Knowledge, Attitude and Practice towards care provision to mentally ill persons among Nurses working in Public health facilities in Ghana

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DEDICATION

I would like to dedicate this thesis to my mother, younger sister and late father; Mrs. Zineyele Rose, Miss. Zineyele Joyce and late Mr. Dakurah Zineyele respectively for their wonderful support and encouragement for the success of this thesis.

I pray for God's protection, guidance, blessings and prosperity in their lives.

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LIST OF ABBREVIATIONS AND ACRONYM

MHA……...Mental Health Authority

MI…….Mental illness

MD……...Mental disorders

MH……Mental health

KAP……..Knowledge, Attitude and Practice

WHO……...World Health Organization

GHS…….Ghana Health Service

GMOH …….....Ghana Ministry of Health

CHAG……...Christian Health Association of Ghana

ICD……International Classification of Disease

RGN……..Registered General Nurse

RNC……Registered Community Nurse

CHN……...Community Health Nurse

ICD……..International Statistical Classification of Diseases

ABSTRACT

Background: Many people are suffering from moderate to severe mental illness and other mental problems and only 1.2% receive the needed treatment from public health facilities leaving remaining untreated. Most of these mentally ill patients and persons are yet to be recognized, diagnosed, and managed properly. Assessing the knowledge, attitude and practice of nurses was necessary to address and solve this burden.

Objective: To assess knowledge, attitude and practice among nurses toward mental care provision in Ghana.

Methods: Health facility based cross-sectional descriptive study was conducted. The data was collected from 201 nurses using structured and google survey of knowledge, attitude and practice questionnaire which was adapted and modified from studies by Mariam & A, 2016; Ahmed et al., 2019 and Ganiah et al., 2017. Respondents were selected using simple random sampling methods. Data were collected and entered into google sheet and exported to SPSS version 26.0 for analysis. Bivariate and multivariate logistic regression were performed to identify socio-demographic variables and other factors which may have significant association with knowledge, attitude and practice toward mental care provision. The significance level of association was determined by p-value less than or equal to 0.05.

Results: A total of 201 respondents participated in this study with a response rate of 91.4%. One hundred and sixty-nine, 84.1% were females. Majority of the respondents, 54.2% were between the ages of 20-29years. Also, 64.7% of the respondents had adequate knowledge, 11.4% had favorable attitude and 67.7 % of the nurses had good practice. In the bivariate and multivariate logistic regression analysis, registered community nurses or CHNs were 66% less likely to have good practice (aOR= 0.33, 95% CI= [0.149, 0.735], $p<0.05$) than enrolled nurses toward mental care provision. Diploma nurses were over two (2) times more likely to have good practice (aOR= 2.21, 95% CI= [1.193, 4.087], $p<0.05$) than certificate nurses. Nurses who provide outpatient and inpatient services were 15 more times likely to have good practice (aOR= 15.75, 95% CI= [5.340, 46.479], $p=0.001$) than nurses who do not provide any mental care.

Conclusion and recommendation: More than half of the nurses have adequate knowledge, good practice and less than half of the participants have favorable attitude. The unfavorable attitude may have affected the quality of mental health care delivery to mentally ill persons. Nurses' capacity building as well as WHO mental health gaps actions adapted and supportive supervision should be strengthened to improve quality mental health care delivery.

CHAPTER 1: INTRODUCTION

1.0 Introduction

This chapter presents the introduction and background, problem statement, justification of the study, general objective, specific objectives, research study questions, hypothesis and significance of the study. This section started with the definition of mental illness followed by the evolution of mental health care in Ghana.

1.1 Background of the study

"Mental illness and disorders" According to the International Statistical Classification of Diseases (ICD-10) and Related Health Problems. These include disorders that cause a high burden of disease such as depression, bipolar affective disorder, schizophrenia, anxiety disorders, and dementia, substance use disorders, and intellectual disabilities, developmental and behavioral disorders. Social withdrawal or personality changes (behavior and attitude) may indicate a mental health disorder (MHA, 2018 & Lomnicki, 2018).

The first pieces of mental health legislation was the 1888 Lunatic Asylum Act of the Gold Coast and by 1972 the Act was replaced by a Mental Health Decree (NRCD 30) which has never been implemented (Doku *et al*, 2012; Ghana Health Service, 2012).There were no psychiatrists in the country except a brief period in 1929 when Dr. Maclagan was appointed alienist to the Asylum at Accra.

At that time, it was felt that the local treatment facilities at the hands of fetish priests, native doctors and other charlatans were adequate to cope with the situation unfortunately they

were regarded as agents of demons and deserved whatever fate lay in wait for them because they were being punished for their sins. In 1906, accommodation for mentally ill patients were considered inadequate and a new Mental Hospital was built in Accra to cater for one hundred and ten (110) mentally ill patients by sixteen (16) untrained nurses, and a visiting doctor of in charge of the prisons (GHS, 2012).

Accra Mental Hospital was the only one in Ghana and by 1909, the mentally ill patients and persons have been increased with problem of overcrowding psychiatric facilities and extremely limited services. As a result of this, the number of psychotic patients in Ghana were not known and estimations were only based primarily on mental hospital admissions which was completely inaccurate and there was no special institutions for mentally ill persons.

In 2012, Ghana passed a new Mental Health Act which aimed to create a new system of mental healthcare replacing the unimplemented Mental Health Decree of 1972 (Osei *et al*, 2011; Ghana Health Service, 2012). The Act was endorsed by the World Health Organization (WHO) as an example of best practice in mental health legislation in Ghana to generally ensure the rights and quality treatment of persons with mental disorder; and to stipulate changes to the organization, provision and funding of mental health services.

The Act at times included the provisions of modern, community-based mental health system and protection of the rights of persons with mental disorders.

The Act also aimed to ensure the rights of persons with mental disorders and illness as indeed they were entitled by the constitution. Rights were ensured: through provisions against discrimination in everyday life and employment; by the setting out of clear procedures and safeguards for voluntary and involuntary admissions; and by protecting specific vulnerable groups, people with intellectual disabilities and women. It was hoped that these provisions had addressed stigma and reduced negative consequences such as eviction, unemployment and abandonment. The Act makes provision for the removal, assessment, treatment and rehabilitation of homeless persons (Ministry of Health/Ghana Health Service, 2012).

A study conducted by Doku et al (2012) found that anticipated challenges in the domains of service organization were as follows; human resources, financial implication and the need for development of expertise in mental healthcare, allied health professions and the judiciary; increased demands placed upon social services and the legal system; the need for strengthening of mental health information systems; and the financial system of the Act.

Similar study conducted by Walker and his colleagues to determine the barriers to the implementation of the Act found the same challenges identified by Doku et al (2012) such as financial challenges, human resource shortfalls and the inadequacies of the legal infrastructure after interviewing 12 stakeholders which includes psychiatrists and mental health nurses working in the GHS, members of the board of the Mental Health Authority and other non-governmental organizations working in the field(Walker et al., 2015).

The above implementation challenges has propelled the leadership, management, Ministry of Health, Ghana Health Service, Private health sector and its agencies to fully integrate mental health services into the existing routine service delivery system at all level of health care provision including the private health sector in Ghana(Ministry of Health/Ghana Health Service, 2015).

It was now mandated that all public and private health facilities to provide mental health services as part of their routine service delivery and it has been included in all health related policies, Acts, decree and laws to be provided all at the primary, secondary and tertiary level of health care provision in Ghana.

1.2 Problem Statement

There were only three public psychiatric hospitals in Ghana and also few private psychiatric hospitals providing care to all kinds of mentally ill persons unfortunately these psychiatric hospitals were all located in major cities in the country without any of these psychiatric health facilities in any rural area in Ghana.

However, in many rural areas in Ghana, mental illness and other related disorders continue rising and seeking mental health care by such patients become a big challenge until the New Mental Health Act passed by Parliament in 2012, Act 846 to promote the practice of mental health care at the community level and protect the right of people with mental illness. The new mental health Act has not been successfully implemented due to inadequate mental health policy, human resources, funding and insufficient infrastructure.

In Ghana, many people are suffering from moderate to severe mental illness and only 1.2% receive the needed treatment from public hospitals leaving remaining untreated (Ghana Health Service, 2018). The new mental health Act in Ghana has integrated mental health services into the existing routine health service delivery system at all levels of health care to cater for needs of people suffering from all forms of mental illness and disorders. The main focus of this integration was on the primary health care at the community level where most of the mental illness and disorders comes from without mental health specialists and treatment available and nurses at all levels play a key role in the care of mentally ill patients and persons seeking for health care.

Nurses' knowledge, attitude and practice of mental health care to mentally ill persons is crucial to improve quality mental health care in Ghana. Also, nurses have been known to stigmatize and showed negative attitude toward mentally ill patients who use psychotic medication and services by discouraging advice, rejecting behavior and disparaging remarks(U. Okpalauwaekwe. et al., 2017).

This study was very necessary since there was no study conducted on knowledge, attitude and practice towards the care provision to mentally ill persons among nurses working in public health facilities in Ghana after the integration of mental health care delivery into the routine existing service delivery system. The current study would help to identify gaps in mental health care provision among nurses working in public health facilities and design the appropriate interventions to address the gaps in Ghana.

1.3 Study justification

Ghana has experienced various mental health reforms before the integration of mental health care into the primary health care system. The coverage of mental health care services particularly in the rural areas has been improved as a result of primary health care personnel providing basic mental health care services at the community level.

The 2012 new mental health Act, Act 846 has not been successfully implemented, an assessment indicated that despite strengths and efforts, some implementation challenges has been encountered; inadequate implementation of mental health policy, human resource, funding and insufficient human right protections for the mentally ill persons resulting in increasing in all form of mental illness with limited number of psychiatric hospitals and personnel to provide the needed care for people suffering from mental illness and disorders.

Since the integration of mental health care into the routine service delivery system, many interventions capacity building of healthcare professionals, increasing to access to mental health services and regular monitoring have been carried out to improve quality mental health service delivery and equity among mental health service users at the primary level of health service delivery. These interventions were also to increase healthcare professionals' knowledge especially nurses about mental health care and to improve their attitude and practices toward the care provision to mentally ill person.

Mental health care service delivery has a great effect on mental health service users and it may influence their sense dignity, autonomy and stimulate negative feelings such as shame

and anxiety. Mentally ill persons are mostly vulnerable to misbehavior and abuse when interacting with the health care delivery system. This may result from the kind of mental illness that impairs their rational thinking, judgement and the characteristics of the treatment such as type of treatment, adverse drug reaction and medication related stigma may influence the treatment outcome.

To improve quality mental health care delivery system and access to acceptable mental health service for its users, it is very necessary to study nurses knowledge, attitude and practice toward care provision mentally ill persons. This study results would be used to develop, design and implement standardized intervention to improve quality mental health service delivery among nurses and other health care professionals especially physician Assistant, medical doctors and mental health professionals.

This study results would also be shared with other stakeholders such as Health care providers, researchers, Ministry of Health, Ghana Health Service, Ghana Mental Health Authorities, Christian Health Association of Ghana (CHAG) and other private health facilities to help improve mental health care quality services among health care providers at all levels of health care delivery system in Ghana.

1.4 General Objective

The **main purpose** of this study was to describe and compare the knowledge, attitude and practice towards care provision to mental ill persons or patients among Nurses working in public health facilities.

1.5 Specific Objectives

To assess the knowledge of nurses towards care provision mentally ill persons attending public health facilities

To identify nurses attitude towards mentally ill persons attending public health facilities

To assess the practice of nurses towards mentally ill persons attending public health facilities

To identify factors associated with knowledge, attitude and practice toward care provision to mentally ill persons among nurses working in public health facilities

1.6 Research study questions

What is the knowledge of nurses towards care provision to mentally ill persons attending public health facilities?

What is the attitude of nurses towards care provision to mentally ill persons attending public health facilities?

What is the practice of nurses towards care provision to mentally ill persons attending public health facilities?

What are the factors associated with knowledge, attitude and practice toward care provision to mentally ill persons among nurses working in public health facilities?

1.7 Hypothesis

1. Nurses' with higher academic qualification have more positive attitudes and good practice toward care provision to mentally ill persons.
2. Nurses profession influence good practice

1.8 Significance of the Study

This study would help to reveal the knowledge, attitude and practice (KAP) among nurses working in public health facilities toward care provision to mental ill persons in Agotime Ziope District, South Tongu District and Keta Municipal in the Republic of Ghana. According to the World Health Organization (WHO), the integration of mental health services into primary health care is the most practical way of ensuring that people have access to mental health services and the care they need but no study has been conducted to identify KAP of nurses working in Public health facilities in Ghana

Furthermore, it would establish whether there is a relationship between education, experience and the outcome of positive versus negative attitudes towards the mentally ill. The result of this study would make the Ghana Ministry of Health, Ghana Health Service and Christian Health Association of Ghana (CHAG) to be aware of the gap in knowledge, attitudes and practice of nurses working in public health facilities which may be influenced by work experience, level of education, capacity building or in service training and availability guideline and protocols on mental health care. In addition, it would create the awareness of the nurses working in public health facilities challenges at the study site. Findings of the current study would facilitate future planning to improve mental health education and service delivery.

CHAPTER 2: LITERATURE REIVIEW

2.0 Introduction

This literature review presents the definition of mental health, mental illness, mental disorders, and mental health problems, prevalence of mental illness, knowledge, attitude, and practice and associated factors among nurses.

2.1 Operational definitions

Mental Health, as defined by the World Health Organization (WHO), is a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

"Mental illness and disorders"

According to the International Statistical Classification of Diseases and Related Health Problems, ICD-10 and 2013 World Health Organization mental health action plan. These include disorders that cause a high burden of disease such as depression, bipolar affective disorder, schizophrenia, anxiety disorders, and dementia, substance use disorders, and intellectual disabilities, developmental and behavioral disorders. Social withdrawal or personality changes (behavior and attitude) may indicate a mental health disorder. Mental disorders are associated with increased mortality rates (WHO, 2013; CAMH, 2016; MHA, 2018 & Lomnicki, 2018).

2.2 Prevalence of mental illness

The American Psychiatric Association has described mental illness as a health condition that leads to changes in thinking, emotions and behavior that result in distress and may be impaired functioning in social, work and family settings (American Psychiatric Association, 2015).

Mental illness and disorders is public health problem affecting every country with limited infrastructures, human resources and funding in the world but developing countries suffered more of the consequences of mental illness due to the burden of limited treatment centres and human resource need.

According to the World Health Organization Gap Action programme (mhGap, 2020), in every 10 persons worldwide, 1 person suffers from mental illness and between 76-85% of people with mental illness in low and middle income countries do not receive treatment. Mental illness affects more females (11.9%) than males (9.3%) (World Health Organization, 2018).

Majority of the mental health professional work in the tertiary level hospitals leaving rural areas with limited or no mental health care. More females suffer from mental illness and disorders than males in most low and middle income countries in Africa.

In Ghana, mental illness is the leading burden of non-communicable illness and has been classified as major public health problem due to the burden and continues rising cases of mental illness and disorders.

2.3 Knowledge of nurses

Knowledge is an important mediating variable for effective health care delivery among health professionals especially nurses who form the majority of the health workforce in each country. Studies conducted in Ethiopia, Nigeria and Nepal showed that nurses had good knowledge about mental illness. Other findings showed that nurses who undergone training were two times more likely to be knowledgeable than those who do not took training. Age of the respondents, profession (3.9 (1.2-12.7) $p< 0.05$), working department (3.9 (1.2-12.7) $p< 0.05$) and ever taking training (3.1 (1.02-9.1) $p< 0.05$) were statistically significant with knowledge on mental illness in bivariate and multiple logistic regressions (Ahmed et al., 2019; Alemu, 2013; Bhargav et al., 2017; Coker AO, 2018; "<Coker AO, 2018.pdf>," ; Dilip Kumar, 2020; Gandhi S & Jothimani G, 2019; Ghanean et al., 2015; Kidanu et al., 2016; Kishore et al., 2011; M et al., 2003; Mansouri et al., 2009; Mariam & A, 2016; Patel et al., 2019; Phuke M et al, 2016). Furthermore, findings from a study also revealed that nurses had an increased level in-service training increased knowledge; 6.4 to 8.2 with $p<0.001$(Rentala et al., 2021). Moreover, another study conducted in South Africa indicated that nurses had inadequate knowledge to manage people with mental illness (Dube & Uys, 2016; Yan Cui et al., 2014). Other findings in Jalgaon on knowledge of mental illness among control region revealed that those in rural areas had inadequate knowledge(78%) and in the urban they had adequate knowledge(82%) towards mental illness with p-value of .000 (Vijay P. More et al., 2012). Sahile and his colleagues study also found that professional category, workload, working experience less than five years

[AOR=4.49, CI (2.37–8.49), ever taking training on mental health [AOR=4.92, CI (3.05–7.95) and type of training on mental illness were significantly associated with poor knowledge [AOR=2.84, CI (1.82–4.44)(Mariam & A, 2016; Sahile et al., 2019; van der Kluit & Goossens, 2011). A study conducted by Mansouri and his colleages also found that on-the-job training of nurses on mental health has increased knowledge and influence positive attitude toward the care of mental ill people (Mansouri et al., 2009; SR, 2017).

2.4 Nurses attitude

Attitude of health professionals also one of the most important variables to ensure quality health service delivery especially among nurses. This means that assessing the attitude of nurses is very necessary for quality health service delivery to the general population. Previous studies conducted indicated that 95.7% and 95% of the respondents had negative attitude toward people with mental illness with $P < 0.0001$. Also, gender ($\chi2=-0.31$, $p>0.05$), experience of mental illness ($\chi2=-1.19$, $p>0.05$), family history of mental illness ($\chi2=-0.73$, $p>0.05$) were not correlated with attitude toward mental illness. (Ahmed et al., 2019; Alemu, 2013; Crabb et al., 2012; Fradelos et al., 2015; G. Aruna et al., 2021; James et al., 2012; Kishore et al., 2011; LY Chow, 2007; Mukherjee et al., 2018; Patel et al., 2019; Rentala et al., 2021; Shah et al., 2017; Sheikh et al., 2015; SR, 2017). Also, Martensson and his colleagues in their study found that educational status ($p=0.001$) and professions ($p=0.001$) were significantly associated with favorable attitude, p-value less than 0.05 (Martensson et al., 2014**).** Findings from a study conducted in Jalgaon by More and his colleagues on mental illness among control region indicated that participants in rural areas

had poor negative attitude (86%) and in the urban areas they had positive attitude (94%) towards mental illness with p-value of .000 (Vijay P. More et al., 2012).

Furthermore, a study among 69 nursing technicians and nursing staff in Nepal found that majority of the participants agreed that mental ill persons are usually unpredictable (95.3%), require constant care (90.6%) and 59.4% think that they are usually dangerous and 71.8% were ready to work together and chat with mentally ill persons and also showed more positive attitude (Chambers et al., 2010; Economou et al., 2020; Happell et al., 2018; Ihalainen-Tamlander et al., 2016; Kidanu et al., 2016; Koutra et al., 2021; Linden & Kavanagh, 2012; M et al., 2003; Martensson et al., 2014; Melo et al., 2016). Other previous studies also indicated that people with mental illness such as schizophrenia tend to be violent, dangerous, talk to someone with a mental illness, and feel comfortable meeting a person with p-values of .028, .008 and .015 respectively(Linden & Kavanagh, 2012; Omar Al Omaria et al., nd). Hsiao and his colleagues study among 180 mental health nurses found that long duration of practice and older with more clinical experience and level of education and professionally expressed more positive attitude toward care of mental ill people (Hsiao et al., 2015; van der Kluit & Goossens, 2011). Similar study conducted by Chamber and his colleagues in five European countries also found that positive attitude were associated with being female nurse and having senior position(Chambers et al., 2010; Sari & 2018).

2.5 Practice of nurses

Following standards, protocols and guideline is key to ensure that quality mental health care services are provided for mentally ill persons or patients. Ensuring the presence of job aid and work experience has improved the practice of nurses toward mental health care service provision (Ihalainen-Tamlander et al., 2016).

Findings from previous studies and a study conducted by Ahmed and his colleagues in Ethiopia indicated that 75.2% of the respondents had good practice, presence of job aid (AOR 95% CI 4.30 (2.59, 7.15)) and good knowledge (AOR 95% CI 0.52 (0.32, 0.85) improved the practice among respondents. Also, the study found that age, educational status, work experience, family history of mental illness, supportive supervision, in-service training were significantly associated with good practice, P-value<0.25. In addition, the results indicated in the bivariate and multivariate logistic regression analysis showed that those who did not have job aid on mental health service provision were four and half more times likely to have good practice than those who had job aid (Ahmed et al., 2019).

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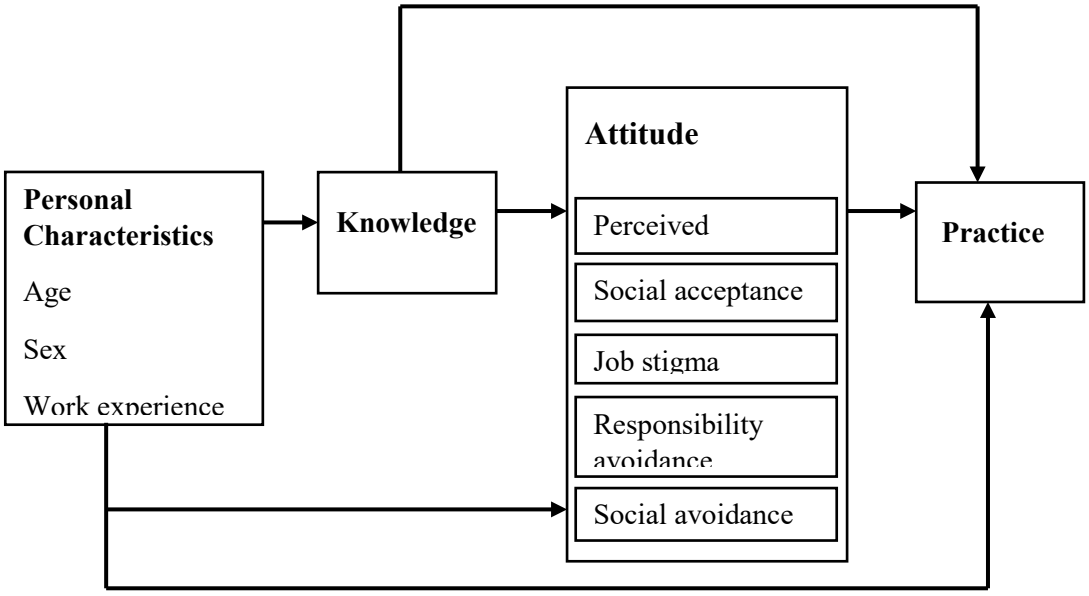
Figure 1**: Theoretical framework of knowledge, Attitude and Practice (KAP)**



The study defined knowledge, attitude and practice based on the framework of World Health Organization (WHO) Guide to developing KAP Survey (WHO, 2008). This theoretical model was adapted and modified from Teixeira (figure 1) based on the theory of knowledge, attitude and practice (KAP).

Knowledge referred to the general knowledge of nurses in caring for mentally ill persons based on social, physical and psychological care. The knowledge section on mental illness comprised of causes, signs and symptoms, consequences, management and risk factors using eight (8) standard questions. In this study, **adequate knowledge** was scored from six (6) or more (≥**75%**) whiles **inadequate knowledge** was also scored from one (1) to 5(<**75%**).

Attitude referred to nurses' feeling or opinion of about mental illness and the care of mentally ill persons or patients.

Attitude was categorized into five aspects; **Perceived dangerous**: the perception that mentally ill persons/ patients are dangerous; **Social acceptance**: the ability to accept mentally ill persons at work, home and any social setting; **Job stigma**: freedom of mentally ill persons to be employed and work among us in all settings ;**Responsibility avoidance**: belief that mental health professionals are responsible for the care of mentally ill persons; and **Social avoidance**: not willing to associate or work with mentally ill persons in an organization. Ten (10) standard attitude questions were used and categorized into two good (favorable) and bad (unfavorable attitude. A scored of seven (7) or more (≥**70%**) was classified as good (favorable and scored of one (1) to six (6) (**<70%) was also classified as** bad (unfavorable) attitude.

Practice; referred to the action based on knowledge and attitude of nurses in providing mental health care (diagnosis, treatment, referral and counseling) to mentally ill persons or patients. Practice also used 8 standard questions and categorized into two; good practice was scored as of six (6) or more (≥**75%**) and **poor practice** was also scored from one (1) to 5(<**75%**).

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

This section presents a description of the research design and method used in this study which includes study population, sample size determination, sampling procedure, inclusion and exclusion criteria, data collection instrument, data collection procedure, data analysis, validity and reliability.

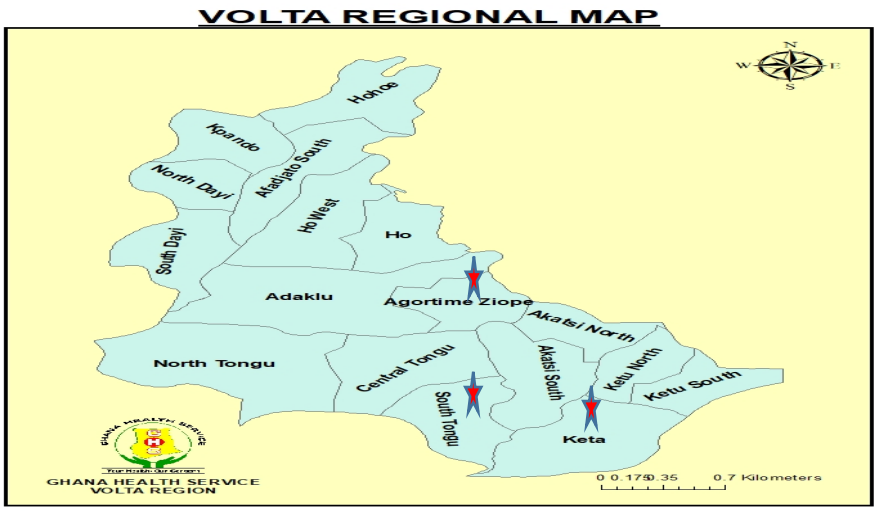
3.1 Research Design

Cross sectional descriptive study was conducted using quantitative approach. The study aimed was to assess knowledge, attitude, and practice toward care provision to mentally ill persons among nurses working in public health facilities in Ghana.

3.2 Study Population and Area

The study population was all cadre of nurses such as Midwives, Registered General Nurses, Registered Community Health Nurses or Community Health Nurses and Enrolled nurses working in public health facilities was selected within the three districts; Agotime-Ziope, South Tongu and Keta Municipal. The total population was **231, 374** with **756** nurses of all categories.

Figure 2**: Study area Map**



3.3 Sample Size determination

The current conducted statistical priori power analysis was based on an effect size of 0.15 and also considering two groups for two-way analysis of variance; alpha of 0.05 and power of 0.95.

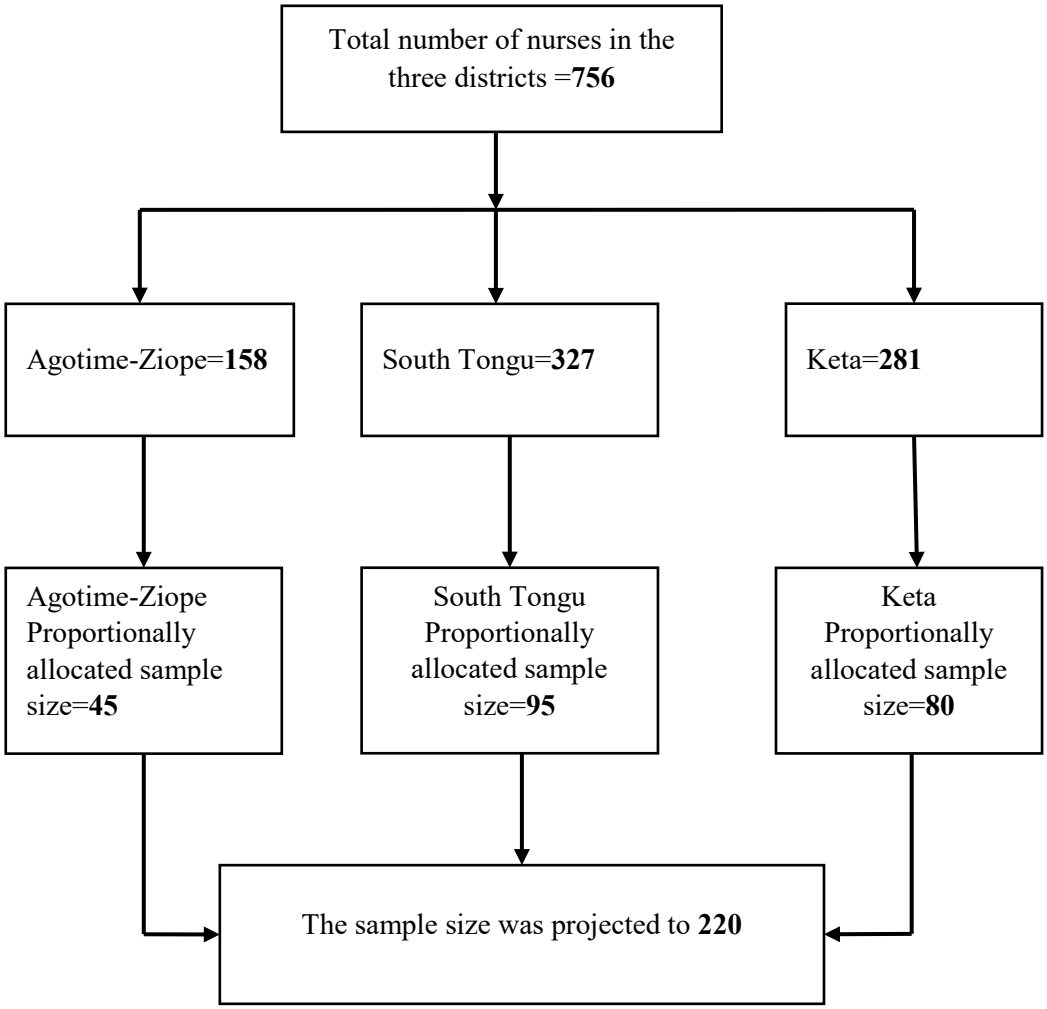
The sample size needed using (G-Power 3.1.9.2) was approximately **201** but due to the 10% non-response rate, the sample size was projected to **220** study participants (nurses).

3.4 Inclusion and Exclusion Criteria

All cadre of nurses registered with Ghana Nursing and Midwifery Council and was permanently employed by Ministry of Health and Ghana Health Service with at least six months working experience was included. All other nurses who were working in private health sector such as Christian Health Association of Ghana, private hospitals, private health centres, private clinic and maternity homes were excluded from the current study.

Figure 3**: Sampling Procedure**

Multistage sampling and proportionate stratified sampling was used.



3.6 Data Collection Instruments

The study instrument comprised of five major sections namely, section A, B, C, D and E. The Section A contained 14 questions described the participants' socio-demographic information such as age, gender, nursing qualifications, working experience and professions. The section B comprises of eight (8) knowledge questions, section C ten (10)

attitude questions and section D eight (8) practice. Modified version of Knowledge, attitude and practice questionnaire for health workers which was designed by National Institute of Mental Health and Neurosciences was adopted and use for this study. Also, knowledge, attitude and practice questionnaire were also adapted and modified from studies conducted by Mariam & A, 2016; Ahmed et al., 2019 and Ganiah et al., 2017. The attitude and practice questions contained five responses categories ranging from 'strongly disagree' to 'strongly agree' (1=strongly disagree 2=disagree, 3= Not sure or neutral or undecided 4=agree, 5=strongly agree). To ensure the validity and reliability, the instrument was pretested among 23 nurses working in Christian Health Association of Ghana health facilities on 5th October, 2021. The Cronbach's Alpha tests for knowledge was 0.789, attitude was 0.864 and practice was also 0.712. This indicated that there was high validity and reliability for the instrument.

3.7 Data Analysis

Data was imported into excel and analyzed with SPSS version 26.0. The data was presented in frequencies table format. Also, descriptive statistics was performed were as follows; mean, frequencies and proportions. Chi-square test was performed to determine the association between demographics characteristics and KAP among Nurses.

Bivariate and multivariate logistic regressions were also performed to assess the various factors associated with knowledge, attitude and practices among Nurses.

All statistical tests were done with 95% confidence interval and statistical significance was considered at P-value less than 0.05.

3.8 Validity and Reliability test

Validity indicates what the instrument supposed to measure and internal validity measures causal relationships (De Vos et al, 2005). Reliability refers to good quality measures which give consistency of results and yielded Cronbach's Alpha 0.87 (Hahn, 2001; Graziani & Raulin, 2004). The Cronbach's Alpha tests for knowledge was 0.789, attitude was 0.864 and practice was also 0.712. This indicated that there was high validity and reliability for the instrument.

3.8 Ethical Consideration

3.8.1 Permission

Ghana Health Service and Ministry of Health (GHS/MOH) has given permission before the data was collected. High authorities from the study areas; Agotime-Ziope District Director of Health services, South Tongu District Director of Health services, Keta Municipal Director of Health services, Medical Superintendent of Sogakope District Hospital and Medical Superintendent of Keta Municipal Hospital has also given permission before the data was collected.

3.9 Data storage and usage

Original data collected from all respondent such as Midwives, RGNs, Registered Community Health Nurses or CHNs and Enrolled nurses was kept under lock-and-key in a cabinet and accessible to the research team only. Data was used only for academic purpose and may be reported in peer review journals and seminars in accordance with the norms of the Ministry of Health and Ghana Health Service.

3.9.1 Confidentiality/Anonymity

Data was encrypted in electronic devices to avoid unauthorized persons from having access to them. Endeavor was also made to minimize the transfer of identifiable data in physical or electronic form.

CHAPTER 4: RESULT

4.0 Results and interpretation

This chapter presents the results and the interpretation of the results. The results were presented in frequency tables i.e. variables, frequencies, percentages, chi- squares values, crude Odd ratio and adjusted Odd ratio. The findings of this study were based on the respondents' socio- demographic information, knowledge, attitude and practice toward care provision to mental ill persons.

4.1 Socio-demographic characteristics

Out of the 220 study participants, 201 responded to the study questions representing a response rate of 91.4%. Out of the 201 respondents, majority were within the age range of 20-29years 109(54.2%) followed by 30-39years 83(41.3%). With regard to gender, 169 (84.1%) were females.

Most 62(30.8%) of the respondents were either registered community nurses or community nurses followed by enrolled nurses 53(26.4%). Regarding to the educational qualification; most 100(49.8%) of the respondents were certificates. Higher proportion of the respondents graduated from government institutions 190(94.5%) and most of the respondents had working experience from 0 to 5years 145(72.1%) followed by 6 to 10years 42(20.9%) in health care delivery. One hundred and thirty seven (68.2%) were working in the rural areas (**Table 1**).

4.2 Knowledge of Nurses

Of the 201, majority 174(86.6%) of the respondents had good knowledge on key causes of mental illness, 168(83.3%) signs and symptoms of mental illness, 173 (86.3 %) risk factors mental illness and 175 (87.1%) management of mental illness. The overall adequate knowledge score was 130 representing 64.7% (**Table 2**).

4.3 Attitude of Nurses

Of the 201, majority of the respondents had unfavorable attitude toward persons suffering from mental illness. With regard to the following questions; can mental ill person receive treatment in the same health center 68 (33.3%) agreed, 76(37.8%) disagreed and 57(28.4%) were not sure; mental ill persons should only be treated in the psychiatric hospitals 60(29.8%) agreed, 87(43.3%) disagreed and 54(26.9%) were not sure; counseling of psychotic disorders should be left for mental health specialists 81(40.3%) agreed, 57(28.4%) disagreed and 63 (31.3%) were not sure; psychiatric nurses should only provide care for mental ill persons 69(34.3%) agreed, 58(28.9%) disagreed and 74 (36.8%) were not sure. The overall unfavorable attitude among nurses was 178(88.6%) (**Table 3**).

4.4 Practice of Nurses

Of the 201, majority 136 (67.6%) of the respondents had bad practice toward care provision for mental ill persons. Concerning the following questions; monitoring of vital signs for mental ill persons 133(66.2%) agreed, 14(6.9%) disagreed and 54(26.9%) were not sure; administer prescribed medication for mentally ill persons 133(66.2%) agreed, 9(4.5%) disagreed and 59(29.9%) were not sure.; refer severely mentally ill persons to an appropriate health facility 135(67.6%) agreed, 11(5.5%) disagreed and 55(27.4%) were not

sure and family involvement in the care of the mental ill persons 136(67.6%) agreed, 11(5.5%) disagreed and 54 (26.9%) were not sure (**Table 4**).

4.5: Factors associated with nurses' knowledge on mental illness

The factor that was significantly associated with knowledge was the type of mental health care ($p<0.05$, $\chi2=6.901$) (**Table 5**).

4.6: Factors associated with nurses' attitude

Factors that were significantly associated with favorable attitude toward mental ill persons were educational qualification ($p<0.001$, $\chi2=18.723$); institution of graduation ($p=0.001$, $\chi2=13.284$); interest to learn mental health ($p< 0.05$, $\chi2=7.569$) and type of mental health care ($p< 0.05$, $\chi2=9.538$). The overall favorable attitude was 23, 11.4% (**Table 6**).

4.7 Factors associated with nurses' practice

The factors that were significantly associated with good practice toward mental health care provision were; professions ($p=0.001$, $\chi2=24.324$), educational qualification ($p<0.002$, $\chi2=12.475$), living background ($p=0.001$, $\chi2= 45.081$), type of mental health care ($p=0.001$, $\chi2=45.081$), interest to learn mental health ($p=0.001$, $\chi2= 43.161$), capacity building ($p<0.005$, $\chi2=10.433$). The overall good was 65 representing 32.3 % (**Table 7**).

4.8: Regression analysis of factors associated with nurses' attitude

Educational qualification, institution of graduation and type of mental health care were the factors that were significantly associated with nurses' attitude in the bivariate and multivariate logistic regression analysis. The results also showed that; nurses who graduated from government schools were 85% less likely to have favorable attitude

(aOR=0.15, 95% CI= [0.034, 0.723], p<0.05) than nurses who graduated from private schools. Nurses who provide outpatient and inpatient services were 89% less likely to have favorable attitude (aOR=0.11 95% CI= [0.013, 0.861] p<0.05) than nurses who do not provide service (**Table 8).**

4.9: Regression analysis of factors associated with nurses' practice

Professions, educational qualification, living background, type of mental health care and interest to learn mental health were the factors that were significantly associated with good practice in the bivariate and multivariate logistic regression analysis. The results also showed that; Registered Community Nurses or CHNs were 66% less likely to have good practice (aOR= 0.33, 95% CI= [0.149, 0.735], p<0.05) than enrolled nurses toward mental care provision; diploma nurses were over two (2) times more likely to have good practice (aOR= 2.21, 95% CI= [1.193, 4.087], p<0.05) than certificate nurses; nurses who live in urban areas were over six (6) times more likely to have good practice (aOR= 6.09, 95% CI= [2.290, 16.199], p=0.001) than those living in the rural areas; nurses who provide outpatient services were four (4) times more likely to have good practice (aOR= 4. 60, 95% CI= [2.199, 9.630], p=0.001) than those who do not provide any mental health care and nurses who provide outpatient and inpatient services were 15 more times likely to have good practice (aOR= 15.75, 95% CI= [5.340, 46.479], p=0.001) than nurses who do not provide any mental care (**Table 9).**

Table 1: Socio-demographic Characteristics

Variable	Indicator	Frequency (n)	Percentage (%)
Age	20-29years	109	54.2
	30-39 years	83	41.3
	40-49 years	9	4.5
Gender	Male	32	15.9
	Female	169	84.1
Marital status	Single	117	58.2
	Married	84	41.8
Professions	RGN	51	25.4
	Midwife	35	17.4
	RCN or CHN	62	30.8
	EN	53	26.4
Educational Qualification	Certificate	100	49.8
	Diploma	89	44.3
	Bachelor degree	12	6.0
Institution of graduation	Government	190	94.5
	Private	11	5.5
Working Experience	0-5years	145	72.1
	6+years	56	27.9
Living background	Rural	137	68.2
	Urban	64	31.8
District	Agotime-Ziope	45	22.4
	South Tongu	89	44.3
	Keta Municipal	67	33.3
Type of mental health care	Outpatient	79	39.3
	Outpatient and inpatient	59	29.4
	None	63	31.3
Interest to learn mental health	Yes	132	65.7
	No	54	26.9
	Do not know	15	7.5
Capacity building	Yes	65	32.3
	No	124	61.7
	Do not know	12	6.0

Table 2: Knowledge of nurses

Variable	Indicator	Frequency (n)	Percentage (%)
Key causes of mental illness includes stress, drug abuse	Yes	174	86.6
	No	27	13.4
Perceived causes of mental illness includes biomedical	Yes	155	77.1
	No	46	22.9
Signs and Symptoms of mental illness includes irrational act, violence, loss of contact	Yes	168	83.6
	No	33	16.4
Manifestation of Mental illness includes lonely, sadness	Yes	175	87.1
	No	26	12.9
Risk factors of mental illness includes family history, chronic condition, brain injury	Yes	173	86.1
	No	28	13.9
Consequences of mental illness includes death, low productivity, stigmatization	Yes	160	79.6
	No	41	20.4
Management of mental illness includes treatment, counseling and referral	Yes	175	87.1
	No	26	12.9
Mental ill person need constant care	Yes	166	82.6
	No	35	17.4
Overall knowledge	Adequate	130	64.7
	Inadequate	71	35.3

Table 3: Attitude of nurses

Variable	Indicator	Frequency (n)	Percentage (%)
Mental ill person can receive treatment in the same health center	Agree	68	33.3
	Disagree	76	37.8
	Not sure	57	28.4
People with mental illness are dangerous and violent	Agree	60	29.8
	Disagree	83	41.2
	Not sure	58	28.9
It is hard to talk to mental ill person	Agree	43	21.3
	Disagree	93	46.2
	Not sure	65	32.3
Mental ill persons should only be treated in the psychiatric hospitals	Agree	60	29.8
	Disagree	87	43.2
	Not sure	54	26.9
Counseling of psychotic disorders should be left for mental health specialists	Agree	81	40.3
	Disagree	57	28.4
	Not sure	63	31.3
People with mental illness can live a normal life and deserve respect	Agreed	117	58.2
	Disagreed	24	11.9
	Not sure	61	30.3
Mental ill patients should be confined to the facility for the rest of their life	Agreed	31	15.4
	Disagreed	125	62.2
	Not sure	45	22.4
Mental ill persons should get the same job opportunity as other people	Agreed	52	25.8
	Disagreed	66	32.8
	Not sure	83	41.2
Psychiatric nurses should only provide care for mental ill persons?	Agreed	69	34.3
	Disagreed	58	28.9
	Not sure	74	36.8
It is best to avoid anyone with mental illness	Agreed	33	16.4
	Disagreed	120	59.7
	Not sure	48	23.9

Table 4: Practice of nurses

Variables	Indicator	Frequency (n)	Percentage (%)
Provide assessment and evaluation for mental ill persons?	Agreed	118	56.7
	Disagreed	29	14.4
	Not sure	54	26..9
Monitoring of vital signs for mental ill persons (blood pressure, temperature etc)?	Agreed	133	66.2
	Disagreed	14	6.9
	Not sure	54	26.9
Administer prescribed medication for mentally ill persons?	Agreed	133	66.2
	Disagreed	9	4.5
	Not sure	59	29.9
Provide counselling for the mentally ill persons?	Agreed	133	66.2
	Disagreed	11	5.5
	Not sure	57	28.4
It is good to refer severely mentally ill persons to an appropriate health facility	Agreed	135	67.6
	Disagreed	11	5.5
	Not sure	55	27.4
Provide family education or awareness creation on mental illness?	Agreed	135	67.6
	Disagreed	14	6.9
	Not sure	52	25.9
Involve family in the care of the mentally ill persons?	Agreed	136	67.6
	Disagree	11	5.5
	Not sure	54	26.9
Provide follow-up visits or home visits for mentally ill persons?	Agreed	132	65.6
	Disagreed	10	5.5
	Not sure	59	28.9

Table 5: Factors associated with nurses' knowledge

Variables	Indicator	Knowledge n (%)		Total	χ2	p-value
		Adequate	Inadequate			
Age					5.486	0.064
	20-29years	77(70.6)	32(29.4)	109(100)		
	30-39 years	46(55.4)	37(44.6)	83(100)		
	40+ years	7(77.8)	2(22.2)	9(100)		
Gender					0.079	0.779
	Male	20 (62.5)	12(37.5)	32(100)		
	Female	110(65.1)	59(34.9)	169(100)		
Marital status					0.010	0.922
	Single	76(64.9)	41(35.0)	117(100)		
	Married	54(64.3)	30(35.7)	84(100)		
Professional category					1.086	0.780
	RGN	35(68.6)	16(31.3)	51(100)		
	Midwife	23(65.7)	12(43.3)	35(100)		
	RCN or CHN	37(59.7)	25(40.3)	62(100)		

Variables	Indicator	Knowledge n (%)		Total	χ2	p-value
		Adequate	Inadequate			
	EN	35(66.0)	18(34.0)	53(100)		
Educational level					1.968	0.374
	Certificate	64(64)	36(36)	100(100)		
	Diploma	56(62.9)	33(37.1)	89(100)		
	Bachelor degree	10(83.3)	2(16.7)	12(100)		
Institution					1.497	0.221
	Government	121(63.7)	69(36.3)	190(100)		
	Private	9(81.8)	2(18.2)	11(100)		
Working Experience					0.533	0.465
	0-5years	96(66.2)	49(33.8)	145(100)		
	6+years	34(60.7)	22(39.3)	56(100)		
Living background					0.682	0.409
	Rural	86(62.8)	51(37.2)	137(100)		
	Urban	44(68.8)	20(31.2)	64(100)		
Interest to learn mental					2.068	0.150

Variables	Indicator	Knowledge n (%)		Total	χ2	p-value
		Adequate	Inadequate			
health	Yes	90(68.2)	42(31..8)	132(100)		
	No	40(58.0)	29(42.0)	54(100)		
Type of mental health care					6.901	**0.032**
	Outpatient	53(67.1)	26(32.9)	79(100)		
	Outpatient and inpatient	44(74.6)	15(25.4)	59(100)		
	None	33(52.4)	30(47.6)	63(100)		
Capacity building					0.000	0.990
	Yes	42(64.6)	23(35.4)	65(100)		
	No	88(63.1)	48(59.2)	124(100)		

Table 6: Factors associated with nurses' attitude

Variable	Indicator	Attitude n (%)		Total	χ2	p-value
		Favorable	Unfavorable			
Age					1.258	0.533
	20-29years	11(10.1)	96(89.9)	109(100)		
	30-39 years	10(12.0)	73(88)	83(100)		
	40+years	2(22.2)	6(77.8)	7(100)		
Gender					0.161	0.689
	Male	3(9.4)	29(96.6)	32(100)		
	Female	20(11.8)	149(88.2)	169(100)		
Marital status					0.076	0.783
	Single	14(12.0)	103(88.0)	117(100)		
	Married	9(10.3)	75(89.3)	84(100)		
Professions					1.123	0.771
	RGN	7(13.7)	44(86.3)	51(100)		
	Midwife	4(11.4)	31(88.6)	35(100)		
	RCN or CHN	5(8.1)	57(91.9)	62(100)		

Variable	Indicator	Attitude n (%)		Total	χ2	p-value
		Favorable	Unfavorable			
	EN	7(13.2)	46(86.8)	53(100)		
Educational Qualification					18.723	**0.000**
	Certificate	9(9.0)	91(91.0)	100(100)		
	Diploma	8(9.0)	81(91.0)	89(100)		
	Bachelor degree	6(50.0)	6(50.0)	12(100)		
Institution					13. 284	**0.000**
	Government	18(9.5)	172(90.5)	190(100)		
	Private	5(45.5)	6(54.5)	11(100)		
Working Experience					0.086	0.770
	0-5years	16(11.0)	129(89.0)	145(100)		
	6+years	7(12.5)	14(87.5)	56(100)		
Living background					1.621	0.203
	Rural	13(9.5)	124(90.5)	137(100)		
	Urban	10(15.6)	54(84.4)	64(100)		

Variable	Indicator	Attitude n (%)		Total	χ2	p-value
		Favorable	Unfavorable			
Interest to learn mental health					**7.569**	**0.006**
	Yes	21(15.9)	111(84.1)	132(100)		
	No	2(2.9)	67(97.1)	69(100)		
Type of mental health care					9.538	**0.008**
	Outpatient	11(47.8)	68(38.2)	79(39.3)		
	Outpatient and inpatient	11(47.8)	48(27.0)	59(29.4)		
	None	1(0.4)	62(34.8)	63(31.3)		
Capacity building					1.473	0.225
	Yes	10(15.4)	55(84.6)	65(100)		
	No	13(56.5)	123(62.4)	136(61.7)		

Table 7: Factors associated with nurses' practice

Variable	Indicator	Practice n (%)		Total	χ2	p-value
		Good	Poor			
Age					0.588	0.745
	20-29years	37(33.9)	72(66.1)	109(100)		
	30-39 years	26(31.3)	57(68.7)	83(100)		
	40+ years	2(22.2)	7(77.8)	9(100)		
Gender					0.021	0 .886
	Male	10(31.3)	22(68.8)	32(100)		
	Female	55(32.5)	114(67.5)	169(100)		
Marital status					0.065	0.798
	Single	37(31.6)	80(68.4)	117(100)		
	Married	28(33.3)	56(66.7)	84(100)		
Professions					24.324	**0.000**
	RGN	5(9.8)	46(90.2)	51(100)		
	Midwife	11(31.4)	24(68.6)	35(100)		
	RCN or CHN	33(53.2)	29(46.8)	62(100)		
	EN	16(30.2)	37(69.8)	53(100)		

Variable	Indicator	Practice n (%)		Total	χ2	p-value
		Good	Poor			
Educational Qualification					12.475	**0.002**
	Certificate	44(44)	56(56)	100(100)		
	Diploma	19(21.3)	70(78.7)	89(100)		
	Bachelor degree	2(16.7)	10(83.3)	12(100)		
Institution					2.874	0.090
	Government	64(33.7)	126(66.3)	190(100)		
	Private	1(9.1)	10(90.9)	11(100)		
Working Experience					0.404	0.525
	0-5years	45(31.0)	100(69.0)	145(100)		
	6+years	20(35.7)	36(64.3)	56(100)		
Living background					**22.629**	**0.000**
	Rural	59(43.1)	78(56.9)	137(100)		
	Urban	6(9.4)	58(90.6)	64(100)		
Interest to learn mental health					**43.161**	**0.000**
	Yes	22(16.7)	110(83.3)	132(100)		
	No	43(62.3)	26(37.7)	69(100)		

Variable	Indicator	Practice n (%)		Total	χ2	p-value
		Good	Poor			
Type of mental health care					**45.081**	**0.000**
	Outpatient	20(25.3)	59(74.7)	79(100)		
	Outpatient and inpatient	5(8.5)	54(91.5)	59(100)		
	None	40(63.5)	23(36.5)	63(100)		
Capacity building					**10.433**	**0.001**
	Yes	11(16.9)	54(39.7)	65(100)		
	No	54(76.9)	82(54.4)	136(100)		

Table 8: Regression analysis of factors associated with attitude

Variable	Indicator	cOR [95% CI], p-value (crude OR)	aOR [95% CI], p-value (adjusted OR)
Educational level			
	Certificate	1	1
	Diploma	1.16(.423, 3.149) 0.779	0.49(.247, 1.003) 0.051
	Bachelor degree	0.12(.031, .446) 0.031	0.51(.253, 1.009) 0.053
Institution of graduation			
	Private	1	1
	Government	7.13(1.976, 25.725)0.003	0.15(.034, .723) **0.017**
Interest to learn mental illness			
	Yes	0.12(.031, .446) 0.031	0.51(.253, 1.009) 0.053
	No	0.21(.062, .715) 0.012	0.027(.074, 1.005) 0.051
	Do not know	1	1
Type of mental health care			
	Outpatient	0.13(.016,1.046) 0.055	0.14(.018, 1.140) 0.066
	Outpatient and inpatient	0.09(.012, .764) 0.027	0.11(.013, .861) **0.036**
	None	1	1

Exponentiated coefficients; 95% confidence intervals in brackets; cOR= crude odds ratio, aOR= adjusted odds ratios; CI Confidence Interval

Table 9: Regression analysis of factors associated with practice

Variable	Indicator	cOR [95% CI], p-value (crude OR)	aOR [95% CI], p-value (adjusted OR)
Professions			
	RGN	3.98(1.333, 11.874) 0.013	1.96(.442, 8.722)0.375
	Midwife	0.94(.375, 2.376) 0.902	0.49(.132, 1.879)0.303
	RCN or CHN	0.38(.176, .821) 0.014	0.33(.149, .735) **0.007**
	EN	1	1
Educational Qualification			
	Certificate	1	1
	Diploma	2.89(1.522, 5.504) 0.001	2.21(1.193, 4.087) **0.012**
	Bachelor degree	3.93(.818, 18.858) 0.087	4.56(.590, 35.212) 0.146
Living background			
	Rural	1	1
	Urban	7.31(2.955, 18.093) 0.000	6.09(2.290, 16.199) **0.000**
Interest to learn mental health			
	Yes	2.50(.778, 8.031) 0.124	0.34(.206, .569) **0.000**

	No	0.21(.062, .715) 0.012	0.27(.074, 1.005) 0.051
	Do not know	1	1
Type of mental health care			
	Outpatient	5.13(2.494, 10.554) 0.000	4.60(2.199, 9.630) **0.000**
	Outpatient and inpatient	18.78(6.573, 53.674)0.000	15.75(5.340, 46.479) **0.000**
	None	1	1
Exponentiated coefficients; 95% confidence intervals in brackets; cOR= crude odds ratio, aOR= adjusted odds ratios; CI Confidence Interval			

CHAPTER 5: DISCUSSION OF THE RESUTLS

5.0: Discussion

This study was conducted in the Volta region of Ghana to assess nurses working in public health facilities knowledge, attitude and practice toward mental care provision. The study also identified factors that were associated with knowledge, attitude and practice among nurses.

5.1 Knowledge

The overall adequate knowledge score was 130 representing 64.7%. In the present study we surveyed the knowledge among nurses working in public health facilities about mental illness; key causes, signs and symptoms, risk factors, consequences and management of mental illness.

The study showed that majority of the nurses had good knowledge on key causes of mental illness 86.6%, signs and symptoms of mental illness 83.3%, risk factors of mental illness 86.3 % and management of mental illness 87.1%. This study findings were similar to other studies conducted which indicated that 50% of health professionals especially nurses had adequate knowledge on mental illness (Ahmed et al., 2019; Alemu, 2013; Bhargav et al., 2017; Coker AO, 2018; "<Coker AO, 2018.pdf>," ; Dilip Kumar, 2020; Gandhi S & Jothimani G, 2019; Ghanean et al., 2015; Kidanu et al., 2016; Kishore et al., 2011; M et al., 2003; Mansouri et al., 2009; Mariam & A, 2016; Patel et al., 2019; Phuke M et al,

2016).

The current study findings were also different from other previous studies and a study conducted in South Africa where they indicated that nurses had inadequate knowledge to manage people with mental illness (Dube & Uys, 2016; Yan Cui et al., 2014). The improved knowledge on mental illness from this study among nurses working in the public health facilities might be attributable to the adaptation of the World Health Organization Mental Health Gap Actions and Strategies in Ghana. Also the introduction of mental health training courses in all health training institutions across the country might have also had a great impact on nurses' knowledge on health care provision.

The study also found that age, professions, capacity building, marital status, educational qualification, institution of graduation, working experience and living background were not significantly associated with nurses knowledge on mental illness. These findings were different from a study conducted by Mariam and her colleagues in Ethiopia where there revealed that age of the respondents, professions, working department and ever taking training and type of training were statistically significant with knowledge on mental illness (Mariam et al., 2016).

5.2: Attitude

The study found that majority (88.6%) of the nurses had unfavorable attitude toward persons suffering from mental illness. The study found that about 33.3% of the nurses agreed that mental ill person can receive treatment in the same health center, 43.3% disagreed that mental ill persons should only be treated in the psychiatric hospitals, 28.4%

disagreed that counseling of psychotic disorders should be left for mental health specialists and 28.9% of the nurses disagreed that psychiatric nurses should only provide care for mental ill persons. These findings were similar to other studies and previous studies conducted in Ethiopia and Malawi where they indicated that 95.7% and 95% of the respondents had negative (unfavorable attitude) toward mental ill persons (Ahmed et al., 2019; Alemu, 2013; Crabb et al., 2012; Fradelos et al., 2015; G. Aruna et al., 2021; James et al., 2012; Kishore et al., 2011; LY Chow, 2007; Mukherjee et al., 2018; Patel et al., 2019; Rentala et al., 2021; Shah et al., 2017; Sheikh et al., 2015; SR, 2017). The reason for nurses' unfavorable attitude toward mental ill persons or patients in the current study might be as a result of perceived harm by the nurses from mentally ill person. This negative attitude might be attributed to evidence that have shown that mental ill persons aggressively harmed nurses in the process of providing health care.

This study also showed that educational qualification and institution of graduation were statistically significant with attitude toward mental ill person. These findings were different from previous studies where they found that gender, experience of mental illness and family history of mental illness were not correlated with attitude for mental illness (Mukherjee et al., 2018). These findings were also similar in a study conducted in Sweden which indicated that educational status (p=0.001) and professions (p=0.001) were significantly associated with favorable attitude, p-value less than 0.05 (Martensson et al., 2014**).**

Further analysis using bivariate and multivariate logistic regression showed that; nurses who graduated from government institutions were 85% less likely to have favorable attitude

than nurses who graduated from private institutions; nurses who provide outpatient and inpatient services were 89% less likely to have favorable attitude than nurses who do not provide any service. These findings were different from a study conducted by Mariam and her colleagues in Ethiopia where they found that nurses with first degree were about 70% less likely to have favorable attitude than diploma nurses; nurses who graduated from private institution were two times more likely to have favorable attitude compared with those who graduated from governmental institution, female nurses were about 2 times more likely to have favorable attitude than male nurses, nurses with 0-5years working experience were 3.6 times more likely to have favorable attitude greater than 10 years (Mariam & A, 2016).

5.3: Practice

Majority (67.7%) of the nurses had good practice toward care provision for mental ill persons. The study also revealed that; professions, educational qualification, type of mental health care, capacity building were significantly associated with good practice toward mental health care provision. These findings were similar from previous studies and a study conducted by Ahmed and his colleagues in Ethiopia which indicated that 75.2% of the respondents had good practice, presence of job aid and having good knowledge increased good practice among respondents (Ahmed et al., 2019). The good practice in the current study among nurses working in the public health facilities toward care provision to mental ill persons may be that there were adequate job aids at the health facilities, capacity building and supportive supervision by Ghana Health Service, Ministry of Health and other

development partners on mental health care delivery.

Other findings from the bivariate and multivariate logistic regression showed that, registered community nurses or CHNs were 66% less likely to have good practice than enrolled nurses toward mental care provision; diploma nurses were over two (2) times more likely to have good practice than certificate nurses and nurses who provide outpatient and inpatient services were 15 times more likely to have good practice than nurses who do not provide any mental care.

These findings were different from a study conducted by Ahmed and his colleagues in Ethiopia where indicated that those who did not have job aid on mental health service provision were four and half more times likely to have good practice than those who had job aid (Ahmed et al., 2019).

Limitation of the study

The study design was cross-sectional, hence the results should be interpreted with caution since this study did not provide an opportunity to assess cause-effect relationship. Though the study used power analysis to estimate the sample size, the findings of this study cannot be generalized to the entire population of nurses in Ghana, since few health facilities were randomly selected. Notwithstanding, the study provides current evidence on nurses knowledge, attitude and practice towards care provision to mental ill persons.

CHAPTER 6: RECOMMENDATION AND CONCLUSION

6.0. Recommendation and conclusion

Ministry of Health should introduce more mental health courses in all health training institutions across the country to improve health care providers practice especially nurses toward mental health care provision.

The district directors of health services, heads of departments and heads of various health facilities should continue to reinforce the adaptation of the World Health Organization Mental Health Gap Actions and Strategies to improve quality mental health care delivery.

Nurses professional continue education mainly on mental health care

The district directors of health services and head of various health facilities should ensure that all the health facilities get the job aids and other protocols to guide them on mental health care provision.

In conclusion, more than half of the nurses have adequate knowledge and less than half of the participants have both favorable and good practice. The institution of graduation and the type of mental health care provided were significantly associated with attitude. Also, the most predicators of good practice in this study were professions, educational qualifications, and type of mental health care and interest to learn mental health.

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APPENDIX 1: INFORMED CONSENT

DEPARTMENT OF GLOBAL HEALTH POLICY AND FINANCING

GRADUATE SCHOOL OF PUBLIC HEALTH

YONSEI UNIVERSITY

Study title: Knowledge, Attitude and Practice towards care provision to mental ill persons among Nurses working in Public health facilities in Ghana

Principal Investigator: Mr Zineyele, Evans Nyeyele

Address: Yonsei University, Graduate School of Public Health, Seoul

Invitation to participate:

This study was to assess the knowledge, attitude and practice towards care provision to mental ill persons among Nurses working in Public health facilities in Ghana. I kindly invite your participation in the study.

Purpose:

The **main purpose** of this study is to describe and compare the knowledge, attitude and practice towards care provision to mental ill persons or patients among Nurses working in public health facilities in Ghana.

Description of procedures:

If you have accepted to take part in this research, you will be asked to provide certain information such as your age, marital status, professional category, academic qualification, working experience and so on.

Eligibility:

Participants were between the ages of 20–59 years and with at least six months working experience and have consented to participate in the study.

Risks:

There was no risk in participating or not participating in this study.

Benefits:

Findings from the study will help policy makers in Ministry of Health /Ghana Health Service and its agencies to develop policies and programme that will improve quality mental health service delivery system among health care professionals in the country.

Economic considerations:

There was no cost associated with participation in this study. If you have contented and accepted to participate in this study the researcher assistants helped you to provide the necessary information.

Confidentiality:

Any information obtained participants was kept strictly confidential. Your consent form was kept separate from the data. The data was not be available to anyone other than the research team only. Findings from this study may be used in presentations, seminars, research papers and reports. Nevertheless, your identity and personal information was not used in any presentations, research papers, or reports.

Compensation:

There was no compensation for participating in the study but your participation would be appreciated expressed in words and say thank you so much for being a participant.

Voluntary participation:

This study was not mandatory. You are free to opt out at any point in time if you so wish to do so. You will not be penalized or punished for not participating or quitting this study.

Any questions

Kindly take enough time to make a decision. We were ever ready to answer any questions you may have about the study. If you have further questions aimed at clarifications concerning your participation in the study, you may contact the principal investigator of the study at Yonsei University, Graduate School of Public Health, Seoul campus Mr Zineyele, Evans Nyeyele on telephone (+821076390962 or 0200825364) or by email; zineyeleevans18@gmail.com.

Respondent agreement:

The above document describing the benefits, risks and procedures for the research on knowledge, attitude and practice towards care provision to mental ill persons or patients among Nurses working in public health facilities has been read and explained to me. I have been given an opportunity to ask any questions about the research and it has been answered to my satisfaction. I agree to participate in this study.

…… ……...…….

Date Signature of the participant

APPENDIX 2: THESIS ACTION PLAN

Item	Activity	Timeline
1.	Submission of study tool to Committee Members	15th-17th September, 2021
2.	Submission of thesis proposal	24th -27th September, 2021
3.	Pre-test of study tool	28-30th October, 2021
4.	Data collection	22nd -16th November , 2021
5.	Data cleaning and Data Analysis	17st -20th November, 2021
6	Results and Interpretation	21st -24th November, 2021
7.	Discussion	25th-27th November, 2021
8.	Final Thesis Report Writing	16st-29th November, 2021
9	Final defense	30th November, 2021
10.	Submission of Final Thesis Report	3th December, 2021

APPENDIX 3: STUDY QUESTIONNAIRE

This research is being conducted by Zineyele, **Evans**, Master of Public Health (Global Health Policy and Financing) student from Yonsei University Graduate School of Public Health, South Korea. The **main purpose** of this study is to evaluate the Knowledge, Attitude, and Practice towards care provision to mentally ill persons or patients among Nurses working in **South Tongu, Keta, and Agotime Ziope** District in Ghana.

Participation in this study is NOT MANDATORY, you can opt out at any point in time of the study.

All your responses would be kept confidential and be used for academic purposes only.

Initial of interviewer.....Serial number:……Date: .....

NB: All sections are multiple-choice. You can choose one response only from each question

Section A: Socio-demographic of nurses

Socio-demographic characteristics	
No	**Questions**
1	Age (in years)? □ 20-29 □ 30-39 □ 40-49 □ 50-59
2	Gender? □ Male □Female

3	Marital status □Single □Married □Separated □Divorced
4	Professions? □RGN □RCN □CHN □EN □ Midwife
5	Education level? □Certificate □Diploma □Bachelor's degree □Master's degree
6	Institution of graduation? □Government □Private
7	Work experience? □ 0-5years □6-10years □More than 10years
8	Which district are you working now? □Agotime-Ziope □South Tongu □Keta Municipal
9	Write your health facility name……
10	Living background □Rural □Urban
11	Level of interest to learn mental illness □ Yes □ No □Do not know
12	Type of Mental health care you provide □ Outpatient service □ Both outpatient and inpatient service □ None
13	Have ever taken a capacity building course / on-the- job coaching on mental health □ Yes □ No □ Don't know
14	If yes, what kind of training or capacity building □ Theory only □ Practice only □ Theory and practice

Section B: Knowledge Level Questions

Scale: 1=Yes, 2= No, 3= I do not know

Knowledge Level Questions	
No	**Questions**
15	Changes in brain chemistry, stress, and drug/substance abuse are some key causes of mental illness? □ Yes □ No □ I do not know
16	The perceived cause(s) of mental illness include biomedical, psychosocial, and supernatural causes? □ Yes □ No □ I do not know
17	Irrational acts, violence, inappropriate behavior, and loss of contact with reality are the signs and symptoms of mental illness? □ Yes □ No □ I do not know
18	The following are the manifestation of mental illness; being lonely, feeling sad, extreme mood change, delusion, and suicide? □ Yes □ No □ I do not know
19	The following are the risk factor of mental illness; family history, chronic medical condition, brain injury, and excessive alcohol or drug use? □ Yes □ No □ I do not know
20	Death, stigmatization, loss of loved ones, and low productivity are the consequence(s) of mental illness? □ Yes □ No □ I do not know

21	Provision of drug, counseling, and referral are the important management of mental illness □ Yes □ No □ I do not know
22	People with mental illness need constant care as physical illness □ Yes □ No □ I don't know

Section C: Attitude Questions

Scale: 1=strongly disagree 2=Disagree 3=Neutral, 4=Agree, 5=strongly agree

Attitude Questions	
23	People with mental illnesses should be able to receive treatment in the same health center as people with physical illnesses □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
24	People with mental illness are dangerous and violent □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
25	It is hard to talk to someone with mental illness □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
26	Mental illness person should only be treated in the psychiatric hospitals □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
27	Counseling's of persons with psychotic disorders should be left for mental health specialists □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree

28	People with mental illness can live a normal life and deserve respect □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
29	Mentally ill patients should be confined to the facility for the rest of their life □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
30	Mental ill persons should get the same job opportunity as other people □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
31	Psychiatric nurses should only provide care for mentally ill persons? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
32	It is best to avoid anyone who has a mental illness? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree

Section D: Practice Questions

Scale: 1=strongly disagree 2=Disagree 3=Neutral, 4=Agree, 5=strongly agree

Practice Questions	
No.	**Questions**
33	Provide assessment and evaluation of the mentally ill persons? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
34	Monitoring of vital signs (blood pressure, temperature, pulse, weight)? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
35	Administer prescribed medication for mentally ill persons? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
36	Provide counselling for the mentally ill persons? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
37	It is good to refer severely mentally ill persons to an appropriate health facility? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
38	Provide family education or awareness creation on mental illness? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
39	Involve family in the care of the mentally ill persons?

	□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree
40	Provide follow-up visits or home visits for mentally ill persons? □ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree

Section E: Intended behavior Questions

Scale: 1=Yes, 2= No, 3= I do not know

No.	Intended behavior Questions
41	Currently, live/ever lived with someone with a mental health problem? □ Yes □ No □ I do not know
42	Currently have/ever worked with someone with a mental health problem? □ Yes □ No □ I do not know
43	Currently have/ever had, a close friend with a mental health problem? □ Yes □ No □ I do not know
44	In the future, I would be willing to live with someone with a mental health problem? □ Yes □ No □ I do not know
45	In the future, I would be willing to work with someone with a mental health problem? □ Yes □ N □ I do not know

46	In the future, I would be willing to continue a relationship with a friend who developed a mental health problem**?** □ Yes □ N □ I do not know

Thank you for your time