FACTORS ASSOCIATED WITH NON-ADHERENCE TO ANTIPSYCHOTIC MEDICATION AMONG YOUNG ADULTS WITH MENTAL DISORDERS AT MUHIMBILI NATIONAL HOSPITAL DAR ES SALAAM, TANZANIA

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FACTORS ASSOCIATED WITH NON-ADHERENCE TO ANTIPSYCHOTIC MEDICATION AMONG YOUNG ADULTS WITH MENTAL DISORDERS AT MUHIMBILI NATIONAL HOSPITAL DAR ES SALAAM, TANZANIA

By

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A dissertation Submitted in (Partial) fulfilment of the Requirement for the Degree of Master of Science in Nursing (Mental Health) of MuhimbiIi University of Health and Allied Sciences

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled ***"Factors associated with non adherence to antipsychotic medication among young adults with mental disorders at Muhimbili National Hospital"***, in partial fulfillment of the requirements for the degree of Master of Mental Health in Nursing

.....

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Date 22 NOV 2010

DECLARATION OF COPYRIGHT

I, Josca Amri Mwoshezi, declare that this dissertation is my own work and it has not been presented and will not be presented to any other University for a similar or other degree award.

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DEDICATION

I dedicate this work to my parents, late Mr. Amri S. Mwoshezi, and Mrs. Asha A. Mwoshezi, who made me what Iam today. My husband Mr. Hussein Mkwawa whose moral support was vital for me to accomplish this work. My sons, Amani, Nurdin and Asaad, I'm very sorry for not being able to give all the attention that you deserve and that I would so dearly have liked to give, and for all the unfulfilled promises.

ABSTRACT

Background; Adherence to antipsychotic medication remains one of the greatest challenges in treatment of psychiatric disorders and, is a significant barrier to the successful of treatment of mentally ill. Young adults present the most affected group with psychiatric disorders at Muhimbili National Hospital (MNH) and estimates and reasons for non-adherence to antipsychotic medication among these youngsters may provide an opportunity for improved patient outcomes if challenges are identified and improved upon.

Method; Descriptive qualitative design was used to obtain information, to the factors associated with non-adherence to antipsychotic medication among young adults with mental disorders at MNH. In-depth interview and focused group discussions (FGD) guided by semi structured questionnaires were conducted in two waves. The main informants were the patient themselves and their relatives and these were recruited from the psychiatric unit after the psycho-education sessions, which conducted every morning before the start of clinic. Notes and record on the patient's responses was made which followed by the content data analysis after transcription of the text,

Results; This study found that development of side effects, perceived cause of mental disorder, stigma, lack of social support, poor socio-economic status, and unavailability of medication at clinics are important factors that contribute to no-adherence. Failure to adhere to antipsychotic medication is associated with exacerbation of psychotic symptoms, psychotic relapse, and hospitalization.

Conclusion; This study found that non-adherence behavior continues to be a significant issue in the management of psychotic disorders especially among young adults. The promotion of patient's functional coping behavior to medication side effects for patients with insight will be a key action for improvement. Development of specific nursing care plans to monitor adherence would be important as well increased training of psychiatric nurses to work in the primary care health facilities would be a long term solution.

LIST OF TABLES

Table 1: Socio demographic characteristics of participants 18
Table 2: theme and codes obtained from data analysis 23

Table of Contents

CERTIFICATION ii
DECLARATION OF COPYRIGHT iii
ACKNOWLEDGMENT iv
DEDICATION v
ABSTRACT vi
Table of Contents viii
ABBREVIATIONS x
DEFINITIONS xi
1.0 CHAPTER 1 INTRODUCTION 1
1.1 INTRODUCTION 1
1. 2 STATEMENT OF THE PROBLEM 3
1.3 SIGNIFICANCE OF THE STUDY 4
2.1 OVERVIEW 5
2.1.2 Measuring Adherence: 6
2.1.3 Factors influencing Antipsychotic Medication Non adherence: 7
2.2 RESEARCH QUESTION 12
2.3 STUDY OBJECTIVES 13
2.3.1 Broad Objective: 13
3.0 CHAPTER 3 METHODOLOGY 13
3.1 Study Design: 13
3.3 Study Population: 14
3.4 Sampling technique: 14
3.5 Adherence assessment; 15
3.6 Sample Size: 15
3.7 Data Collection: 15
3.7.1 Data Collection Tools: 15
3.7.2 Link between focus group discussion and in-dept interview 16
3.7.3 Pre-testing 16
3.7.4 Data collection procedure: 17
3.7.5 Data analysis and processing: 17
3.8 Ethical Consideration: 18
4.0 CHAPTER 4 RESULTS 19
4.1 Social demographic characteristics 19
4.2 Experience of using antipsychotic medication since the onset of the mental disorder 19
4.3 Knowledge on the therapeutic effect of antipsychotic medications 22
4.4 Perceived causes of mental disorders 24
4.5 medication side effect 25
4.6 Mental health provider's services 27
4.7 Unavailability of antipsychotic medication 28
4.8 Poverty 28
4.9 Social support and stigma 29
CHAPTER 5 DISCUSSION 30

5.1 Reasons that contribute to non-adherence to antipsychotic medications 31
5.1.1 Side effects of antipsychotic medication 31
5.1.2 Perceived causes of mental disorders. 31
5.1.3 Knowledge on the therapeutic effects of antipsychotic medications 32
5.1.4 General social support and, stigma 33
6.0 CHAPTER 6 CONCLUSION AND RECOMMENDATIONS 35
6.1. Conclusion 35
6.2 Recommendations 35
6.2.1 Implications for nursing practice 36
6.2.2 Limitations of the study 36
7.0 REFERENCES 37
8.0 APPENDICES 42
8.1 APPENDIX 1 42
8. 2 APPENDIX 2: 48
8.3 APPENDIX 3: 50
8.4 APPENDIX 4 52

ABBREVIATIONS

MNH:	-	Muhimbili National Hospital
MUHAS:	-	Muhimbili University of Health and Allied Sciences
OPD:	-	Out Patient Department
TSH	-	Tanzania Shilling
DSM-IV-TR	-	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.
HBM	-	Health belief model
FGD	-	Focus group discussion
SSIs	-	semi structure interview

DEFINITIONS

Non-adherence to antipsychotic medication is defined as not taking the prescribed medication at the frequency or dosage that would be anticipated to generate an antipsychotic effect.

Antipsychotic medication (Neuroleptics) is drug used to treat psychosis.

Polipharmacy is the use of multiple psychopharmacological medications for long term treatment.

Remission is a dichotomous concept in that it is an absence of symptoms in addition to a return to premorbid functionality

1.0 CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

Non-adherence to antipsychotic medication is defined as not taking the prescribed medication at the frequency or dosage that would be anticipated to generate an antipsychotic effect (Åkerblad, Bengtsson, Holgersson, Knorring, & Ekselius, 2008; Knapp, King, Pugner, & Lapuerta, 2004 ; Masand, Roca, Turner, & Kane, 2009; Sajatovi Sajatovic, 2008). Others views non adherence in psychiatric medicine as the "the point below which the desired preventative or therapeutic result is unlikely to be achieved"(Michael, Gelder., Juan, Lopezlbor., & Andreasen, 2004), or he describes the same concept as "the extent to which the patient's behaviour coincides with the clinical prescription". Others have defined adherence as extent to which a person's behaviors coincides with the medical advice given. Adherence to antipsychotic medication reduces recurrence of psychotic episodes among persons with severe mental disorders (Morken, Widen, & Grawe, 2008). Under normal circumstances, the use of antipsychotic medications result to remission of psychotic episodes, where as when a client adheres to medication, for example in Schizophrenic individuals, to the effects can make them lead a normal and functional life (Stuart & Laraia, 2005).

Non-adherence has been found to be a major problem in patients with severe mental disorders that is linked with poor clinical result, and high resources utilization (Clatworht et al., 2008; Gutiérrez-Casares, Cañas, Rodríguez-Morales, Hidalgo-Borrajo, & Alonso-Escolano, 2010; Knapp et al., 2004). Hui and colleagues associated non adherence with antipsychotic with , afrequent cause of exacerbations in psychopathology, psychotic relapse, violence and rehospitalisation (Hui et al., 2006) Relapse can cause distractions in a variety of clinical and functional domains, and can lead to clinical and economic burdens (Adewuya et al., 2009). In such scenarios, the quality of life to person with mental illness is considerably reduced and therapeutic interventions are necessary (Gutiérrez-Casares et al., 2010),. Studies have found general problems with treatment adherence among psychiatric patients that include,

incomplete regimens, discontinuation of medications, failure to attend the first outpatient appointment after psychiatric hospitalization. These problems also include outpatient follow up and failing to follow assignment of other therapies including cognitive behaviour therapy, psychological, or social intervention. (Limington et al., 2007; Livensky, 2006). Consumption of higher doses of psychotic drugs other than amount prescribed has also been documented by Ann-Charlotte and colleagues 2008.

In developed countries such as America, non-adherence is found to be as high as 20% to 89% as reported by a study that evaluated the relationship between antipsychotic non-adherence and health expenditure by using pharmacy records; with an average rate of 50% among people with schizophrenia. It detailed that non-adherence to antipsychotic was associated with greater number of clinic and emergency room visits and more psychiatric hospitalization (Masand et al., 2009; Todd et al., 2004:) Another similar study found that individual who are given atypical antipsychotic medication would have greater adherence to treatment than those receiving typical antipsychotics (Gutiérrez-Casares et al., 2010; Masand et al., 2009; Todd et al., 2004:). The same group of scientists found that among patients exempted from medical benefices 41% of them had adhered to atypical antipsychotic and 24% patients without exemption for medical benefit did not.

This is a greater challenge in the developing countries where exemption of medical costs is almost not practiced though is within the existing policy. In Tanzania mental health service is integrated in the primary care (MoH) and the policy outline is treatment of psychiatric conditions is free of charge. Putting policy into practice is one among the challenges facing the health system where it is overburdened with chronic and acute diseases let alone new emerging diseases. Integration of mental illness into primary care aimed to bring these services closer to the end user but t the availability of antipsychotic medication is still insufficient, and atypical antipsychotics are very expensive for people with mental disorders, the majority of which have poor income. One of the studies in Africa, Nigeria in particular, shows that one of four (25%) patients with psychosis do not keep scheduled post-discharge appointment, and one in three do not take medications as prescribed (Ademola, Adeponle,

Brett, Adekeka, & Laurenc, 2009). That indicates one of the major problems in the developing countries. Tanzania is among countries with unknown magnitude of non-adherence but likely to high due to increased number of psychiatric clients roaming in the streets but it also a country where the infrastructure of mental services is still poor despite that mental health care is now integrated in to primary care health services (Mental Health Policy, 2008). So availability of drugs may contribute to adherence, or non-adherence to antipsychotic medication. Since non-adherence is associated with relapse and high utilization of hospital cost, as well as a social-economical burden to people with mental disorders including their families, this is among important drawbacks to the good prognosis of such patients as well failure of adequate utilization of primary health care services for mental health (Gutiérrez-Casares et al., 2010). Social predictors to non-adherence factors include, history of previous non-adherence, side effect, poli-pharmacy, severity of symptoms and therapeutic relationship, and negative attitude toward medicatio. To date in Tanzania, there is no published study that has established factors contributing to non-adherence to antipsychotic medication among young adults. .

That being said, the present study was evaluate factors contributing to non-adherence to antipsychotic medication and was done at Muhimbili National Hospital (MNH)

1. 2 STATEMENT OF THE PROBLEM

To date, literature regarding information on antipsychotic non-adherence in Tanzania is very limited and there is no published report whatsoever that discusses on the factors contributing to antipsychotic non adherence among young adult with mental disorders in Tanzania.

In Tanzania, young adults (approximate age range of 17-25 years old) form the majority of admitted patients in the psychiatric unit at any one time. They usually constitute two thirds of all patients (Admission book in psychiatric unit at MNH 2009). One of the plausible reasons is that, this age group largely succumb to mental health problems due to their use of addictive substances such as psychoactive substances, other forms drug abuse (inhalation of petrol and glue) and smoking marijuana as found by (McCurdy, williams, Kilonzo, Rose, & MT, 2005)

However the high admittance rate is significantly worsened by the non-adherence to antipsychotic medication (for those that seek conventional health care services) leading to poor prognosis, frequent relapses (revolving door psychiatry) and worsening of mental health. Young adults in Tanzania are also among highly plagued by HIV and AIDS and evidence has shown that Centre nervous system (CNS) involvement in HIV positive individuals also contributes to the raising prevalence of mental disorders (Baingana, Thomas & Comblain, 2005), The problem of non-adherence is also compounded with the lack of adequate psychiatrsities, and other specialised health related personnel such as Psychiatric nurses and Clinical psychologists in primary health care settings, regional hospitals as well as in the main consultant hospitals other than Muhimbili National Hospital (MNH). Poor diagnosis of mental illness at first visit may predispose to severe forms of the illness due to lack of specialists in the primary health care settings. More over, almost two thirds of people with diagnosable mental disorders do not seek treatment, and stigma related to mental illnesses one of the barriers that discourages people from seeking needed care (Stuart & Laraia, 2005).

According to the admission book in psychiatric unit at MNH showed that the period of four months from January – June 2009, the re- admission increased up to 50% due to relapse which associated with non-adherence to their prescribed antipsychotic medication. In the outpatient department (OPD) at MNH clinic records showed that two in six patients of mental disorders either do not taking medication as prescribed or do not attending out patient schedule as directed, and shows that patients who do not adhered to antipsychotic medication have a tendency of increased suicidal ideation and attempt.

Documentation of the magnitude of non-adherence may provide better insights on how serious the problem is and delineating the factors that contribute to non-adherence may likely provide us with ideas on how to intervene and change the situation.

1.3 SIGNIFICANCE OF THE STUDY

Identification of factors associated to non-adherence to antipsychotic medication among young adult with mental disorders will assist the psychiatric health care team in planning of care and

assist early identification of factors that may hinder adherence to medication. Such information can be used to develop psychiatric nursing care plans that may address specific needs to improve drug adherence for this group, as current treatments enable patients to live independently in the community as they recover from the illness. The study will provide an evidence based care approach method to improve patient outcomes given that young adults present the most affected group at the psychiatric unit of MNH. Therefore, understanding factors associated with non-adherence to antipsychotic medication among young adult with mental disorders at MNH, will help to plan an intervention for enhancing adherence to antipsychotic treatment, and will assist to reduce the consequences of poor adherence among this group.

2.0 CHAPTER 2 LITERATURE REVIEW

2.1 OVERVIEW

The prevalence and risk factors for non-adherence to antipsychotic medication differ from one country to another worldwide, depending on the instrument used to measure antipsychotic adherence or the definition used to define non-adherence to antipsychotic medication (Michael et al., 2004), (Osterberg & Blaschke, 2005; Todd et al., 2004:) Currently there is no universally definition of adherence for medication but most of the researchers define adherence as intentional or accidental error in dosage and in timing, total or partial omission of antipsychotic medication, and use of unintended combination (Patel & David 2007; Phillips, Liy, Troup , & Vin, 2000). Non-adherence behaviour may be categorized as either active or passive. Active non adherence, is when the patient makes a planned decision not to take the treatment as instructed For example, a patient takes medication only when he/she experiences symptoms of the illness(Lehane & McCarthy 2006; Michael et al., 2004). From a self regulatory perspective, the level of treatment adherence may be indicating a strategic coping response which is entirely in consistence within the patient's view of their problem. The patients with a shorter period of illness tend not to adhere to their medication compared to those with chronic disease (Lehane & McCarthy 2006). Passive non-adherence may be intentional when the patient's intent to follow treatment recommendation but are frustrated by

barriers such as forgetting and inability to follow treatment instructions because of lack of understanding (Lehane & McCarthy 2006; Michael et al., 2004).

2.1.2 Measuring Adherence:

Adherence measures can be divided into two broad categories that are indirect and direct. Indirect method includes self report from patient as well as information from family members and friends (Michael et al., 2004; Velligan & Weiden, 2006). Research indicates that patients reports are more accurate than estimates from doctors or family members but it is not certain that such report estimates the true level of adherence (Michael et al., 2004). Self report s may be challenged in cases where a patient may decide to answer according practitioners' interest, so to underestimate or overestimate the measure of non-adherence to antipsychotics, thus these need to be measured. Other indirect method includes counting pills and bottles and recording pills use with mechanical givers (Velligan & Weiden, 2006). Pill counting has the advantage of being technologically simple and inexpensive. However, some studies have shown that pill counts may also underestimate the true level of non adherence (Lehane & McCarthy 2006; Michael et al., 2004; Osterberg & Blaschke, 2005). Technology developments have allowed the integration of electronic devices into medicine containers to record the time and data of usage. The major advantage of these devices is to outline schedule of medication – taking rather than simply detailing how much was taken (Michael et al., 2004).

Direct method includes blood and urine analysis which confirms the presence of a drug in the body and its concentration (Michael et al., 2004). However, these techniques are difficult to carry out for many medications, and sometime there is no direct relationship between amount of medication taken and non-adherence behaviour.Medication adherence is crucial in psychiatry especially for chronic mental disorders to the extent that both patients and clinicians need to share responsibility although is very rare or sometimes not possible (Marcia Valenstein1 & Patricia Wolschon, 2009; Patel & David 2007). Adherence implies that the patient and provider collaboration is active in the treatment process.(Livensky, 2006). Research that focuses on enhancing adherence to treatment can be particularly important for patients with severe and persistent mental illness, such as schizophrenia and related psychotic disorders (Patel & David 2007). Identification of specific prediction factors would help with

early identification and individualized intervention and support. This may prevent the non-adherence to antipsychotic medication among people with mental disorders. Recognizing that people differ to able in, involved to treatment decision, that help patients to adhere to their treatments specifically medication (Clatworht et al., 2008).

2.1.3 Factors influencing Antipsychotic Medication Non adherence:

2.1.3.1. Illness related factor:

The perception regarding mental causality is strongly related to local explanatory model of mental illness behaviour (Ademola et al., 2009). Illness behaviour includes the definition of symptoms and progress by the societies. The perception of the disease that sometimes influenced by culture and hinders the people who are mentally sick to seek professional treatment (Llorca, 2008; Lynch & Medin, 2006). The knowledge, beliefs and altitudes associated with explanatory models of mental illness greatly affect care seeking behaviour, and therefore decrease adherence to treatment.(Lynch & Medin, 2006; Phillips et al., 2000). Therefore, there is important for mental health team to discus with patients how they feel and belief and how they link their illness and their antipsychotic medication as to plan together antipsychotic medications strategies so as to enhance antipsychotic adherence. The nature of the psychopathology has also been identified as a factor associated with non-adherence. A study on comparison of hospital based antipsychotic medication use refusal to take medicine, identified that grandiosity patients as a most powerful discriminating variable between the two groups. The results showed that compliance were more likely to be in depression patients, anxiety and had more insight, than with grandiosity 85% non adherence.

The nature of psychopathology and type of disorder may indicate to be associated with non adherence. One Canadian study showed that of the 22.5% of participants that took psychiatric medication for mental health problems in the previous months, 46.8% took drugs for major depression, 43.1% for co-morbid major depression, 34.0% for depressive symptoms and 17.6% for no depression symptoms. Rates of psychiatric medication use ranged from 46.5% of those with major depression, to 17.6% of those with no depressive symptoms. The rate of

non adherence to psychiatric medication was 31% and the rate were higher among those with depressive symptoms 37.4% and the lowest were those with light depressive symptoms 27.4% (Sewitch, Cole , McCusker, Ciampi, & Dyachenko, 2008). This indicates that the type of disorder may predict medication adherence. Lack of insight or awareness of having mental illness is a primary reason for non adherence to antipsychotic medications (Marvin et al., 2001; Olfson, Marcus, Wilk, & West, 2006). With poor insight patient denied the presence of illness and sometimes blame others or external factors to be the cause of their problem so they believe that there's no need for treatment, this contributing on non adherence behaviour (Stuart & Laraia, 2005)

One longitudinal study evaluated adherence of 200 participants with first episode of psychosis found that lack of insight related to alcohol and cannabis use, positive psychosis symptoms are highly associated with poor adherence to antipsychotic medication (Coldham, Addington , & Addington, 2002; Kleinma et al., 2002; Olfson et al., 2006). In the study done in the USA with 543 participants, evaluated awareness of illness and non-adherence to antipsychotic medication among people with schizophrenia, and found that 97 patients (32%) who do not adhere to their antipsychotic where reported by their psychiatrists to being unaware that they had a mental illness, compared with the patients who were aware of their mental illness. For patients with schizophrenia who lack such awareness, non-adherence tend to be prolonged and clinically disruptive, re-hospitalization and poor quality of life due to their belief that antipsychotic medications do not prevent relapse (Olfson et al., 2006). The simple psychological approaches used to enhance to this patients were not effective. Discussions must be made on the causes of their mental disorders as the patient may link the causation of their illness and their belief so may accept the treatment as to improve adherence.

Meta-analysis of 185 studies to clear relationship between race, gender, educational experience, intelligence, marital status, occupational status, income, and ethnic or cultural background and adherence behaviour, showed that there are little evidence that adherence behaviour can be explained in terms of personality characteristics (Michael et al., 2004). Socio demographic or dispositional characteristic are the only determinants of adherence is

discredited by evidence that an individual's level of adherence may vary over time and between different aspects of the regimen. Explanation for non adherence arises from poor understanding and recall of information presented on the medication consultation. Lack of basic knowledge about patient's medication, and the relationship between this and their adherence is not clear, and also the link of demographic. Moreover, interventions that enhance knowledge do not necessary improve adherence (Michael et al., 2004). In such scenarios, qualitative studies are better suited to explore factors related to non adherence, since rich and detailed information maybe substantiated with discussions until saturation rather than closed ended or self administered questionnaires.

2.1.3.2 Treatment related factors:

Side effects of antipsychotic drugs often used for the treating aggression, managing violence in psychosis emergencies can influence a mental ill person not to adhere to their antipsychotic medication (Stuart & Laraia, 2005). Guthrie found that acute extra pyramidal symptoms as a result of treatment occur about 75% to 90% patients receiving typical antipsychotic medication, and that 1% as compared with 5% of patient using atypical antipsychotic medication can develop tardive dyskinesia (Guthrie, 2003). Further more, other scientists found that there is less need to discontinue atypical antipsychotic drug than a typical antipsychotic medication (Christian et al., 2002 ; Lieberman & Stroup 2005). Patients given typical antipsychotic should be assessed for the occurrence of acute neuroleptic-induced akathisia which can appear to worsening of agitation and acute dystonia reaction. This complication can make may contribute to patient decision on stopping the medication, which may contribute to non adherence to antipsychotic (Stuart & Laraia, 2005). Further more the atypical antipsychotic medication which has fewer side effects is expensive and particularly for developing countries like Tanzania, where the majority have poor income and lack medical insurance.

Sajatovic and colleagues, using treatment event as measurement to compare outcomes on out patients, found lower deference on adherence and non-adherence at the twelve months, from 54.9% patients receiving atypical and 50.1% patients on typical antipsychotics (Sajatovic et al., 2002). How ever there are another contributing factors rather than side effect which may contribute to antipsychotic medication non-adherence (Lieberman & Stroup 2005; Stuart & Laraia, 2005). In the study to assess medication predictive factors and enhancement strategies, Guthrie and colleagues suggested that drug formulation and routine of the administration of drugs are contributing factor to non adherence to antipsychotic. Depot injections are associated with high adherence rate than oral formulation, drugs in liquid form higher rates than tablet, and sublingual higher rates than normal tablets. Depot antipsychotic may be associated with lower relapse rate than antipsychotic tablet and allow early detection of non-adherence. Probably these differences maybe due to the frequency of daily medication taking which demonstrate to the ambivalence to the patient using of the antipsychotic to compare with depot intramuscular injected drug which given about 2 to 3 weeks (Guthrie, 2003; Patel & David 2007; Stuart & Laraia, 2005).

2.1.3.3 Level of social support factors:

Level of social support to people with mental disorders is association with better adherence, although stressful social interaction and shared superstitions or force beliefs about antipsychotic may affect adherence. Social support systems can be helpful in emphasizing the strengths of individual and families and focusing on health rather than illness (Patel & David 2007). This support is important for all level of prevention in primary, secondary and tertiary and is help to encourage health promotion behaviour, help people to seek assistant earlier, reduce occurrence of potentially stress event, helping to deal with chronic mental illness and fostering, the ability to cope with stressful events which may act as tool for enhancement antipsychotic medication among psychiatric patients.

In the study to assess individual with first episode of psychosis reviewed that lack of family involvement in the antipsychotic prescription of mental ill patient may contribute to poor

antipsychotic adherence(Coldham et al., 2002; Masand et al., 2009). Therefore there is some importance of family members to be included in the treatment plan, to know the importance of using the antipsychotic to their patients as pre-described, this may improve adherence to antipsychotic medication (Coldham et al., 2002).

Studies show that the patient with severe disorder in the community have less relapse and did not need as much medication when family members were expressing emotionally appropriate behaviours towards patients (Limington et al., 2007). However, for patients living alone in isolation or boarding house, or in extended families, if family members are negatively affected by the patient of mental illness being at home, it influences poor adherence due to lack of support from family members (Limington et al., 2007; Singer 2001). When family interaction with patients are positive and constructive it encourages patients to adhere with treatment (Limington et al., 2007).

It is known that in sub-Sahara Africa mentally ill person tent to be living within families and have a high degree of support, and this has been hypothesized to be responsible for the perceived better prognosis of mental illness in developing countries. This may help to enhance adherence among people with mental disorders. People with mental illness with fewer symptoms are more likely to take their medication and at the sometime effectively elicit social support.

2.1.3.4 Stigma and mental illness:

Stigma poses as a major challenge among people with mental disorders in developed countries, because it separates them from society and keeps them away from others. The impact of stigma is huge. Almost two thirds of people with diagnosable mental disorders do not seek treatment, and stigma related to mental illnesses one of the barriers that discourages people from seeking needed care, (Stuart & Laraia, 2005). In Uganda, a qualitative study described opinions of a wide range of a hundred and sixty mental health stakeholders in relation to mental health as "there is a strong interrelationship between poverty, stigma and

mental illness"(Ssebunnya, Kigozi, Lund, Kizza, & Okello, 2009). The study asserted that poor people with mental illness are more prone to stigma and other unfavourable consequences than their counterparts with higher socio-economic status. The situation in Uganda is very similar in Tanzania, as described by unpublished research report by (Maboja, 2009). In Nigeria, it was found that he lack of acceptance of mental ill, patient is barrier of non adherence to treatment to people with mental illness (Adewuya et al., 2009). At the community level, negative attitude have become structured into social patterns of segregation, dissemination, and lack of support for mental health service and these attitudes may result in economic marginality segregation and relapse (Singer 2001). Therefore this attitude may affect mentally ill person to avoid seeking for mental health care, or to stop using antipsychotic that may end up with poor antipsychotic medication and affecting the outcome of the medication.

In Nigeria, poor adherence was almost five times likely due to stigma (OR 4.70, 95% CI 2.2 – 9.9) and at least four times likely associated with perceived spiritual causation of mental illness (OR 3.74, 95% CI 1.87 – 7.74) (Adewuya et al., 2009). The association between poor adherence and causal belief suggests that patients initiate or continue medication treatment based on their individual beliefs, attitude and expectation of their illness and its treatment. It has been shown that patient attitude of the cause of their mental illness affected short term adherence to treatment this may contribute for high percentages of mental ill patient not to attend to clinic as instructed by their psychiatrist. Also found that old people also tend to hold on to more traditional views especially in the rural communities. Therefore there is a need of psychiatrist attention for psychological barriers early in treatment may improve antipsychotic medication adherence and ultimately affect course of illness.

2.2 RESEARCH QUESTION

What are the factors affecting antipsychotic medication adherence among young adults with mental disorders?

2.3 STUDY OBJECTIVES

2.3.1 Broad Objective:

To describe factors associated with antipsychotic medication non-adherence among young adults with mental disorders during maintenance phase of antipsychotic medication

2.3.2 Specific Objective:

1. To describe factors associated with non-adherence to antipsychotic medication among young adults admitted at MNH

3.0 CHAPTER 3 METHODOLOGY

3.1 Study Design:

Descriptive qualitative design was used to obtain information, to the factors associated with non-adherence to antipsychotic medication among young adults with mental disorders at MNH. Semi-structured interviews (SSIs) and focused group discussions (FGD) were conducted in two waves. Individual SSIs were used as they are an effective qualitative method for learning about the perspectives of individuals related to a particular topic (Polit & Beck 2003). Data was collected in the first wave and analyzed to observe the evolution of "non-adherence to antipsychotic medication" and it was necessary to collect data in the second wave to reach saturation of the phenomenon. The main informants were the patient themselves and their relatives and these were recruited from the psychiatric unit after the psycho-education sessions conducted every morning before the start of clinic.

3.2 Study Setting:

This study was conducted at Muhimbili National Hospital (MNH) at the department of Psychiatry from 30th June to 1st July to 2010. MNH is a tertiary and university teaching Hospital; the hospital is located in the city of Dar es Salaam. MNH Hospital is the only national hospital in the country and receives referral from all over the country. The hospital

provides mental health services for the patients with wide range of mental disorders. Nation wide, this department is the second largest unit that caters for mental health services at consultancy level. It thus, curbs a larger population compared to other medical services in the country. The hospital has put an extra effort to facilitate medication adherence for clients in the community by providing community based care which is done by the community psychiatrist nurses. Mental health care integrates the patient's relatives as much as possible and this has been the mainstay method of care in this unit.

3.3 Study Population:

The study was involved young adults with mental disorders attending at Muhimbili National Hospital, psychiatric clinic. The inclusion criteria was young adults aged between 18 – 40 years old with mental disorders, diagnosed with mental disorder according to the statistical manual for mental disorder, fourth edition (DSM – IV – TR), who was willing to participate in the study, diagnosis made by psychiatrist, being on antipsychotic for at least 12 months, and being stable enough so to complete interview and sign informed consent.

3.4 Sampling technique:

Purposive sampling procedure was used in this study in which the researcher selected participants based on the psychiatrists and psychiatric nurses' judgment (Polit & Beck, 2003). Patients that were stable and those judged to be most representative and informative were chosen following the above inclusion criteria. The patient's file patient was used to identify compliance to treatment and clinical attendance. Equality of representation was ensured by balancing both male and female participants on antipsychotic medication were identified and appointments were made for the interview and focus group discussion for the following day.

3.5 Adherence assessment;

Adherence behaviour to antipsychotic medication was assessed before participant recruited to the study through self, mental health provider reports, and review of case note of participants. this was included the client, health providers, and family members of the client to describe the name of medication used by the client, number of tablets described ,number of tablets taken and omitted per day, and if was using the medication constantly within twenty eight days

3.6 Sample Size:

Sample size was based on the saturation principle of data saturation at the two waves of data collection. In the end, twenty participants were included in the study, and they all managed to complete the interview.

3.7 Data Collection:

3.7.1 Data Collection Tools:

The Questionnaire is divided into eight parts. The firs part (Part I) is on socio-demographic data. The second part is on adherence assessment. The third part is on side effect of antipsychotic associated with or without non-adherence attitudes. The fourth part is on substance/alcohol abuse associated with or without non-adherence behaviors. The fifth part is on social support associated with /without non-adherence, the sixth part is on self stigma with/ non-adherence. The seventh part is on mental health providers associated with/without non-adherence and the last part is on unavailability of antipsychotic associated with/without non-adherence

Eleven SSIs and two focus group discussions of 6 participants each, also was used to gather information on describing the factors associated with non-adherence to antipsychotic medication among young adults with mental disorders at MNH.

3.7.2 Link between focus group discussion and in-dept interview

There are various types of instruments used to collect data for qualitative research. Focus groups and in-depth interviews are among the most utilize instruments that researchers are using in collecting their data.(Wikipedia, 2009).

This study used these instruments to gather the information on the "factors associated with non- adherence to antipsychotic medication among young adults with mental disorders at (MNH)". Focus groups discussion and in-depth interviews, began by welcoming participants and briefing them on the process (e.g., that there are no right or wrong answers, that the session will be recorded).

Both were an effective qualitative method that allowed participants to talk about their personal feelings, opinions, and experiences on the factors that contributing to medication non-adherence among people with mental disorders. During data collection participants felt more encouraged to express the deepest thoughts about why they are not adhered to their antipsychotic medications.

Both methods provide an opportunity to observe non communication behaviors and notes were made, as well as materials presented was revised between sessions in case of not well described or understood. After analysis the themes obtain from both tools were the same so a single report was written.

3.7.3 Pre-testing

Pre-testing was done on 3 participants (in-depth) and one FGD, participants with psychotic mental disorder, attending at Muhimbili National Hospital (in patients and out patients) in May 2010. The aim of pre-test was to check whether the instrument used in the study was able to collect desired data. Participant information was closely assessed to make sure that the interview guide was understood by participants. Necessary modifications were done and clarity was assured at the end. The study involved one research assistant, selected according to her experiences to mental health related research and intervention with mental ill patients

3.7.4 Data collection procedure:

The commended psychiatric nursing officer was trained for two days to gain familiarity on how to use interview guide, controlling the FGD and recording. Pre-testing to three patients and one focus group discussion was done by using interview guides in Kiswahili the common language used by participants. Necessary modification on data collection tools was done. Before interview informed consent written and or oral was obtained from participants. Patient case notes of participants were used to identify the social demographic and adherence behaviours and eleven SSIs (three per day) and one focus group discussion was done on the first wave. Written notes and audio recording from participants, also non verbal behaviours presented by participants was observed and noted down. Each interview lasted 40-60 minutes. The researcher was responsible for day to day management of the study process while the assistant observed the non-verbal communication during SSIs and a focus group discussion.

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3.7.5 Data analysis and processing:

Data analysis was done after completion of the first wave and it was deemed necessary to repeat a second FGD to reach saturation. Transcriptions were done in Kiswahili as data collection to ensure consistency of data and were finally translated to English

Descriptive content analysis was used to analyse the data. Transcription of context from SSIs and focus group discussion interview was done within twenty four hours after the field work. Whereby the text was divided into condensed meaning unit, abstraction, coding whereby similarity was labelled and finally thematic analysis was done to show the factors enhancing non-adherence to antipsychotic medication was obtained. By this approach, certain themes and sub-themes were collectively agreed upon by the research team based on the objective of the study. This was done in Swahili language to avoid the distortion of what reported by participants, which is commonly language used during data collection procedure. Coding was

initially done on paper for the written transcripts of the interviews. The researcher rechecked twice the final data entered for analysis

Table 1: Socio demographic characteristics of participants

	MALE=10	- Female=10	Total N=20
1.**Age group**			
18- 30 yrs	2	3	5
31- 40 yrs	4	5	9
2. **Religion**			
Muslim	3	3	6
Christian	4	5	9
3. **Level of education**			
Primary level	4	4	8
Secondary	3	1	4
College/ University	1	3	4
4. **Marital status**			
Single	2	4	6
Married	5	1	5
Divorced	0	2	2
Widow	0	1	1
5. Employment status			
Employed	2	1	3
Unemployed	3	6	9
Self employed	3	1	4
6. Income/month(Tsh.)			
0 <150,000/	2	3	5
150,000-300,000/	2	2	4
300,000/	4	3	7
7. Amount spent for treatment (Tshs)			
5,000/month	2	3	5
1. 10000/Month	2	2	4
2. >20000	4	3	7

3.8 Ethical Consideration:

The study was carried out in accordance with existing ethical guidelines. Research ethical clearance was obtained from the Senate Research and Publication Committee of Muhimbili University of Health and Allied Sciences (MUHAS). Permission to collect data at the National Hospital was also granted by the MNH administration. A written consent was obtained from each participant prior to enrolment. Information about the study was given to the patients and their care givers to ensure that they have the information needed to make an informed choice and a complete description of the aims of the study. Patients who refused to participate (ten young men) were assured of the same quality of care as any other patient. All patients' information was kept confidentially (i.e. by using code number instead of using their names). Data was locked into a filing cabinet.

4.0 CHAPTER 4 RESULTS

4.1 Social demographic characteristics

The majority participants were ranged between 31 -40 years old **(Table 1)**. Most had primary education, not married and two had been divorced due to mental illness. The majority was not employed while of those employed, had an income between 150,000-300,000 TSH. / Monthly from self employment. According to the observation, for both sex, non adherence was not associated with gender or a clear relationship with demographic or socioeconomic factors, this was some what unexpected.

4.2 Experience of using antipsychotic medication since the onset of the mental disorder

According to the observation from participants both adherent n=5 and non adherent n=7 reported to experience positive perception of using antipsychotic medications. They reported to be controlled with their symptoms and prevented from relapse of their mental disorders. They identified that when stopped their medication they relapsed. This was proved from one participant during in-depth interview who reported that;

"I have been using antipsychotic medication for along time, when I am using my medication constantly, it improves my mental state, but when I stopped it, I relapsed. From this experience I can not stop the medication because, I now, know if I stop, I am going to relapse and misbehave" (Male, 38 years, adherent).

Other participants experience the period of remission when they stop using anti psychotic medication, they thought that they are cured and stopped their medication; as a result they are relapsing and condition become worse. In the focus group discussion one of the participants reported that;

*"I experienced that, after my first time of may mental illness, I was using my antipsychotic medication every day, I was improved much and thought that I was cured ,so I stopped the medication ,and I was not attending the clinic .Then I relapsed severely and divorced with my husband"(*Female,25 years, non -adherent).

Another experience mentioned by participants which hinder them to use their prescribed antipsychotics was substance/alcohol abuse n= 5, was observed to be a major source of non-adherence to antipsychotic medication. For adherent participant they tried to schedule their time table when to use antipsychotics and others were using light alcohol. For non-adherent they stop using their antipsychotic in order to continue with substance /alcohol abuse because they believed that mixing substance /alcohol and medication my poison their body. While some of them believed that even if they did not use substance /alcohol they are going to relapse, so they decided to stop medication.

The following were some of the quotation from participants, during in-depth interview clients reported that;

"I'm using white wine because it is so light, it can not cause me harm or confuse me to forget using my antipsychotics" (female, 32 years, adherent).

"There was a time when I was not using alcohol or cannabis but still I relapsed that's why I decided to use substances / alcohol abuse, because I want to enjoy my life" (Male, 29 years, non adherent).

Changing of antipsychotic medication also mentioned by participants as contributing factors, either partial or complete non-adherence among young adults with mental disorders. In addition, patients feel dependant on the drugs and this valid reason for concern

Participant from in-depth interview reported that;

"I thank God that I'm improving my mental state because I am using one type of antipsychotic medication. I am worried that I cannot live without pills. She continue to narrate that I was wondering around for two weeks after stopping my medication because my first medication was not available at my clinic, so the doctor prescribed another medication although I didn't use it. I wanted to try to live without them".

"When I tried to find my previous medication I had already relapsed and the condition was worse than the previous episode. Now I am happy because I am using my first medication without any problem" (female, 24 years, non- adherent).

From the participants report the study found that high dose of antipsychotic medication may contribute to poor adherence behavior, this may be due to the medication side effect The strategies to minimize the medication side effect by addition of artane *(Benzhexol)* may enhance antipsychotic medication adherence. This was proved by the following example, during focus group discussion one participant responding to what she was experiencing when using antipsychotic medication as I quoted her;

"I was much improved, when using antipsychotics, the problem is when I'm using high dose of haloperidol=4.5 mg daily, I am acting like a robot because I experienced body stiffness and couldn't do my activities, but when I was using with Artane (Benzhexol)I was active and doing activities without a problem" (female, 32 years ,adherent).

The result also shows that client may adhere for their antipsychotic medication when they are supported by their close relatives, and by weighing the advantages and disadvantages of using and psychotic medication. The following are the examples;

"*During the first days of my medication I was taking my medication under supervision of my relative. But after seeing the advantage of the medication, I used to take my medication alone.*" (Male, 27 years, adherent).

4.3 Knowledge on the therapeutic effect of antipsychotic medications

According to the observation made through in-depth and focus group discussion, participants were mostly prescribed haloperidol n=12, Olanzepine n=1, Modicate injection n=1 Chlopromazine n=1, Thioridazine n=1 and a combination of Haloperidol and Modicate injection n= 4.

Most of the participants were not able to mention their medication; they just explained their medication by color and explained their dose by number of tablets. Most of participants were also not a ware of the expected side effects from their antipsychotic medications. One participant was able to mention the side effect that was expected, while the majority of participant n=14 experienced the side effects as they used their medications without explanations by the mental health providers. This lack of awareness of the expected side effects enhance antipsychotic non-adherence since most participants stopped their medication (n=10) after experiencing the adverse effects. The negative effects of medication were contrary to their expectations of getting better with the medication. The study also found that those who knew a little bit of their medication could still not adhere. The following are narrations from both adherent and non adherent participants as quoted.

One participant from in-depth interview reported that;

" *I was using haloperidol and chlorpromazine (phenegan), as I continued with my prescribed antipsychotic I was experiencing excessive weight gain and constipation which made to be uncomfortable and I decided to stop the medication*" (female, 40 years, non- adherent).

Had this participant enough knowledge on the benefits of medication and also if she had information on how to balance diet and exercise, she may likely to have continued with the medication, certainly her weight and appearance was more important at that time, than her mental disorder.

Contrary to one adherent male, who reported that;

"I was using two small tablets when I was experienced oversleeping I went to report to my doctor" (Male, 23 years, adherent).

He had the wisdom to seek advice rather than just stop medication.

Table 2 Theme and codes obtained from data analysis

SERIAL NO.	THEME	CODE
1.	Perceived spiritual causation of mental illness	Client and relatives believes to be witched is cause of their mental disorders.
2.	Medication side effect	Medication side effect such as body stiffness, over sleeping, lost of sexual desire/impotence, excessive weight gain, body weakness, constipation dibbling of saliva,
3.	Unavailability of antipsychotic medication	Antipsychotic are inadequate near by the clients clinics
4.	poverty	Not afford to buy the antipsychotic medication which is not available in the district hospitals. Transportation fare to attend their psychiatric clinics also is important problem.
5.	stigma	They are isolated with their close relatives, even mental health providers, people used to call them *(vichaa)* means mad people, and mental disorders seemed as a shame illness by the community.
6.	Poor social support	They are not given a chance to participate to the home activities, some of them divorced due to mental illness
7.	Expectation of being cured	Due to remission of long period, patient may think to be cured and stopped medications.

Young adults with mental disorders face some of the barriers that prevent either temporary or permanently to adhere for their antipsychotic medications. Those barriers if not managed adequately may hinder antipsychotic treatment, which contribute to relapse of mental ill people. Among barriers that were narrated by the participants including the following themes; Perceived causes of mental disorders, unavailability of prescribed antipsychotic medication at their outpatient clinics n=5, stigma n=4, poverty n=3, expectations of being cured n=3, and poor family support n=3 (Table 2).

4.4 Perceived causes of mental disorders

This study found that the client's decision to adhere or not it depends on the perceived cause of the disorders. According to the narration from the participant, the majority of participants were under the broad theme of being bewitched (n=9). Participants under this theme narrated about visits to the traditional healer either before or after attending to the hospital treatments, and were contributing to either partial or complete non-adherence to antipsychotic behavior.

Those attending before hospital treatments, it delayed them to attend the hospital care and their mental illness become worse, as the participant from in –depth interview reported

"At the beginning of my mental disorders my relatives thought that I was bewitched, so they took me to a traditional healer and got some treatment. But there was no improvement, instead the condition became worse. The traditional healer agreed to have failed to treat me ,and advised to go to the hospital, it is where I have been getting antipsychotic medication from which I have improved my mental state and I still use my medication" (male, 22 years, adherent).

Those attending traditional treatment after hospital treatment they stopped their antipsychotic one of the participant from in-depth interview narrated that;

"At the beginning of my mental disorder my parents brought me to the hospital, where after being given some antipsychotics I improved. But being after discharged my aunt thought that I was bewitched by one of my relative so she took me to deferent traditional healers where I

relapsed because I stopped my antipsychotic medication, she continued that, this mix of treatment it prevent me to adhere to my hospital treatment" (female, 20 years, non-adherent).

4.5 medication side effect

Further analysis in this theme gives us some negative meanings on the salient beliefs of what causes mental disorders as well as how the medication adherence can revoked by this concept "**Negative meanings**" that are the final meanings condensed from nations are;

1. Mental disorders are caused by bad spiritual/witchcraft or bad people.
2. Conventinal medication can not cure mental disorders.

Most of participants reported medication adverse effect as an important cause of antipsychotic medication non-adherence n=14.The majority reported to experience more than one side effect, which including, over sleeping n =8, excessive body weight gain n=7, body stiffness n=7, body weakness n =7, loss of sexual desire/impotence n=4, upward gaze n=4, dribbling of saliva n=3, excessive appetite n=2, missing menstruation n=1, sedative addiction n=1, constipation n=1, tremors n=1, and excessive drowsiness n=1. This study found that most of participants decided to stop the medication and some of them reduced their prescribed medication after developed side effects. Participant from in-depth interview said that;

"When I started my antipsychotic medication after few days I noted body stiffness, my eye looking upward, and lost of sex desire it shocked me so I decided to stop the medication" (Male, 32 years, non- adherent).

Participant from focus group discussion reported that,

"Because of over sleeping and body tiredness, I can't do my activities, and I'm a house girl so I decided to stop medication in order to continue with my job" (Female, 18 years, non adherent).

Study also found that for participant who adhered to their medication although they developed medication side affect they reported medication side effect either to their relatives or to their

health providers to compare to those who do not adhered. , this altitude help patients to adhere to their medication.

Participant from group discussion reported that

"I'm doing well with my daily activities while I'm using my antipsychotic medication, but at the beginning it caused over sleeping, I went to the clinic, and I reported to the doctor who changed the medication to me, now I'm doing well with my medication .I was using two tablets at morning time and other tablets at evening time" (Male, 30 years, adherent).

At the beginning of my mental disorder I experienced over sleeping, excessive weight gain, my eye looked upward, body stiffness I decided to stop medication then I went to ask my doctor who changed to another medication and added artne (Benzhexol) for reducing side effect. Now I'm using my antipsychotics without a problem" (female, 32 years, adherent).

Study found that when the client was educated for the expected medication side effects, they may tolerate them, and may avoid non-adherence. This shows that there is a link to protect medication non-adherence among young adults with mental disorders as long as the providers provide adequate and continuous health education on the importance of complying with treatment advice. The use of antipsychotics is medically known to be associated with adverse effects that include extra pyramidal symptoms, sleepiness and increased thirst, which have been extensively documented. Others were worried about perceived adverse effects that are not necessarily medically based.

Participant from in-depth interview reported that;

"At the beginning of using antipsychotic medication, it was disturbing me much, and I almost stopped using. But when I recalled how sick I was without it, then I decided to try and tolerate the drugs and continued with my medication. I kept on seeking advice from mental health providers who educated me that the side effects were for a short period of time, I continued with my medication with some other drug that was to reduce these side effects until the side effects were subsided. Now I'm still using my medication without a problem"

From the narrations, despite the non-adherence, further analysis into more concrete meanings gives a concept of "positive meanings" and these are

1. Recognition of improving
2. Hope for future reduction and termination of medication
3. Meaningful social life and acceptance of medication

4.6 Mental health provider's services

The majority of participants (n=5) agreed to be satisfied by the mental health services, and others reported to have poor relationship, while some feel stigmatized by mental health providers. The results showed that for some of clients are not involved in the planning of their treatment or some treatment procedures are not possible if there is a lack of family support this contributes to non adherence to their antipsychotic medications. The following narration is quoted from the participants;

A male participant from focus group discussion narrated that;

"One day doctor "Y" planned to admit me but I told him that there was no body at home who will going to support me while I am being admitted, he did not listen to me, so I left and travelled to Mwanza where I hoped to receive support from my relatives while being admitted at the hospital. When I came back I saw the difference in his approach towards me, I decided to stop attending the OPD clinic because of fear of meeting him again

(Male, 30 years, non-adherent).

There many occasions that admission of patients in the hospital is not the best option due to lack of family support while in care, patients have been known to get worse when they do not see their families visiting while in care. Some feel they have been discarded and thus have negative feelings on hospitalization. However, others have positive experiences within the same settings.

Participant from in-depth interview narrated that;

"I do have a good therapeutic relationship with Mental health providers because they educate me on my mental disorder and have instructed me on the proper use of my

antipsychotic medication, normally they encouraging me to take my antipsychotic medication" They said I am young and have my whole life ahead of me, if I don't use these drugs, I will end up badly and if I use, I might be able to lead a normal life like anyone else, that was very encouraging and it keeps me going (female, 25 years, adherent).

The study also found, barriers within mental health system, contributing to antipsychotic non-adherence as the participant during group discussion reported;

"I spent long time at the clinic just waiting to be prescribed antipsychotic medications. It takes more than three to four hours; I normally fail to wait for such long hours and decide to leave without medication" (Male, 26 years, non- adherent).

4.7 Unavailability of antipsychotic medication

Unavailability of antipsychotic medication was mentioned by the both adherent and non-adherent participants as one of the main cause of non-adherence to their antipsychotic medication.

One participant from in-depth interview was narrated that;

"The unavailability of my antipsychotic medication is disturbing my time table of my medication, because if I'm missing the medication at my clinic it takes time to go to the private pharmacy where it is very expensive ,so I remained for many days without using antipsychotic medications" (Female, 28 years, non-adherent).

"When I took my antipsychotic medication I was so tired; it seems that I was punished, but what can I do, it is the treatment. "But there have been times when I have not been able to take my medication simply because I could not get any at the clinic and if my situation is bad, then I cannot buy and then I cannot take the medication……it is very demoralizing for us with poor income" (Male, 20 years, Adherent).

4.8 Poverty

In this study Most participants identifies poverty as a barrier to access medication, although the medication is provided by exemption by the government ,but patient were having financial difficulties even in arranging money for transport .In many patients inconvenience distance is the main problem. Although the client can buy their antipsychotic medication from local shop the main problem is high cost of the medicine or unavailability of psychiatric medicine in shops in the remote areas. One participant from focus group discussion reported that;

"*Normally I failed to attend to the psychiatric clinic because of bus fair, I'm changing two buses which cost not less than TSH.1000, not only that but also the medication not available at the clinic, normally I told to buy the medication., my family is poor, they failed to buy the medication so I remain without medication"* (Male, 25 years, non- adherent).

Some of participants described as poverty being the cause of their mental illness in the first place and can also be a result of mental illness.

Participant from FGD reported that;

*"My problem is that I think I became mentally ill because of poverty, I am poor compared to my sister, I have led a restless life, always worried, could not sleep half the time worrying on my debts, ...eventually I cracked. If I had support from my rich relatives, I wouldn't be here in the first place. Now my sister confuses me and I end up failing to take my medication, because every thing I do, is taken simply because I'm mad. What happened when I was not, no support and now....*He continued to explain that he now works as a night watchman when he can, *"how can I work while I'm sleeping excessively, my body was stiff, very tired and some times my eyes looking upwards due to medications. If I decide to sleep at home where can I get my income? How will I buy the medications that are always out of stock in the district hospital?"* (Male, 29 years, non- adherent).

4.9 Social support and stigma.

The family support to people with mental disorder will encourage them to adhere to there medication and visa versa. Even though it has proved in this study that even some of participants who lacking family support may adhere to medication on there own, depending on the care from mental health providers. It was also proved that there are some who receive support and care from close relatives but are discouraged by the outsiders to adhere for their medication. According to the narration from participants study found that the client of mental disorder stigmatized with their family as well as mental health providers. During in depth and focus group discussion participants reported to be supported by their families who were n=9 and who said they lack support were n=5.and being stigmatized n=4.

One of participant from in-depth group discussion reported that;

"My relatives are very supportive although they have a problem of money they are escorting me to hospital, they are reminding me to take my medication, and they even including me to participate with home activities but still I don't adhere to my medication due to the medication disturbances" (Male, 22 years, non adherent).

"They are stigmatizing me, when I ask for anything they tell me that don't bring your madness (ondoa kichaa chako hapa) but still I kept on using my medications as directed by my doctor" (Female, 40 years, adherent).

My family did not advise me anything about my illness. They chose to ignore my problem, as I was an embarrassment to them, especially after I got worse, I had never felt so alone in my life before the first episode of my illness....I now know that mental illness is such a stigma in our society...I cannot imagine if I had HIV this would have been the same. Right now I have a very poor relationship with them. But I should be thankful that the police brought me to the hospital...now I know that I have a chance to get better, but is difficult if you do not have anyone to support you. When I cannot get my medication from the clinic, that is it, I relapse and get sick all over again but I'm still using my medication" (Male, 35 years, old adherent).

CHAPTER 5 DISCUSSION

Analysis of the participants' narratives has revealed various aspects of the subjective meaning of taking medication from the patient's perspectives. On the other hand, adherence or non adherence habit depends on the individual attitude towards medication. This study found that development of side effects, stigma, lack of social support, poor socio-economic status and unavailability of medication at clinics are important factors that contribute to medication no-adherence. Non-adherence behavior continues to be a significant issue in the management of psychotic disorders especially among young adults. Failure to adhere to antipsychotic medication is associated with exacerbation of psychotic symptoms, psychotic relapse, and hospitalization; it is a significant barrier to the successful treatment of mentally illness as clarified previously by (Llorca, Khan, Bouhours, & 2006; Noguchi, 2008)

5.1 Reasons that contribute to non-adherence to antipsychotic medications

5.1.1 Side effects of antipsychotic medication

The majority of non adherent participants agreed that antipsychotic medications reduce the relapse of their mental disorders. This is in consistence with the previous study by(Gutiérrez-Casares et al., 2010; Morken et al., 2008), who found that antipsychotic medication reduce the recurrence of psychotic episodes among persons with mental disorders, and resulting to the remission of psychotic episode (Stuart & Laraia, 2005). The study also found that participants experienced some of the problems that hinder them to adhere for their medications; those are under the broad theme of, medication side effects, poor social support unavailability of medications and stigma, as clarified in previous study by (Kozuki & Schepp, 2005).

5.1.2 Perceived causes of mental disorders.

The study found that adherence and non-adherence may be affected by the belief of causality of the mental illness. Participants narrated the following causes of mental illness; witchcraft, poverty, substance/alcohol abuse, heredity, stress, and God's will. The perception regarding mental causality is related to local explanatory model of mental illness behaviour (Adewuya et al., 2009), including the definition of the symptoms and the progress within the society. The perception of the disease is sometimes influenced by the culture and hinder the client to seek professional treatment as clarified previously by (Adewuya et al., 2009; Llorca, 2008; Lynch & Medin, 2006).In this study it was found that majority of participants believed that, their mental disorders were caused by being bewitched thus they were attending to traditional healers, as alternative of their treatment of their mental disorders either before or after beginning of their antipsychotic medications. This may be influenced by the culture in the definition of mental illness (Adewuya et al., 2009; Bhugra, 2006)

5.1.3 Knowledge on the therapeutic effects of antipsychotic medications

This study found that the side effects of antipsychotic medications and not understanding the mechanisms of actions of these drugs affected both adherence and non-adherence participants, although they differ to their response towards side effects. Adherence participants narrated that they consulted their relatives and others to go to their mental health providers as soon as they observe them. Non- adherence participants narrated that they stopped their medication and others reducing the dosage soon after experiencing side effects which enhance to non-adherence behaviour as clarified previously by (Guthrie, 2003; Stuart & Laraia, 2005).This study also found that there are other contributing factors that related to the treatment factors, the amount of tablets taken and frequency as narrated by participants was enhancing the client not to adhere to their medications. This is in consistent with the previous study by (Guthrie, 2003).Those participants who were prescribed four tablets per day either decided to take only two tablets per day or stopped.

The study found that, client with lack of insight towards their mental illness, narrated that due to the nature of illness; either they don't believe that they are sick, or they lost their memory, this is in consistent with the previous study by (Olfson et al., 2006).

Alcohol and substance abuse; participants narrated that one of the non-adherence barrier to their antipsychotic medication is the use of substance /alcohol which may make the client forget to take their medication or some times intentional so as to use substance/alcohol. This is in consistent with previous studies (Coldham et al., 2002; Gutiérrez-Casares et al., 2010; Olfson et al., 2006).

5.1.4 General social support and, stigma

Social support system can be helpful in emphasizing the strengths of individual and family and focus on health rather than illness. According to the observation from SSIs and focus group discussion interview, social support is very important to enhance the adherence behaviour among person with mental disorder, as narrated by the participants, lack of social support is barrier to their antipsychotic medications, they said that they need support from their family, to remind them to take their medications, to escort them to the mental ill clinic, because of the nature of the disorder sometimes they may be not able themselves ,as clarified previously by (Patel & David 2007). This support is important for all level of prevention in primary, secondary and tertiary and help to encourage health promotion behavior, clients to seek assistant earlier, reduce occurrence of potentially stress event, helping to deal with chronic mental illness and fostering, the ability to cope with stressful events which may act as tool for enhancement antipsychotic medication among psychiatric patients. (Adewuya et al., 2009; Clatworht et al., 2008).

According to the narration from participants study found that the client of mental disorder stigmatized with their family as well as mental health providers they are not given a chance to present even their ideas to the family members, as well as to their treatment plan. lack of acceptance of mental ill, is barrier of non adherence to treatment to people with mental illness, this is in consistent with the previous study by (Adewuya et al., 2009; Kozuki & Schepp, 2005).

5.1.5 Poverty

It was noted that poverty impacts on help seeking behavior as patients may not be able to finance themselves to the health facilities especially if they are deep in the regions or live a considerable distance form MNH. Mental health consumers are disproportionately impacted by poverty, income and material resources are often not given prominence in mental health policy, though the Tanzanian mental health policy stipulates that drugs are free of change but half the time they are not available (Yanos, 2001, & Wilton, 2003). Although the client can buy their antipsychotic medication from local shop the main problem is high cost of the medicine or unavailability of psychiatric medicine in shops in the remote areas.

5.1.6 Mental health provider's services

The results showed that some of clients are not involved in the planning of their treatment or some treatment procedures, therapist played a role in making treatment decision and appointments for the clients, sometimes without discussing with the client on the barrier that may hinder them not to attend to the mental ill clinics, such as financial difficulties, as a result the client failed to attend to the clinic and stopping their medications, as clarified previously by (Kozuki & Schepp, 2005).

6.0 CHAPTER 6 CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

This study aimed to identify the factors that enhance antipsychotic non-adherence among young adult at Muhimbili National Hospital. Non adherence was identified to be a challenge to the treatment outcome among people living with mental disorders. Interventions aimed to improve the identified barriers are very important to improve treatment outcome to the mentally ill population. Solutions to non adherence problems identified such as medication side effects, substance abuse/alcohol, unavailability of medications, poverty, poor social support and stigma need to sought.

In summary, effective health program planning is necessary

6.2 Recommendations

1. Since adherence to antipsychotic medications is a major problem for the mental health provider's perspectives, the promotion of patient's functional coping behavior to medication side effects to patients with insight will be a key action for improvement. This can be done by providing knowledge of the therapeutic effects of these drugs, the importance of maintaining therapeutic concentrations in blood by taking drugs at the right time, right dose and right method, the mechanism of action and recognition of symptoms when development of side effects occurs should be among the areas to be explained to patients.
2. Medication diaries can be developed and outpatient clients can be taught to record their drug schedules, note symptoms and signs of side effects for compressive monitoring and updates when they return at the clinic. People with mental disorders should be given a chance to participate in their treatment plan, after being educated of their mental disorder and needed medication.
3. Antipsychotic medications and mental health practitioners should be made available at all health facilities and effective drug stock monitoring should be taught to all health workers for continuity.

4. Adherence enhancing techniques should be routine for all mental health providers, supported by the multi-disciplinary mental health and psychiatric team.
5. The Ministry of Health and social Welfare (MOHSW) should institute monitoring and evaluation tools to ensure that mental health policy is efficiently implemented and ensures that the revised policy encompasses the means to support realistic treatment for the majority poor.
6. The government should collaborate with traditional hearers so as to find the strategic plan to prevent non- adherence to medication for those attending the traditional treatments.

6.2.1 Implications for nursing practice

The study implies that there is a need to train more nurses in mental health and psychiatric specialisation so as to maintain the primary health care facilities that are operating without mental health component. It might be cost effective to train a number of psychiatric and mental health nurses than psychiatrists that will be required to work at consultant hospitals, this scheme will ensure a wider coverage for those afflicted by mental disorders.
The study also implies that there is a need for that mental health nurses to develop a special nursing care plan to accommodate adherence to antipsychotic medication or find a better tool to monitor drug compliance for clients at home.

6.2.2 Limitations of the study

1. Self report used to assess the medication adherence may over estimate adherence.
2. The age was limited so the opinion from the client above 40 years for the contributing factors with non-adherence to antipsychotic medication was missing.

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