CHAPTER 1

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Mental Health is 'the capacity of an individual to form harmonious relationships with others and to participate in or to contribute constructively to change in the social environment' (WHO 1948).Mental illness or mental disorder is a psychological or behavioural pattern that occurs in an individual and is thought to cause distress or disability that is not expected as part of normal behaviour (MOH 2005).

Mental disorders are responsible for about 12 – 15 % of the world's total disability more than cardiovascular diseases and twice as much as Cancer. Globally it has been estimated that over 12.5% of the burden of the disease is due to mental and neurological disorders (MOH 2005).

In Zambia, hospital based figures show a prevalence of between 1.8 and 3.61 per 10 000 population for acute psychotic states and schizophrenia respectively. 10% of the admissions for acute psychotic states are alcohol and drug misuse related, where more males are reported to abuse alcohol and drugs than females. Other common mental conditions include; affective disorders and organic brain damage (MOH 2005).

The concept of Primary Health Care (PHC) was adopted by the Zambian government through the Ministry of Health (MOH) in 1980 in order to achieve the World Vision of Health for All by the year 2000. One of the eight elements of PHC is promotion of mental health. The health care vision of the Zambian government is to provide all Zambians with equity of access to quality cost-effective health care as close to the family as possible (MOH 2005). Through extensive consultations, mental health is now part of the National Health Strategic Plan (NHSP) and the Basic Health Care Package (BHCP), (M0H 2005).

There are 560 beds for psychiatric patients throughout the country. Chainama Hills Mental Hospital being the only specialized hospital in Zambia has 200 beds. The rest of the beds are shared among the seven (7) units in the General Hospitals at Kabwe, Mansa, Chipata, Kasama, Mongu, Ndola and Livingstone. There are also beds for mentally ill patients in district hospitals. The provincial hospitals and district hospitals lack trained mental health staff. This

has prompted the untrained staff to be referring most cases of severe mental illness directly to Chainama Hills Mental Hospital in Lusaka (Birbeck 2006).

Whilst in Chainama Hills Hospital, patients are treated using medication, psychotherapy, social therapy and electroconvulsive therapy. Like in any other illness, when mentally ill patients are discharged from the hospital, they are expected to integrate in their communities and live a normal productive life. Unfortunately, this is not the case with this category of patients. Often, patients do not spend long time in the community without going back to Chainama Hills Hospital for readmissions. These frequent readmissions have not only affected Zambia. Even globally, it has been noticed that there is a high rate of readmissions for both male and female adults to the psychiatric hospitals (Joiner 2006). Similarly in South Africa, the rates of readmissions of the adult mentally ill are on an increase and are more than the first admissions (Gillis and Sandler 2006). These high rates of readmissions of the mentally ill adult patients impact negatively on the patients themselves, families and institutions they are readmitted to. Readmissions to the psychiatric hospital make patients face a lot of stigma, discrimination, violence by communities, and loss of social status and are often not taken on in their previous jobs (Warner and Mandiberg 2008). Frequent readmissions, especially through involuntary readmissions impinge on personal liberty (Valfre 2005). According to (WHO 2004); frequent readmissions of the mentally ill patients take away rights of individuals rather than protecting their rights.

Frequent readmissions of a family member is more trying to the family, since most patients are in productive age groups and are bread winners (Joiner 2006).The readmitting institutions face challenges as well in terms of shortage of beds, overcrowding, strain on the few members of staff and other meagre hospital resources (Gillis and Sandler 2006).

The Zambian government has put in place some measures to reduce the high rates of readmissions such as development of a four year strategic plan to train direct entry of Mental Health Registered Nurses and Clinical Officers in order to promote community based mental health activities.

The government has also embarked on reviewing the Mental Disorders Act Cap 307 of 1951 which refers to mentally challenged persons as stupid and imbecile (MOH 2005). Such terms as

imbecile breed stigma and discrimination against the mentally ill patients by the community in which they live. Despite the above interventions, the problem seems to be on the increase. Factors associated with the high rates of readmissions could be demographic characteristics, socio cultural, economic, patient related, and distance from the nearest health facility.

1.2 PROBLEM STATEMENT

Frequent readmissions of the mentally ill adults are on an increase worldwide and this has caused great public concern. Readmissions of the mentally ill adults are inevitable but what is causing concern are the high rates of these readmissions for the adult mentally ill adults. The high rates of readmissions affected both developed and developing countries. For instance, in Australia, according to (Warner and Mandiberg 2008), readmission rates of more than one (1) in seven (7) occurring within one (1) week after discharges were reported. Equally in South Africa, rates of readmissions of the mentally ill adults are more than that of the first admissions (Gillis and Sandler 2006).

The problem of high rates of readmissions of the mentally ill patients in Zambia may not be different from the global picture. A review of medical records at the only psychiatric hospital in Zambia (Chainama Hills Hospital in Lusaka) revealed a steady increase in the rates of readmissions of the mentally ill adults for the year 2006 to 2008 as shown in the following statistics.

TABLE 1: STATISTICS FOR THE READMISSIONS OF THE MENTALLY ILL ADULTS AT CHAINAMA HOSPITAL IN LUSAKA, ZAMBIA

YEAR	TOTAL NUMBER OF ADMISSIONS IN A YEAR	NUMBER OF READMISSIONS IN A YEAR	PERCENTAGE
2006	994	149	15%
2007	1023	173	16.8%
2008	1054	192	18.2%

SOURCE: HMIS 2009.

Table one: shows an increase in the rates of readmissions of the mentally ill patients at Chainama Hills Hospital in Lusaka.

The mentally ill adults who are readmitted to Chainama Hills Hospital are referred from different parts of Zambia. The increase in the rates of readmissions may indicate the unjustified reasons for readmissions. It may also mean that patients fail to integrate in their communities after discharge from the hospital.

According to the World Health Organization, the readmission rates are supposed to be between 3% and 5% of admissions. WHO instituted this guideline as a control measure to high rates of readmissions. The statistics for Chainama Hills Hospital show that the rates of readmissions are more than the acceptable 5% WHO threshold; this has created a concern which needs further investigations.
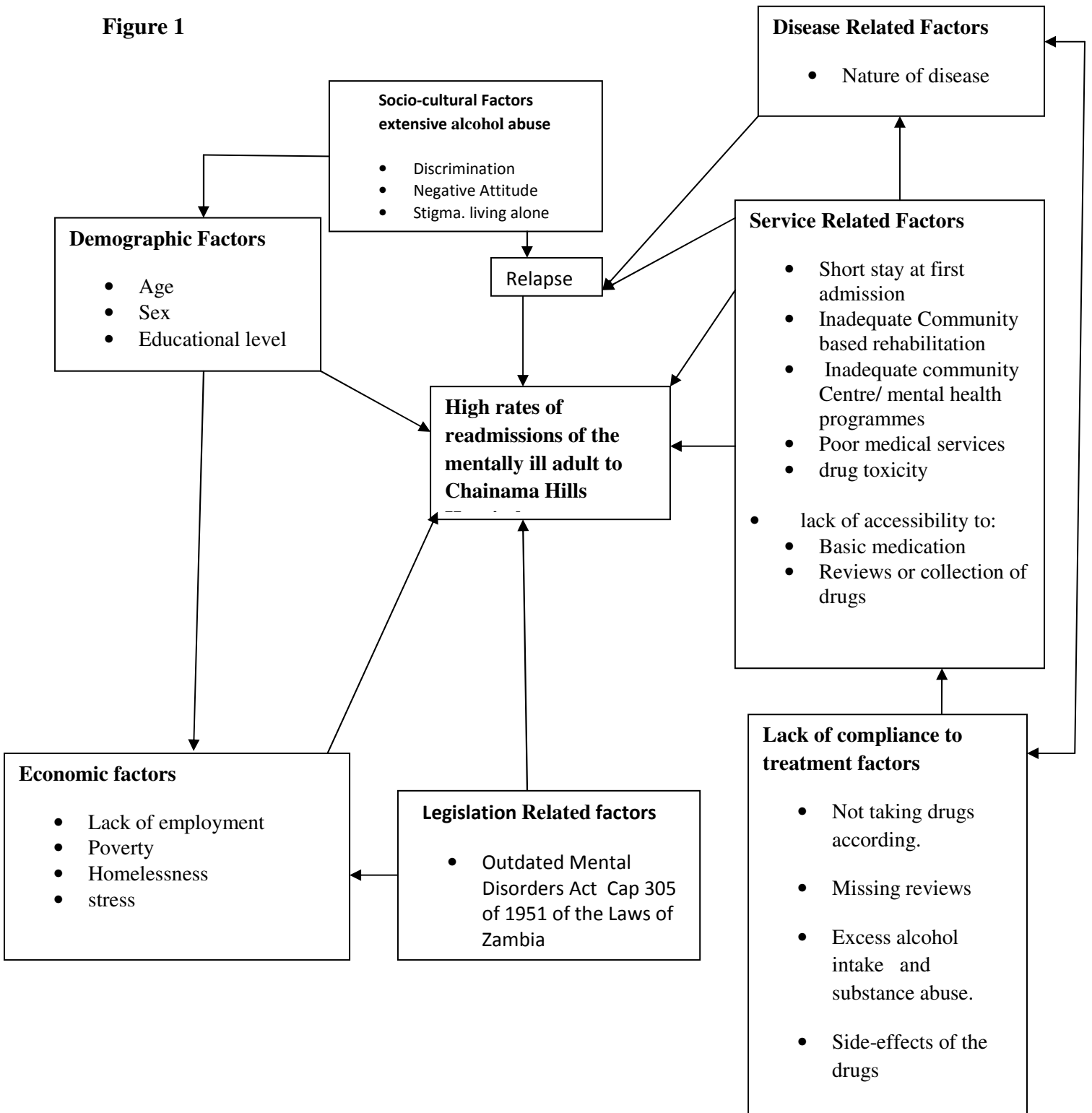
So far, very little has been done in Zambia to determine the factors associated with the high rates of readmissions at Chainama Hills Hospital. The statistics from Chainama Hills Hospital clearly show that there is a gap between the actual rates of readmissions and the WHO acceptable threshold. This gap is what has necessitated the urgent need for this study.

High rates of readmissions impact negatively on patients. Some patients end up losing their jobs, or at times are sidelined in developmental projects, hence leading them to being subjected to abject poverty, which is a catalyst for relapses that lead to readmissions. Readmissions can also impact negatively on families as well. For instance, there is usually loss of family ties with the patient who spends prolonged periods of time in the hospital. Moreover, stigma is also extended to the family by the community they live in. This breeds resentments, fear, and mistreatment of the family by the community.

High rates of readmissions are also a strain on the health institutions and on the Ministry of Health Budget. For example, they (readmissions) contribute to overcrowding. Overcrowding of patients promotes transmission of air-borne diseases like tuberculosis. When patients acquire tuberculosis as a nosocomial infection, their stay in the hospital will be prolonged hence causing a strain on the meagre human and financial resources. The more the times a patient is readmitted to the hospital the less productive they become. Some patients even develop a dependency syndrome on the readmitting institutions for they spend most of their times there. Such clients feel insecure to integrate themselves in the community.

PROBLEM ANALYSIS DIAGRAM OF FACTORS ASSOCIATED WITH HIGH RATES OF READMISSIONS

Figure 1

Disease Related Factors

- Nature of disease

Socio-cultural Factors extensive alcohol abuse

- Discrimination
- Negative Attitude
- Stigma. living alone

Relapse

Demographic Factors

- Age
- Sex
- Educational level

Service Related Factors

- Short stay at first admission
- Inadequate Community based rehabilitation
- Inadequate community Centre/ mental health programmes
- Poor medical services
- drug toxicity

- lack of accessibility to:
- Basic medication
- Reviews or collection of drugs

High rates of readmissions of the mentally ill adult to Chainama Hills

Economic factors

- Lack of employment
- Poverty
- Homelessness
- stress

Legislation Related factors

- Outdated Mental Disorders Act Cap 305 of 1951 of the Laws of Zambia

Lack of compliance to treatment factors

- Not taking drugs according.

- Missing reviews

- Excess alcohol intake and substance abuse.

- Side-effects of the drugs

The problem analysis diagram above shows that socio-cultural, disease related, demographic, service related, lack of compliance to treatment, legislation and economic factors being **independent variables** while high rates of readmissions of the mentally ill adults at Chainama Hills Hospital as a **dependent variable.**

1.3 JUSTIFICATION OF THE STUDY

If the problem of readmission of the mentally ill adults is not abated, family ties will disintegrate, there will be low or no participation of the community in the care of the mentally ill patients, stigma will be perpetuated in the communities and the quality of health care will be compromised as there will not be enough financial and human resources to manage the problem.

The continued high rates of readmissions of the mentally ill adults despite the so many interventions put in place could be attributed to other factors that could not have been studied before interventions were put in place. Therefore, this research will identify factors which may contribute to high rates of readmissions at Chainama Hills Hospital. The research results will also help management and relevant policy makers to address the problems of high rates of readmissions based on scientific grounds.

1.4.0   RESEARCH QUESTIONS

- Why are there so many readmissions of the mentally ill adults at Chainama Hills Hospital in Lusaka?

- What could be the contributing factors to high rates of readmissions of the mentally ill adults at Chainama Hills Hospital?

1.5.0.   GENERAL OBJECTIVE

To determine the prevalence and factors associated with readmissions of the mentally ill adults at Chainama Hills Hospital in Lusaka.

1.5.1. SPECIFIC OBJECTIVES

i) To determine the rate of readmissions among mentally ill adults who were admitted at Chainama Hills   Hospital at the time of study

ii) To determine the association between demographic characteristics and high rates of readmissions of the mentally ill adults at Chainama Hills Hospital.

iii) To establish if compliance to treatment is associated with high rates of readmissions of the mentally ill adults at Chainama Hills Hospital.

iv) To determine extent to which socio-cultural practices contribute to the readmissions of the mentally ill adults at Chainama Hills Hospital.

v) To make recommendations to management and policy makers for the improvement of mental health in Zambia.

1.6.0 RESEARCH HYPOTHESIS

1.6.1 Alternative Hypothesis

There is a relationship between demographic characteristics, lack of compliance to treatment, Socio- cultural practices and high rates of readmissions of the mentally ill adults at Chainama Hills Hospital in Lusaka.

TABLE 2: VARIABLES AND CUT OFF POINTS

VARIABLE	INDICATOR
Age	Less than 35 years More than 35 years
Sex	Male Female
Marital status	Married Single Divorced Widowed
Educational Level	Primary Secondary Tertiary
Occupation	Employed Un employed
Compliance to prescribed treatment	Compliance to prescribed treatment Non Compliance to prescribed treatment
Socio-Cultural Practice	Good Socio-cultural practices Bad Socio-cultural practices

1.6.2. OPERATIONAL DEFINITION OF TERMS

Readmissions

Being admitted more than once in a year for the same problem of a mentally ill adult to Chainama Hills Hospital

Adult patients

All patients of 18 years of age and above who were readmitted to Chainama Hills Hospital

Compliance

The ability of the client to abide by prescribed treatment or medical advice

Socio -Cultural Practices

These are customs, behaviors and rules in societies which influence the way their members relate with people who have history of mental illness.

CHAPTER 2

2.0. LITERATURE REVIEW

The literature review focuses on factors associated with high rates of readmissions of the mentally ill adults. The literature review is aimed at establishing what is already known about the study topic and to identify gaps in the existing literature. In this chapter, literature review is arranged in sequence of global perspective, regional perspective and national perspective respectively.

2.1. GLOBAL PERSEPECTIVE

High rates of readmissions of the mentally ill adults are a global problem. (Pasqual 2006), revealed that there is usually little assessment of the client's needs and the levels of functioning and little consideration of whether hospital or community is the best treatment setting for particular clients before discharge from the hospital. He further explained that clients are often discharged from hospital/state institution back into a hostile community without proper assessment. The lack of after care and support services to facilitate the transition from a highly structured hospital setting to a less structured community setting may have a devastating effect on a client which may lead to relapses and frequent readmissions.

Similarly, (Lin 2005) suggested that high rates of readmission to Psychiatric Hospital in Taiwan are a reflection of lack of adequate community based after care.

(WHO 2008) stated that "Homelessness" of the mentally ill patient has increased in the wealthy nations, which have contributed to relapse and repeated readmissions of the mentally ill patients. WHO further pointed out that it is alarming to see how serious mental disorders are simply dealt with using bureaucratic and or legal solutions without taking into consideration the daily needs and the quality of life of the patients and their families.

On the other hand, (Peter 2006) associated homelessness, socio demographic variables of age, level of education and living alone to frequent readmissions in Switzerland.

(Fabio et.al 2004) in Brazil mentioned that age, sex, nature of disease and average length of short stay during the first and second admission may contribute to high rates of readmissions to Psychiatric hospital.

(Joiner 2006) reported that there were more mentally ill patients being readmitted than patients with other illnesses in 2003 and 2004 in Canada. These readmissions were due to the nature of the diseases such as 45% for personality disorders, 41% for Schizophrenia and 2.5% for substance abuse such as alcohol. Contrary to Fabio, Joiner pointed out that the longer the initial stay, the greater the chances of the readmission within a year. This could probably mean that patients develop dependency syndrome on the admitting institution.

Meanwhile, (Kent and Yelloelees 2002) outlined that social factors, physical illnesses, substance abuse and dangerous to self and others, account for 38.9%, 31.1%, 20.3% and 9.7% respectively of readmissions in South Australia.

(Taj et. al. 2007) revealed that non compliance or non adherence to treatment was directly related to the prognosis of the illness in terms of lack of disease control and frequent readmissions. He further pointed out that reasons of non compliance could be associated with non affordability of the drugs, unawareness of the benefits of treatment and unfriendly/ hostile attitude of the hospital staff. On the other hand, (Valfre 2005) attributed side effects of medication to non compliance to treatment.

(Taylor and Dear 2005), suggested that stigma is the major problem in the community for the mentally ill patients in North America and Western Europe. Since negative beliefs often lead to discrimination, there is little wonder that people with mental health problems living in the community experience rampant harassment. Therefore, to them (clients) a hospital is a safer place as compared to their homes in the community.

(Valfre 2005) further explained that life in the in-patient facility may actually be better because of security, protection, individual attention and emotional support from the health staff than a lonely life style that exists in the harsh community. With that in mind patients prefer to be readmitted to the institution than being taken care of in the community.

2.2. REGIONAL PERSPECTIVE

The high rates of readmissions for the mentally ill adults have not spared the African region at all. Some studies were conducted in countries like South Africa and Kenya to show some factors associated with the high rates of readmissions of the mentally ill adults.

According to (Gillis and Sandler 2006), progressive increase in the rates of readmission to the Psychiatric hospital in South Africa was causing concern. Readmissions accounted for 42% of the total admissions and at times the number of readmissions exceeded that of the first admissions. The study also pointed out that these high rates of readmissions were associated with recycling of short stay in-patients on first admission, tendency of certain psychiatric conditions to relapse, inefficiency in the current psychiatric out patients department and community services . Above all, with the high cost of living, the burden of unproductive extra mouth of the mentally ill patient may cause relatives to seek readmission of the patient as a less expensive alternative.

(George 2005) explained that community hostility towards the mentally ill patient facilitates high rates of readmissions. The mentally ill patients prefer hospitals as safer places to the communities. In addition, hospitals seem to be conducive environments for treatment compliance than the communities.

(Okonji 2004) in Kenya reported that 55% of the readmitted psychiatric out-patients were due to defaulting in treatment.

2.3. NATIONAL PERSPECTIVE

In Zambia, very little has been done to show factors that are associated with high rates of readmissions of the mentally ill adults at Chainama Hills Hospital. It could be due to lack of research resources. Zambia being in the same region with Kenya and South Africa and having common customs and cultures with these countries, there is a high likelihood that high rates of readmissions could be associated with similar factors. However, a report by Mayeya in 2007 showed that socio-economic conditions contribute to mental health problems in Zambia. It further revealed that after patients undergo treatment at Chainama Hills Hospital, most of them are sidelined for developmental projects within the communities in which they lived. Such treatment predisposes them to a life of poverty. As a result of that, there is a high number of relapses leading to frequent readmissions among some of these people.

CHAPTER 3

3.0. RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

This was a cross sectional study design. Qualitative and quantitative methods were used to collect data. The study looked at data at one point in time. Qualitative method was used in order to describe human experiences which needed in-depth interviews. Quantitative method was also used when testing the relationships, differences and causes, effects and interactions among and between variables using numbers. These processes were tested with either hypotheses and or research questions (Wood and Haber 2002).

Participants were accessed during one data collection period and attrition (loss of participants) was prevented or avoided.

3.2   RESEARCH SETTING

The research was conducted at Chainama Hills College Hospital in Lusaka Urban. Chainama Hills Hospital is a natural setting as this is the appropriate and usual place where mentally ill patients are referred and readmitted to. The researcher had no manipulation or control over the readmissions as they were happening on their own in this natural environment. Chainama Hills Hospital is the biggest Psychiatric hospital in Zambia. It has 200 beds. The hospital is supported by a network of smaller Psychiatric units in seven provincial general hospitals.

 The hospital provides specialized high quality psychiatric care to the patients in form of psychotherapeutic, rehabilitative and physical intervention in collaboration with the patients, their families, friends, relatives and employers. The participants were accessed consecutively, (one after the other) as they came for readmissions and review at Chainama Hills Hospital.

The researcher had decided to conduct the research in Lusaka Urban District and at Chainama Hills College Hospital in particular because it was a natural setting and very little had been done on the proposed topic. The place was appropriate as it was the only and biggest specialized mental hospital in the country. Above all, the researcher was familiar with the town and the institution.

3.3.0 STUDY POPULATION

The study population consisted of eligible patients and relatives to the adult patients who were readmitted to Chainama Hills Hospital during the time of study. The participants were accessed consecutively (one after the other), as they came for readmission and review. The population was targeted on the basis of availability.

3.3.1 INCLUSION CRITERIA

Both male and female patients, who were 18 years and above, who were calm, able to speak coherently and whose close relatives assented for them were included in the study.

For those patients who were found not fit to talk coherently, their relatives who were 18 years and above and who gave consent were interviewed instead.

3.3.2. EXCLUSION CRITERIA

All patients who were not calm, who could not speak coherently and those whose close relatives could not assent for them were excluded from study.

All patients below the age of 18 years were excluded from the study.

All relatives to the patients who were below the age of 18 years were excluded from the study.

All relatives who refused to give written consent were excluded from the study.

3.4. SAMPLING METHOD

Probability, convenient sampling method was employed, whereby participants were accessed on the basis of their availability as they came for readmissions and reviews.

3.5. SAMPLE SIZE DETERMINATION

3.5.1 Sample size for quantitative method:

The study was designed to tolerate an absolute sampling error of up to 5 percent, with the power of the study at 95 percent.

The following formula was used to calculate the sample size;

$$n = Z^2 P (100-P)/d^2$$

Where:-

$Z = 1.96$, the factor from the normal distribution

P = Expected period prevalence

d = Absolute sampling error

n = Sample size

Therefore;

$$n = (1.96)^2 \ 18.2 \ (100-18.2)/5^2$$

$$n = 3.84 \times 18.2 \times 81.8/25$$

$$n = 228.7$$

$n = 229.0$ patients, and this was the sample size.

3.5.2 Sample size for qualitative method.

Two focus group discussions were conducted. The first group of participants was eight (8) patients. The second group of participants was ten (10) relatives to the patients.

3.6. DATA COLLECTION TOOLS

A semi-structured interview questionnaire and focus group discussion guide were used to collect data from the participants. The questionnaire had both open ended and closed ended questions. The questionnaire was written in English but it was translated in vernacular whenever necessary during the interview.

A tape recorder was also used to capture the exact words used in the focus group discussion by the participants. Recording of the actual words helped the researcher not to forget the actual responses participants gave and it made data analysis easier.

3.7. DATA COLLECTION TECHNIQUES

Participants were given explanation with regard to the purpose of the study. They were asked to volunteer to participate in the study. Data was captured in English by the Investigator.

In order to support information from the administered questionnaire and to make the research results more reliable, a structured interview questionnaire was administered to another 150 participants who were just admitted once and two focus group discussions were conducted on the patients and their relatives. Focus group discussion is an in depth interview with a small number of people usually 6 to 12. The discussion was conducted in the local language so that participants were enabled to freely express themselves.

3.8. PILOT STUDY

A pilot study was conducted on participants who came for review at clinic six (psychiatric unit) in the University Teaching Hospital in Lusaka. The pilot study sample was 10% of the actual study population. A total sample of 23 participants who came for review at the clinic was enrolled for the pilot study. The main reasons for conducting a pilot study were to get the general overview of the likely responses to the actual study. The pilot study also served as a means of testing the instrument (questionnaire).This enabled necessary adjustments to be made to the questionnaire that was used in the major study.

3.9. VALIDITY

Validity for this study was ensured by covering all important variables under study in the interview schedule. Questions were clearly constructed with clear instructions and explanations. Pilot study was conducted and amendments to the instruments were done where necessary. Same questions were asked to each participant in the same sequence with same translations to vernacular language whenever necessary to ensure participants understood the questions.

3.10.   RELIABILITY

The pilot study was done before the actual study, which helped to measure reliability. A structured interview schedule was used and all questions were standardized.

3.11. ETHICAL CONSIDERATION

Permission was sought from the University of Zambia Research Ethics Committee and Chainama Hills College Hospital Administration. Explanation was given on the nature and purpose of the study to the participants, who were asked for consent.

Participants were reassured on the maintenance of anonymity and confidentiality. No name was entered on the questionnaire; though unique numbering was applied to identify the individuals. The data collected was kept under lock and key.

Participants were also informed on their freedom to withdraw from participating in the study at any time, though the emphasis was made on their importance to participate in the research.

3.12. PLAN FOR DISSEMINATION AND UTILIZATION OF THE STUDY FINDINGS

The findings from the research study would be disseminated in the following ways:-

- Chainama Hills Hospital, Ministry of Health, Department of Community Medicine and the Medical Library would each receive a copy of the study report

- A symposium would be held at Chainama Hills Hospital at which the findings of the research study would be presented and discussed to come up with better ways of improving mental health services

It is hoped that the results would be utilized by policy makers and health professionals to come up with better strategies of reducing readmissions to Chainama Hills Hospital. The results would also be used by communities to help change their attitude and practices towards the known mentally ill patients.

CHAPTER FOUR

4.1.0.DATA ANALYSIS AND PRESENTATION OF FINDINGS

This chapter presents both quantitative data derived from the structured interviews and qualitative data from the focus group discussions. It further describes the processing and analysis of the data. Data was collected using a structured interview questionnaire and focus group discussion guide. A total of 380 participants, (150 participants who were admitted just once in 12 months and 230 participants who were readmitted to Chainama Hills Hospital for the same problem in the last 12 months) were interviewed and there was a 100% response rate. In addition, two focus group discussions were conducted at Chainama Hills Hospital. The first group comprised 8 participants and the second group comprised 10 participants.

4.2.0. DATA PROCESSING AND ANALYSIS

4.2.1. Qualitative Data

At the end of each focus group discussion, the recorder read the points to the focus group members who were asked to clarify them. This was done to check the information for accuracy and consistence. Data obtained was transcribed from the local languages to English with the help of linguistic experts. Using the participants' own words, the key statements, ideas and attitudes expressed for each topic were categorized. The researcher read through all the information to obtain a general sense of information and to reflect on its overall meaning.

Content analysis was used to analyze the data. According to Polit et. al. (2001), content analysis refers to "an analysis of the content narrative data to identify prominent themes and patterns among the themes". In this regard, the participants' own words were used to list the key statements and ideas expressed for each topic of discussion. Thereafter, answers of the two groups of participants were compared. The most useful information that emerged from the discussions was selected to illustrate the main ideas. The findings were then interpreted and presented in table form to reflect the discussion as much as possible.

4.2.2 Quantitative Data

Following data collection, the structured interview questionnaires were sorted out and edited for internal consistence, completeness, legibility and accuracy. Closed ended questions were assigned numerical codes for easy entry and analysis using the SPSS soft ware computer package version 17.0. Open ended questions in the interview schedule were processed by reading through the data in its entirety to identify and group answers that belonged together. This process is known as categorization Polit et. al. (2001). The groups were then assigned numerical codes (0, 1, 2,3and 4). The codes were then entered and analyzed using SPSS soft ware computer package. The data analysis consisted of mainly running frequency tables and the variables that were cross tabulated and numerical descriptions were used to show the relationship of variable.

With the same SPSS soft ware computer package, Chi-square was used to test association between variables. Logistic regression was also employed to take care of cofounders. The cut off point for statistical significance was set at 5%. Therefore, only p- values of less than or equal to 0.05 were considered to be statistically significant there by failing to reject the alternative hypothesis.

4.3 PRESENTATION OF QUANTITATIVE DATA

The findings are from the data that was obtained from 380 respondents who were either patients or relatives who accompanied patients for review or readmissions at Chainama Hills Hospital in Lusaka. The findings of the study were presented according to the sequence of the questions and the sections in the questionnaire. Many of them were grouped together to give an overall picture of the phenomenon under study. The findings were presented in tables. This was done to assist in examining the relationships between the data collected. Data was analyzed using SPSS version 17.0

SECTION A; The tables in section A represent the demographic data of the sample

SECTION B; The tables in section B represent the respondents' compliancy to treatment.

SECTION C; The tables in section C represent the Socio cultural practices of the community members towards the known mentally ill adult patients.

SECTION A. SOCIO DEMOGRAPHIC DATA (n=380)

TABLE 3: ASSOCIATION BETWEEN SEX AND READMISSION (n=380)

SEX	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (n=150)	380	
Male	143 (63%)	57 (38%)	200	< 0.001
Female	87 (37%)	93 (62%)	180	
TOTAL	230(100%)	150(100%)	380	

Majority of the respondents (63%) who were readmitted were males. The odds ratio was 2.68 and the P-value was less than 0.001(highly significant)**.** Therefore it can be inferred that Males were more likely to be readmitted than Females

TABLE 4: .ASSOCIATION BETWEEN AGE AND READMISSION (n=380)

AGE	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (n=150)	380	
Less than 35 years	106 (46 .1%)	48 (32%)	**154**	0.007
More than 35 years	124 (53.9%)	102 (68%)	**226**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Slightly above fifty percent of the respondents (53.9%) who were readmitted were above the age of 35 years. Odds ratio was 1.83.The P-value was 0.007 which was significant. This implied that those with the age of more than 35 years were more likely to be readmitted than those below the age of 35 years.

TABLE 5: ASSOCIATION BETWEEN MARRITAL STATUS AND READMISSION (n=380)

MARRITAL STATUS	EVER READMITED		TOTAL	P- value
	YES (n=230)	NO (n=150)	380	0.022
Married	83 (36.1%)	73 (48.7%)	**156**	
Single	101 (43.8%)	58 (38.7%)	**159**	
Divorced	40 (17.4%)	13 (8.7%)	**53**	
Widowed	6 (2.61%)	6 (4%)	**12**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

The table shows that (43.85%) of the respondents who were readmitted were single. The P-value was 0.022, which was significant. Therefore it can be concluded that being single was associated with readmission of mentally ill adult patients.

TABLE 6: ASSOCIATION BETWEEN EDUCATION AND READMISSION (n=380)

EDUCATION	EVER READMITED		TOTAL	P- value
	YES (n=230)	NO(n=150)	380	< 0.001
No education	42 (18.3%)	31 (20.7%)	73	
Primary	54 (23.5%)	26 (17.3%)	80	
Secondary	71 (30.9%)	23 (15.3%)	94	
Tertiary	63 (27.4%)	70 (46.7%)	133	
TOTALS	230(100%)	150(100%)	380	

About (31 %) of the respondents who were readmitted had secondary education. The P-value was less than 0.001 which was highly significant hence being educated was associated with readmission.

TABLE 7: ASSOCIATION BETWEEN EMPLOYMENT AND READMISSION (n=380)

EMPLOYMENT	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (150)	380	
Yes	80 (34.8%)	91 (60.7%)	171	< 0.001
No	150 (65.2%)	59 (39.3%)	209	
TOTAL	230(100%)	150(100%)	380	

Majority (65.2 %) of the respondents who were readmitted were not in employment. The odds ratio was 0.35, and the P-value was less than 0.001(highly significant), indicating that there is an association between unemployment and readmission of mentally ill adult patients.

TABLE 8: ASSOCIATION BETWEEN RELIGION AND READMISSION (n=380)

RELIGION	EVER READMITED		TOTALS	P- value
	YES (n=230)	NO (n=150)	380	0.090
Christianity	182 (79%)	132 (88%)	314	
Islam	10 (4.3 %)	6 (4%)	16	
Hindu	1 (0.43%)	1 (0.7%)	2	
None	37 (16.1%)	11 (7.3%)	48	
TOTAL	230(100%)	150(150)	380	

Majority of the respondents (79 %) who were readmitted were Christians. The P-value being 0.090 (not significant) it can be inferred that religion is not associated with readmission of mentally ill adult patients.

TABLE 9: ASSOCIATION BETWEEN DISTANCE AND READMISSION (n=380)

DISTANCE	EVER READMITED		TOTAL	P- value
	YES (n=230)	NO (150)	380	< 0.001
Less than 2 km	59 (25.7%)	82 (54.7%)	141	
Between 2 km and 12 km	53 (23.0%)	35 (23.3%)	88	
More than 12km	118 (52.3%)	33 (22%)	151	
TOTAL	230(100%)	150(100%)	380	

The table shows that about (52.3 %) of the respondents who were readmitted lived more than 12km from the nearest mental health facility. The P-value was less than 0.001 (highly significant), hence it is deduced that living more than 12km from the mental health facility was associated with readmission of mentally ill adults.

TABLE 10: ASSOCIATION BETWEEN TIME TAKEN TO REACH THE NEAREST HEALTH CENTRE AND READMISSION (n=380)

TIME TO REACH MENTAL HEALTH CENTRE	EVER READMITED		TOTAL	P- value
	YES (n=230)	**NO (n=150)**	**380**	< 0.001
Less than 30 minutes	46 (20%)	64 (42.7%)	**110**	
Between 30 minutes and 2 hours	54 (23.5%)	37 (24.7%)	**91**	
More than 2 hours	130 (56.5%)	49 (32.7%)	**179**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Table 10 indicates that (56.5 %) of the respondents who were readmitted took more than 2 hours to walk to the nearest mental health facility. The P-value was less than 0.001(significant), and so it was inferred that taking more than 2hours to reach the nearest health centre was associated with readmission of mentally ill adults.

TABLE 11: ASSOCIATION BETWEEN THE DIAGNOSIS OF THE PATIENT AND READMISSION (n=380)

DIAGNOSIS	EVER READMITTED		TOTAL	P-Value
	YES (n=230)	No (n=150)	380	0.009
Substance abuse	53 (23%)	23 (15.3%)	76	
Dementia	1 (0.43%)	4 (2.7%)	5	
Schizophrenia	65 (29.9%)	64 (42.7%)	129	
Depression	35 (15.2%)	28 (18.7%)	63	
Mania	34 (14.8%)	14 (9.3%)	48	
Psychotic illness	39 (17%)	17 (11.3%)	56	
TOTAL	**230(100%)**	**150(100%)**	**380**	

About (29.9 %) of the respondents who were readmitted were diagnosed with Schizophrenia and (23 %) with Substance abuse**.** Those with Dementia were the least (0.43 %). The P- value was 0.009 (significant). This implied that diagnosis of the patient was associated with readmission of mentally ill adults.

SECTION B.COMPLIANCE TO TREATMENT (n=380)

TABLE 12: ASSOCIATION BETWEEN GOING FOR REVIEW ON APPOINTED TIME AND READMISSION (n=380)

REVIEW ON TIME	EVER READMITTED		TOTAL	P-value
	YES(n=230)	NO(n=150)	380	
Yes	69 (30%)	132 (88%)	**201**	< 0.001
No	161(70%)	18 (12%)	**179**	
TOTAL	**230 (100%)**	**150 (100)**	**380**	

Majority of the respondents, (70 %) who were readmitted did not go for review on the appointed dates. The odds ratio was 0.06, and the P-value was less than 0.001 (highly significance). It was concluded, therefore that missing appointments for review was associated with readmission of mentally ill adults.

TABLE 13: ASSOCIATION BETWEEN TAKING OF DRUGS ACCORDING TO THE PRESCRIPTION AND READMISSION (n=380)

TAKING DRUGS ACCORDING	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (n=150)	380	
Yes	65 (28.3%)	133 (88.7%)	198	< 0.001
No	165 (71.7%)	17 (11.3%)	182	
TOTAL	**230(100%)**	**150(100%)**	**380**	

The majority of the respondents (71.7 %) who were readmitted did not take the prescribed drugs according to prescription. The odd ratio was 0.05 and, the P-value was less than 0.001(highly significant). Therefore, it was inferred that not taking drugs according to prescription was associated with readmission of mentally ill adults.

TABLE 14: ASSOCIATION BETWEEN AVALIABILITRY OF PRESCRIBED DRUGS AND READMISSIONS (n=380)

AVALIABILITY OF DRUGS	EVER READMITTED		TOTAL	P-value
	YES (n=230)	**NO (n=150)**	**380**	
Yes	212 (92.2%)	143 (95.3%)	**355**	0.291
No	18 (7.8%)	7 (4.7%)	**25**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Majority of the respondents (92.2 %) who were readmitted indicated that the prescribed drugs were available at the hospital pharmacy. The odds ratio was 0.58; the P-value was 0.291(not significant). This meant that availability of prescribed drugs was not associated with readmission of mentally ill adults.

TABLE 15: ASSOCIATION BETWEEN BEER INTAKE AND READMISSION (n=380)

TAKING BEER	EVER READMITTED		TOTAL	P-value
	YES (n=230)	**NO (n=150)**	**380**	
Yes	139 (60.40%)	24 (16%)	**163**	< 0.001
No	91 (39.7%)	126 (84%)	**217**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Majority (60.4 %) of the readmitted respondents indicated that they drank beer. The odds ratio was 8.02, and the P-value was less than 0.001 (highly significance). It was deduced that drinking beer was associated with readmission of mentally ill adults.

TABLE 16: ASSOCIATION BETWEEN SMOKING AND READMISSION (n=380)

SMOKING	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (n=150)	380	< 0.001
Yes	131 (57%)	30 (20%)	**161**	
No	99 (43.0))	120 (80%)	**219**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Above half, (57 %) of the respondents who were readmitted smoked. Odds ratio was 5.29 and, the P- value was less than 0.001(highly significant). This meant that smoking was associated with readmission of mentally ill adults.

TABLE 17: ASSOCIATION BETWEEN THE TYPE OF SUBSTANCE SMOKED AND READMISSION (n=281)

TYPE OF SUBSTANCNE SMOKED	EVER READMITTED		TOTAL	P-value
	YES (n=131)	NO (n=150)	281	< 0.001
Marijuana	68 (52.3%)	12 (40%)	**80**	
Cocaine	12 (9.2%)	0 (0%)	**12**	
Petrol	8 (6.2%)	0 (0%)	**8**	
Glue	5 (3.8%)	1 (3.3%)	**6**	
Commercial cigarettes	34 (26.2%)	17 (56.7%)	**51**	
Tea-leaves	3(2.3%)	0(05)	**3**	
TOTAL	**131**	**150**	**281**	

Among the 131 who were readmitted and who smoked, (52.3 %) smoked marijuana, and the P-value was less than 0.001(highly significant). This meant that smoking marijuana was associated with readmission of mentally ill adults.

SECTION C: SOCIO-CULTURAL PRACTICES (n=380)

TABLE 18: ASSOCIATION BETWEEN COMMUNITY INTERACTION WITH THE MENTALLY ILL AND READMISSION (n=380)

INTERACTION	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (n=150)	380	< 0.001
Yes	71 (30.9%)	129 (89%)	**200**	
No	159 (69.1%)	21 (14%)	**180**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

About (69.1 %) of the respondents who were readmitted indicated that they did not interact well with their community members. The odds ratio was 0.07; the P-value was less than 0.001 (highly significant). It was deduced, therefore that there was an association between community interaction with readmission of mentally ill adults.

TABLE 19: ASSOCIATION BETWEEN COMMUNITY PERCEPTION OF CARING FOR A MENTALLY ILL PATIENT AS A BUDERN AND READMISSION (n=380)

PATIENTS AS A BUDERN	EVER READMITTED		TOTAL	P-value
	YES (n=230)	NO (n=150)	380	
Yes	177 (77%)	118 (78.7%)	**295**	0.801
No	53 (23%)	32 (21.2%)	**85**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Among those who were readmitted, (77 %) indicated that caring for the mentally ill was a burden. The odds ratio was 0.91 whilst the P- value was 0.801(not significant).

It was, therefore, deduced that there was no association between community perception of caring for mentally ill adults and readmission.

All the 230 respondents who were ever readmitted indicated that they did not have any community rehabilitation programmes in their communities.

TABLE 20: ASSOCIATION OF BETWEEN OVERALL COMPLIANCE TO TREATMENT AND READMISSION (n=380)

COMPLIANCE TO TREATMENT	EVER READMITTED		TOTAL	P-value
	YES(n=230)	NO(n=150)	380	
Yes	69(30%)	125(83.3%)	**194**	< 0.001
No	161(70%)	25(16.7%)	**186**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

Majority of the respondents (70 %) who were readmitted did not comply to treatment. Odds ratio was 0.09. P-value was less than 0.001 (highly significant). This meant that non-compliance to treatment was associated with readmission.

TABLE 21: ASSOCIATION BETWEEN OVERALL SOCIO-CULTURAL PRACTICES AND READMISSION (n=380)

SOCIO-CULTURAL PRACTICES	EVER READMITTED		TOTAL	P-value
	YES(n=230)	NO(n=150)	380	
Good	64(27.8%)	135(90%)	**199**	< 0.001
Bad	166(72.2%)	15(10%)	**181**	
TOTAL	**230(100%)**	**150(100%)**	**380**	

About (72.2 %) of the readmitted respondents indicated community socio-cultural practices were bad. Odds ratio was 0.04, and the P-value was less than 0.001(highly significant). This was interpreted to mean that there was an association between socio-cultural practices and readmission of mentally ill adults.

TABLE 22: MULTIVARIATE ANALYSIS

VARIABLE	B	P-VALUE	COMMENT
Sex of being male	0.259	0.732	Not significance
Age of more than 35 years	-237	0.781	Not significant
Marital status of being single	0.548	0.515	Not significant
Education of secondary and tertiary	0.253	0.748	Not significant
Employment	0.078	0.925	Not significant
Distance of more than 12km	2.336	0.111	Not significant
Time of about 2hours to reach nearest mental health facility	-1.478	0.278	Not significant
Taking beer	2.279	0.017	Significant
Taking drugs according prescribed frequency	1.653	0.107	Not significant
Diagnosis of Schizophrenia	0.492	0.627	Not significant
Smoking	-18.787	0.999	Not significant
Type of substance smoked	-494	0.584	Not significant
Overall treatment compliance	0.644	0.522	Not significant
Lack of interaction	0.619	0.503	Not significant
Review on appointed date	-030	0.978	Not significant
Bad socio-cultural practices	3.354	0.001	Significant

Table 22 above showed that variables of taking beer and bad socio- culture practices were significant as their p- values were less than 0.05.

SUMMARY OF THE FOCUS GROUP DISCUSSIONS

Two focus group discussions were held at Chainama Hills Hospital. The Participants included patients who were either readmitted to the hospital for the same problem or those who came for review but had been readmitted before in the last twelve (12) months. The other group included the relatives to the patients who were either readmitted to the hospital or those who had come for review after readmission within the past twelve (12 months).The discussions were summarized and findings were interpreted .The most useful statements and quotations were selected to illustrate the main ideas. These participants came from different parts of Zambia.

DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS OF THE FOCUS GROUP DISCUSSION

The first group comprised participants who were patients and whose close relatives assented for them to take part in the discussion. They were eight (8) in total, thus four females and four males. Three (3) of the participants were of the age below 35 years and five (5) of them were above the age of 35years. Four (4) were married, two (2) were single, one (1) was a divorcee and the other one (1) was a widow. Two (2) participants attained tertiary education, Two (2) attained secondary education, Two (2) primary education and Two (2) never went to school. Three (3) were in formal employment while Five (5) were not in any form of employment.

The second group comprised five female participants and five male participants. These participants were close relatives (care takers) of the patients who had been readmitted to Chainama Hills Hospital within 12 months. Six (6) of the respondents were married, Two (2) were single, One (1) divorced and One (1) widowed. Two (2) of the participants attained tertiary level of education, Two (2) had secondary education, Three (3) had primary education and Three (3) had no education at all. Those who were in formal employment were five (5), Two (2) were in informal employment (businessmen and women) and Three (3) were not in any employment at all.

The major themes predetermined for the focus group discussion were as follows;

a) What readmission was?

b) Rates of readmissions

c) Demographic characteristics associated with high rates of readmissions of the mentally ill adults.

d) Activities that can be indicative of non compliance to treatment.

e) Some socio -cultural practices that can possibly contribute to high rates of readmissions of the mentally ill adults.

TABLE 23: WHAT DO YOU UNDERSTAND BY THE TERM READMISSION?

Readmission is when a patient has been admitted more than once to a health institution for the same problem.	**GROUP 1**	**GROUP2**
Yes	✓	✓
No		

Participants from both groups indicated that readmission is when a patient has been admitted more than once to a health institution for the same problem**.**

TABLE 24: HOW COMMON IS THE READMISSION OF THE MENTALLY ILL ADULTS FROM YOUR COMMUNITIES?

READMISSIONS ARE VERY COMMON	GROUP 1	GROUP 2
Yes	✓	✓
No		

 Table 24 shows that participants from both groups of focus group discussion indicated that readmission were very common among mentally ill adults from their communities**.**

TABLE 25: HOW WOULD YOU RATE THE READMISSION OF THE MENTALLY ILL ADULTS FROM YOUR COMMUNITY?

READMISSION RATE	GROUP 1	GROUP 2
High	✓	✓
Low		

The above table shows that the participants from both groups of focus group discussion indicated that readmissions were high.

TABLE 26: WHAT ARE SOME OF THE DEMOGRAPHIC CHARACTERISTICS THAT YOU THINK CAN CONTRIBUTE TO HIGH RATES OF READMISSIONS OF THE MENTALLY ILL ADULTS?

DEMOGRAPHIC CHARECTERISTICS	GROUP1	GROUP2
Males	✓	✓
Not educated	✓	✓
Married	✓	
Single		✓
Employed	✓	
Not employed		✓
Christians	✓	✓

Both groups in the above table indicated that being males, lack of education, and being a Christian were some of the demographic characteristics that contributed to high rates of readmissions among mentally ill adults. In addition to the above, group 1 also added that being married was one of the factors whilst group 2 suggested that being single and unemployment were some of the demographic factors.

TABLE 27: CAN LACK OF COMPLIANCE TO TREATMENT LEAD TO READMISSIONS OF THE MENTALLY ILL ADULTS?

READMISSION RATE	GROUP 1	GROUP 2
Yes	✓	✓
No		

Both groups of participants in the above table stated that lack of compliance to treatment could contribute to readmission.

TABLE 28: WHAT TYPE OF ACTIVITIES CAN INDICATE THAT CLIENTS DO NOT COMPLY WITH TREATMENT AND WHICH CAN CONTRIBUTE TO HIGH RATES OF READMISIONS?

ACTIVITIES	GROUP 1	GROUP2
Missing reviews	✓	✓
Not taking drugs	✓	✓
Not taking drugs according to prescribed frequency	✓	✓
Taking traditional medicine alone or in combination with conventional medicine.	✓	✓
Taking too much beer	✓	✓
Smoking marijuana, petrol glue, tea-leaves, taking benylin with codeine or amphetamine	✓	✓
Not understanding the illness.	✓	
Smoking too much of commercial cigarettes. and local tobacco (balani)		✓

Both groups of participants in the above table indicated that missing of reviews, not taking drugs according to prescribed frequency, not taking drugs at all, taking of traditional medicine, taking substance that have stimulants like; Codeine and Amphetamines, taking too much beer and smoking either marijuana, petrol, tea-leaves or glue can lead to relapse and readmissions.

Besides the above activities, group 1 stated that not understanding the condition while group 2 stated that smoking too much of commercial and local tobacco (balani) were contributing factors.

TABLE 29: CAN SOME SOCIO CULTURAL PRACTICES LED TO READMISSION OF THE MENTALLY ILL ADULTS?

SOCIO-CULTURAL PRACTICES	GROUP 1	GROUP 2
Yes	✓	✓
No		

Table 29 shows that both groups of participants indicated that some socio- cultural practices could contribute to high rates of readmissions of the mentally ill adults.

TABLE 30: WHAT ARE SOME OF THE SOCIO-CULTURAL ACTIVITIES THAT CAN CONTRIBUTE TO HIGH RATES OF READMISSIONS OF THE MENTALLY ILL ADULTS?

SOCIO-CULTURAL PRACTICES.	GROUP A	GROUP B
Client isolation	✓	✓
Staying alone in a house.	✓	
Denied to marry	✓	✓
Restriction of interaction		✓
Client labeling e.g. Stupid, Chipuba, abafulungana.	✓	✓
Violence against the clients	✓	✓
Not consulted in major decision making	✓	
Stigmatization	✓	✓
Lack of community rehabilitation programs	✓	✓
Perceived as worthless	✓	✓

The above table shows that both groups indicated that client isolation, denied marriage, client labeling, violence against clients, stigma, lack of community rehabilitation programmes and perceived worthlessness of a client as some of the socio-cultural practices that contributed to readmission of the mentally ill adults. Group 1 also added staying alone in the house while group 2 added restriction of interaction as other factors.

CHAPTER 5

DISCUSSION OF FINDINGS

5.0. INTRODUCTION

The main objective of the study was to determine the prevalence and factors associated with high rates of readmission of the mentally ill adults at Chainama Hills Hospital in Lusaka.

5.1. PREVALENCE OF READMISSION OF THE MENTALLY ILL ADULTS

Prevalence was defined as the number of those who were admitted more than once in the last 12 months for the same problem divided by the total number of patients who were admitted in the last 12 months multiplied by 100. One thousand and sixty five (1065) patients were admitted and two hundred and ten (210) were readmitted. Therefore the prevalence of readmissions was 210/1065x100 = 19.72%. Since the WHO acceptable threshold ranges from 3 to 5%, and the prevalence at Chainama Hills Hospital (19.72%) was way above the set threshold, it implied that there was a problem of readmissions at Chainama Hills Hospital.

5.2. ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC CHARECTERISTICS OF THE SAMPLE AND READMISSION

5.2.1. Sex and Readmission

Among the 230 participants who were readmitted to Chainama Hills Hospital in the last 12 months, (63%) were males (Table 3). This implied that males were more likely to be readmitted than females. The findings were in support of Bernado (2001) study which revealed that males were twice more likely to be rehospitalised during one year follow up than women. The findings were also in line with those of Mbewe et. al. (2006) study on schizophrenia research which revealed that more men were admitted than women. The same findings indicated that the sex difference could be a reflection of the greater social disruption associated with men with agitated psychotic disorders compared to women with such disorders. After logistic regression, the study findings showed no association between sex and readmissions as the P-value was greater than 0.05 (P = 0.732.).

5.2.2. Age and Readmission

Age was found not to be significantly associated with readmission (Table 4). This could probably mean that at the age of 35 and beyond, most people are expected to be independent and be bread winners. This poses a challenge to most people especially if they are not working and are poor. Such challenges facilitate relapse and readmission. This finding contradicts that of the Bernado (2001) which indicated that the very young men are twice more likely to be rehospitalised during one year of follow up than old men. After logistic regression, the findings of this study showed no association between age and readmission as P- value was greater than 0.05, (P=0.781).

5.2.3. Marital status and Readmission

Majority (43.8 %) of those who were readmitted were single (Table 5). The singles in this study comprised those who had never been married before. This could mean that singles faced the challenges of life alone. Such challenges precipitate the already existing mental illness hence relapse and readmission. The results were similar to the findings by Bernado (2001) in America who established that being single was one of the factors associated with readmission to psychiatric facility for about 78% of those who were readmitted during his research. According to this study there was no association between marital status and readmission after multivariate regression was done, as the P-value was greater than 0.05 (P = 0.515)

5.2.4. Education and Readmission

The research findings revealed that majority of the respondents who were readmitted were educated. They either had primary, secondary or tertiary education. It was also revealed during focus group discussions that the most educated people have money which enables them to buy and use substances like cocaine, cannabis, amphetamine and other stimulants. The findings contradicted those of Lay et. al. (2006) which established that lack of education influenced the number of hospitalization. After multivariate analysis, it was found that there was no association between education and readmission. P-value was 0.748

5.2.5. Employment and Readmission.

Table 7 shows that majority (65.5 %) of the readmissions were not in employment. This could mean that these people were poor. Poverty perpetuates issues of mental illness, stress and rehospitalisation. These results are similar to those of Mayeya (2007) which indicated that relapse and readmissions among Zambians who were mentally ill were due to unemployment and poverty. According to Bruttaerts (2004), unemployed patients were almost two times as likely to have early readmission of less than 60 days after hospital discharge as the patients who were employed. These findings also tallied with Deva (2006) research results which established that readmission were common among the unemployed known mentally ill patients who did not have any national insurance or social security. Equally, Wanner and Mandiberg (2008) established that employment decreased the alienation and aid recovery, although very few mentally ill patients were in employment. After logistic regression, the results of this study showed no association between employment and readmission of the mentally ill adults. P-value was 0.925.

5.2.4. Distance and Readmission

About (52.3%), according to table 9, who were readmitted lived more than 12km from the nearest mental health facility. This could imply that such clients were unable to access mental health services as per their needs. These findings tie with the MOH (2006), "Health systems in Zambia report" which stated that there was inequitable access to basic health services in Zambia between provinces, urban and rural areas.

The findings above were similar to those by Sykehis (2006) research which revealed that 50% of patients admitted to psychiatric hospitals where previous admission and readmission rates were influenced by how psychiatric services are organized. After logistic regression, the findings indicated that there was no association between distance and readmission as the P-value was 0.111. In the same vein there was no association between taking more than 2 hours to reach the nearest mental health facility and readmission of the mentally ill adults as the P-value was 0.107.

5.2.5. Diagnosis and Readmission

The study findings established that majority (29%) of those who were readmitted were diagnosed as having schizophrenia. These findings were similar to those of Fabio (2005) which revealed that the nature of illness of schizophrenia tent to relapse and necessitate rehospitalisation. After multivariate analysis, the results showed no association between diagnosis of schizophrenia and readmission of the mentally ill adults. P-value was 0.627.

5.3.0. ASSOCIATION BETWEEN COMPLIANCE TO PRESCRIBED TREATMENT AND READMISSIONSOF THE MENTALLY ILL ADULTS

5.3.1. Association between reviews on appointed date and readmission

The study revealed that among the 230 participants who were readmitted, 70 % (161) did not go for review on the appointed dates. The reasons could be that the majority (52%) stayed more than 12km away from the health facility as shown in table 9 and could not access the services. On the other hand it could be that participants could not afford transport as most of them were out of employment as shown in table 7. In such instances, care takers opted to go and collect drugs on behalf of their patients. This implied that the client was not closely monitored by a health care provider. On the other hand, the client could just forget the appointment date due to either the nature of the illness or as a result of living alone. Participants in the focus group discussion revealed that when patients felt better they just decided to stay away from the hospital. It was also indicated that clients missed appointments as a way of preventing stigma by onlookers as they had to queue in the open space as they waited for the clinicians to attend to them. It was also noted in the focus discussions that many patients missed reviews because they could not afford to pay K2 500=00 (Two thousand five hundred thousand kwacha) as a review charge at Chainama Hills Hospital. Others indicated that they got discouraged to go for review as the reviews were done on specific days, and at times they arrived late at the institution and found the reviews had already been done by 12.00 p.m hours of the specified days. These findings tie with the findings of Mbewe (2006) which revealed that social, demographic, economic, political, environmental, cultural, and religious influences affect the mental health of the people, and their ability to access mental health care. Similarly, Nuchring et.al. (2004) pointed out that, patients who lived were more likely to miss review appointments which could lead to relapse and rehospitalisation. To the contrary the findings for this study showed no association between missing review on appointed dates and readmission of mentally ill adults after logistic regression as the P-value was 0.978.

5.3.2. Association between takings of drugs according to prescribed frequency and readmission

The study results showed that (71.7%) of the respondents who were readmitted were not taking drugs accordingly. The probable explanation for this was given in the two focus group discussions as follows: forgetting the time to take drugs, cognitive confusion, and deliberate decision when they felt better, array of potential unpleasant side effects of the psychotropic drugs, stigma from onlookers, and lack of supportive housemates. From the focus group discussions, it was also established that some cultural beliefs that insisted on the use of traditional medicines as the only cure for mental illness than conventional medicines influenced clients to default in treatment. Therefore, some clients opted to taking of traditional medicines alone or in combination with conventional medicines, a practice that reduces the efficacy of the drugs. The findings of this study were supported by the findings of Hatfield (2007) which revealed that a sizeable percentage of clients who chose to drop medication at some point in their illness for various reasons often became psychotic again and often cycled back into the hospital. Similar findings were established by Gunnar (2008) study which revealed that non adherence to treatment was associated with relapse, hospital admissions and having persistent psychotic syndromes.

The results of this study showed no association between taking of drugs according to prescribed frequency and readmission after logistic regression as the P-value was 0.107.

5.3.3 Beer intake and readmission

The research established that (60.40%) of the participants who had readmission took alcohol/beer. Reasons cited in both focus discussions were that taking beer was a way of socialisation as most of them were being isolated and were out of employment. Others indicated that excessive beer intake helped them forget about their illness and that it was a way of suppressing the side effects of the psychotropic drugs. The findings of the study are supported by Mbewe (2006) study on schizophrenia in Zambia which revealed that high rates of alcohol intake put strain on mental health services in Zambia. After multivariate logistic regression, the results showed an association between beer intake and readmission as the P-value was 0.017.

5.3.4. Substance smoked and readmission

The research findings revealed that (57%) of those readmitted used either narcotic drugs or commercial cigarettes. Majority (73.3%) of the participants who smoked among those who were readmitted used either of the following substances: Marijuana, Cocaine, Petrol, Glue or Tea-leaves and (26.7%) smoked commercial cigarettes. These findings were supported by National Drug Intelligence report (2006) which revealed that individuals with schizophrenia sometimes use substances such as marijuana to mitigate the disorders' negative symptoms like depression, apathy, social withdrawal and to combat side effects of the drugs. The two focus group discussions also cited that some clients took Benylin cough mixture fortified with Codeine, and drugs like Ecstasy and Amphetamine to keep their mood "high". To the contrary, after multivariate analysis, the study results showed no association between the types of substance used (smoked) and readmission as the P-value was 0.584. The same analysis established that there was no association between smoking and readmission of the mentally ill adults as the P-value was 0.999.

5.3.5. Association between overall treatment compliance and readmission

The study findings revealed that majority of the respondents who were readmitted (70%) did not comply with treatment. The findings were similar to that of John, Schuchart and Emily (2002) study on schizophrenia. The results established that the risk of relapse among patients with schizophrenia was approximately 3.5% per month with predictors of more frequent relapse which included poor treatment compliance to anti-psychotic drugs, poor insight into the illness and the need for treatment. Nageotte and Sullivan (2006) in their study also found that medication noncompliance had been shown to be the variable most strongly associated with the rehospitalisation of patients with schizophrenia. To the contrary, after multivariate analysis, the research findings showed no association between compliance to treatment and readmission (P= 0.522).

5.4.0. SOCIO- CULTURAL PRACTICES AND READMISSION OF THE MENTALLY ILL ADULTS

5.4.1 Interaction and readmission

The study results showed that (69.1%) did not interact with their community members. This could have been due to self isolation by patients themselves, or communities shunning the mentally ill patients for various reasons. It came out in the focus group discussion that some religious, cultural and spiritual beliefs emphasised that mental illness was caused by the devil; it was a curse from God and an attack of sorcery. Such beliefs bled fear of possibility of contracting of the disease and being afflicted. These beliefs contributed to discrimination and isolation of the mentally ill patients and at times even their families by community members. The results were similar to the report of Mweemba (2007) which revealed that rising rates of mental and emotional illnesses in Zambia were being met with growing levels of stigma and discrimination with sufferers often isolated by their community members. It was also cited in the discussion that mentally ill patients were considered as violent, dangerous, of low intelligence and unpredictable by community members, this further contributed to the creation of distance between community members and the mentally ill patients. The findings were similar to that of Kent and Yelloelees (2004) study which stated that clients could feel insecure and isolated in the hostile communities and would wish for hospitalization where there was perceived security associated with hospital routine. Bruttaerts (2004) also indicated that rehospitalisation could be seen as an appropriate response to a patient's request for help and as a means of protecting the patient from further deterioration. After multivariate analysis, the findings of this study showed no association between community interaction with the mentally ill adults and readmission as the P- value 0.503.

5.4.2. Association between socio culture practices and readmission

The research findings revealed that majority (72.2%) of the respondents among those who were readmitted indicated that the socio-cultural practices in their communities towards the mentally ill patients were bad. (77%) of the respondents indicated that mentally ill patients were considered as a burden to their family members. These findings were in line with Oye (2005) research in Nigeria which revealed that in a society with poor health facilities and poverty, caring

of mentally people posed a major burden for patients and their families, hence the degree of stigma experienced by individuals with mental illness which suggested an unusual level of illness-related burden. Much of bad and undesirable community practices were cited during the focus group discussions and some of them were as follows:

Mentally ill people were considered as worthless, unpredictable, stupid, outcasts and as imbeciles. Majority of the respondents also indicated that most cultures did not even allow their relatives to get married to a known mentally ill patient regardless of the nature and degree of the illness. One of the participants angrily asked, " if the laws of Zambia (Mental Disorders Act Cap 305 of 1951) can refer to a known mentally ill person as an imbecile, stupid and idiot what more of a common citizen?" "Where are the human rights of the mentally ill persons?" "Is that not stigmatisation and discrimination against the known mentally ill person?"

Participants of the focus group discussions also explained that unlike people with other chronic illnesses like HIV/AIDS, known mentally ill are usually harassed, beaten and raped, sidelined in developmental projects and they could be dismissed from employment without any interference from any organisation for justice. These sentiments were supported by 100% responses from the participants who were interviewed using a questionnaire who indicated that there were no communities mental health programmes in all the participants' communities. This could probably mean that the Government of the Republic of Zambia and other stakeholders attach less importance to mental health. The findings were similar to that of Phil and Harlem (2007) in India who revealed that psychiatric illnesses were made serious with frequent relapses as they were considered as " a curse from God" or as "a punishment for sins of the past life" or manifestations of the evil spirits. Such beliefs bleed rejection, denial of equal opportunities and participation in the society, humiliation and violation of human rights. Similarly, Fabio (2005) indicated that if social environment was favorable, it contributed to recovery and reintegration, but when it was negative, it reinforced stigma, discrimination, relapse and rehospitalisation. After logistic regression, the findings of this study showed strong association between bad socio-cultural practices and readmission of the mentally ill adults. The P-value was 0.001.

5.5.0. LIMITATIONS OF THE STUDY

Finances and time were a major limitation as the study had to be completed within six months after approval.

5.6.0. CONCLUSION

The study was carried out to determine the prevalence and factors associated with readmissions of the mentally ill adults at Chainama Hills Hospital in Lusaka. The prevalence was established to be 19.72%.The study findings revealed that beer intake and bad socio-cultural practices were significantly associated with readmission of the mentally ill adults. The study further revealed that factors such as sex, age above 35years, education level, employment, being single, distance of 12km and more from nearest mental health facility, taking more than 2hours to reach the nearest mental health facility, diagnosis of schizophrenia, smoking, type of substance smoked, not taking drugs according to prescribed frequency and compliance to treatment showed no association with readmission of the mentally ill adults after multivariate analysis was done. However in other similar studies these same factors were found to be statistically significant.

5.7.0. RECOMMENDATIONS FOR REDUCING THE HIGH RATES OF READMISSIONS

The following recommendations have been made based on the findings of this study.

- Mass education of the communities should be embarked on by Government and all stakeholders to sensitize them on mental health so as to make them develop positive attitude and good practice towards mentally ill patients.
- Mentally ill patients should be educated on the effects of beer intake on their mental illnesses. Caretakers of the patients should also be educated on the same so that they continue to discourage their patients from taking beer.

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THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF COMMUNITY MEDICINE

STRUCTURED INTERVIEW QUESTIONNAIRE

TITLE OF STUDY: STUDY ON PREVALENCE AND FACTORS ASSOCIATED WITH HIGH RATES OF READMISSIONS OF THE MENTALLY ILL ADULTS PATIENTS AT CHAINAMA HILLS HOSPITAL IN LUSAKA DISTRICT.

QUESTIONNAIRE NUMBER: ………………

PLACE/LOCATION: …………………………

DATE OF INTERVIEW: ………………………

NAME OF INTERVIEWER: …………………

INSTRUCTIONS

1. Answer all questions.

2. No name should appear on this questionnaire

3. Put the letter ''X'' in the box next to your choice.

4. Participants should be free to ask questions during the course of the interview.

5. Participants may or may not answer the questions that seem sensitive to them.

6. Use a pen/pencil for indicating your answer to the question.

7. Indicate   your answers clearly

8. All information provided will be held in strict confidence.

SECTION A: DEMOGRAPHIC DATA

1) What is the sex of the client?

   1) Male

   2) Female

2) How old is the client?

   1)Less than 35 years

   2)More than 35 years old

3) What is the marital status of the client?

   1) Married

   2) Single

   3) Divorced

   4) Widowed

4) If divorced, was it due to the mental illness?

   1) Yes

   2) No

5) What is the highest level of education of the client?

    1) None

    2) Primary

    3) Secondary

    4) Tertiary

6) Is the client employed?

    1) Yes

    2) No

7) If No has the client been dismissed from employment?

    1) Yes

    2) No

8)If yes, why?

Specify…………………………………………………………..

9) What is the Religion of the client?

    1) Christianity

    3) Islam

    3) Hindu

    4) Any other- specify-----------------------------

10) How far is the client's home from the nearest mental health facility?

    1) Less than 2 kilometers

    2) Between 2 and 12 kilometers

    3) More than 12 kilometers

11) How long does it take the client to walk to the nearest mental health facility?

    1) Less than 30 minutes

    2) 30 minutes to 1 ½ hours

    3) More than 2 hours

12) Whom does the client live with at home?

    1) Alone

    2) With his wife and his biological children

    3) With his wife, biological children and other extended family   members

13) What is the   diagnosis for the client

Specify_____

14) What is the reason for the current readmission?

……………………………………………………

15) How many times has the client being admitted to this institution in the last 12 months?

(Specify)-------------------------

SECTION B: COMPLIANCE

16) Is the client taking the drugs as per prescription?

   1) Yes

   2) No

17) If No why?

----

18) Does the client go for review on the appointed dates?

  1) Yes

  2) No

19) If no why?

----

20) Have the drugs been always available to the patient at health facility?

   1) Yes

   2)No

21) Does the client drink beer?

1) Yes

2) No.

22) If yes when did the client start drinking beer?

1) Before he became mentally ill

2) After he became mentally ill

23) In your opinion, how do you rate the beer intake of the client?

 1) Has increased

2) Not increased

24) If answer is A. what do you think has contributed to the client's increase in beer intake?

…………………………………………………………………………………………

…………………………………………………………………………………………

25) Does the client Smoke?

1) Yes

2) No

26) If yes what type of substance does he /she smoke?

Specify…………………………………………………….

27) Does the client understand the importance of complying with treatment?

1) Yes

2) No

SECTION C. SOCIO –CULTURAL PRACTICES

28) Do you think that mental illness is curable?

    1) Yes

    2) No

29) How does your community perceive known mentally ill persons?

1) Retarded

2) Public nuisance

3) Dangerous

4) Others_____ (Specify)

30) Do you think known mentally ill patients should work in regular employment?

1) Yes

2) No

31) Do you think that people in your community can easily work with a known mentally ill patient?

1) Yes

2) No

32) How do you view known mentally ill people when it comes to decision making?

1) As capable of making decisions

2) Not capable of making decisions

33) Do people in your community easily interact with the known mentally ill patients?

1) Yes

2) No

34) If NO why? (specify) --

----

35) Is it culturally acceptable in your society to marry a known mentally ill patient?

1) Yes

2) No

If NO why? …………………………………...

36) Does caring for a known mentally ill patient pause a major burden to your community?

1) Yes

2) No.

37) Do you have a community mental Health rehabilitation program in your community?

1) Yes

2) No

WE HAVE COME TO THE END OF THE INTERVIEW AND I THANK YOU FOR YOUR PARTICIPATION

FOCUS GROUP DISCUSSION GUIDE.

INSTRUCTIONS TO THE MODERATOR

- Introduce self and recorder

- Explain the purpose of the recorder

- Explain the purpose of the discussion and topic in general

- Give assurance of confidentiality

- Encourage participants to discuss subject matter openly

- Let participants introduce themselves

- Participants should listen to each other's opinion if possible, only   one person should speak at a time.

QUESTIONS TO BE ASKED

- What is readmission?

- How common is readmissions of adult mentally ill patients from your community?

- How do you rate the readmissions of the mentally ill adults?

- How can lack of compliance to treatment lead to high rates of readmissions of the adult mentally ill?

- Are there socio- cultural practices that can be associated with high rates of readmissions of the mentally ill adults?

- If yes ,which of these socio-cultural practices contribute to high rates of readmissions of the adult mentally ill?

- What are some of the ways in which readmissions can be minimized?

WE HAVE COME TO THE END OF THE DISSCUSSION, THANK YOU VERY MUCH FOR YOUR PARTICIPATION

APPENDIX II: INFORMED CONSENT.

PREVELANCE AND FACTORS ASSOCIATED WITH HIGH RATES READMISSIONS OF THE MENTALLY ILL ADULT PATIENTS AT CHAINAMA HILLS HOSPITAL IN LUSAKA.

INTRODUCTION.

I Ngoma Misozi, a student of Masters of Public Health at the University of Zambia is requesting for your participation in the research study mentioned above. The essence of the study is to assess the prevalence and factors associated with these high rates of readmissions. Before you decide whether or not to participate in the study, I would like to explain to you the purpose of the study, any risk or benefits and what is expected of you. Your participation in this study is entirely voluntary. You are under no obligation to participate. If you decline to participate, no privileges will be taken away from you. If you agree to participate, you will be asked to sign this consent in front of someone. Agreement to participate will not result in any immediate benefits.

PURPOSE OF THE STUDY

The study will determine the prevalence and factors associated with readmissions of the mentally ill adults at Chainama Hills Hospital. The information obtained will help Chainama Hills Hospital Management and Ministry of Health to take measures in controlling these readmissions.

PROCEDURES

The study will involve face to face interview. After signing the consent form, the researcher will proceed to ask you the relevant questions and your response will be recorded on the questionnaire. The interview will last about 35 minutes.

As for the Focus Group Discussion (FGD), a tape recorder will be used to record your actual words, information in depths and your perception over the subject.

Recording the actual words will help researcher not to forget the actual response you will give .It will also help the researcher analyse the data.

RISKS AND DISCOMFORTS

There is no risk involved in the research though part of your time will be utilized to answer some questions. Some questions may seem to be sensitive and personal. You have the right to withdraw from the interview. You may also choose not to answer those questions that seem sensitive to you. However, measures will be put in place not to embarrass you.

BENEFITS

There is no direct benefit to you by participating in this study, but the information which will be obtained will help the policy makers to take measures to curb the readmission of mentally ill adults at Chainama Hills Hospital in Lusaka. No monetary favours will be given in exchange for information obtained.

CONFIDENTIALITY

The research records and information you will give will be confidential to the extent permitted by law. All information on the questionnaire will be kept under lock and key. Furthermore, no name will be entered on the questionnaires instead; you will be identified by numbers. Personal information will not be released without your permission except when required by law.

The MOH, the UNZA Research Ethics Committee or the School of Medicine may review your records again but this will be done with confidentiality.

INFORMED CONSENT FORM

The purpose of this study has been explained to me and I understand the purpose, benefits, risks and discomforts, and confidentiality of the study.

I further understand that: if I agree to take part in this study I can withdraw at any time without having to give an explanation and that taking part in this study is purely voluntary.

I_____(names)

agree to take part in this study.

Signed_____ Date_____ (participant)

Participant's signature or thumb print.

Signed: _____ Date_____ (Witness)

Signed: _____ Date _____ (Researcher)

PERSONS TO CONTACT FOR PROBLEMS OR QUESTIONS.

1. Misozi Ngoma

UNZA, School of Medicine,

P.O. Box 50110,

Lusaka.

Cell number: 097-7460543 or 097- 7660033.

2. Dr .C. C. Michelo

Head of Department – Community Medicine,

School of Medicine,

University of Zambia,

P.o. Box 50110,

Lusaka.

Telephone number: 01256181.

3. The chairperson,

UNZA Biomedical Research Ethics Committee,

P.o. Box 50110,

Lusaka.

IMPLEMENTATION PLAN

APPENDIX III: GANT CHART

Description of activity	Year: 2009							Year:2010		
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Research proposal Presentation to graduate forum	■									
Research proposal Presentation to UNZA research ethics committee		■								
Training of research assistant			■							
Data collection				■						
Data analysis					■	■				
Research report writing & Submission						■	■	■		

Duration of study: 8 Months

APPENDIX IV: STUDY BUDGET

No.	ITEMS REQUIRED	COST (ZMK)
1.	Stationery	1 600 000
2.	Secretarial services	1 000 000
3.	Research assistant (2)	2 000 000
4.	Transport Allowance (20,000/day)	2 400 000
5.	Lunch Allowance (20,000/day)	2 400 000
6.	Telephone services	300 000
7.	Statistics assistant	2 000 000
8	Tape recorder	2 000 000
9	Transport refund for respondents 229x20 000	4 580 000
10	Refreshments for focus FGDs	500 000
11	Printer	1 320 000
	TOTAL	16 000 000
	10% Contingency fund	1 600 000
	GRAND TOTAL	**21 700 000**