STIGMATIZATION OF MATHARE MENTAL HOSPITAL NURSING STAFF CARING FOR THE MENTALLY ILL

A THESIS PRESENTED IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DEGREE OF MASTER OF MEDICINE IN PSYCHIATRY OF THE UNIVERSITY OF NAIROBI

BY:

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DECLARATION

I, Dr Georgina Wangui Kamunge, do hereby declare that this proposal entitled "Stigmatization of Mathare mental hospital nursing staff caring for the mentally ill", is the result of my own work and that it has not been submitted either wholly or in part to this or any other university for the award of any degree or diploma.

Date.....28/9/2011.....

Signature.....G.Kamunge.....

Dr Georgina Wangui Kamunge

CERTIFICATE OF APPROVAL

This dissertation entitled "Stigmatization of Mathare mental hospital nursing staff caring for the mentally ill" has been submitted for examination with our approval as University of Nairobi lecturers.

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Special thanks to my husband (Robinson), children (Eric and Yvonne) for tolerating my long working hours and for their moral and financial support throughout the proposal preparation. Moreover, thank you to my parents and my siblings for their moral support and encouragement throughout the period of the proposal preparation.

May God Bless You All.

DEDICATION

This proposal is dedicated to my parents, Mr. and Mrs. P. Kamunge for their endless support in my whole study period.

LIST OF ABBREVIATIONS

W.H.O.	World Health Organization
U.O.N.	University of Nairobi
K.N.H.	Kenyatta National Hospital
SPSS	Statistical package for social sciences
ECN	Enrolled community nurse
KRCHN	Kenya Registered community health nurse
ECN-P	Enrolled psychiatric community nurse
KRCHN-P	Kenya Registered psychiatric community health nurse

OPERATIONAL TERMS AND DEFINITIONS

Prejudice: is baseless and usually a negative attitude towards members of a group. Common features of it include negative feelings, stereotyped beliefs, and a tendency to discriminate against members of a group.

Discrimination: refers to the treatment taken toward or against a person of a certain group that is taken in consideration based on class or category.

Attitude: represents an individual's degree of like or dislike for a person, place, thing, or event. It can either be positive or negative.

Social stigma: refers to social disapproval of personal characteristics or beliefs which are perceived to be against the cultural norms.

Self stigma: is the internalization of the stigma responses from the general public by Target individuals

Stigma: It refers to a person who stands as "discredited facing an undesirable world"

Courtesy stigma/stigma by association: refers to where stigma affects everything and everyone surrounding the person with a mental illness.

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ABSTRACT

BACKGROUND: Over the years, mental illness has been associated with stigma and negative attitudes. Most research has been on stigma of mentally ill and few on their relatives. Staff members caring for the mentally ill are at risk of stigma by association due to regular interaction with mentally ill. In the local setting, majority of the staff members working for the mentally ill patients in the hospital institutions are the nurses. In view of this the current study aimed to establish the prevalence of stigmatization of Mathare mental hospital nursing staff caring for the mentally ill.

OBJECTIVES: To determine the prevalence of stigmatization of Mathare mental hospital nursing staff caring for the mentally ill patients and their social demographic characteristics.

DESIGN: Cross-Sectional descriptive study involving nursing staff members caring for the mentally ill at Mathare Mental Hospital who fulfilled the inclusion criteria.

STUDY SITE: Mathare Mental Hospital situated along Thika Road, 4km North of Nairobi City.

METHOD: Participants were interviewed using a researcher designed social demographic questionnaire and Adopted Researcher designed stigma questionnaire assessing discrimination, disclosure and positive attitude. Statistical analysis included descriptive analysis of nurse's demographic characteristics and associations between stigma and demographics using chi square tests conducted using SPSS version 17.

RESULTS: One hundred and twenty (n = 120) nurses met the inclusion criteria and were recruited in the study. The age of nurses in the study ranged from18 years to 60 years with a mean age of 42 (SD 7.7) years. There were 108 (90 %) female nurses and 12 (10%) male nurses. Married participants constituted 80 % (n=96) of the population while 12.5% (n=15) were single. Majority of the nurses, 97.5 %(n=117) were Christians. Approximately 56% nurses had worked

in the nursing field for 15 years, while 26.7% (n=32) nurses and 15% (n=18) nurses had worked for 10 -15 and 5 -10 years respectively. Only 1.7% (n = 2) of nurses had worked for less than five years. Enrolled community psychiatric nurses accounted for 45% (n=53), followed by Kenya registered community psychiatric nurses with 24%(, n=28) and registered community health nurses with 18%(n=21) while enrolled community nurses accounted for 14%.Most nurses lived in rented premises(54%), while 46% (n = 55) lived in their own houses.

The main significance of the study found a moderate level of stigma among the nursing staff caring for the mentally ill at a mean overall score of 35.2(SD=14.4) with a range of 4 to 56.The mean stigma score for the 9 discrimination items was 22(SD=8.3), 11.7(SD=5.9) mean score for 5 items on disclosure items while mean score for the 2 positive attitude items was 1.5(SD=1.5).

The multivariate analysis showed significant association with nursing experience where a longer working experience was associated with lower stigma score.

CONCLUSION: There is a moderate level of stigma at among nursing staff caring for the mentally ill in Mathare Mental Hospital. Nurses with longer exposure to mental health practice reported lower level of stigma related caring for the mentally ill.

RECOMMENDATIONS: Mental health education needs to be introduced early at various levels in the education curriculum to help reduce level of stigma associated with mentally ill patients.

CHAPTER 1: INTRODUCTION

People who suffer from mental illness are at risk of stigma, prejudice and discrimination. According to a nationwide survey on members of the American public in 1950, Star 1955(1) found that the general reaction to the mentally ill patients was negative and poorly informed. Cumming and Cumming 1957 (2) found similar attitudes in a rural town called Blackfoot, in Saskatchewan, Canada even after a 6 month educational campaign concerning mental health.

The mentally ill patients are branded as' psychos' in the public domain and they experience discrimination in areas such as housing and employment. Based on this finding one American study, found that 40% of landlords reject applicants with a known psychiatric disorder. Alisky et al. 1990 (3)

The stigma which is experienced by the mentally ill patients is also experienced by their relatives. Hatfield 1978(4) in a study of relatives of people with schizophrenia in Washington DC found a disturbed family life marked by constant stress as a result of caring for the mentally ill patient at home. This would result to blame, grief, hopelessness and other times marital disruption.

In the local and African Setting, no study on stigmatization of staff members working for the mentally ill has been done. Internationally, a study done in Queen's University, Kingston, Ontario on "Fighting Stigma and discrimination, is fighting for mental health" Stuart (5) mental health professionals by virtue of courtesy stigma were seen as mentally abnormal, evil or corrupt. In addition the treatment they gave for the psychiatric illnesses was excessively scrutinized and viewed with suspicion. Stuart 2002. (5)

In the local setting, the majority of the staff members caring for the mentally ill patients within the hospital setting are the nurses. At Mathari hospital, Nairobi, Kenya, there are 168 nurses out of a total of 398 staff members. (Hospital registers November 2009) They are therefore at risk of being labeled in public domain as their clients linking them to undesirable characteristics which can lead to status loss and discrimination.

It is in this view the study seeks to establish whether the stigma experienced by the mentally ill patients and their relatives is also experienced by the Mathare mental nursing staff caring for the mentally ill.

BACKGROUND

The concept of Stigma has been there for many decades, but it has gained attention only in the past decade where there's an increasing interest on its psychological and medical research. Stigma has been recognized as a global concern which needs to be attended to and eliminated at all levels; individual, institutions and community level. In Surgeon's diary Report on Mental Health 1999 (6), a lot of emphasis has been put on knowing the origins of stigma, its effects on mental health and means to overcome it.

Through courtesy stigma, mental health professionals were seen to be mentally unwell and the treatment they gave to mentally ill patients was viewed with a lot of suspicion Falk 2001(7), Smith 2002(8).They were therefore at risk of facing discrimination in the public domain like the mentally ill patients.

STATEMENT OF THE PROBLEM

Majority of the research done on stigma has been more on attitudes and believes about mental illness in the public setting. The mentally ill patients are usually at risk of stigma, discrimination and prejudice.

Stigma can initiate a cycle of impoverishment and disability of the mentally ill patients and those close to them. Stigma retards mental health research, mental health reforms and system improvement. It is in such context that stigma has been recognized as a major concern which needs to be addressed at multiple levels (regional, community, institutional and individual level) In Kenya there is no study on stigmatization of nursing staff caring for the mentally ill. In Africa, no study on stigmatization of nursing staff caring for the mentally ill in a hospital setting has been done. Internationally, a study done in Canada "*Fighting Stigma and Discrimination is fighting for Mental Health*", at Queensway University found mental health professionals were at risk of courtesy stigma and would then be labeled as mentally unwell. However no specific study focused on stigmatization of nursing staff members caring for the mentally ill, has been done.

JUSTIFICATION

Stigma has been noted to be a major global concern and needs to be addressed at all levels; regional, community, institutional and individual level.

To date there has been no study done in Kenya on Stigmatization of nursing staff caring for the mentally ill in any hospital. In Africa scene no study on stigmatization on nursing staff caring for the mentally ill has been done. In the international scene no specific study has been done on stigmatization of nursing staff caring for the mentally ill.

Continued care of patients, is considered to be very relevant in chronic conditions like those seen in the mentally ill patients. There is need to establish if the stigma experienced by the mentally ill patients and their relatives is also experienced by the nursing staff caring for the mentally ill in the hospital setting.

RESEARCH QUESTION

Is there stigmatization of Mathare mental hospital nursing staff caring for the mentally ill?

AIM

The main aim of the study is to establish prevalence of stigmatization of Mathare mental hospital nursing staff caring for the mentally ill.

SPECIFIC OBJECTIVES

To determine prevalence of stigmatization of Mathare mental hospital nursing staff caring for the mentally ill.

To determine the social demographic characteristics of the stigmatized Mathare mental hospital nursing staff caring for the mentally ill.

HYPOTHESIS

The hypothesis for the study is, "There is stigmatization of Mathare mental hospital nursing staff caring for the mentally ill"

CHAPTER 2: LITERATURE REVIEW

Stigma has been found to have various effects on the stigmatized person. It separates a person from others by linking him/her to undesirable characteristics hence they are avoided by others in the public Owens et al. (9)

Several social psychologists have described stigma as a situational threat. They have found that stigma results when one is placed in a social situation which influences his treatment in public. Jones et al. 1984(10) Conceptualized stigma links a person to undesirable traits which lead to discrediting. In the identity threat model by Major and O'Brien 2005(11), stigma threatens self esteem, physical health, mental health and academic achievements of a person.

Currently social stigma has been recognized as a major concern in health care and human services across societies worldwide. According to Goff man1963 (12), stigma discredits a person in the society. A stigmatized person is believed to posses' qualities which are not valuable in any context. Corrigan 2000(14) found that stigma represented a set of prejudicial attitudes with negative emotional responses, biased social structures and discriminating behavior towards members of a subgroup.

Stigma can be experienced by minority members and their associate where the members internalize the negative, prejudicial attitudes to themselves which leads to negative emotional responses. Corrigan & Watson2002 (15)

KENYAN SITUATION

To date no study has been done on stigmatization of Mathare mental hospital nursing staff caring for the mentally ill.

Kuria 2008 (16) study on Prevalence of self stigma among patients attending outpatient clinic at Mathari Hospital, recommended that psycho education be done when the patient is still in the ward and empowering the relatives on knowledge on mental illnesses as a means to reduce stigma in the society.

Mburu 2007 (17) in study of Stigma towards mental illness and mentally ill in a rural community in Kenya recommended that health workers to take more time to educate patients and their relatives at every available opportunity in an effort to distinguish myths from facts.

Omar 2003 (18) study of Stigmatization of the mentally ill patients as seen among visitors to the psychiatric patients admitted to Mathari Mental Hospital, found that drug abuse and stress were amongst the causes of mental illness and he recommended that there was need to have policies which would define the framework for the mental health workers in alleviating stigma.

REST OF AFRICA

The concept of stigma has been researched in a number of studies.

A study done in Egypt on lay respondents by Mocker 2005 (19). Concerning selfhood and social distance in relation to stigma in Egypt, found that social distance or stigma reflected a series of practical and moral judgments about a person's ability to fulfill specific tasks, their worth morally and their position in the society. It was also noted that there was underutilization of psychiatric services due to stigma.

According to Bassioni et al. 1966(20), Arabs in the Middle East would tolerate mental disturbances if they didn't get out of control or result in shameful behavior, when they would then consult a doctor.

In another study on stigmatizing attitude of final year medical student towards a psychiatric label in Nigeria, Ogunsemi et al. 2008(21) found that stigma towards mental illness was not limited to the general public but even medical students were part of the stigmatizing group.

A study done in Nigeria on attitude of health workers to the care of psychiatric patients, found that health workers feared treating psychiatric patients within a general hospital setting. They preferred the mentally ill patients to be managed in their own separate ward. Results of the study noted that mental health enlightment programmes accompanied with positive contacts with psychiatric patients during treatment would help in reducing stigma to mental illness by the health workers. (32)

In a study done in South Africa concerning perception of the mentally ill patients by professional nurses in a general hospital, found a positive perception of self in caring for or nursing the mentally ill in a general hospital. However, inadequate knowledge, skill and experience in psychiatry among the nursing staff was noted to be affecting the caring process for the mentally ill. (35)

INTERNATIONAL STUDIES

In a study exploring the perceptions and dilemmas in defining mental health in young homeless people in Great Britain, found that the young people requiring mental health attention, preferred to hide their mental health status even when engaged with mental health services, probably due to their negative and extreme perceptions of mental health. O'Reilly et al.2009 (22)

In a Study which used a met analysis on the associations between Stigma and Mental Health found a medium co relational effect size between Stigma and Mental Health which indicated that it was strong enough to be observed in everyday life. Mak W.W.S et al. 2007(23)

Continued care of patients is considered to be very relevant in chronic conditions like as seen in the chronic illnesses like those seen in the mentally ill. A study examining continuity of care from the perspective of service users and careers using participant account of illness careers as a way of identifying key moments where continuity may be threatened, found an apparent fragility of continuity and its relationship to levels of satisfaction. Levels of satisfaction were closely related to moments of transition when the relationship was vulnerable. Workers whom patients were closest to would leave them without any warning, and this would eliminate any positive experience the patient had with the worker and mental health as a whole. Rees. I. et al. 2009(24)

In a study of anti- stigma campaign having Psychiatrists as Social Engineers, The Royal College of Psychiatry believes that society as a whole including medical practitioners had the capability to develop humane attitude towards mentally ill patients. Pilgrim. D. et al. 2005(25)

A study done on students in three secondary schools in Hong Kong, comparing combination of education and video based contact to reduce stigma of mental illness found that; adding video based contact to education on mental illness was more effective if the contact video is done prior to the education component. Chan Y.N.J.et al. 2009 (26).

According to Bayer,R.,2008 (27). study on stigma and ethics of public health, it was found that stigmatized people were vulnerable to spread of diseases, hence increasing morbidity and mortality by imposing barriers upon the people who would intervene to reduce spread of illness. The public health unit found that it had the duty to counteract the stigma so as to protect communal health

A study on perceptions of depression in older people amongst primary care professionals in 18 primary care centers in South London, found that older people regard depression as a "sign of weakness". The perceived stigma of mental illness was recognized as a barrier to seek help. Families were identified to be a source of support and distress; hence their influence would be ideal in identification and treatment of depression in older people. (28)

A study on the effects of patients with bipolar, schizophrenia and major depressive disorders on the mental and other health care expenses of family, found that living with a person with serious mental illness, significantly increased healthcare expenses of the family especially mental health care. The expense for the patients with bipolar disorder and major depression was noted to be higher than for patients with schizophrenia (29).

A study done on women with chronic mental health problems evaluating whether low self esteem was an inevitable consequence of stigma, found that most women felt they were different in some way and were like outsiders in some social groups. They had a sense of common identity which was based on the shared experience. (30)

According to a study on sources of stigma for means-tested government programs, the role of stigma needed to be addressed through open policy debates on advantages and disadvantages of using stigma to reduce moral hazard problems. (31)

According to Halter.J.M. Study on perceived characteristics of psychiatric nurses: stigma by association, psychiatric nurses was not viewed positively by their peers (32) this was probably due to stigma by association.

Chambers et al. in a comparative study of nurse's attitudes to mental illness in five European countries, (34), found that there was positive attitude towards mental illness. This finding had implications for educational preparation of all nurses so as to ensure that patients were treated with dignity in an ethically appropriate environment and using appropriate treatment.

A study done in a teaching hospital in Turkey on attitudes of hospital staff toward mentally ill, found that academicians, resident psychiatrists and nurses had a negative attitude towards the mentally ill subjects despite their sufficient knowledge on mental illnesses like schizophrenia and depression. These findings were thought to be due to the negative effects of the medical education system. (36)

Nolan et al. in a comparative cross sectional questionnaire survey of the work of UK and US mental health nurses found that the US nurses more ready to attend to a wider range of clients than the UK nurses. However both groups of nurses found that having direct contact with clients

was very satisfying in their work. (37)

According to a study on study on mixed attitudes to caring for the people with mental illness in a rural general hospital in Australia, found that the attitudes were very varied and were linked to issues influencing ability to provide care. However majority of the participants expressed a strong desire to be able to provide care for mentally ill patients in their own community hospital. (38)

There was more negative attitude towards mental illness and mentally ill patients among nursing staff in somatic care compared to nursing staff in, mental health. In addition, the attitudes among the nursing staff were comparable with the public opinions about mental illness and the mentally ill persons. (39)

With all the above studies, stigma on the mentally ill patients is very common. Continued care of patients is considered to be very relevant in chronic conditions like those seen in the mentally ill patients. However, in my research I haven't come across a study on Stigmatization on nursing staff caring for the mentally ill.

This study will assess prevalence of stigmatization of Mathare mental hospital nursing staff caring for the mentally ill.

CHAPTER 3: MATERIALS AND METHODS

STUDY DESIGN

Cross sectional descriptive study

STUDY SITE

The study area is Mathari Mental hospital. It is the national referral hospital for the mentally ill civil and criminal patients and a mental health teaching hospital for colleges and universities including the University of Nairobi. Its core services include giving pharmacological, psychological and electroconvulsive treatment. The services are either on outpatient or inpatient basis. The outpatient services cater for the mentally ill patients requiring review and/or have a mild illness. The inpatient service caters for the seriously sick patients, patients dangerous to self or to others or patients who lack insight and hence require hospital supervision in taking of medications. The hospital has five male and three female civil wards, two male and one female criminal ward, one infirmary ward, one amenity ward and a rehabilitation unit. The hospital also offers occupational therapy, physiotherapy and radiology services to both outpatients and inpatients. Despite the core service for the hospital being treatment of the mentally ill patients, it has other units offering various services. These include a dental unit which offers dental treatment of the inpatient and outpatient mentally ill patients and any other patients from the general population requiring dental service. In an attempt to reduce stigmatization associated with mental illness, Mathare mental hospital offers curative services for general medical illnesses, antenatal services, family planning services in women of child bearing age, child welfare clinic for children under the age of five years, comprehensive care clinic services and a diabetic clinic. Diagnostic services offered include laboratory services and electroencephalography test. The hospital has future plans of intensifying community based psychiatric services countrywide, opening a general outpatient casualty and a maternity unit.

STUDY POPULATION

120 Mathare mental hospital nursing staff caring for the mentally ill.

INCLUSION CRITERIA

1. Nursing staff caring for the mentally ill in Mathare mental hospital

2. Willingness to participate in the research by giving consent

EXCLUSION CRITERIA

1. Non-nursing staff caring for the mentally ill in Mathari mental hospital.

2 Unwillingness to participate by declining to give consent

Sample size determination

The researcher used mugenda (1998) method which has two phases in the calculation.

Phase 1

Involves calculation of the desired sample which will be used in phase 1 of the calculation by the formula;

$$N=\frac{z^2pqD}{d^2}$$

Where

N=the desired sample size (when population size is greater than 10,000)

z is the normal standard deviation usually at 1.96 corresponding to 95% confident interval

p is the proportion of the target population with the desired characteristics.

In this study, there is no reference study done, 0.5 will be used as the mean proportion (i.e. 50%)

q is 1-p

d is the degree of accuracy desired 0.05

D is the design effect=1

Hence, $N = \frac{1.96^2 \times 0.5(1-0.5)1}{0.05^2} = 384.16$ which is rounded of to 384.

Phase2

In this study N is less than 10,000 the 2nd formula is used to determine the actual sample size thus

$$Nf = \frac{N}{1+\frac{n^*}{N}}$$

nf is the actual sample size for a population less than 10,000

N is the desired population size for a population of more than 10000 members

N in the second phase is the total population of the present phase which is 168.

$$nf = \frac{384}{1+\frac{384}{168}} = 117 \text{ nurses for the study.}$$

Sampling

. This was calculated as an average from total sample size against the number of wards; $\frac{117}{12}$=9.75 rounded of to 10 participants in each of the study wards.

According to Mathare Hospital register during the study period, (August to September 2010)s, each ward had an approximate number of 10-11 nurses allocated to each of the 12 study wards. However, during the data collection period ward 8M was under renovation and the nursing staffs in that ward had been distributed to wards 5M, 9M and 6M.Stratified random sampling based on nursing working area was used to select 120 nurses required in the study from 12 wards at Mathare Mental Hospital. These wards included four female and eight male wards. Three of the

12 wards were criminal wards. (one female and two male).A sampling frame for all nurses working within each ward was available from ward in-charges ,and using the sampling frame ten participants were recruited over a period of 20 working days during all shifts including night duty during 10 O'clock tea break, lunch break,4 O'clock tea break and evening duty time.

DATA COLLECTION INSTRUMENTS

The social demographic questionnaire was subjected to all respondents and gathered data on age, gender, marital status, religion, residence, employment status, working experience, level of training.

Stigma questionnaire

Stigma questionnaire was adopted by the principal investigator from king et al. 2007 Stigma Scale questionnaire to capture items on discrimination, disclosure and positive attitudes towards mental illness. The King et.al 2007 stigma questionnaire was a standardized instrument used to measure stigma for mental illness and was administered on mental health service users and it had a 28 item stigma scale. The scores of King et al. 2007 stigma scale questionnaire were negatively correlated with Global Self Esteem Scale hence it was able to measure stigma and the tool had re-test reliability. In the 16 item Adopted researcher designed stigma questionnaire, the study participants were nursing staff members caring for the mentally ill and questions focused on stigma items related to discrimination, disclosure and positive attitudes to evaluate courtesy stigma experienced by nursing staff members caring for the mentally ill. The King et al. 2007 stigma scale questionnaire focused on self stigma experienced by mental health service users.

Study Implementation

Pre-testing of the study instrument was conducted before commencing the main study. The pre-testing involved 20 nursing staff members working in the outpatient psychiatric department and ward 4M who were not included in the sampling frame for the main study in a period of 4 working days. The participants were briefed on the nature of the study and the objective of the pre-testing exercise. Participation was approved after signing of an informed written consent form. All the 20 questionnaires issued during the piloting phase were returned yielding a response rate of 100%. The results of the pretest showed that all 20 nurses understood and were able to provide the demographic and social information required and questions related to stigma.

The results of the validation of stigma items showed that the 16 items in the stigma questionnaire had high internal consistency reliability coefficient (alpha=0.88). This implies that the 16 items measured the same underlying dimension. More specifically, 9 out of the 16 items measured discrimination of nurses as a cause of stigma, 5 items measured disclosure of the nature of work involved in caring for mentally ill patients and 2 items evaluated whether nurses had a positive attitude in caring for the mentally ill. The 9 items that assessed stigma associated with discrimination of nurses caring for mentally ill patients had similarly high coefficients (alpha=0.83). The same was true for the 5 items measuring disclosure of the nature of work involving care for mentally ill patients (alpha=0.86). However, the 2 items measuring positive attitudes showed marginal internal consistency (alpha=0.53).

The aim of the analysis of the pre-testing data was to establish validity and reliability of the questionnaire and also to determine ease of completion by the nursing staff caring for the mentally ill patient. The results were analyzed and compared with existing data on the stigma scale tool.

Wards involved in the main study were, male wards (5M,6M,8M,9M,1M), female wards (2F,5F,6F), infirmary ward, Section A, Section B, Section C to target 10 participants per ward. On arrival at the specific wards in the main study, the Principal Investigator gave a brief note on the nature of the study. Those not fulfilling the inclusion criteria were thanked and excluded. Those fulfilling the inclusion criteria signed the consent forms. The researcher would then administer the social demographic and the stigma questionnaires. The interview would be ended and participants would be thanked. Each interview took a maximum period of 30 minutes. The interviews were done in a period of 4 weeks in 5 working days. The principal investigator clarified any issues arising related to the study. In order to minimize attrition, the principal investigator distributed the questionnaires during tea, lunch and evening breaks. The principal investigator waited for the questionnaires to be filled, gathered them and thanked the participants. The questionnaires were entered into a custom designed access database maintained by principal investigator accessible to the Principal Investigator.

DATA ANALYSIS AND PRESENTATION

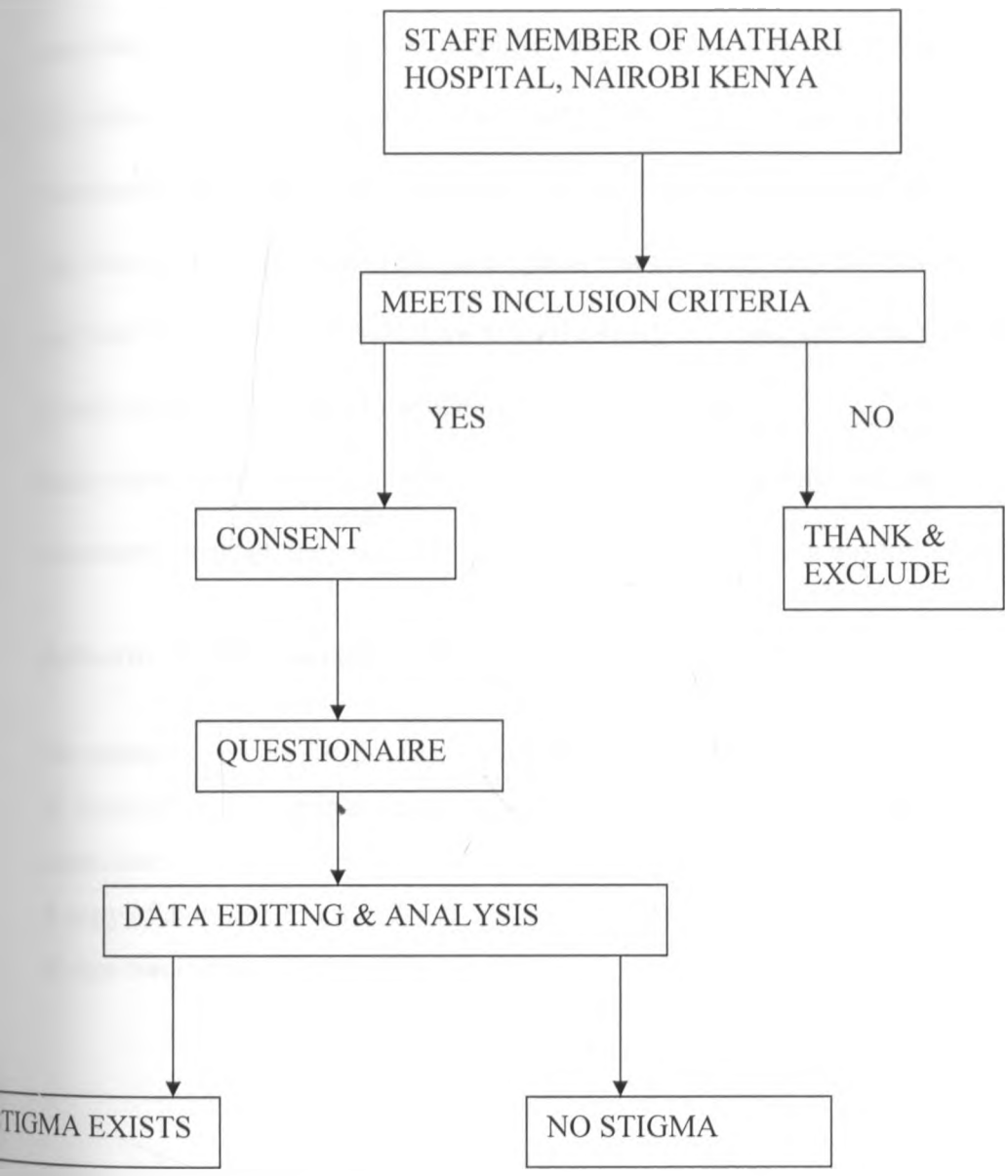
The initial stage of the analysis involved descriptive analysis of socio demographic characteristics of the study participants. This was followed by analysis of all the stigma and attitudinal items in the questionnaire. Means and standard deviations for responses on each item were calculated and data presented using frequency tables, graphs, pie charts and narratives.

Statistical association between the nursing staff demographics and measures of their attitude and stigma were explored using correlation. The Likert scale responses for each attitude and stigma items were compared with relevant demographic characteristics using the chi square test.

TIME SCHEDULE

Proposal Development	*August 2009 to November 2009*
Approval by department	*April 2010*
Ethical committee clearance	*August 2010*
Data collection	*August-September 2010*
Data Analysis	*October-November 2010*
Data Presentation	*April 2011*
Report Writing	*April-May 2011*

FLOW CHART


STAFF MEMBER OF MATHARI HOSPITAL, NAIROBI KENYA
MEETS INCLUSION CRITERIA
YES
NO
CONSENT
THANK & EXCLUDE
QUESTIONAIRE
DATA EDITING & ANALYSIS
TIGMA EXISTS
NO STIGMA

ETHICAL CONSIDERATION

A detailed explanation of the study was given to the participants. A written informed consent was sought from all research participants before including them in the study.

The researcher further explained to the participants that the study was voluntary and that information collected in the study was to be used for the purposes of the study only.

The Researcher explained to the participants that the study may not benefit them as individuals and that they were free to withdraw from the study any time, and if they did so, there was no penalty or loss of benefits to which they were entitled to .

Study participants were assured of confidentiality as their names were not be used in the study documents. Instead, they were only assigned a serial number to ensure confidentiality.

Authority to carry out the Study

The research process began after obtaining approval from department of psychiatry, University of Nairobi and clearance obtained from Kenyatta National Hospital Research and Ethics committee.

A copy of authority to collect data was given to medical superintendent's office before collection of data commenced.

STUDY LIMITATIONS

1 Only nursing staff members working in Mathari Hospital who were willing to participate were enrolled in the research.

2 The study was carried out in one hospital in Kenya which was a small representation of staff caring for the mentally ill in the Hospitals in Kenya.

CHAPTER 4: RESULTS

4.0 Introduction

This chapter presents the study findings and is divided into three sections;

1. Socio-demographic characteristics of nursing staff caring for the mentally ill at Mathare Mental Hospital.
2. Prevalence of stigma and associations between stigma and socio-demographic factors.
3. Multivariable regression analysis conducted to predict the prevalence of stigma among nurses caring for mentally ill patients considering socio-demographic factors.

4.1. Socio-demographic characteristics

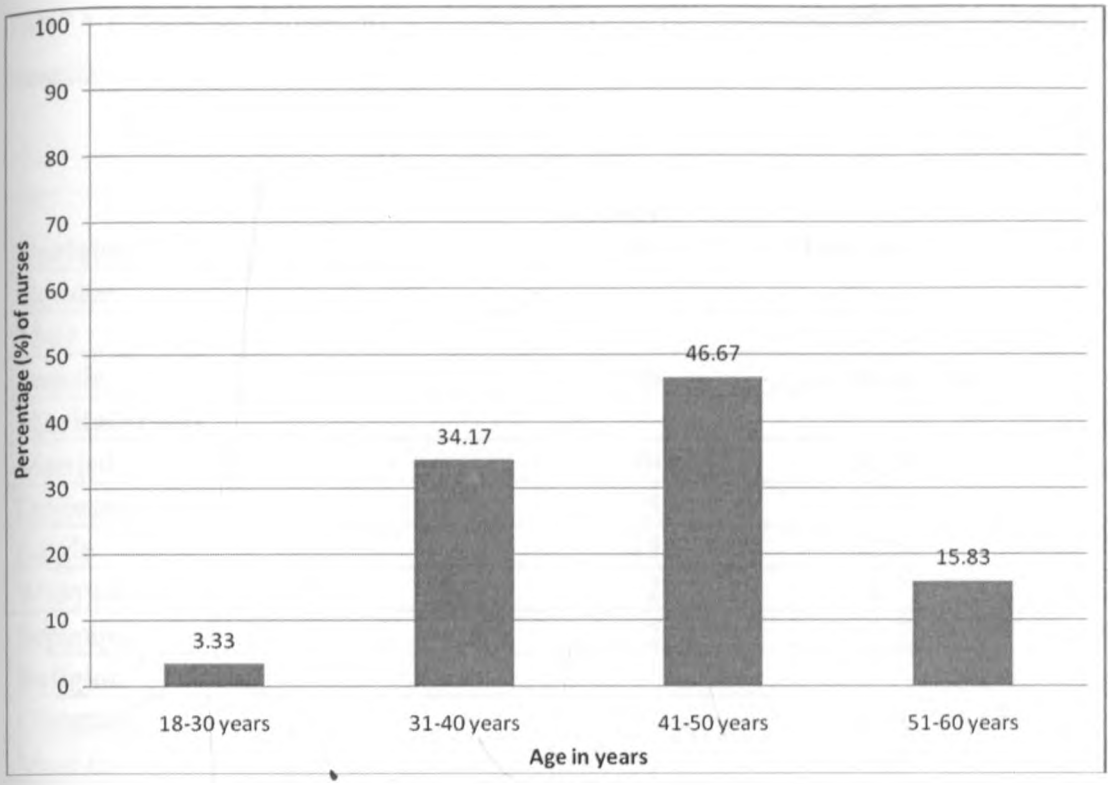
The total number of one hundred and twenty(n=120) nursing staff members caring for the mentally ill at Mathari Mental Hospital were recruited in the study in august 2010.All the nurses reported that they were permanently employed except one who was working on temporary basis. The analysis of the remaining demographic and social characteristics of these participants showed the following:

4.1a Nurses' Age

As shown in Figure 4.1a below, most nurses were middle aged with 46.7% (n=56) aged between 41and 50 years followed by those aged 31-40 years (34.2% n=41)

The mean age (± SD) was 42 ± 7.7 years, and the median age was 43 years (range 18-60 years)

Figure 4.1 Age distribution of study participants



The remaining demographic characteristics of the participants including gender, marital status, religion and years of nursing experience are summarized in Table 4.1.b

The analysis showed that 108 (90%) female nurses and 12 (10%) male nurses were recruited (Male to female ratio = 1: 9). Eighty percent (n=96) of participants were married and 12.5% (n=15) were single. Only 2 (2.1%) of the married participants were aged 18 to 30 years.

A total of 117 (97.5%) nurses indicated that they were Christians. There was only one (0.8%) Muslim while two (1.7%) participants were from other religions.

Approximately 56% of the interviewed nurses had worked in the nursing field for at least 15 years (Table 5.1b). There were 32 (26.7%) nurses and 18 (15%) nurses with between 10 to 15

and 5 to 10 years of experience, respectively. Only 1.7% (n = 2) of nurses had worked for less than five years.

Table 4.1: Selected demographic characteristics of 120 nurses recruited at Mathare Mental Hospital

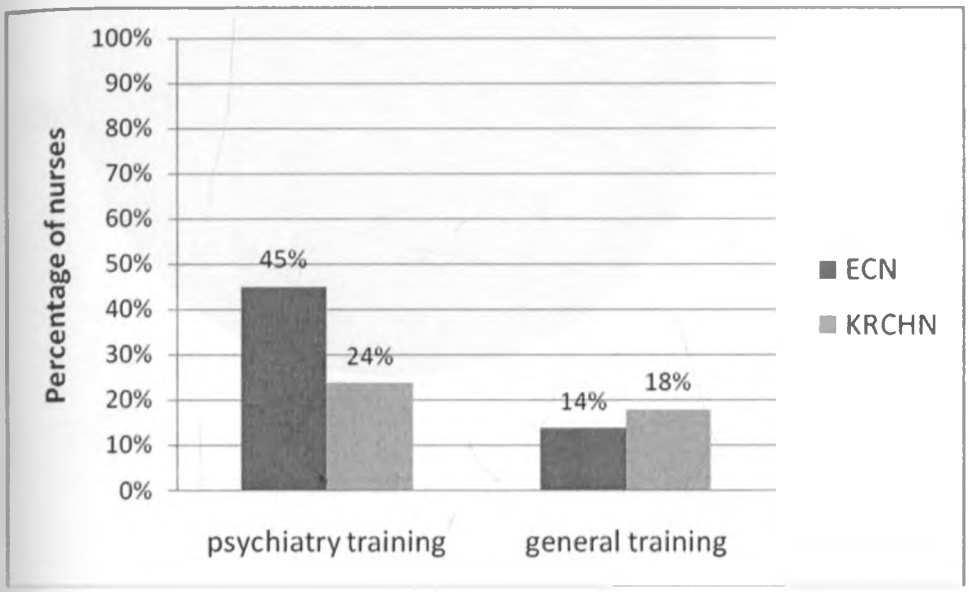
Variable	Number (n=120)	Percent
Gender		
Male	12	10.0
Female	108	90.0
Marital status		
Married	96	80.0
Divorced	5	4.2
Single	15	12.5
Widowed	2	1.7
Separated	2	1.7
Religion		
Christian	117	97.5
Muslim	1	0.8
Other	2	1.7
Experience		
< 5 years	2	1.7
5-10 years	18	15.3
11-15 years	32	27.1
> 15 years	66	55.9

4.1b Nursing training

Figure 4.2 below shows that most nurses caring for the mentally ill patients at Mathare Mental Hospital have specialized training in psychiatric nursing in addition to their basic nursing training as Enrolled Community Nurse (ECN) or Kenya Registered Community Health Nurse (KRCHN) nurses. Additionally, Enrolled Community Nurses (ECN) with specialized training in psychiatric nursing (ECN-P) constituted a majority among nursing staff in the study. This group (ECN-P) accounted for 45% (n=53) of the sample as shown in Figure 4.2, followed by Kenya

registered community health nurses with specialized training in psychiatry (KRCHN-P) at 24%, (n=28)and Kenya Registered Community Health Nurse with only a basic training (KRCHN) at (18%, n=21)

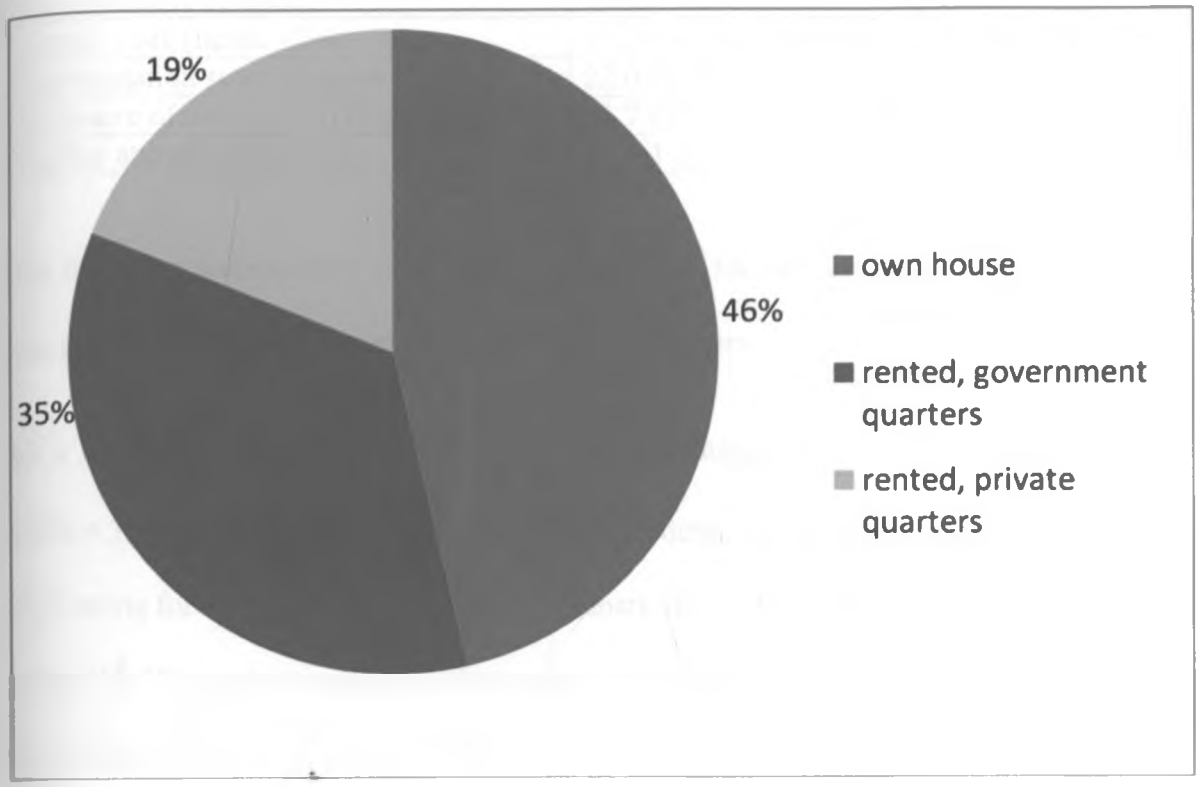
Figure 4.2: Percent distribution of nurses by level of training and specialization in psychiatric care



4.1c Residence

As shown in figure 4.3., majority of the participants lived in rented premises (54%), with 35 %(n=42) living in government quarters and 19 %(n=23) in private quarters. The remaining 46% lived in their own homes.

Figure 4.3: Distribution of nurses by type of residence occupied



4.2 Stigma among nurses and its association with socio-demographic factors

An overall stigma score calculated for each individual nurse had a possible maximum value of 64 (16 items × 4; 4 represents strongly agree). The mean overall stigma score in this sample of nurses was 35.2 ± 14.4 with a range from 4 to 56, indicating moderate level of stigma on average among nurses caring for the mentally ill at Mathare Mental Hospital.

Results showing the mean scores for stigma among nurses for the overall score and that of the three subscales: discrimination, disclosure of nature of work and positive attitude are presented in Table 4.2.

Table 4.2: Overall stigma score and the discrimination, work and positive attitude sub scores for 120 nurses at Mathare Mental Hospital

Score (number of items)	Mean (SD)	Median (IQR)
Overall score (items = 16)	35.2 (14.4)	43 (22.5-47)
Discrimination score (items = 9)	22.0 (8.3)	26 (14-29)
Disclosure of nature of work (items = 5)	11.7 (5.9)	15 (5.5-16)
Positive attitude (items = 2)	1.6 (1.5)	2 (0-2)

The following section reports the prevalence of stigma for each individual questionnaire and association between stigma and sociodemographic factors.

4.2 a Age –specific stigma prevalence versus discrimination

Table 4.3 shows age-specific prevalence of stigma items related to discrimination among nursing staff caring for the mentally ill patients in Mathari Mental Hospital. Nurses in the youngest age group (18-30 years) were more likely to report that people understood their care for the mentally ill compared to older nurses. ($\chi^2 = 13.5$, $p= 0.02$). Eighty-three percent of nurses aged 18-30 years indicated that people understood their care for the mentally ill, compared to 69.2% and 47.8% of nurses aged 41-50 years and 51-60 years, respectively. The other stigma items that showed significant associations with nurses' age were responses to: "discrimination by employers in other field", ability to be hired by employers when off-duty and difficulty in "telling people that I care for mentally ill patients at Mathare Hospital" (Table 4.3) Only one-third of nurses 18 to 30 years reported discrimination by employers in other fields compared to 54.4%, 63% and 47% of nurses aged 31 to 40 years, 41 to 50 years and 51 to 60 years, respectively. ($\chi^2 = 9.24$, $p= 0.04$)

Table 4.3: Prevalence of stigma for items measuring discrimination among nurses of different ages caring for mentally ill patients

Stigma item	Age category (years)				χ^2	P
Discrimination	18-30 n=4	31-40 n=41	41-50 n=56	51-60 n=19		
People have been understanding my care for the mentally ill at Mathare mental hospital	83.3	60.8	69.2	47.8	13.5	0.02 *
People react negatively when I mention I care for the mentally ill patients at Mathare mental hospital*	83.3	89.1	86.2	73.9	2.91	0.34
People have avoided me because I care for the mentally ill patients at Mathare mental hospital	50.0	45.6	53.9	47.8	0.77	0.84
People have insulted me because of working for the mentally ill patients at Mathare Hospital Nairobi Kenya	50.0	52.2	56.9	52.2	0.35	0.95
I have been discriminated by health professionals in other fields because of caring for the mentally ill at Mathare mental hospital	50.0	67.4	76.9	56.5	4.66	0.16
I have been discriminated against by employers in other fields because I care for the mentally ill patients at Mathare mental hospital	33.3	54.4	63.1	47.8	9.24	0.04 *
Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill in Mathare mental hospital*	66.7	69.6	66.2	47.8	3.38	0.34
Once people know I care for the mentally ill at Mathare mental hospital, they take my opinions seriously*	100	71.7	69.2	60.9	3.57	0.34
Most employers would hire me for part-time duties during my off-duty time*	50.0	87.0	75.4	65.2	10.8	0.03 *

4.2b Age versus disclosure among nursing staff members caring for the mentally ill in Mathare Mental Hospital.

Among the five disclosure items presented in Table 4.4, only one item was significantly associated with age. Patients aged 51-60 years were less likely (39.1%) to report "I find it hard telling people I care for the mentally ill in Mathare mental hospital" compared to those aged 18-30 years (50%), 31-40 years (67.4%) and 41-50 years (66.2%) p= 0.02. The responses in the different age groups did not differ significantly when asked if they worried saying they cared for the mentally ill (p=0.51), avoided telling others they treated mental patients (p=0.49), mind

people knowing the nature of their work (p = 0.66) or were scared how people would react on learning the nature of work they do (p = 0.56).

Table 4.4: Prevalence of stigma for items measuring disclosure among nurses of different ages caring for mentally ill patients

Stigma item	Age category (years)				χ^2	P
Disclosure	*18-30 n=4*	*31-40 n=41*	*41-50 n=56*	*51-60 n=19*		
I worry telling people that I care for the mentally ill at Mathare mental	66.7	63.0	69.2	52.2	2.2	0.51
I avoid telling other people I give treatment to the mentally ill patients at Mathare mental	66.7	60.9	60.0	43.5	2.43	0.49
I find it hard telling people I care for the mentally ill in Mathare mental hospital	50.0	67.4	66.2	39.1	12.4	0.02 *
I don't mind people in my neighborhood knowing that I care for the mentally ill in Mathare mental hospital	33.3	54.4	56.9	47.8	1.59	0.66
I am scared how other people would react if they found out that I care for the mentally ill at Mathare mental hospital	50.0	54.4	60.0	43.5	1.95	0.56

4.2 c Gender versus stigma among nurses working with mentally ill patients

As Table 4.5 shows, the level of stigma reported by female nurses was not significantly different from that reported by their male colleagues for the 9 items assessing discrimination as a source of stigma. Although the responses were not statistically different the male nurses were more likely to report being stigmatized than female nurses for the following items (Table 4.5): People react negatively when I mention I care for the mentally ill patients at Mathare mental hospital (93.8% versus 83.9%), Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill in Mathare mental hospital (75% versus 62.9%), and Once people know I care for the mentally ill at Mathare mental hospital, they take my opinions seriously (81.3% versus 68.6%).

Table 4.5: Prevalence of stigma for items measuring discrimination among male and female nurses caring for mentally ill patients

Stigma item	Gender		χ^2	P
Discrimination	Male n=12	Female n=108		
People have been understanding my care for the mentally ill at Mathare mental hospital	62.5	63.7	0.009	0.925
People react negatively when I mention I care for the mentally ill patients at Mathare mental hospital	93.8	83.9	1.08	0.46
People have avoided me because I care for the mentally ill patients at Mathare mental hospital	50.0	50.0	0.00	0.98
People have insulted me because of working for the mentally ill patients at Mathare Hospital Nairobi Kenya	50.0	54.8	0.13	0.79
I have been discriminated by health professionals in other fields because of caring for the mentally ill at Mathare mental hospital	75.0	68.6	0.28	0.77
I have been discriminated against by employers in other fields because I care for the mentally ill patients at Mathare mental hospital	56.3	56.5	0.0002	0.988
Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill in Mathare mental hospital*	75.0	62.9	0.90	0.41
Once people know I care for the mentally ill at Mathare mental hospital, they take my opinions seriously*	81.3	68.6	1.08	0.39
Most employers would hire me for part-time duties during my off-duty time	81.3	75.8	0.23	0.76

4.2 d Prevalence of stigma on disclosure and positive attitude items among male and female nursing staff caring for the mentally ill.

According to the table 4.6 below, the male nurses reported higher levels of stigma for most of the stigma items related to disclosure and positive opinion. However, the findings of the chi–square test show there were no statistically significant differences among male and female nurses in reported levels of stigma for these items.

Table 4.6: Prevalence of stigma for items measuring disclosure and positive attitude among male and female nurses caring for mentally ill patients

Stigma item	Gender		χ^2	P
Disclosure	Male n=12	Female n=108		
I worry telling people that I care for the mentally ill at Mathare mental	75.0	62.9	0.90	0.41
I avoid telling other people I give treatment to the mentally ill patients at Mathare mental	56.3	58.1	0.019	0.89
I find it hard telling people I care for the mentally ill in Mathare mental hospital	75.0	59.7	1.40	0.28
I don't mind people in my neighborhood knowing that I care for the mentally ill in Mathare mental hospital*	62.5	52.4	0.57	0.59
I am scared how other people would react if they found out that I care for the mentally ill at Mathare mental hospital	68.8	53.2	1.37	0.29
Positive attitude				
I do not feel embarrassed caring for the mentally ill patients at Mathare mental hospital*	12.5	9.7	0.12	0.66
Having worked in Mathare mental hospital for the mentally ill has made me a stronger person in society*	18.8	8.9	1.53	0.20

4.2 e Training versus stigma among nurses working with mentally ill patients

The prevalence of stigma and its association with the level of training among nurses working with mentally ill patients in Mathare Hospital are presented in Tables 4.7 and 4.8. The observed prevalence of stigma in this study varied significantly by level of nurses training on five out of the 16 items.

These five items were: "People have insulted me because of working for the mentally ill patients"; "I have been discriminated against by employers in other fields because I care for the mentally ill patients"; "Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill"; "Most employers would hire me for part-time duties during my off-duty time"; and "I worry telling people that I care for the mentally ill at Mathare mental" (Table 4.7 and 4.8)

Table 4.7: Prevalence of stigma for items measuring discrimination among nurses with different training caring for mentally ill patients

Stigma item	Training category				χ^2	P
Discrimination	ECN n=16	KRCHN n=21	ECN-P n=53	KRN-P n=28		
People have been understanding my care for the mentally ill at Mathare mental hospital	68.4	62.1	67.8	53.3	2.61	0.65
People react negatively when I mention I care for the mentally ill patients at Mathare mental hospital*	84.2	89.7	86.4	80.0	6.76	0.28
People have avoided me because I care for the mentally ill patients at Mathare mental hospital	52.6	51.7	55.9	40.0	3.08	0.57
People have insulted me because of working for the mentally ill patients at Mathare Hospital Nairobi Kenya	63.2	62.1	54.2	43.3	8.94	0.04 *
I have been discriminated by health professionals in other fields because of caring for the mentally ill at Mathare mental hospital	68.4	72.4	71.2	63.3	2.95	0.62
I have been discriminated against by employers in other fields because I care for the mentally ill patients at Mathare mental hospital	52.6	62.1	67.8	36.7	9.65	0.03 *
Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill in Mathare mental hospital*	57.9	69	72.9	50.0	15.9	0.01 *
Once people know I care for the mentally ill at Mathare mental hospital, they take my opinions seriously*	68.4	69	71.2	70.0	0.50	0.97
Most employers would hire me for part-time duties during my off-duty time*	73.7	79.3	83.1	66.7	12.5	0.02 *

Forty-three percent of KRN-P reported that they had been insulted for working in a mental health hospital compared to 54.2% of ECN-P, 62.1% of KRCHN and 63.2% of ECN ($\chi^2 = 8.94$, p= 0.04), Table 4.7. KRN-P were less likely to report discrimination by other employers (36.7% versus 52.6% to 67.8% for other cadres, p=0.03) or the public were willing to accept them (50% versus 57.9% to 72.9% for other cadres, p=0.01), Table 4.7.

As shown in Table 4.8, both items (n=2) assessing positive attitudes of nurses were not significantly associated with training. However, 53.3% of KRN-P worried telling people they

cared for mentally ill patients compared to between 62.1% and 74.6% of nurses in other cadres, p= 0.04.

Table 4.8: Prevalence of stigma for items measuring disclosure and positive attitude among nurses with different training caring for mentally ill patients

Stigma item	Training category				χ^2	P
Disclosure	ECN n=16	KRCHN n=21	ECN-P n=53	KRN n=28		
I worry telling people that I care for the mentally ill at Mathare mental	63.2	62.1	74.6	53.3	9.18	0.04 *
I avoid telling other people I give treatment to the mentally ill patients at Mathare mental	52.6	58.6	64.4	50.0	3.39	0.49
I find it hard telling people I care for the mentally ill in Mathare mental hospital	57.9	69	69.5	46.7	6.78	0.12
I don't mind people in my neighborhood knowing that I care for the mentally ill in Mathare mental hospital*	52.6	58.6	55.9	50.0	1.71	0.87
I am scared how other people would react if they found out that I care for the mentally ill at Mathare mental hospital	52.6	55.1	61.0	50.0	2.40	0.71
Positive attitude						
I do not feel embarrassed caring for the mentally ill patients at Mathare mental hospital*	5.3	6.9	10.2	16.7	2.34	0.67
Having worked in Mathare mental hospital for the mentally ill has made me a stronger person in society*	5.3	10.3	8.5	16.7	2.19	0.67

4.2 f Nursing experience versus stigma

The prevalence of stigma and its association with experience among nurses working with mentally ill patients in Mathare Hospital are presented in Tables 4.9 and 4.10.

The years of nursing experience was significantly associated with the responses nurses gave to two items presented in Table 4.9. Approximately two-thirds of nurses with less than 5 years experience, 47.6% of nurses with 5-10 years experience, 68.57% of nurses working for 10-15 years and 43.04% with over 15 years experience felt people avoided them because they cared for mentally ill patients ($\chi^2 = 8.71$, p= 0.04). On the other hand, only 55% of nurses who had worked for over 15 years felt "most people in the public are willing to accept me as a nursing

staff friend caring for the mentally ill" compared to at least 66% of nurses in each of the group with shorter durations of experience ($\chi^2 = 8.79$, p= 0.04).

Table 4.9: Prevalence of stigma for items measuring discrimination among nurses with different durations of experience

Stigma item	Experience (years)				χ^2	P
Discrimination	< 5 yr n=2	5-10 n=18	11-15 n=32	>15 yr n=66		
People have been understanding my care for the mentally ill at Mathare mental hospital	100	66.67	74.29	56.96	5.16	0.19
People react negatively when I mention I care for the mentally ill patients at Mathare mental hospital*	66.67	95.24	88.57	81.01	3.80	0.21
People have avoided me because I care for the mentally ill patients at Mathare mental hospital	66.67	47.62	68.57	43.04	8.71	0.04 *
People have insulted me because of working for the mentally ill patients at Mathare Hospital Nairobi Kenya	66.67	57.14	60.00	50.63	1.13	0.75
I have been discriminated by health professionals in other fields because of caring for the mentally ill at Mathare mental hospital	66.67	66.67	77.14	65.82	1.51	0.68
I have been discriminated against by employers in other fields because I care for the mentally ill patients at Mathare mental hospital	66.67	57.14	65.71	53.16	1.67	0.64
Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill in Mathare mental hospital*	66.67	71.43	80.00	55.70	8.79	0.04 *
Once people know I care for the mentally ill at Mathare mental hospital, they take my opinions seriously*	100	71.43	77.14	65.82	2.82	0.54
Most employers would hire me for part-time duties during my off-duty time*	66.67	76.19	88.57	72.15	3.85	0.19

For disclosure the items that were significantly associated with nursing experience were: "I avoid telling other people I give treatment to the mentally ill patients" and "I don't mind people in my neighborhood knowing that I care for the mentally ill" (Table 4.10). Nurses with longest experience (over 15 years) were less likely to avoid telling people that they worked with

mentally ill patients ($\chi^2 = 9.21$, p= 0.03) or to mind neighbors knowing they care for mentally ill patients ($\chi^2 = 9.12$, p= 0.03).

Both items (n=2) assessing positive attitudes of nurses were not significantly associated with experience.

Table 4.10: Prevalence of stigma for items measuring disclosure and positive attitude among nurses with different durations of experience

Stigma item	Experience (years)				χ^2	P
Disclosure	< 5 yr n=2	5-10 n=18	11-15 n=32	>15 yr n=66		
I worry telling people that I care for the mentally ill at Mathare mental	66.67	66.67	74.29	60.76	1.98	0.55
I avoid telling other people I give treatment to the mentally ill patients at Mathare mental	66.67	76.19	65.71	49.37	9.21	0.03 *
I find it hard telling people I care for the mentally ill in Mathare mental hospital	66.67	71.43	74.29	54.43	4.99	0.15
I don't mind people in my neighborhood knowing that I care for the mentally ill in Mathare mental hospital*	66.67	52.38	71.43	46.84	9.12	0.03 *
I am scared how other people would react if they found out that I care for the mentally ill at Mathare mental hospital	66.67	66.67	65.71	48.10	4.44	0.20
Positive attitude						
I do not feel embarrassed caring for the mentally ill patients at Mathare mental hospital*	0.00	4.76	17.14	8.86	3.02	0.50
Having worked in Mathare mental hospital for the mentally ill has made me a stronger person in society*	0.00	9.52	14.29	8.86	1.14	0.73

4.2 g Religion versus stigma

The religious affiliation of nurses showed a significant association with 3 out of the 16 items measuring stigmatization. As shown in Table 4.11, all the 3 items were related to disclosure about the nature of the work done. Both items (n=2) assessing positive attitudes of nurses were not significantly associated with religion.

As shown in Table 4.11 below, the single Muslim participant and the Catholic participants were more likely to report that they worry telling people that they care for the mentally ill ($\chi^2 = 6.58$,

p= 0.04). These groups of nurses were also more likely to "find it hard telling people I care for the mentally ill" compared to the nurses with other religious affiliations namely Protestants and "other" religion ($\chi 2 = 8.16$, p= 0.02).

Table 4.11: Prevalence of stigma for items measuring disclosure among nurses with different religious beliefs

	Religious belief				χ^2	p
Disclosure	Catholic n=112	Protestant n=4	Muslim n=1	other n=3		
I worry telling people that I care for the mentally ill at Mathare mental	65.8	56.3	100	33.3	2.38	0.52
I avoid telling other people I give treatment to the mentally ill patients at Mathare mental	60.8	43.8	100	0	6.58	0.04*
I find it hard telling people I care for the mentally ill in Mathare mental hospital	65	43.8	100	0	8.16	0.02*
I don't mind people in my neighborhood knowing that I care for the mentally ill in Mathare mental hospital*	55.8	37.5	100	33.3	3.26	0.34
I am scared how other people would react if they found out that I care for the mentally ill at Mathare mental hospital	59.2	31.3	100	0	8.97	0.02*

4.3 MULTIVARIABLE ANALYSES OF FACTORS ASSOCIATED WITH STIGMA

A score summarizing the stigmatization of nurses was calculated by adding the responses to all 16 Likert scale items yielding a score with range 0 to 64. To examine association between total stigma score and social and demographic variables linear regression analysis was conducted with stigma score as the dependent variable. The independent variables included the social (marital status and religion) and demographic (age, gender, experience, training) variables.

The results of the multivariable analysis are presented in Table 4.12.

The multivariate linear model [F (18, 119) = 1.71; p = 0.046] had an adjusted R-square value 0.39. R-square is an overall measure of the strength of association and represents the proportion of variance in the dependent variable (total stigma score) which can be predicted from the independent variables. This indicates that the social and demographic factors examined in this model explained 39% of the total variation in total stigma score. The regression coefficients, their standard errors and p-values are presented in Table 4.12.

The signs of the coefficients are consistent with earlier hypothesis, for example the years of nursing experience and nurse's age were negatively correlated with stigma indicating that stigma reduced with longer duration of service. In the final model the following factors showed statistically significant associations with nurses' stigma: years of nursing experience (all p-values < 0.05), belonging to "other" religion (p = 0.03) and being a divorcee (p = 0.046). More specifically, for a nurse moving from less than 5 years of experience to 5-10 years of nursing experience the stigma score is predicted to decrease by 16.799 units. Similarly, stigma scores were predicted to decrease by 13.3 units and 20.23 units for nurses with 11-15 years and those with over 15 years experience, respectively. All these reductions were statistically significant at the 0.05 level. Concerning marital status the coefficient for divorcees was significant (p = 0.046) indicating that the reported level of stigma was significantly lower among married nurses compared to their divorced colleagues. Finally, there was evidence of an influence of religion on stigma with the significant and positive coefficient for "other" religions (p = 0.03) showing that nurses reporting other religious beliefs experienced higher stigma levels.

However, the overall association between gender and stigma was not statistically significant and neither was the association between stigma and age statistically significant as evidenced by the p values greater than the statistical significance cut off level of 0.05.

Table 4.12: Results of linear regression analysis of social and demographic variables on stigma score

Variable	Coefficient	Standard error	P value	95% Confidence interval	
Constant	-2.50	0.33	0.02	-1.22	-7.67
Gender	2.52	3.96	0.53	-5.32	10.36
Nurses' age					
30-40 years	0.56	7.66	0.94	-14.59	15.72
41-50 years	-2.58	8.19	0.75	-18.78	13.63
51-60 years	-0.78	8.68	0.93	-17.97	16.42
Marital status					
Divorced	-11.57	6.54	0.046*	-24.52	-1.39
Single	-0.13	4.46	0.98	-8.96	8.71
Widowed	-7.41	8.50	0.39	-24.25	9.43
Separated	2.19	8.41	0.80	-14.47	18.85
Religion					
Protestant	5.33	4.11	0.20	-2.82	13.47
Muslim	-16.76	14.67	0.26	-45.82	12.29
Other religion	18.40	8.60	0.03*	1.37	35.43
Professional qualification					
KRCHN	-5.53	4.61	0.23	-14.65	3.60
ECN-P	-2.21	3.87	0.57	-9.87	5.45
KRN	2.44	4.25	0.57	-5.96	10.85
Nursing experience					
5-10 years experience	-16.80	11.08	0.03*	-38.73	-5.13
11-15 years experience	-13.34	10.91	0.02*	-34.94	-8.27
> 15 years experience	-20.23	10.87	0.048*	-41.75	-1.29

CHAPTER 5: DISCUSSION

The study findings showed that majority of the study participants were mainly of the female gender. This compares to the gender distribution of nurses reported in other hospitals and fields of nursing where female nurses tend to dominate. Indeed nursing is taken to be more of a feminine job since it requires one to have motherly qualities of tender loving care with compassion.

Similar findings showing dominance of female gender in nursing profession are seen other studies like one done by Chikanda (43) where 80% of the study participants were female. This percentage was close to the 90% population of the female participants in the present study. Another study on professionalization, gender and female dominated professions in Ontario (51) found nursing to be a female dominated profession.

A study by Asakuna and Wanatabe on survival strategies of male nurses in rural areas of Japan (48) found nursing profession to be dominated by the female gender. Nursing career was seen to be fit for female population according to a study done in Turkey by Odzemira et al. (49)

Most nurses were permanently employed .This would be significant in ensuring consistent availability of nursing staff caring for the mentally illness given that majority of mental illnesses are chronic in nature.

The current study found a dominance of the middle age group which could be explained by the requirement of additional training prior to deployment in specialized areas like the psychiatric hospitals like the one in the current study. Indeed this may explain why majority of the study participants had specialized in psychiatric nursing which would be expected in a specialized health institution like the one in the current study.

More than half of the study participants lived in rented government premises. This may be for easier accessibility to the work station which would increase the amount of time a nurse has with a patient. This enables a better understanding of a patient's illness and hence a faster comprehensive management of a patient with eventual reduction in hospital stay for the patients.

A study by Hog berg et al. (45) found that psychiatric nurses preferred to live in the neighborhood of persons with mental illness. Other reasons would be high cost of rent of decent housing in Nairobi which ranges from a minimum of Ksh15, 000. However the study did not evaluate the monthly income of the study participants hence it would not give a reliable conclusion based on staff in ability to afford rent in private premises.

Most participants reported that they were married. According to Curie et al (52) marriage enhances emotional stability which leads a better output in one's employment. This would be very beneficial to nurses caring for mentally ill who require much encouragement due to the emotional and psychological challenges related to mental illness.

Approximately ninety seven percent of the study participants were Christians. This may be representative of the pattern of religion in the country. Moral values taught in various religions are important to the staff members caring for mentally ill. The mentally ill persons unless when mentally stable on treatment cannot make proper judgments in their life hence depend on guidance by the significant others like staff members caring for them. However the study was not able to evaluate if the participants were active in their religion

5.1 STIGMATIZATION OF NURSES CARING FOR THE MENTALLY ILL PATIENTS

A moderate level of stigmatization of the staff members caring for the mentally ill in Mathare Mental Hospital was found in the present study. The negative reaction towards majority of the participants when they mentioned about their nature of occupation could be explained by possibility of courtesy stigma associated with the mentally ill patients. The mentally ill patients are not accepted in the society (51) and due to this reason, people who are seen to be close to them in any way are held with a lot of suspicion and are imagined to be mentally unwell. A study by Kendell 2004(50) found that due to courtesy stigma mental health staffs surrounding the mentally ill are viewed as been evil and mentally unwell. The presence of courtesy stigma has also been found in a study done by Stuart 2005 (5).

Most participants who had already specialized in psychiatry could not be hired for part-time duties during their off duty time by other health professionals .This may be due to stigma by association. This is consistent with studies done by Halter (33) where psychiatric nursing was the least considered specialty among nine other specialties. However contrary findings were found by American Association of Nursing (2002) where Psychiatric nurses would be employed in other areas like private clinics and in colleges or in universities as lecturers.

Majority of the study participants had a positive attitude to their nature of work. Practically this is relevant since it can affect the quality of service to the mentally ill. Similar positive attitude towards caring for the mentally ill have been found among nurses working for five European countries (47).In addition a study done by Rameela(46) also found positive attitudes among psychiatric nurses caring for the mentally ill. Contradictory findings have been found in a study done in Korea where psychiatric nurses showed negative attitudes towards mentally ill.

5.2 STATISTICAL ASSOCIATIONS BETWEEN STIGMA AND NURSES SOCIAL DEMOGRAPHIC FACTORS

In the multivariate analysis statistically significant associations were found between stigma and three factors namely years of nursing experience, religion and marital status.

Nurses with a more working experience showed a lower level of stigma. These findings have been supported by various studies like one done by Oberlaender et al (53) who found that there was evidence on the effect of professional experience on stigma among Romanian forensic nurses caring for mentally ill patients, with nurses holding more professional experience viewing patients more critically.

A study by Caldwell et al (54) found that long term experience working with forensic psychiatry services may lead to better understanding of the patients. These differences between length of nursing experience and stigma may be the result of previously reported and documented contact hypothesis. According to the contact hypothesis prolonged contact with the mentally ill patients imparts more knowledge and understanding about mental illness leading to attitudinal changes among nurses caring for mentally ill.

Studies consistent with current study findings are also supported by findings of a study in Turkey (55) showing that staff cadres spending longer periods of time with mentally ill patients may discuss personal and family circumstances during these periods and generally report less stigmatizing attitudes.

A Study done by Hamaidea et al (58) on attitude of Jordanian nursing students towards mental illness supported contact hypothesis though the period of contact was over a short period of time. Angermeyer et al (59) study on familiarity with mental illness and social distance from people with schizophrenia and major depression: testing model using data from a representative population survey found that respondents who were familiar with mental illness expressed a less strong desire for social distance hence less levels of stigma.

In another study on contact with the mentally ill having a reduction on stigma has been found by Alexander et al (60) in a study on impact of contact on stigmatizing attitudes towards people with mental illness. However the study did not specify the duration of contact with the mentally ill.

A Study showing contradictory findings on contact hypothesis is one done on attitudes towards mental illness: testing the contact hypothesis among Chinese students in Hongkong which showed that previous contact with mental illness had no significant effect on attitude towards mental illness hence findings did not support contact hypothesis. (61)

With all the above findings, contact and hence subsequent experience with the mentally ill patients may perhaps have an impact on improving the attitude towards the mentally ill with eventual reduction on the stigma associated with mental illness.

The impact of religion in this study suggests that nurses in "other religions" hold more stigmatizing attitudes than Christian nurses who formed the majority of the group. Religion is seen to be a powerful tool in the behavior of people to make sense of suffering ,to control both internal and external excessive forces and to promote rules which allow cooperation and support within the community. However due to the small (n=2) number of participants in "other religion" it is difficult to make reliable conclusions or explain the possible causes of the higher level of stigma in this group of nurses.

Perhaps to be expected, an ethnographic study conducted among mental health nurses in Thailand (56) reported significant stigma of mental illness and an influence of culture and religion on mental health and mental health nursing fields. This aspect is rarely addressed in quantitative analysis but the analysis presented in this study shows some evidence of an effect of religion on stigma among mental health nurse practitioners.

Findings on marital status showed that the divorced participants had a higher level of stigma. Divorce has been found to have different effects on the male and female gender.Coconan (56) found that men were negative about divorce and had higher emotional adjustment problems compared to the female. This may have negative effects in their daily life activities and would perhaps put them more at risk of higher level of stigma. The divorced female people are at risk of experiencing greater stigma when they place the children in the child care. (56).

More contributions on the effect of divorce include The National Institute of Mental Health (62) which found that divorce was associated with an increased risk of psychiatric conditions like depression which may lead to feelings of isolation, lowered self esteem which is accompanied by social stigma. This perhaps may explain the higher level of stigma in the divorced participants.

Finally, there was no significant association between stigma and the remaining demographic factors including age, gender, and the level of training of the participants in the current study.

However studies with contrary findings have reported significant differences in nurses' stigma according to age, gender and level of education. A possible explanation for differences in stigma by level of education has included the fact that staff with less education spends more time with mentally ill patients. (55) .The homogeneity of the nurses in this sample in terms of their roles could explain the lack of an effect of level of education. The nurses' contact with patients regardless of nursing education level is influenced by the need to complete assessments and paperwork in which social stressors may not be explored fully due to workload and time limitations.

5.3 LIMITATIONS

- The study involved participants from one hospital in Kenya hence cannot be a generalized view of staff members in other hospitals in the country.

5.4 CONCLUSION

There is a moderate level of stigma at a mean overall stigma score of 35.2 with range of 4 to 56 among nursing staff caring for the mentally ill in Mathare Mental Hospital. There is hence a need of sensitization to the community so as to give factual knowledge concerning causes of mental illness with an aim to eliminate stigma by association.

5.5 RECOMMENDATIONS

- The more exposure an individual has to mental health, the less the stigma related to the mentally ill. Hence mental health education needs to be introduced at various levels in the education curriculum, starting from primary then to secondary level and at university level under the common undergraduate courses. Moreover mental health education should be introduced in training institutions for teachers, police, journalists and other civil service training institutions.

- More studies need to be done among nursing staffs in psychiatric health units in general hospitals, so as to compare if integration of psychiatric units in the general hospitals plays a role in reducing level of stigma associated with mental illness.

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7.0 APPENDICES

Appendix 1: Informed consent explanation

My Name is Dr Georgina W. Kamunge, currently a Masters Degree student in psychiatry at university of Nairobi. My Supervisors are; Dr Mary Wangari Kuria [consultant psychiatrist and lecturer department of psychiatry, university of Nairobi] and Dr Pius A. Kigamwa [consultant Psychiatrist and senior lecturer department of psychiatry, university of Nairobi].

I am carrying out a study on stigmatization of Mathare mental hospital nursing staff caring for the mentally ill. I intend to interview nursing staff caring for the mentally ill patients in Mathare mental hospital to establish if they experience stigma because of working for the mentally ill.

At the end of the study, the necessary recommendations will be made with an aim to promote a positive attitude of the nursing staff members in the general public.

Your decision to participate in the study is entirely voluntary. The study involves self administered social demographic and stigma questionnaire.

Your name will not be used anywhere and information gathered from you will be confidential and treated for the purposes of the study only.

You may choose to withdraw from the study at any time, and if you do so, there will be no penalty or loss of benefits which you are otherwise entitled to.

The study may not benefit you as an individual. Feel free to ask any questions now or any other time thereafter. If you agree to participate in this study I would request you to sign the statement below after reading it through.

PARTICIPANTS CONSENT

The study has been explained to me and I voluntarily consent to participate in it. I have had the opportunity to ask questions and understood the researcher Dr. Kamunge will answer future questions I may have concerning the study. If you have any question, my telephone Number is 0711176943. Alternatively, you may get in touch with Ethical Committee KNH telephone number; 2726300(ext 44102)

Signature of Applicant .....Signature of Researcher.....

Appendix 2: Study questionnaire

2a Social Demographic Questionnaire

Study no……Date……..Ward……..

1. Gender

Male……Female……

2. Age

a) 18-30 years
b) 31-40 years
c) 41-50 years
d) 51 -60 years

3. Marital status

a) Married
b) Divorced
c) Single
d) Widowed
e) Separated
f) Remarried.

4. Religion

a) Christian
b) Muslim
c) Hindu
d) Other

5 Level of training;

a) ECN
b) ECN-P
c) KRCHN
d) KRCHN-P

5. Employment Status

(a)Permanent.....

(b)Temporary.....

6. Work Experience

a) Less than 5 years.....

b) 5-10 years.....

c) 11-15 years.....

d) More than 15 years.....

7. Residence

a) Own house

b) Rented

i) Government Quarters (Mathare Mental Hospital)

ii) Private Quarters

Adopted Researcher based stigma questionnaire

Dc-discrimination, D-disclosure, P-positive attitude. People-persons in the public domain.

1. I worry telling people that I care for the mentally ill at Mathare mental hospital .(D)
   a) Strongly agree
   b) Agree
   c) Neither agree nor disagree
   d) Disagree
   e) Strongly disagree
2. People have been understanding my care for the mentally ill at Mathare mental hospital(Dc)
   a) Strongly agree
   b) Agree
   c) Neither agrees nor disagrees
   d) Disagree
   e) Strongly disagree
3. People react negatively when I mention I care for the mentally ill patients at Mathare mental hospital(Dc)
   a) Strongly agree
   b) Agree
   c) Neither agrees nor disagrees
   d) Disagree
   e) Strongly disagree

4. People have avoided me because I care for the mentally ill patients at Mathare mental
   (a)Strongly agree
   (b)Agree
   (c)Neither agrees nor disagrees.
   (d)Disagree
   (e) Strongly disagree

5. I do not feel embarrassed caring for the mentally ill patients at Mathare mental hospital(P)
    a) Strongly agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagree
    e) Strongly disagree
6. People have insulted me because of working for the mentally ill patients at Mathari Hospital Nairobi Kenya(Dc)
    a) Strongly Agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagree
    e) Strongly Disagree

7. I have been discriminated by health professionals in other fields because of caring for the mentally ill at Mathare mental hospital.(Dc)
    a) Strongly agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagree
    e) Strongly Disagree
8. I avoid telling other people I give treatment to the mentally ill patients at Mathare mental (D)
    a) Strongly agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagree
    e) Strongly Disagree

9. I have been discriminated against by employers in other fields because I care for the mentally ill patients at Mathare mental hospital.
    a) Strongly Agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagree
    e) Strongly disagree
10. Having worked in Mathare mental hospital for the mentally ill has made me a stronger person in society.(P)
    a) Strongly Agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagree
    e) Strongly Disagree.
11. I find it hard telling people I care for the mentally ill in Mathare mental hospital(D)
    a) Strongly Agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Strongly Disagrees.
12. I don't mind people in my neighborhood knowing that I care for the mentally ill in Mathare mental hospital.(D)
    a) Strongly Agree
    b) Agree
    c) Neither agrees nor disagrees
    d) Disagrees.
    e) Strongly Disagree

13. I am scared how other people would react if they found out that I care for the mentally ill at Mathare mental hospital. (D)

a) Strongly agree

b) Agree

c) Neither agrees nor disagrees

d)Disagree

e) Strongly disagree

14. Most people in the public are willing to accept me as a nursing staff friend caring for the mentally ill in Mathare mental hospital. (Dc)

a) Strongly agree

b) Agree

c) Neither agrees nor disagrees

d) Disagree

e) Strongly disagree

15. Once people know I care for the mentally ill at Mathare mental hospital, they take my Opinions seriously (Dc)

a) Strongly agree

b) Agree

c) Neither agrees nor disagrees

d) Disagree

e) Strongly disagree

16. Most employers would hire me for part-time duties during my off-duty time (Dc)

a) Strongly agree

b) Agree

c) Neither agrees nor disagrees

d) Disagree

e) Strongly disagrees

APPENDIX 3: BUDGET

ITEM DEFINATION	EXPENSES (KSHS)
Stationaries; Writing pens clip boards Pins and staples Erasers Rough papers	6,000
Computer Services Laptop Typing Printing photocopying	150,000
Transport	5,000
Total:	**161,000**

The funding for the study was obtained from own personal savings.