H., Roser, M. (2018). Mental Health. OurWorldInData.org.https://ourworldindata.org/mental-health.

Seloilwe, E.S. (2016). Experiences and demands of families with mentally people at home in Botswana. Journal of Nursing Scholarship, 38(3): 262-268.

van den Bergh, B.J., Gatherer, A., Fraser, A., Moller, L. (2011). Imprisonment and women's health: concerns about gender sensitivity, human rights, and public health. Bull World Health Organ, 89: 689-694.

World Health Organization. (2013). Investing in Mental Health. https://apps.who.int/iris/bitstream/handle/10665/42823/9241562579.pdf.

World Health Organization. (2020). People who inject drugs. https://www.who.int/hiv/topics/idu/en/

Zhang, H., Sun, Y., Zhang, D., Zhang, C., & Chen, G. (2018). Direct medical cost for patients with schizophrenia: a 4- year cohort study from health insurance scheme claims data in Guangzhou city, Southern China. *International journal of mental health systems, 12(1), 1-14.*

APPENDIX
DEPARTMENT OF NURSING SCIENCE
SCHOOL OF BASIC MEDICAL SCIENCES
UNIVERSITY OF BENIN,
BENIN CITY, EDO STATE.

Dear Respondent,

INFORMED CONSENT

The general nature of the study entitled **"Economic burden and quality of life of mental illness among patients in low density ward in Federal Neuro-psychiatric Hospital, Uselu, Benin City"** conducted by **Nwankwo Onyinye** has been explained to me. I understand that I will be asked to fill questionnaire. My participation in this study should take a total of 7 minutes. I understand that my responses will be confidential and that anonymity will be present and that my name will not be associated with any results of this study. I may refuse to answer questions on the questionnaire and that I may discontinue participation at any time.

My non participation will not count against me in any way.

My name, signature and dates below signified my voluntary participation in this study.

I _____ have accepted to take part in this research.

_____ _____

Signature Date

APPENDIX

DEPARTMENT OF NURSING SCIENCE

SCHOOL OF BASIC MEDICAL SCIENCES

UNIVERSITY OF BENIN,

BENIN CITY, EDO STATE

Dear Respondent,

QUESTIONNAIRE

I am a student in the above named institution. I am carrying out a research study on the topic: **"The Economic burden and Quality of life of Mental illness among patients in Low density ward, in Federal Neuro-Psychiatric Hospital, Uselu, Edo State".** Kindly assist me by indicating your opinion where necessary.

This study is strictly for academic purpose and you are hereby assured that all information supplied will be treated in a strictly confidential manner.

Thank you.

Yours faithfully,

Nwankwo Onyinye

SECTION A: DEMOGRAPHIC DATA

1. Sex: Male [ ] Female [ ]
2. Age: Less than 30 years [ ] 30-39 years [ ] 40-49 years [ ] 50-59 years [ ] 60 years & above [ ]
3. Marital Status: Single [ ] Married [ ] Divorced [ ] Widowed [ ]
4. Educational Qualification: No formal education [ ] Primary [ ] Secondary [ ] Tertiary [ ]
5. Ethnicity: (a) Bini [ ] (b) Esan [ ] (c) Hausa [ ] (d) Igbo [ ] (e) Yoruba [ ] (f) Others (specify) _____
6. Employment status: (a) Employed [ ] (b) Unemployed [ ] (c) Retired. [ ] (d) Self-employed [ ] (e) Schooling
7. Religion: Christian [ ] Muslim [ ] Others (specify): _____
8. Place of Residence: Rural [ ] Urban [ ] Semi Urban [ ]
9. Living arrangements: Alone [ ] With parents [ ] With spouse [ ] With others [ ]
10. Health insurance scheme: Yes [ ] No [ ]

SECTION B: THE DIRECT MEDICAL COST OF MENTAL ILLNESS INCURED BY PATIENTS AND HOUSEHOLDS

1. Type of Mental illness, please specify _____
2. Duration of illness since onset: Less than 6months[ ] Within 1year [ ] Within 2-3years [ ] Within 4-5years [ ] More than 5years
3. How long have you been receiving treatment for mental illness: Less than 6months[ ] Within 1year [ ] Within 2-3years [ ] Within 4-5years [ ] More than 5years [ ]
4. How often do you come for check-up Appointment: Weekly[ ] 2 Weekly[ ] 4 Weekly[ ] 6 Weekly[ ] 8 Weekly[ ]
5. Cost incurred for your treatment monthly in current health care facility in Naira: Less than 50,000[ ] 50,000-100,000[ ] 100,000-150,000[ ] 150,000-200,000[ ] More than 200,000 [ ]
6. Cost incurred for test and radiological imaging monthly in current health care facility in Naira: Less than 50,000[ ] 50,000-100,000[ ] 100,000-150,000[ ] 150,000-200,000[ ] More than 200,000 [ ]
7. Currently involved in alternative treatment: Yes [ ] No [ ]
8. If yes, cost incurred for alternative treatment monthly in Naira: Less than 50,000[ ] 50,000-100,000[ ] 100,000-150,000[ ] 150,000-200,000[ ] More than 200,000 [ ]

SECTION C: THE INDIRECT MEDICAL COST OF MENTAL ILLNESS INCURED BY PATIENTS AND HOUSEHOLD

1. Days of absent from work in the past one month: Less than 10days [ ] 10-15days [ ] 15-20days [ ] Above 20days [ ]
2. Employment status of the person that accompanies you for treatment regularly: Business [ ] Civil servant [ ] Driver [ ] Nurse [ ] Self-employed [ ] Others [ ]
3. Relationship with the individual above: Parent [ ] Colleagues [ ] Spouse [ ] Relatives [ ] Friends [ ] Others [ ]
4. Waiting time to see Medical practitioner on appointment date: Less than 20mins [ ] 20-40mins [ ] 40-60mins [ ] Above 1hour [ ]
5. Cost of care time and medical services monthly in current health care facility in Naira: Less than 50,000[ ] 50,000-100,000[ ] 100,000-150,000[ ] 150,000-200,000[ ] More than 200,000 [ ]

SECTION D: THE IMPACTS OF MENTAL ILLNESS ON PATIENT QUALITY OF LIFE

Below is a list of statements dealing with your general feelings about yourself due to your current state of mental health. If you Strongly Agree with the statement, tick SA. If you Agree with the statement, tick A. If you Disagree with the statement, tick D. If you Strongly Disagree with the statement, tick SD.

S/N	STATEMENTS	Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)
1.	On the whole I am satisfied with myself				
2.	At times I think I am no good at all				
3.	I feel that I have a number of good qualities				
4.	I am able to do things as well as most other people				
5.	I feel I do not have much to be proud of				
6.	I certainly feel useless at times.				
7.	I feel that I am a person of worth, at least on an equal plain with others				
8.	I wish I could have more respect for myself				
9.	All in all, I am inclined to feel that I am a failure				
10.	I take a positive attitude toward myself				

PILOT STUDY

Reliability
Scale: Direct Medical Cost

Case Processing Summary

		N	%
Cases	Valid	15	100.0
	Excluded[a]	0	.0
	Total	15	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.773	8

Reliability
Scale: Indirect Medical Cost

Case Processing Summary

		N	%
Cases	Valid	15	100.0
	Excluded[a]	0	.0
	Total	15	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.766	5

Reliability
Scale: Quality of Life of respondents

Case Processing Summary

		N	%
Cases	Valid	15	100.0
	Excluded[a]	0	.0
	Total	15	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.821	10