EFFECTIVENESS OF CHILD AND ADOLESCENT MENTAL HEALTH EDUCATION ON KNOWLEDGE AND ATTITUDE OF COMMUNITY HEALTH EXTENSION STUDENTS IN THE UNIVERSITY COLLEGE HOSPITAL IBADAN

BY

KASALI OLUYEMISI

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Declaration

I hereby declare that this study or any part of it has not been submitted for the award of any diploma, degree or any other examination.

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KASALI OLUYEMISI

Supervisors' Attestation

This is to certify that this work was carried out by **KASALI OLUYEMISI** in the Centre for Child and Adolescent Mental Health, University of Ibadan

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Dr Rotimi Adejumo
University college Hospital, UCH, Ibadan

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ABSTRACT

Introduction

The Burden of mental illness worldwide is unfortunately unmatched by the available specialists trained in caring for the illnesses. Mental illnesses in children contributes a significant part of this unmet need causing distress to both patients and families. The need to equip non-specialists with the requisite training to help them easily identify common mental illnesses in children and adolescents cannot therefore be overemphasized. This study therefore aims to assess the baseline knowledge of community health officers and provide a training intervention on child and adolescent mental disorders as well as measure the effect of the training.

Methodology

This is a quasi experimental study. Students of two community health training institution were assessed at baseline for their knowledge and attitude on child and adolescent mental health. The intervention group was thereafter taken through an intervention and assessed afterwards.

Results

There was a significantly low knowledge of respondents at baseline. There were significant improvement in the knowledge and attitude about general information about mental illness in children and adolescents. Attitude towards the management of behavioural disorders like conduct and attention deficit hyperactivity disorder.

Conclusions

There is a need to broaden the scope of child mental health training among trainee community health officers.

CHAPTER ONE

INTRODUCTION

"Mental well-being is a fundamental component of the World Health Organisation (WHO)'s definition of health. Good mental health enables people to realize their potential, cope with the normal stresses of life, work productively, and contribute to their communities" (WHO, 2013). This statement stresses the importance of mental health to the development of a nation. Nigeria is estimated to have a population of over 140 million according to 2006 census. This presents us with human capital which is critical to development but this potential can be hampered if attention is not paid to mental wellbeing.

According to Mental Health Leadership and Advocacy Program (MHLAP), (2012), about 20% of Nigerians experience a form of mental illness during their lifetime. This represents a significant number of people, and a large proportion of Africa's most populous nation. In spite of the prevalence of mental illness, Jorm (2011) noted that information about mental health is not given as much attention as other physical health conditions. As such, people do not know as much about mental health and mental health problems as they know about other physical conditions, health workers inclusive. Knowledge about mental health disorders has been shown to play a role in the attitude of people towards mental disorders (Makanjuola et al, 2012; Adebowale et al, 2014; Jacob, 2013).

Mental health literacy has been defined as knowledge and beliefs about mental disorders which aid their recognition, management or prevention (Jorm, 1997). Ignorance about mental health presentation, the associated factors, presentation and modes of management can result in great damage to the societies mental health and development. Reduced literacy about mental health is associated with increased stigma, discrimination, delayed care seeking and attendant societal underdevelopment.

Considering the association between mental health literacy and prompt appropriate help-seeking, and consequently outcomes (Kelly, Jorm and Rodgers, 2006), it is imperative to know that mental health education goes a long way to improve the mental health literacy level of the public, and also serves as a basis for needed interventions. Education enables the public to make more informed decisions about mental illness (Corrigan & Penn 1999). It is targeted not only to inform and prevent, but it also forms the attitudes towards mentally ill people in order not to marginalise them (Papageorgiou-Vasilopoulou 2005).

Health promotion and health education are important components of the role of health professionals. Tossavainen et al. (2004) support that health promotion education and intervention focuses on the development of the whole person, viewing the total individual in a total environment. Benefits of health promotion information and education intervention may include changes in attitudes, increased awareness and knowledge, lowered risk for certain health problems, better health status, and improved quality of life (Modeste & Tamayose 2004). According to Jorm (1997), constituents of mental health education are the ability to recognise disorders and specific types of psychological disorders as well as the knowledge about risk factors and causes. It also encompasses awareness about self-help interventions and modalities of professional help available. Included in this are the correct attitudes and behaviour which facilitate recognition and appropriate help seeking and skill in seeking mental health information.

In 1991, the Federal Government of Nigeria included mental health as the 9th component of primary health care. This was in recognition of the fact that the primary health care (PHC) centres are closest to the people and so have more opportunities to cater for individuals who present with a form of mental disorder. It is also an established fact that the majority of PHC workers are community health extension workers, which makes them the first point of contact for many patients seeking care at the community and primary care level.

Anecdotal reports have shown that most of community health students who come to the psychiatry unit for their posting do not display a positive attitude to patients, and these are the future primary health care workforce.

This study therefore seeks to assess the knowledge about mental health among community health students. The study will also evaluate the effectiveness of a mental health educational intervention on the knowledge and attitude of community health students about mental health problems among children and adolescents. Successfully

RELEVANCE OF THE STUDY TO CHILD AND ADOLESCENT MENTAL HEALTH (CAMH) IN AFRICA

In Nigeria and West Africa there are few mental health specialists and fewer experts in child and adolescent mental health care (Aviles et al., 2006). Most of these specialists are concentrated in a small number of institutions in the urban centres, effectively making their services unavailable to the vast majority of children and adolescents who require them. Mental disorders have been basically ignored in the process of strengthening primary care whereas effective treatment exists and can be productively delivered in primary care settings.

Globally, the emphasis on mental healthcare services has shifted from large formal institutions to community based systems. Primary health at the local government level in Nigeria is the stronghold of healthcare delivery to the community. Considering that mental disorders in children and adolescents are highly prevalent in the community (Cortina et al., 2012), it is justifiable that community health officers that work within the community constitute a population whose existing knowledge and attitude in child and adolescent mental health issues need to be evaluated. So also, training using WHO training guidelines will be highly applicable to this population of community health workers in order to improve their knowledge and

attitude to child and adolescent mental health issues. This is very relevant bearing in mind the role of community health workers in the stepped-care approach of mental health care delivery.

Cortina et al., (2012) estimated the prevalence of mental disorders in children in sub-Saharan Africa to be 14.5%, and Tunde-Ayinmode (2010) found the prevalence of mental disorders among children and adolescents in the primary care clinic of a Nigerian tertiary health facility to range from 1% for mental retardation to 50% for schizophrenia. Yet, the majority of adolescents with mental health problems do not receive professional help for their problems (Sournader et al. 2001)

It is saddening that in spite of these high rates of mental disorders in the young population, there is still very low awareness about mental health disorders in Nigeria due to apathy exhibited by primary health care providers and non-provision of essential facilities by the government. According to Jorm (2011), 'mental health literacy' is a much neglected aspect of education even among health care workers, with the resultant effect of healthcare workers showing negative reactions to those who have been diagnosed with a mental health disorder.

Children and adolescents who are diagnosed with a mental disorder are often unable to access any treatment for their mental health disorders due to lack of knowledge of health professionals (Onilemo 2014). Therefore, provision of mental health training on trainee community health officers may give more people opportunity to receive mental health care.

Although there is evidence that mental health education has a positive impact on knowledge towards mental health and mental illness, a review of the literature did not identify many studies evaluating the knowledge and attitude of community health extension students who will become the future professionals in providing primary health care services to adolescents with mental health challenges in the community. Thus, this study covers this gap in the sphere of community mental health and it provides evidence for the development of an enhanced

curriculum for the health sciences, with resultant positive implications for practice and research. This gives them opportunity to identify and provide care for more children and adolescents with mental health disorders who may present at their primary care settings.

The primary healthcare providers (PHCPs) are the first line of contact in health and related issues to the community and act as a principal point of continuing of care within a healthcare system. The need for the understanding of the knowledge, attitude and practice of primary healthcare providers on child and adolescent mental health from these countries is important. This will play a significant role in planning of services for adolescents with mental illness and identifying factors that may affect their help-seeking behaviour (Fisher et al., 1997, Adewuya et al 2007; Heflinger and Hinshaw 2010). Adewuya et al (2007) indicated that healthcare providers had higher level of social distance towards the mentally ill. An earlier study in the UK shows that patients experienced stigmatizing attitude by healthcare providers (Gaebel et al., 2002).

The information obtained from the result of the study will contribute to the body of literature on mental health, as well as highlight areas that can be focus of interventions to train this students about mental illnesses in children and adolescent. The study could also change the perspectives of community health care workers about mental illness, modifying their attitude to persons with mental illness positively through the provision of adequate knowledge about mental illness. The data from the intervention may potentially contribute to advocacy materials for the inclusion of training on Child and Adolescent Mental Health in the curriculum for public health workers.

OBJECTIVES

The objective of this study is to assess the knowledge and attitudes of students regarding the recognition, assessment and management of children with mental health disorders, and to assess the effectiveness of a child and adolescent mental health education intervention on the knowledge and attitude of students of Community Health Officers (CHO) Training, University College Hospital.

The specific objectives of the study are as follows;

1. To assess the knowledge of CHO students about the recognition, assessment and management of children with mental health disorders.
2. To assess the attitude of CHO students towards children with mental health disorders.
3. To evaluate the effect of a training intervention on the knowledge and attitude of CHO students with regard to child and adolescent mental health.
4. To evaluate the effect of a training intervention on the attitude of CHO students with regard to child and adolescent mental health.

NULL HYPOTHESIS

1. There will be no significant change in the knowledge of CHO students about child and adolescent mental health problems after the training intervention.
2. There will be no significant difference in the attitude of CHO students towards children and adolescents with mental health problems after the training intervention.

CHAPTER TWO

LITERATURE REVIEW

Concepts of Mental Health and Mental Illnesses

The W.H.O. (2011) defines mental health as 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 his or her community. Mental health is an integral and essential component of health. It includes concepts such as resilience, a sense of mastery and control, optimism and hope as well as our ability to initiate and sustain relationships and to play a part in our social world (European Commission 2008).

Mental health is a basic human right; it is fundamental to all human and social progress and is a basic requirement in order to live a happy and fulfilled life. Mental health refers to the successful performance of mental function, resulting in productive activities, fulfilling relationships, and the ability to adapt to change and adversity (U.S. Department of Health and Human Services 1999).

On the other hand, mental illness is characterised by alterations in thinking, mood, or behaviour associated with distress or impaired functioning (U.S. Department of Health and Human Services 1999). Mental illness refers to conditions that affect cognition, emotion, and behaviour such as schizophrenia and depression (Manderscheid et al. 2010). The Canadian Mental Health Association (2012) defines mental illnesses (also called mental disorders) as a variety of psychiatric conditions which typically show thought, behavioural or emotional impairments as a result of genetic, environmental, biological and psychosocial factors. Individuals experiencing a mental illness may have problems with behavioural and emotional control, communication and their sense of reality may become distorted. According to the W.H.O. (2012b) mental disorders comprise a broad range of problems with different symptoms. However, they are generally characterized by a combination of abnormal thoughts, emotions,

behaviour and relationships with others. Examples are schizophrenia, depression, mental retardation and disorders due to drug abuse.

The obstacles to early diagnosis, treatment, and care of mental health disorders could be due to shortage of mental health service providers. Majority people do not have access to tertiary health services and as a result, they rely on the primary health providers. The primary health providers attend to nearly all health and related issues in the developing countries and in Nigeria, primary healthcare providers play an essential role in delivering services to the entire community.

Overview of Child and Adolescent Mental Health

Children and adolescents are individuals between the first day of life and 19 years old. Adolescence specifically captures 10-19 years old according to World Health Organization (2015). According to the National Demographic Health Survey, 2013 (NPC, 2014) of Nigeria, children and adolescents jointly contribute about 54.5% of the population. This implies that more than half of the population are children and adolescents. Adolescents are generally perceived as a healthy age group, and yet 20% of them, in any given year, experience a mental health problem, most commonly mood disorders, anxiety disorders and disruptive behavioural disorders (e.g. attention-deficit/hyperactivity disorders [ADHD]) (W.H.O. 2012c). In high-income countries, between 5% to 20% of children and adolescents need mental health services (W.H.O. 2012c). One fifth of adolescents under the age of 18 suffer from developmental, emotional or behavioural problems and one in eight have a mental disorder (Jane-Llopis & Anderson 2005). Moreover, a meta-analysis on estimates of the prevalence of child and adolescent depression reported 5.7% for adolescents and 2.8% for children (Costello et al. 2006).

Child and adolescent mental problems are highly prevalent throughout Europe, with epidemiological studies from different European countries demonstrating high prevalence rates

(W.H.O. 2008c). The W.H.O. estimates that some two million young people in the European Region suffer from mental disorders ranging from depression to schizophrenia (W.H.O. 2005a). And yet, the majority of adolescents with mental health problems do not receive professional help for their problems, and mental health problems in adolescence tend to be under-recognised and under-treated (Sourander et al. 2004).

Epidemiology Of Childhood Mental Disorders

World Health Organization (WHO) in 2001 reported that 450million people globally suffer from some form of mental disorder or brain damage and that 25% of the population will meet criteria at some point in their life (Merikangas et al., 2009). There are widely varying estimates of the prevalence of mental disorders causing significant functional impairment in children ranging from 3% to 18%.

In 1998 the Diagnostic Interview Schedule for children version (DISC-IV) was first used in Australia in a child and adolescent survey to assess the seven common disabling mental disorders commonly experienced by the children and adolescents, and the prevalence and severity of impact of mental disorders on their children. The survey found that 14% of children and adolescents were having mental health problems. Up to 7.4% of children and adolescents were assessed as having Attention deficit hyperactivity disorders (ADHD), and 6.9% with Anxiety disorders, followed by Major depressive disorders (2.8%) and conduct disorders (2.1%). The rate of depression was slightly higher in females (3.1%) compared with 2.5% in male. This gender difference contrasted with the patterns of mental disorders in general, with 16.3% of males and 11.5% of females having had a mental disorder in the previous 12 months. It was also reported that ADHD, anxiety disorders and conduct disorders all had a mild impact on functioning.

Regarding the epidemiology of child and adolescent mental disorders, Merikangas and colleagues in 2009 reported a median prevalence of depressive disorders of 4%, with a range of 0.2% to 17%. The average age of onset for depressive disorder in children and adolescents is between 11 years and 14 years as reported by longitudinal studies of community samples (Lewinsohn et al., 2000).

Costello and colleagues in 2005 reported that the median prevalence rate of all anxiety disorders was 8% with a range of 2% to 24%. However, there were differences in the prevalence of individual anxiety disorders between children and adolescents. Separation anxiety disorders was most common (4.9%) of those 4-11years. Panic disorders and obsessive compulsive disorder are rare in children under 12 while generalized anxiety disorder (2.9%) and social anxiety disorder (3.4%) are the two most prevalent among youths. The prevalence of anxiety disorders among children 4-11years was 7.6% in males compared with 6.1% in females due to mainly the higher prevalence of obsessive compulsive disorder in males in the age group. The co morbidity of anxiety disorders and mood disorders is so common that it has been assumed that anxiety disorders in early life may be a forerunner of depression in adulthood. (Merikangas and Avenevoli, 2002)

Disruptive behaviour disorders have a 12-month prevalence rate of 6% with a range of 5% to 14% according to Costello. (2004) Conduct disorder prevalence was estimated at 1.5% and oppositional defiant disorder (ODD) at 2.3% by Ford, as compared with 2.8% to 5.5% for ODD and 2.0% to 3.32% for conduct disorder as reported by Roberts et al., (2007)'for children and adolescents in the USA (Canino et al., 2004). The prevalence of conduct disorder with several studies shows differences of 3 to 4 times higher rates in boys than girls (Loeber et al., 2000). Some researchers reported that boys with diagnosis of ADHD are more likely to have an early onset of conduct disorder. There is a high degree of co-occurrence of conduct disorder and ADHD as well as a strong association between destructive behaviour disorders with mood and

anxiety disorders (Merikangas and Avenevoli, 2000). The prevalence of ADHD in child and adolescents 5-15 years was reported as 1.23% with a 12-month prevalence ranging from 2.0% to 8.7% by Roberts (2007) and Canino (2004) as well as Calinoui. However a median prevalence of 3% have been reported in the United States Merikangas et al.(2009), Costello et al.,(2004), Faraone et al.,(2003).

Mental Health Education

Health education is dedicated to the improvement of the health status of individuals and the community (Gilbert et al. 2011). Health education comprises consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing. Mental health education is an umbrella concept covering all educational approaches to increase knowledge and promote skills related to mental health (at population, group or individual level) which take place in the media, educational institutions, services and other settings (Lahtinen et al. 1999). Another widely used term is "mental health literacy", which is defined as the ability to gain access to, understand, and use information in ways which promote and maintain good health (Lauber et al. 2003). It refers to knowledge and beliefs about mental disorders which aid their recognition, management or prevention including the ability to recognise specific disorders knowing how to seek mental health information knowledge of risk factors and causes, of self-treatments, of professional help available, and attitudes that promote recognition and appropriate help-seeking (Jorm et al. 1997).

Mental health promotion, according to the W.H.O. (2010) involves actions to create living conditions and environments that support mental health and allow people to adopt and maintain healthy lifestyles. These include a range of actions to increase the chances of more people experiencing better mental health (W.H.O. 2010). The Framework for Promoting Mental Health in Europe supports that mental health aspects should be integrated to all health

promotion programmes. Mental health promotion is recognized as an integral component of health promotion in general. Promotion of mental health is an umbrella concept covering all positive activities, including individual, interactional, structural or cultural approaches, aiming both to increase the value and visibility of mental health and encourage concrete efforts to protect, maintain and improve mental health (Lahtinen et al. 1999). Mental health promotion aims to protect and support emotional and social wellbeing and create the conditions that enable optimal functioning of individuals, families, communities, and societies (McCollam et al. 2008).

A number of studies have been carried out to assess the level of knowledge of health workers and teachers and mental health as a whole and specifically, knowledge of Child and Adolescent Mental health specifically. Most of the studies have shown that health workers in other disciplines have very low information regarding mental illnesses. Majority still believe in spiritual causes and will prioritise spiritual and traditional treatment. This has led to increasing effort to promote mental health awareness among health workers. The disadvantage inherent in a misinformed or ignorant public lies in late recognition and delayed presentation to orthodox care. Majority of mental health conditions have been known to exhibit increasingly poorer prognosis as treatment is further delayed. The concept of "duration of untreated psychosis" stems from the realization that the longer the illness remains untreated the worse the outcomes for the individual.

The paucity of information about mental health problems and child mental health is highlighted in the study of Tungchama in 2014, where he explored the knowledge, attitude and practice of health professionals towards children and adolescent with mental health difficulties in Jos University Teaching Hospital, Jos Plateau in Nigeria. The study was a cross-sectional survey among 395 health professionals from clinical and non-clinical departments. A background assessment of the mental health of the participants was initially conducted. He thereafter

assessed the participants' stigmatizing attitudes and knowledge towards children and adolescents with mental illness. He found out that about a quarter of the respondents believed that mental illness was caused by evil spirits while majority of the respondents had very high stigmatising behaviours. Interestingly higher stigmatising behaviour was found among younger adult male respondents, those with university level education and those with longer years of working in the hospital.

Several studies have evaluated interventions to modify these stigmatizing perceptions A focus on training young persons in a Nigerian tertiary institution was highlighted by Lydia-Ibrahim in 2016, who conducted a quasi-experimental study among students of Kogi State Polytechnic. She employed a 5-hour training programme spread over 3 days, and evaluated knowledge and attitudes after. The intervention consisted of videos designed for multipurpose care workers in developing countries by Omigbodun and Adeyemo (2012). The videos contained pictures and stories of well-known individuals such as politicians, businessmen and actors who had mental illness and recovered. The trainings were delivered using power point, video show and also incorporated interactive sessions. The study showed slightly positive change in the knowledge of the students towards persons with mental illness. However, attitude remained unchanged as well as stigmatising behaviour (Lydia Ibrahim et al., 2016).

Knowledge and Attitude about Child and Adolescent Mental Health

Kutcher et al. (2009) argue that mental health, which is a fundamental part of student health and well-being; still remains largely absent from the agenda in most institutions and educational systems. Nevertheless, DeSocio et al. (2006) showed that children who participated in a mental health education programme realized a significant gain in their knowledge about mental health.

Koroma in 2015 conducted an intervention among teachers regarding knowledge of behavioural problem in primary school children. He conducted a quasi-experimental study among 140 teachers in Ibadan carried out in 5 phases. The phases consisted of a base-line assessment, training intervention, post-intervention assessment, a "booster" session and post assessment. The intervention was developed based on the WHO MHGAP training module. He did a post-intervention analysis of knowledge and attitude and thereafter conducted a booster session. The booster session was meant to remind the participants about the content of the earlier administered intervention. He found that the intervention improved knowledge among the school teachers. However the intervention did not improve the attitude towards CAMH problems (Koroma et al,. 2015). This might be due to the fact that, knowledge is generally improved easily using short interventions, whereas for attitude to change, longer and more robust interventions may be required. The focus on primary school teachers in the above study is based on the need to ensure that professionals who spend the most time with children outside of the home are able to identify the children that may need help and to refer promptly.

Onileimo in 2014, interviewed 146 nurses at the University College Hospital, Ibadan. The workers were divided into intervention and control groups. The intervention group received training using Mental Health Gap Action programme (mhGap) modules conducted at a single sitting. These modules are WHO international guidelines regarding information about CAMH. The study showed that prior to the intervention, nurses had very low knowledge about the aetiology and symptoms of mental health problems in children. It also showed that a one-day training could produce significant positive changes in the knowledge and attitude of participants compared to the control group. Some other studies have however shown that a change in attitude is difficult to obtain from a training programme. This has led to further studies exploring the use of other methods of information dissemination such as videos.

Role Of Primary Healthcare In Child Mental Healthcare Delivery

Primary healthcare (PHC) is a very important aspect of healthcare delivery in Nigeria. It serves as the first point of call for majority of patients in the urban and rural areas of Nigeria. Majority of adult and child mental health problems will first present at the primary healthcare centre in most cases, therefore emphasizing a need for this level to be equipped. Historically, the establishment of primary heath carewas first attempted in Nigeria between 1975 and 1980 with the introduction of Basic Health Services Scheme (BHSS). The second attempt was founded by Professor Olikoye Ransome Kuti between 1986 and 1992 and this was meant to provide a close-to-home, accessible and affordable health pathway for patients. Primary healthcare has since then developed significantly to incorporate various tasks such as antenatal care, immunization and extension services. PHC is structured ideally to contain Doctors, Nurses, Community Health Workers, Laboratory Scientists and Health Assistants but since the doctor and nurse ratio to the general population is very low, majority of PHC is manned by trained community health officers (CHOs) or community health extension workers (CHEWs). CHOs are health cadres trained to provide basic care under the supervision of a nurse or a doctor. However they have been equipped to carry out basic interventions using a predefined action algorithm called the "standing order". This standing order allows for simple symptoms and signs to be matched to diagnosis and needed intervention instituted in the absence of a doctor or trained nurse.

The CHO/ CHEW cadre are primarily health extension workers that work in the community and visit homes and inspect environments in mostly rural areas. They enjoy the trust of communities and their advice is sought by indigenes or rural areas for ailments and treatments. The chew cadre also live within the communities in which they work in most cases thereby enhancing their contact with the people. Very minimal training in mental health and child mental health conditions is provided to this group while in training. As a result, majority may

not have been exposed and may still have stigmatizing behaviours towards people with mental health problems.

Integrating mental healthcare delivery into PHC has faced some challenges due to the lack of awareness by policy makers regarding its importance. Recent attempts have used the linkage and enhancement models to integrate mental health care into PHC. Linkage involves providing opportunities for specialists to visit PHC outposts to provide services to individuals that need it, while the enhancement model trains the CHOs to be able to carry out assessments and mental state examination in order to attain a diagnosis. Recent attempts at empowering the cadre of staff has resulted in the task-shifting approach. This approach empowers the lower cadres in healthcare delivery to execute basic treatment plans and only involve specialists if complications arise.

CHAPTER THREE

METHODOLOGY

STUDY SITE

The study was carried out among students in the department of community health extension at the University College Hospital, Ibadan. The school was established on the 15th October, 1979, for the purpose of training community health officers who would be able to function effectively in providing primary health care services at the Local Government Area level.

STUDY DESIGN

This is going to be a quasi-experimental study. The study was carried out in three phases; which are the baseline, intervention and post-intervention phases. The intervention was composed of a single-session training of about 3-hour duration on aetiology, symptoms and treatment of behavioural disorders common in children and adolescents. The training was based on the WHO MHGAP training modules on child and adolescent mental health disorders. Prior to the training, a questionnaire examining knowledge and attitude towards child and adolescent mental disorders and questions on the MHGAP training module on behavioural disorders was administered to both the intervention group and the control group

STUDY POPULATION

The study population was Community Health Extension (CHEW) and Community Health Officers (CHOs) students of University College Hospital, Ibadan.

INCLUSION CRITERIA

All consenting community health extension students who are in their posting year

Consenting students who are old enough to provide consent, that is who must have been up to 18 years old.

EXCLUSION CRITERIA

First year community health extension students

SAMPLE SIZE DETERMINATION

The sample size was determined using the sample size formula for experimental studies

$$N = \frac{K\,[P_1(1-P_1)+P_2(1-P_2)]}{(P_1-P_2)^2}$$

N= sample size of each group

K= $(Z\alpha+Z\beta)^2$

Zα= standard normal deviate at significance of 0.05= 1.96

Zβ= standard normal deviate for power at 80%=0.84

P_1= Proportion with outcome in the intervention group=75%

P_2= Proportion with outcome in the control group= 50%

A conservative value of 50% was assumed for outcome in the control group. It is anticipated that the intervention will translate into an absolute change of 25% on the knowledge scale, and therefore outcome in the intervention group is thus estimated at 50 + 25, i.e P_2=75%

$$N = \frac{(Z\alpha+Z\beta)^2\,([P_1(1-P_1)+P_2(1-P_2)]}{(P_1-P_2)^2}$$

$$N = \frac{(1.96+0.84)^2\,(0.75(1-0.75)+0.5(1-0.5)]}{(0.75-0.5)^2}$$

N = 54.88

Adjusting for loss to follow-up and attrition, an adjustment factor of 25% was used resulting in a final sample size of

$$= \frac{55}{0.75} = 73.33$$

A minimum of 73 participants was required in each group, to give a total sample size of 146

SAMPLING METHOD

Community health extension students of the University College Hospital were the study population. They were chosen because they undergo postings in psychiatry during their period of study; as such they have contact with children and adolescents presenting to the psychiatry ward. Participants were block-randomized into intervention and control groups.

DATA COLLECTION PROCEDURE

The data collection was carried out in two stages: Baseline and Post Intervention, with an intervention phase in between. At baseline, each participant in both the control and intervention groups was given the questionnaires, to assess the baseline knowledge. Subsequently, the students in the intervention group was invited for a day training session on child and adolescent mental health using the Mental Health Gap Action Training Modules. Finally both groups will have the questionnaire administered to them to determine the effectiveness of the mental health education.

STUDY INSTRUMENTS

Data was collected with the use of the following instruments:

1. Modified **Socio-Demographic Questionnaire**: This is a self-report questionnaire originally designed by Omigbodun et al.(2008) It was initially made to capture socioeconomic details of participants and their families. It was modified, precoded, pretested and required questions added.
2. **Modified Knowledge and Attitude Towards child and Adolescent Mental Disorders Scale:** Modified Knowledge and Attitude towards child and adolescent

mental disorders was developed by Ibeziako, Omigbodun, Bella and Belfer (2008). This is in two parts. The first part is the General Knowledge and Attitude scale which comprises of 36 questions meant to evaluate the knowledge and attitude of the respondents regarding mental health conditions in children and adolescents. The second part is the 22- item questionnaire Behavioural Disorder Questionnaire which measures the test takers knowledge of Behavioural problems specific to children and adolescents.

INTERVENTION INSTRUMENT

Mental Health Gap Action Programme training module (MhGap): This was designed by the WHO to provide needed information regarding mental health disorders in general. The modules to be employed in the training intervention for this study was the Developmental & Behavioural Disorders Module.

PRETEST

There was a pre-test among Community Health Officer students. This will help to determine the reliability and validity of the instruments and thus remove questions that are not valid or reliable

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the Oyo state Research Ethical Review Committee, situated at the Ministry of Health of the Oyo state secretariat, Ibadan. In conducting the study, the following principles was complied with:

Confidentiality of data: information obtained in the course of this research was kept confidential. No information leading to the identification of participants was collected. Each

participant was given an identification number so as to match the pre and post-intervention responses. The data obtained was secured by password on the computer system.

Voluntariness: participants will not be coerced to take part in the research as participation will be entirely voluntary. Participant will be informed about their right to exit the study at any point without any repercussions to them.

Informed consent: adequate information provided to the participants and consent will be obtained before attempting the questionnaire.

Beneficence and non-maleficence: participants will not be paid nor asked to pay for participating in this study. The study will not in any way cause harm to any of the respondents. Meanwhile, participants will benefits from the training and educational intervention, which will help them in self-care and promotion of their mental health.

CHAPTER FOUR

RESULTS

This chapter presents findings on the effectiveness of a mental health training program administered to Trainee Community Health Officers on knowledge and attitude towards child and adolescent mental disorders. Divided into three sections, the first section of this chapter provides a description of the socio-demographic characteristics of respondents. Section two describes comparison between the intervention group and control group on pre-existing knowledge and attitude towards child and adolescent mental disorders, while section three describes comparisons of mean scores pre-intervention and post-intervention, on knowledge and attitude about child and adolescent mental disorders, in the intervention group.

4.1 Socio-demographic characteristics of respondents

Table 4.1 shows the socio-demographic characteristics of the study participants. There were no statistically significant differences in the socio-demographic information provided by the students in control and intervention groups in terms of age, class, gender, religion, level of education and place of abode. The mean age of the trainee officers was 37.4 years (±7.4) in the intervention group, and 36.3 years (±9.1) in the control group. The participants' ages ranged between 20 to 47 years. Majority of respondents in the intervention and control groups (93.3% and 96.0% respectively) were females, and over three quarters (86.7% and 95.0% respectively) were Christians. Almost all the respondents in both the intervention and control groups (100.0% and 98.6% respectively) had previous educational qualification up to tertiary level.

Also, at baseline 15.1% of intervention group participants had had prior exposure to mental health information and 16.4% of control group participants had had prior exposure to mental information. See figure 4.1

At baseline, 6.8% of intervention group participants claimed to have a friend or relative diagnosed with mental illness, while 8.2% of control group participants claimed to have a friend or relative with a mental illness. See figure 4.2

Table 4.1 Demographic characteristics of respondents

Demographic characteristics	Intervention group (n=73) n (%)	Control group (n=73) n (%)	Total N= ?	X^2	P
Age (years)					
20-29	12(16.4)	14(19.2)	26		
30-39	30(41.1)	22(30.1)	52	4.179	.243
40-49	29(39.7)	30(41.1)	59		
50-59	2(2.7)	7(9.6)	9		
Gender					
Male	13(17.8)	21(28.8)	34	2.454	.117
Female	60(82.2)	52(71.1)	112		
Religion					
Muslim	15(20.5)	9(12.3)	24	1.795	.180
Christianity	58(79.5)	64(87.7)	122		
Place of abode (with whom)					
Parent	17(23.3)	18(24.7)	35		
Relatives	16(21.9)	9(12.3)	25	3.333	.343
Self	25(34.2)	24(32.9)	49		
Husband	15(20.5)	22(30.1)	37		
Level in school					
1st year	33(45.2)	31(42.5)	64		
2nd year	14(19.2)	10(13.7)	24	1.350	.509
3rd year	26(35.6)	32(43.8)	58		
Level of education					
Tertiary	73(100.0)	72(98.6)	145	1.007	.316
Secondary	0(0.0)	1(1.4)	1		

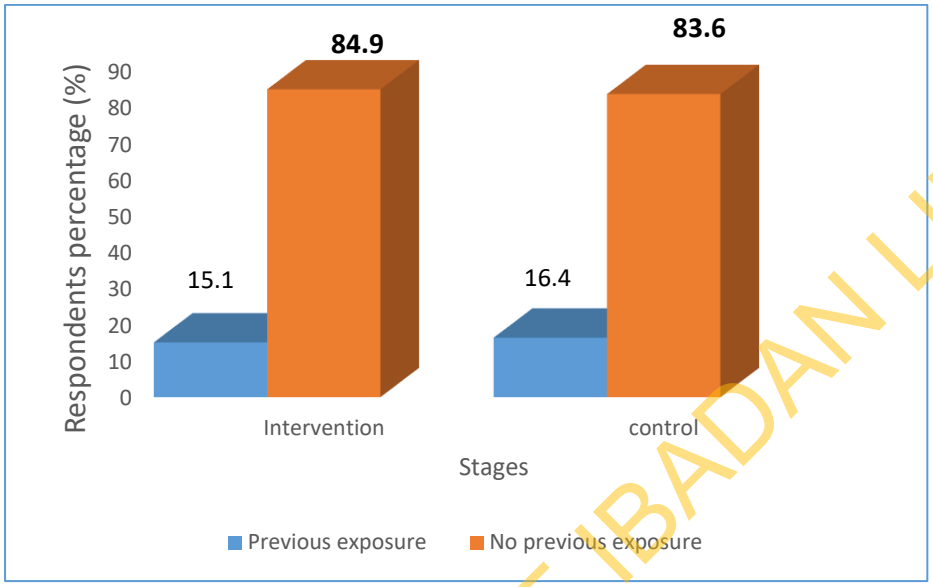

Figure 4.1: Bar chart showing respondents with prior exposure to mental health information.

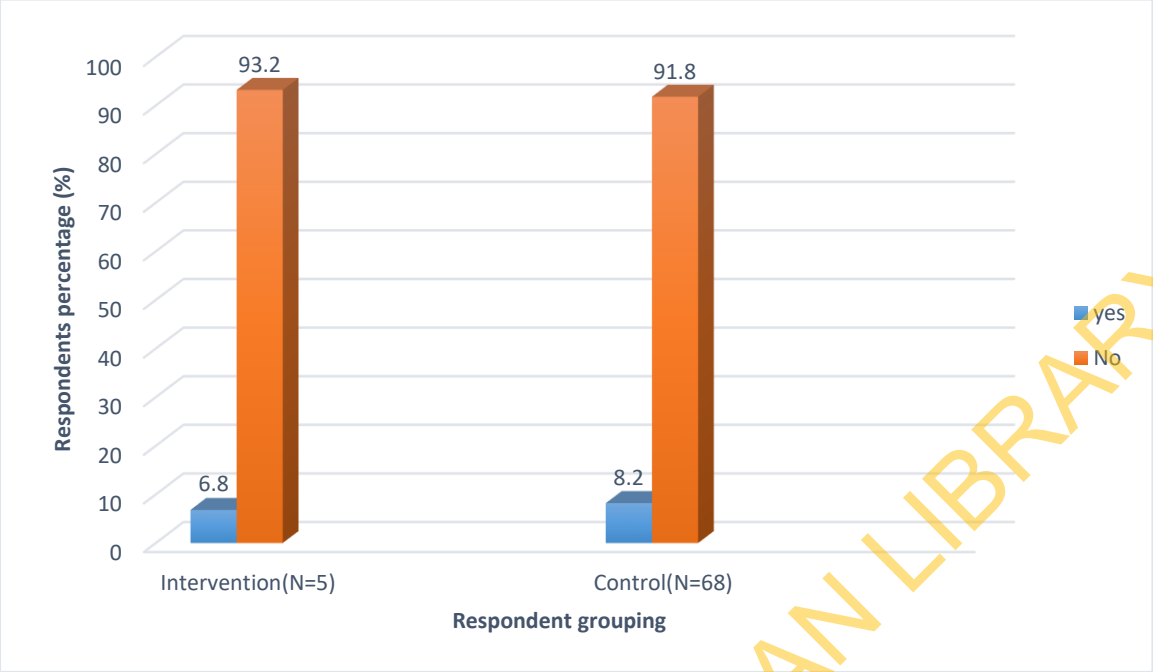

Figure 4.2 : Bar chart showing respondents with mental illness diagnosed in a friend or relative.

4.2 General knowledge at baseline assessment

Tables 4.2 and 4.3 summarise the distribution of items measuring general knowledge about mental illness of children and adolescents, comparing both the intervention and control groups at baseline. The results showed that the two groups were essentially similar in the patterns of responses provided by the intervention and control groups. However, there were statistically significant differences between the intervention and control groups in rates of response to only 3 items or questions.

Table 4.2: Comparison of general knowledge about mental illness between intervention and control groups at baseline

Items for measurement	Baseline (N=73)		Control group (N=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Mental illness is rare in children & adolescents	34(46.6)	39(53.4)	34(46.6)	39(53.4)	.685	.408
Children with mental disorders are difficult to interact with	31(42.5)	42(57.5)	33(45.2)	40(54.8)	2.221	.136
imbecile and moron are types of mental disorders found in children	60(82.2)	13(17.8)	57(78.1)	16(21.9)	.387	.534
Children & adolescent with mental illness are likely to be violent	46(63.0)	27(37.0)	49(67.1)	24(32.9)	.271	.603
Mental illness in children can be caused by traumatic events	66(90.4)	7(9.6)	66(90.4)	7(9.6)	.000	1.000
Children who live in poverty are not any more likely to have mental illness than children who do not live in poverty	62(84.9)	11(15.1)	18(24.7)	55(75.3)	2.108	.146
For children & adolescents with mental illness, their families are to blame for this	15(20.5)	58(79.5)	9(12.3)	64(87.7)	1.795	.180
The root cause of mental illness in children is a curse in the family	5(6.8)	68(93.2)	3(4.1)	70(95.9)	.529	.467
Children with mental disorders are possessed by demons	7(9.6)	66(90.4)	0	73(100.)	7.353	.007*
Children & adolescents with mental illness can recover.	65(89.0)	8(11.0)	67(91.8)	6(8.2)	.316	.574
Children & adolescents with mental illness have inherited weak genes from their parents	37(50.7)	36(49.3)	37(50.7)	36(49.3)	.000	1.000
Children & adolescents with mental illness are unpredictable	49(67.1)	24(32.9)	46(63.0)	27(37.0)	.271	.603
One in five children and adolescents will develop mental illness over the course of their lifetime	11(15.1)	62(84.9)	18(24.7)	55(75.3)	2.108	.146
Supernatural power can be used to afflict mental illness on a child or adolescents	31(42.5)	42(57.5)	33(45.2)	40(54.8)	.111	.739

Table 4.3: Comparison of general knowledge about mental illness between intervention and control groups at baseline (continued)

Items for measurement	Baseline (N=73)		Control group (N=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Mental illness in children and adolescents is caused by spiritual attack	16(21.9)	57(78.1)	18(24.7)	55(75.3)	.153	.695
Parents with mental illness always transmit these disorders to their children	23(31.5)	50(68.5)	37(50.7)	36(49.3)	5.546(b)	.019
Children and adolescents do not have depression	19(26.0)	54(74.0)	24(32.9)	49(67.1)	.824	.364
Children do not have psychosis just behaviour problems	19(26.0)	54(74.0)	27(37.0)	46(63.0)	2.458	.117
Mental illness in children and adolescents cannot be treated	8(11.0)	65(89.0)	30(41.1)	43(58.9)	2.744	.098
Poor academic performance is a type of mental disorder	40(54.8)	33(45.2)	30(41.1)	43(58.9)	.463	.496
Untidy appearance in a child is a sign of mental disorder	26(35.6)	47(64.4)	31(42.5)	42(57.5)	1.429	.232
Using a cane to beat or threaten a child is a way to manage their behaviour when they are restless and unable to sit still	24(32.9)	49(67.1)	36(49.3)	37(50.7)	.995	.318
Their juvenile remand home is a good place to manage children with mental disorders	30(41.1)	43(58.9)	6(8.2)	67(91.8)	1.664	.197
Children with mental disorders should be taken to religious houses for treatment	11(15.1)	62(84.9)	64(87.7)	9(12.3)	.669	.414
Health workers can be trained to manage children with mental disorder	67(91.8)	6(8.2)	64(87.7)	9(12.2)	.669	.414
Treating mental illness in children is always very expensive	13(17.8)	60(82.2)	24(32.9)	49(67.1)	4.38	.036

4.3 Knowledge about conduct disorder at baseline:

Table 4.4 summarizes the distribution of items measuring knowledge about conduct disorder in children and adolescents. The results showed that 11 questions or items had similarities in the responses provided by baseline and control group. However only 6 items or questions had significant different responses between the baseline and control group.

Table 4.4: Comparison of knowledge about conduct disorder in intervention and control groups at baseline

Items of measurement	Intervention group(?) (n=73)		Controls (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
up to 4% of children have conduct disorder	41(56.2)	32(43.8)	37(50.7)	36(49.3)	.440	.507
Symptoms of conduct disorder include:						
"running away from home"	62(84.9)	11(15.1)	60(82.2)	13(17.8)	.199	.655
Lying	57(78.1)	16(21.9)	42(57.5)	31(42.5)	7.060	.008*
Stealing	59(80.8)	14(19.2)	48(65.8)	25(34.2)	4.233	.040*
" inattention"	50(68.5)	23(31.5)	45(61.6)	28(38.4)	.753	.385
" sadness"	51(69.9)	22(30.1)	42(57.5)	31(42.5)	2.399	.121
" truancy''	52(71.2)	21(28.8)	58(79.5)	15(20.5)	1.327	.249
Possible causes of conduct disorder include:						
parental divorce	64(87.7)	9(12.3)	54(74.0)	19(26.0)	4.419	.036*
Criminality in father	52(71.2)	21(28.8)	48(65.8)	25(34.2)	.508	.476
Desire for attention	45(61.6)	28(38.4)	37(50.7)	36(49.3)	1.780	.182
Methods of intervention could include:						
behavioural modification techniques	66(90.6)	7(9.6)	51(69.9)	22(30.1)	9.682	.002*
Cognitive behavioural technique	55(75.3)	18(24.7)	48(65.8)	25(34.2)	1.615	.204
Group therapy	54(74.0)	19(26.0)	48(65.8)	25(34.2)	1.171	.279
Drug Abuse	37(50.7)	36(49.0)	42(57.5)	31(42.5)	.690	.406
Mental illness can occur in children and adolescents	61(83.6)	12(16.4)	67(91.8)	6(6.2)	2.281	.131
Psychiatric disorders in children are commoner in females than males	30(41.1)	43(58.9)	28(38.4)	45(61.6)	3.887	.049*
Conduct disorder occurs more in males than females	17(23.3)	56(76.7)	46(63.0)	27(37.0)	7.026	.008*

4.4 Knowledge about Attention deficit hyperactivity disorder (ADHD) at baseline

Table 4.5 summarises the distribution of responses to items measuring knowledge about attention deficit hyperactivity disorder (ADHD) in children and adolescents, by comparing responses by the intervention and control groups at baseline. The results showed that there were no statistically significant differences in the rates of correct responses to 13 questions or items between the intervention and control groups. There were significant differences between the groups in the proportion of correct responses, however, to 3 items or questions.

Table 4.5: Comparison of knowledge about ADHD in intervention and control groups at baseline

Items for measurement	Intervention group (n=73)		Control group (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Attention deficit hyperactivity disorder (ADHD) occurs in children & adolescents	50(68.5)	23(31.5)	55(75.3)	18(24.7)	.848	.357
ADHD is more common in males than females	26(35.6)	47(64.4)	43(58.9)	30(41.1)	7.942	.005*
ADHD does not occur in adolescents	19(26.0)	54(74.0)	15(20.5)	58(79.5)	.613	.433
Common signs of ADHD include:						
Impaired attention	46(63.0)	27(37.0)	48(65.8)	25(34.2)	.119	.730
Over activity	61(83.6)	12(16.4)	45(61.6)	28(38.4)	8.815	.003*
Impulsivity	40(54.8)	33(45.2)	30(41.1)	43(58.9)	2.744	.098
Laughing to self	42(57.5)	31(42.5)	46(63.0)	27(37.0)	.458	.499
ADHD is apparent before the age of 6years	34(46.6)	39(53.4)	33(45.2)	40(54.8)	.028	.868
Possible causes of ADHD include:						
brain abnormalities	58(79.5)	15(20.5)	54(74.0)	19(26.0)	.613	.433
genetic factors	55(75.3)	18(24.7)	39(53.4)	34(46.6)	7.646	.006*
Diet	35(47.9)	38(52.1)	30(41.1)	43(58.9)	.693	.405
food allergy.	25(34.2)	48(65.8)	25(34.2)	48(65.8)	.000	1.000
ADHD is best managed by:						
Medication	42(57.5)	31(42.5)	49(67.1)	24(32.9)	1.429	.232
Punishment	10(13.7)	63(86.3)	9(12.3)	64(87.7)	.061	.806
Behavioural modification techniques	51(69.9)	22(30.1)	51(69.9)	22(30.1)	.000	1.000

4.5 Changes in General knowledge after intervention

Table 4.6 and 4.7 summarise the distribution of items measuring general knowledge about mental illness of children and adolescents, comparing the intervention group's responses before and after the intervention. The results showed that there were statistically significant differences in responses to 9 questions or items after the training intervention. The proportion of participants with responses of agreement to the item *"children & adolescents with mental illness are unpredictable"* had increased from 67.1% pre-intervention to 89.6% post–intervention. Similarly, responses of disagreement to the item *"children and adolescents with mental illness are likely to be violent"* increased from 63.0% pre-intervention to 87.7% post–intervention. Also, affirmative responses to the statement *"one in five children and adolescents will develop mental illness over the course of their lifetime"* increased in frequency from 15.1% pre-intervention to 39.9% post–intervention. Correspondingly, affirmative responses to the item *"supernatural power can be used to afflict mental illness on a child or adolescents"* decreased from 42.5% pre-intervention to 15.1% post–intervention.

Table 4.6: Comparison of general knowledge about mental illness in intervention group pre- and post-intervention

Items for measurement	Pre- Intervention (n=73)		Post Intervention (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Mental illness is rare in children & adolescents	34(46.6)	39(53.4)	29(39.7)	44(60.4)	2.753	.097
Children with mental disorders are difficult to interact with	31(42.5)	42(57.5)	33(45.2)	40(54.8)	2.221	.136
imbecile and moron are types of mental disorders found in children	60(82.2)	13(17.8)	70(95.9)	3(4.1)	2.21	.146
Children & adolescent with mental illness are likely to be violent	46(63.0)	27(37.0)	64(87.7)	9(12.3)	11.945	.001*
Mental illness in children can be caused by traumatic events	66(90.4)	7(9.6)	71(97.3)	2(2.7)	2.960	.085
Children who live in poverty are not any more likely to have mental illness than children who do not live in poverty	62(84.9)	11(15.1)	19(26.0)	54(74.0)	2.685	.101
For children & adolescents with mental illness, their families are to blame for this	15(20.5)	58(79.5)	20(27.4)	53(72.6)	.940	.332
The root cause of mental illness in children is a curse in the family	5(6.8)	68(93.2)	6(8.2)	67(91.8)	.098	.754
Children with mental disorders are possessed by demons	7(9.6)	66(90.4)	2(2.7)	71(97.3)	2.960	.085
Children & adolescents with mental illness can recover.	65(89.0)	8(11.0)	63(86.3)	10(13.7)	.253	.615
Children & adolescents with mental illness have inherited weak genes from their parents	37(50.7)	36(49.3)	61(83.6)	12(16.4)	17.878	<.001 *
Children & adolescents with mental illness are unpredictable	49(67.1)	24(32.9)	65(89.0)	8(11.0)	10.246	<.001 *
One in five children and adolescents will develop mental illness over the course of their lifetime	11(15.1)	62(84.9)	29(39.7)	44(60.3)	11.157	<.001 *
Supernatural power can be used to afflict mental illness on a child or adolescents	31(42.5)	42(57.5)	11(15.1)	62(84.9)	13.370	<.001 *

Table 4.7 : Comparison of general knowledge about mental illness in intervention group pre- and post-intervention (continued)

Items for measurement	Pre- Intervention (n=73)		Post Intervention group (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree /not sure n(%)	X^2	P
Mental illness in children and adolescents is caused by spiritual attack	16(21.9)	57(78.1)	5(6.8)	68(93.2)	6.730	.009*
Parents with mental illness always transmit these disorders to their children	23(31.5)	50(68.5)	38(52.1)	35(47.9)	6.336	.012*
Children and adolescents do not have depression	19(26.0)	54(74.0)	27(37.0)	46(63.0)	2.031	.154
Children do not have psychosis just behaviour problems	19(26.0)	54(74.0)	37(50.7)	36(49.3)	9.386	.002*
Mental illness in children and adolescents cannot be treated	8(11.0)	65(89.0)	14(19.2)	59(80.8)	1.927	.165
Poor academic performance is a type of mental disorder	40(54.8)	33(45.2)	57(78.1)	16(21.9)	8.877	.003*
Untidy appearance in a child is a sign of mental disorder	26(35.6)	47(64.4)	36(49.3)	37(50.7)	2.803	.094
Using a cane to beat or threaten a child is a way to manage their behaviour when they are restless and unable to sit still	24(32.9)	49(67.1)	8(11.0)	65(89.0)	10.246	.001*
Their juvenile remand home is a good place to manage children with mental disorders	30(41.1)	43(58.9)	39(53.4)	34(46.6)	2.226	.136
Children with mental disorders should be taken to religious houses for treatment	11(15.1)	62(84.9)	6(8.2)	67(91.8)	1.664	.197
Health workers can be trained to manage children with mental disorder	67(91.8)	6(8.2)	73(100.0)	0	6.257	.012*
Treating mental illness in children is always very expensive	13(17.8)	60(82.2)	32(43.8)	41(56.2)	11.596	.001*

4.6 Knowledge about conduct disorder after intervention

Table 4.7 summarises the distribution of responses in the intervention group to items measuring knowledge about conduct disorder in children and adolescents pre- and post-intervention. The results showed significant differences in the rates of correct responses to 6 items before and after the training intervention. The proportion of respondents who gave correct responses to the questionnaire item *"up to 4% of children have conduct disorder"* increased from 63.0% pre-intervention to 87.7% post –intervention. The proportion of respondents who correctly endorsed items on symptoms of conduct disorder increased between the pre-intervention and post–intervention stages as follow: *"running away from home"* (84.9% vs. 97.3%); *"lying"* (78.1% vs. 91.8%); *"stealing"* (80.8% vs. 94.5%); and *"truancy"* (71.2% vs. 100.0%). The proportion of respondents who gave incorrect responses to the item *"psychiatric disorders in children are commoner in females than males"* decreased from 41.1% pre-intervention to 28.8.1% in the post–intervention stage.

Table 4.8 Comparison of knowledge about conduct disorder in intervention group pre- and post-intervention

Items for measurement	pre Intervention (n=73)		post –intervention (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Up to 4% of children have conduct disorder	41(56.2)	32(43.8)	53(72.6)	20(27.4)	4.301	.038*
Symptoms of conduct disorder						
"Running away from home"	62(84.9)	11(15.1)	71(97.3)	2(2.7)	6.840	.009*
"Lying"	57(78.1)	16(21.9)	67(91.8)	6(8.2)	5.352	.021*
"stealing"	59(80.8)	14(19.2)	69(94.5	4(5.5)	6.337	.012*
"inattention"	50(68.5)	23(31.5)	67(91.8)	6(8.2)	12.436	.0001*
"sadness"	51(69.9)	22(30.1)	54(74.0)	19(26.0)	.305	.581
"Truancy"	52(71.2)	21(28.8)	73(100.0)	0 (0.0)	24.528	.0001*
Possible causes of conduct disorder include:						
Parental divorce	64(87.7)	9(12.3)	67(91.8)	6(8.2)	.669	.414
Criminality in father	52(71.2)	21(28.8)	67(91.8)	6(8.2)	10.224(b)	.001*
Desire for attention	45(61.6)	28(38.4)	58(79.5)	15(20.5)	5.571	.018*
Conduct disorder can be managed by:						
Behavioural modification techniques	66(90.6)	7(9.6)	70(95.9)	3(4.1)	1.718	.190
Cognitive behavioural technique	55(75.3)	18(24.7)	68(93.2)	5(6.9)	8.722	.003*
Drug Abuse	37(50.7)	36(49.0)	49(67.1)	24(32.9)	4.074	.044*
Mental illness can occur in children and adolescents	61(83.6)	12(16.4)	73(100.0)	0	13.075	.0001*
Psychiatric disorders in children are commoner in females than males	30(41.1)	43(58.9)	21(28.8)	52(71.2)	32.257	.0001*
Conduct disorder occurs more in males than females	17(23.3)	56(76.7)	63(86.3)	10(13.7)	.569	.451

4.7 Knowledge about Attention deficit hyperactivity disorder (ADHD) after intervention

Table 4.9 summarises the distribution of responses to questionnaire items measuring knowledge about attention deficit hyperactivity disorder (ADHD) in children and adolescents, by comparing the proportion of correct responses in these groups pre- and post-intervention. The results showed statistically significant differences in the proportion of respondents in each of these groups who gave correct responses to 9 questionnaire items after the training intervention. Compared to before the intervention, more participants correctly endorsed the item: *"ADHD is apparent before the age of 6 years"* afterward (75.3% vs. 46.5%). The proportion of correct responses to items on common signs of ADHD increased between the pre-intervention and post –intervention stage thus: *"Impaired attention"* (63.0% vs. 100.0%); *"Overactivity"* (83.6% vs. 100.0%); *"Impulsivity"* (54.8% vs. 86.3%). Also, a greater proportion of intervention group participants correctly endorsed possible causes of ADHD after the intervention, compared to before it, to items such as *"brain abnormalities"* (97.3% vs. 79.5%); *"genetic factors"* (75.3% vs. 97.3%), and *"diet"* (47.9% vs. 68.5%). Better understanding of ADHD management processes also seemed to occur post-intervention than pre-intervention, as evidenced by higher proportions of respondents correctly endorsing the choice of *medication*. (80.0% vs. 57.5%), *behavioral modification techniques* (97.3% vs. 69.9%), and a smaller proportion endorsing the use of *punishment* (5.5% vs. 13.7%) respectively afterwards.

Table 4.9: Comparison of knowledge about ADHD in intervention group pre- and post-intervention

Items for measurement	Pre-Intervention (n=73)		Post Intervention (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Attention deficit hyperactivity disorder (ADHD) occurs in children and adolescents	50(68.5)	23(31.5)	56(76.7)	17(23.3)	1.240	.266
ADHD is more common in males than females	26(35.6)	47(64.4)	53(72.6)	20(27.4)	20.108	.001*
ADHD does not occur in adolescents	19(26.0)	54(74.0)	16(21.9)	57(78.1)	.338	.561
Common signs of ADHD include:						
Impaired attention	46(63.0)	27(37.0)	73(100.0)	0(0.0)	33.126	.0001*
Over activity	61(83.6)	12(16.4)	73(100.0)	0(0.0)	13.075	.0001*
Impulsivity	40(54.8)	33(45.2)	63(86.3)	10(13.7)	17.438	.0001*
Laughing to self	42(57.5)	31(42.5)	48(65.8)	25(34.2)	1.043	.307
ADHD is apparent before the age of 6years	34(46.6)	39(53.4)	55(75.3)	18(24.7)	12.692	.0001*
Possible causes of ADHD include:						
brain abnormalities	58(79.5)	15(20.5)	71(97.3)	2(2.7)	11.251	.001*
Genetic factors	55(75.3)	18(24.7)	71(97.3)	2(2.7)	14.832	.0001*
Diet	35(47.9)	38(52.1)	50(68.5)	23(31.5)	6.336	.012*
Food allergy	25(34.2)	48(65.8)	27(37.0)	46(63.0)	.119	.730
ADHD is best managed by:						
Medication	42(57.5)	31(42.5)	59(80.0)	14(19.2)	9.284	.002*
Punishment	10(13.7)	63(86.3)	4(5.5)	69(94.5)	2.844	.092
Behavioral modification techniques	51(69.9)	22(30.1)	71(97.3)	2(2.7)	19.945	.0001*

4.8 General attitude towards child and adolescent mental disorders at baseline

Table 4.10 summarises the distribution of responses to items measuring general attitude toward mental illness in children and adolescents by comparing the proportions of the intervention and control groups who gave correct responses to questions on attitude at baseline. The results showed no significant difference in the proportions of both groups who gave correct responses to 4 questionnaire items. There were however statistically significant differences between the proportion of correct responses to 5 items.

Table 4.10 Comparison of attitudes toward child and adolescent mental illness in intervention and control groups at baseline

Items for measurement	Intervention group (n=73)		Control group (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Would you feel afraid to talk to children and adolescents with mental illness	6(8.2)	67(91.8)	30(41.1)	43(58.9)	21.236	.000*
Would you be upset or disturbed if your child or relative were in the same school or in the midst of children with mental disorders	17(23.3)	56(76.7)	36(49.3)	37(50.7)	10.693	.001*
Children with intellectual disability should not be allowed to attend school with normal children	14(19.2)	59(80.8)	28(38.4)	45(61.6)	6.551	.010*
would you allow your or relative to maintain a friendly relationship with a child or adolescent with mental illness	41(56.2)	32(4.,8)	36(49.3)	37(50.7)	.687	.407
Would you be embarrassed if your friends knew that someone in your close family had child or adolescent with mental illness	18(24.7)	55(75.3)	43(58.9)	30(41.1)	17.599(b)	.0001*
Would you be comfortable to have children and adolescents with mental disorder as patients under your care.	58(79.5)	15(20.5)	43(58.9)	30(41.1)	7.228	.007*
Do you feel children and adolescents who are mentally ill should be nursed with other children with physically illnesses	35(47.9)	38(52.1)	21(28.8)	52(71.2)	1.947	.163
Child and adolescent mental health problems can be prevented within the same public health frame work as communicable diseases	65(69.0)	8(11.0)	27(37.0)	46(63.0)	1.794	.180
Do you feel child and adolescent mental disorders can be successfully treated in hospital?	35(47.9)	38(52.1)	67(91.8)	6(8.2)	.316	.574

4.9 General attitude toward child and adolescent mental disorders after intervention

Table 4.11 summarises the distribution of responses to items measuring general attitude to mental illness in children and adolescents, by comparing the proportions of the intervention group that gave correct responses to questionnaire items before and after the intervention. The results showed a significant change in responses indicating disagreement with 2 items describing negative attitude before and after the training intervention. Proportions of intervention group participants who gave responses of agreement to questions or items describing negative attitude such as *"...be upset or disturbed if your child or relative were in the same school or in the midst of children with mental disorders"* decreased from 23.3% pre-intervention to 11.0% post–intervention. Also, the proportion of responses indicating agreement with questions describing positives attitude including *"would you allow your relative to maintain a friendly relationship with a child or adolescent with mental illness"* significantly increased from 56.2% pre-intervention to 67.1% post–intervention. Similarly, the proportion who endorsed the item *"would you be comfortable to have children and adolescents with mental disorder as patients under your care"* increased significantly from 79.5% pre-intervention to 91.8% post–intervention.

Table 4.11 Comparison of attitude to child and adolescent mental illness in intervention group between pre- and post-intervention stage

Items for measurement	Pre-Intervention (n=73)		Post Intervention (n=73)		Statistics	
	Agree n(%)	Disagree/ not sure n(%)	Agree n(%)	Disagree/ not sure n(%)	X^2	P
Would you feel afraid to talk to children and adolescents with mental illness	8(11.0)	65(89.0)	6(8.2)	67(97.8)	.316	.574
Would you be upset or disturbed if your child or relative were in the same school or in the midst of children with mental disorders	17(23.3)	56(76.7)	8(11.0)	65(89.0)	3.909	.048*
Children with intellectual disability should not be allowed to attend school with normal children	14(19.2)	59(80.8)	22(30.1)	51(69.9)	2.360	.125
Would you allow your or relative to maintain a friendly relationship with a child or adolescent with mental illness.	41(56.2)	32(4.,8)	49(67.1)	24(31.9)	4.759	.029*
Would you be embarrassed if your friends knew that someone in your close family had child or adolescent with mental illness	18(24.7)	55(75.3)	10(13.7)	63(86.3)	2.828	.093
Would you be comfortable to have children & adolescents with mental disorder as patients under your care?	58(79.5)	15(20.5)	67(91.8)	6(8.2)	4.505	.034*
Do you feel children & adolescents who are mentally ill should be nursed with other children with physically illnesses	35(47.9)	38(52.1)	42(57.5)	31(42.5)	1.347	.246
Child & adolescent mental health problems can be prevented within the same public health frame work as communicable diseases	65(69.0)	8(11.0)	65(89.0)	8(11.0)	.000	1.000
Do you feel child & adolescent mental disorders can be successfully treated in hospital?	35(47.9)	38(52.1)	42(57.5)	31(42.5)	1.347	.246

4.10 Attitudes towards behavioural disorders in children and adolescents at baseline

Table 4.12 summarises the distribution of responses to items measuring attitude towards behavioural disorders in children and adolescents by comparing the proportions of participants

in the intervention and control groups who responded positively or negatively to certain items at baseline. The results showed no statistically significant differences in the proportions of participants in the two groups who gave responses to 5 questionnaire items at baseline. There were however significant differences in the proportions of responses to two items.

Table 4.12: Comparison of attitudes toward behavioural disorders in children and adolescents between intervention and control groups at baseline.

Items for measurement	Intervention group (n=73)		Control group (n=73)		Statistics	
	Agree n(%)	Disagree / not sure n(%)	Agree n(%)	Disagree / not sure n(%)	X^2	P
A hyperactive, inattentive child should always be punished.	9(12.3)	64(87.7)	12(16.4)	61(83.6)	.501	.479
Behavioural disorder in children and adolescents are best managed with medication	24(32.9)	49(67.1)	40(54.8)	33(45,2)	7.122	.008*
Appropriate behaviours in children and adolescents with behavioural disorder should be rewarded	33(45.2)	40(54.8)	31(42.5)	42(57.5)	.111	.739
Simple clear and concise instructions should be given to control behaviour in children and adolescents with behavioural disorders.	62(84.9)	11(15.1)	55(75.3)	18(24.7)	2.108	.146
Children & adolescents with mental disorders can attend regular school.	42(57.5)	31(42.5)	24(32.9)	49(67.1)	8.959	.003*
Parents of children and adolescents with mental health problems should be involved in the treatment plan of their children.	60(82.2)	13(17.8)	61(83.6)	12(16.4)	.048	.826
Treatment of children and adolescents with mental health problems should be multidisciplinary	27(37.0)	46(63.0)	18(24.7)	55(75.3)	2.602	.107

4.11 Attitudes towards behavioural disorders in children and adolescents after intervention

Table 4.13 summarises the distribution of responses to items measuring attitude towards behavioural disorders in children and adolescents by comparing the proportions of participants in the intervention group who gave responses to certain items pre- and post-intervention. The results showed significant changes in responses to 6 questions or items before and after the training intervention. Proportions of participants who agreed with questionnaire items describing negative attitudes, such as *"a hyperactive, inattentive child should always be punished"* decreased significantly from 12.3% pre-intervention to 2.7% post–intervention.

Also there were increases in proportions of agreements to items describing positive attitude, including the following, *"behavioural disorders in children and adolescents are best managed with medications"* where endorsements increased from 45.2% pre-intervention to 83.6% post–intervention. Similarly, there was a significant increase in endorsements of the items: *"appropriate behaviours in children and adolescents with behavioural disorder should be rewarded"* (45.2% vs 83.6%); *"simple clear and concise instructions should be given to control behaviour in children and adolescents with behavioural disorders"* (84.9% vs 100.0%); *"children and adolescents with mental disorders can attend regular school"* (57.5% vs 74.0%); *"parents of children and adolescents with mental health problems should be involved in the treatment plan of their children"* (82.2% vs 94.5%); and *"treatment of children and adolescents with mental health problems should be multidisciplinary"* (37.0% vs 58.9%), comparing pre-intervention with post–intervention responses.

Table 4.13: Comparison of attitudes towards behavioural disorder pre- and post-intervention in intervention group

Items for measurement	Pre- Intervention group (n=73)		Post- Intervention group (n=73)		Statistics	
	Agree n(%)	Disagree / not sure n(%)	Agree n(%)	Disagree / not sure n(%)	X^2	P
A hyperactive, inattentive child should always be punished	9(12.3)	64(87.7)	2(2.7)	71(97.3)	4.818	.028*
Behavioural disorder in children and adolescents are best managed with medication	24(32.9)	49(67.1)	30(41.1)	43(58.9)	1.058	.304
Appropriate behaviours in children and adolescents with behavioural disorder should be rewarded	33(45.2)	40(54.8)	61(83.6)	12(16.4)	23.417	<.001*
Simple clear and concise instructions should be given to control behaviour in children and adolescents with behavioural disorders	62(84.9)	11(15.1)	73(100.0)	0	11.896	.001*
Children and adolescents with mental disorders can attend regular school	42(57.5)	31(42.5)	54(74.0)	19(26.0)	4.380	.036*
Parents of children and adolescents with mental health problems should be involved in the treatment plan of their children	60(82.2)	13(17.8)	69(94.5)	4(5.5)	5.393	.020*
Treatment of children and adolescents with mental health problems should be multidisciplinary	27(37.0)	46(63.0)	43(58.9)	30(41.1)	7.026(b)	.008*

4.11 Effect of Intervention on Knowledge and attitude scores (Mean Scores)

Table 4.14 summarises knowledge and attitude scores of all respondents at the two time points. The result obtained showed that there was a significant difference in the mean knowledge score before and after the training intervention in the intervention group (t=-4.375, P≤0.001), with higher mean knowledge score post-intervention (61.6±2.9) than pre-intervention (58.4±4.4). There was also a significant increase in the mean attitude score post intervention, compared to pre-intervention (t=-5.311, P≤0.001). Furthermore, there was a significant increase in the mean attitude score between the pre intervention and post intervention stages (t=2.537, P≤0.012).

Table 4.14 : Comparison of knowledge and attitude mean scores

Stages	N	Mean	STD	t-test	P
Knowledge					
(Intervention Group only)					
Pre- intervention	73	58.4	4.4		
Post- intervention	73	61.6	2.9	-4.375	<.001
Attitude					
(Intervention group only)					
Pre- intervention	73	19.9	2.5	-5.311	<.001
Post- intervention	73	21.8	2.6		

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 DISCUSSION

The study was designed to evaluate the knowledge and attitude of CHO students in Ibadan about child and adolescent mental health, and to determine the effect of a training intervention on the recognition and assessment of child and adolescent mental health. Briefly stated, results indicated that respondents in both the intervention and control arms of the study had similarities regarding their knowledge and attitude to children and adolescents with mental disorders at baseline. The effect of the health education intervention was such there was a significant increase in knowledge and increase in positive attitude towards children and adolescents with mental disorders. According to Tossavainen et al. (2004), health promotion, education and intervention focuses on the development of the whole person, viewing the total individual in a total environment, and Health promotion and health education are important components of the role of Health Professionals in giving care to patients with mental illness.

5.1.1 Socio-demographic Characteristics

Analysis of the socio-demographic characteristics of all the respondents in both the intervention and control groups showed that the highest number of participants was found in the age bracket 30 to 49 years. This may be a result of the fact that some of the enrolees into the school had worked at some point in time after obtaining the Health Extension degree before returning to advance their study. Therefore they may be more representative of the knowledge of primary care workers already in the field as well as still in training. Female to male respondents' ratio was found to be 4 to 1 in all respondent groups, indicating that there were

more female respondents in each of the groups in this study. Also there were no significant differences between participants in the two groups in terms of level of education and year in school. Thus in general, both the intervention and control arms of the study were found to have similar socio-demographic characteristics may be effective comparative groups.

5.1.2 Changes in Knowledge of all respondents about mental disorders in general

Findings from this study show roughly similar patterns in the responses of intervention and control group participants to items measuring knowledge about child and adolescent mental disorders at baseline. The results showed no significant differences between the two groups. This establishes a foundation on which comparison of the effect of the intervention can be judged. The reported rates of prior exposure to mental health information in each group was found to be similar; with just about half in each group having received some form of prior information about mental health. For a disorder as common as mental illness reported with a lifetime prevalence of one in every 5 person, this proportion of prior exposure is very low. This has been similarly observed worldwide. According to Jorm (2011), 'mental health literacy' is a much neglected aspect of education even among health care workers, with the resultant effect of healthcare workers showing negative reactions to those who have been diagnosed with a mental health disorder.

After the training intervention, findings from this study showed a significant increase in correct responses to questionnaire items measuring knowledge of child and adolescent mental disorders.

Improved responses were observed in areas regarding the predictability of mental illnesses in children and adolescents, presence of violence and violent behaviours, aetiology of mental illnesses and un-relatedness to spiritual attacks.

5.1.3 Changes in Knowledge of all respondents about conduct disorder

Findings from this study essentially revealed little or no significant difference between the intervention and control groups, in terms of responses to items measuring knowledge of respondents about conduct disorder at baseline. There was generally poor knowledge about conduct disorders among the respondents, with incorrect responses observed in the identification of symptoms of conduct disorder and confusing the hyperactivity as a symptom of conduct disorder. In a study among teachers by Kos, Richdale, and Jackson (2010), the authors reported that teachers have limited and inaccurate knowledge about mental disorder and often provide inappropriate information about the condition to parents. Such limited knowledge may be a reflection of low levels of knowledge in the community, a situation which may also explain the low rates we found among CHOs in our study.

However, after the intervention there was a significant increase in the proportion of participants who gave accurate responses to questions or items measuring knowledge of conduct disorder. There were improvements in responses regarding for example the prevalence of conduct disorder, the symptoms and the management guideline involved in managing conduct disorder. The effects of this intervention to improve knowledge on conduct disorder was supported by Sarraf, Karahmadi, Marasy and Azhar (2010), whose study findings revealed that the improvement in knowledge of conduct of pupils, attitude towards affected children, and knowledge of disruptive Behavioural disorders after training sessions.

5.1.4 Changes in Knowledge of all respondents about Attention Deficit Hyperactivity Disorder (ADHD)

Findings from this study revealed several misconceptions about the prevalence, symptoms and management of ADHD among the entire sample of respondents at baseline. There was very high rate of incorrect responses with over 80 per cent of respondents giving incorrect responses to questions about ADHD symptoms and management. These findings are in line with the study by Jimoh (2014) among 250 teachers from 10 public and 10 private schools in Lagos,

Nigeria, which reported deficiencies in their knowledge as well as negative attitudes towards pupils with ADHD.

However, after the intervention there were significant increase in the accurate responses to items assessing knowledge about ADHD. Significantly more respondents gave correct responses to regarding the age of onset, the common signs and symptoms, aetiology and heritability of the condition. The study findings also suggested that there was an improvement in understanding of management processes post-intervention. There was a significant increase in the proportion of participants who agreed that various accepted modes of management were helpful in the management of ADHD, including medications and behaviour modification techniques. In addition, significantly fewer respondents endorsed the use of punishment in ADHD, after the intervention. The possibility that health education in this study was an effective approach to improving knowledge and attitude of CHOs to mental disorders in children supports the findings reported by Murray (2009) who utilized a one-week training intervention, in addition to internet-based training, to improve the knowledge . These interventions appear to have produced rapidly improved knowledge about ADHD, with benefits lasting for up to 6 months.

5.1.5 Changes in Attitude of all respondents toward mental disorders in general

At baseline, participants in both sample groups had generally negative attitudes. This negative attitude has been smlarly reported in studys conducted in other parts of the country. For example, a study among 144 primary school teachers in Lagos Nigeria, Adeosun et al. (2013) reported negative attitudes towards pupils with ADHD. Lack of knowledge and experience regarding mental illness of lay people are sad to be mostly responsible for misperceptions and negative attitudes (Corrigan & Gelb, 2006). It is known that an individual's knowledge regarding mental illness plays an influential role in shaping attitudes and perceptions about schizophrenia, and a lack of such knowledge could contribute to avoidance and social

distancing behavior (Esterberg, Compton, Mcgee, Smith, & Hochman, 2008). Furthermore, a major contributor to such negative attitudes is a lack of opportunities to receive education regarding mental illness.

The results of this study showed that after the health education sessions, significant improvements in the proportion of respondents with positive attitudes toward mental health disorders in children and adolescents was observed. After the training, a significantly smaller proportion of intervention group participants agreed with items that described negative attitudes. Such items included being "upset or disturbed if one's child or relative were in the same school or in the midst of children with mental disorders". Similarly, there was a significant rise in agreement with items that described positive attitudes such as "would you allow your relative to maintain a friendly relationship with a child or adolescent with mental illness?", and "would you be comfortable to have children and adolescents with mental disorder as patients under your care?" at the post-intervention stage.

In a study by Mohr et al (2008), it was suggested that effective interventions may require reinforcement at regular intervals in order to bring a sustainable change in perceptions about a subject matter.

5.1.6 Change in Attitude of all respondents toward behavioural disorders

Findings from this study show roughly similar patterns in the responses of intervention and control group participants to items measuring attitude towards behavioural problems in children and adolescents at baseline. This study also found a significant difference between respondents' attitude to behavioural disorders after the intervention. There was a significant decrease in the proportion of intervention group participants who agreed with items which described negative attitudes after the health education intervention. Such items included statements such as: "a hyperactive, inattentive child should always be punished''. Also, there was a significant increase in the proportion of respondents who endorsed questionnaire items

indicating positives attitude, such as “behavioural disorders in children and adolescents are best managed with medication”, “appropriate behaviours in children and adolescents with behavioural disorder should be rewarded”, “simple, clear and concise instructions should be given to control behaviour in children and adolescents with behavioural disorders”, “children and adolescents with mental disorders can attend regular school”, “parents of children and adolescents with mental health problems should be involved in the treatment plan of their children” and “treatment of children and adolescents with mental health problems should be multidisciplinary”.

The implication to this result is that attitude to behavioural disorder in child and adolescent after health education intervention underwent significant changes. These findings are in support of those of numerous other studies which suggest that provision of accurate information on mental illness plays a potential role in modifying public attitude. For example, Rebecca et al (2012) revealed that mass media and multi component campaigns have shown some promising results in terms of positive changes in attitude of society towards mental illness. Boysen et al (2008) pointed out that evidence from studies of intervention by education about mental illness suggests that people with a better understanding of mental illness are less likely to endorse stigma and discrimination.

5.1.7 Overall Change in Knowledge and attitude among respondents

The present study showed there was no significant difference in the mean knowledge score between the intervention and control groups at baseline. There was a however a significant increase in the mean knowledge score of the intervention group after the intervention. These findings suggest that the training was effective in improving the knowledge of the participants regarding mental health issues in children and adolescents. These effects correspond with the

recognised functions of mental health promotion strategies put forward by McCollam et al. (2008).

There was also a significant increase in scores reflecting positive attitude to child and adolescent mental health disorders after the intervention, compared to before it. This is in keeping with the findings of Boysen et al (2008) who revealed that evidence from studies of interventions involving education about mental illness suggests that people with a better understanding of mental illness are less likely to endorse stigma and discrimination.

5.2 LIMITATION OF STUDY

This study had a number of limitations. One major limitation is the fact only a single pre-intervention assessment of the control group was done, making it impossible to compare both groups independently at different time points.

Also, the post–intervention assessment was conducted immediately after the intervention, making it impossible to know whether any changes observed would be sustained in the medium or long time.

5.3 CONCLUSION

The results of this study showed that low levels of knowledge and negative views about individuals with mental illness were obvious at baseline. The effect of the intervention was demonstrated by significant change in the responses of the respondents regarding mental illness in general, and behavioural and conduct disorder in particular. A significant improvement was obtained after health education was instituted as an intervention in this study.

5.4 RECOMMENDATION

The results of this study show that community health officers in Ibadan, Nigeria have poor knowledge and negative attitudes about child and adolescent mental health:

- Further research in this area should be carried out among larger samples of CHOs, giving the importance of their roles in field work to the provision of child and adolescent mental health care in resource-constrained settings.
- Child and adolescent mental health should be included in the study programme of community health in the State-run training institutions.
- Future studies may need to increase time allocated for the intervention and also reinforce the intervention with other cost-effect strategies such as telephone messages or electronic mails.
- Vigorous training and advocacy program with regards to child and adolescent should be encouraged for trainee community health officers.

APPENDIX

INFORMED CONSENT LETTER

Dear Respondent,

I am **KASALI OLUYEMISI** an M.Sc student of the Centre for Child and Adolescent Mental Health (CCAMH), University of Ibadan, Oyo State, Nigeria. The aim of this survey is to assess the effectiveness of child and adolescent mental health education on knowledge and attitude of CHO students in Ibadan. We appreciate your participation; however, your participation is voluntary. Please note that information obtained will be treated with absolute confidentiality and participation is entirely voluntary. Kindly give honest responses as any wrong information may affect the validity of the result obtained for this research. Only the researcher and members of the research team will have access to any information provide. Thank you.

Statement of study participant giving informed consent:

Now that the study has been well explained to me and I fully understand the content of the study, I hereby agree to participate in the study.

Date: _____/_____/____ Signature: _____ Phone number: _____

Statement of research assistant obtaining informed consent

I have fully explained this research to the respondent and have given sufficient information, including on the research risks and benefits, to make an informed decision.

Name: _____ Signature: _____ Date: __/___/____

QUESTIONNAIRES

PART 1: SOCIO DEMOGRAPHIC CHARACTERISTICS

Serial Number: ……..

Date of interview: ……..

Phone number: ……

1. Age at last birthday (years): ……..

2. Gender:

☐ Male ☐ Female

3. Religion:

☐ Muslim ☐ Christian

☐ Non Religious ☐ Other (please specify)…….

4. With whom do you live?

☐ Parent ☐ Relatives

☐ By myself ☐ Others (please specify)……

5. School year?

☐ First year ☐ Third year

☐ Second year ☐ Fourth year

6. What is the maximum highest level of education attained by you?

☐ Tertiary ☐ Secondary

☐ Primary ☐ Others(please specify)

1. Have you had any prior exposure to mental health information?

☐ Yes ☐ No

2. If yes to the above, What was the Source of the mental health information?

……

3. Do you have any individual (child or adult) with a mental illness either among your family members, friends, neighbours or colleagues etc?

☐ Yes ☐ No

PART 2 GENERAL KNOWLEDGE AND ATTITUDE QUESTIONS

S/No		Agree	Disagree	Not sure
1	Mental illness is rare in children and adolescents			
2	Children with mental disorders are difficult to interact with			
3	'Imbecile' and 'Moron' are types of metal disorders found in children			
4	Children and adolescent with mental illness are likely to be violent			
5	Mental illness in children can be caused by traumatic events			
6	Children who live in poverty are not any more likely to have mental illness than children who do not live in poverty			
7	For children and adolescents with mental illness their families are to blame for this			
8	The root cause of mental illness in children is a curse in the family			
9	Children with mental disorders are possessed by demons			
10	Children and adolescents with mental illness can recover			
11	Children and adolescents with mental illness have inherited weak genes from their parents			
12	Children and adolescents with mental illness are unpredictable			
13	One in five children and adolescents will develop mental illness over the course of their lifetime			

14	Supernatural power can be used to afflict mental illness on a child or adolescent			
15	Mental illness in children and adolescents is caused by spiritual attack			
16	Parents with mental illness always transmit these disorders to their children			
17	Children and adolescents do not have depression			
18	Children do not have psychosis just behaviour problems			
19	Mental illness in children and adolescents cannot be treated			
20	Poor academic performance is a type of mental disorder			
21	Untidy appearance in a child is a sign of mental disorder			
22	Using a cane to beat or threaten a child is a way to manage their behaviour when they are restless and unable to sit still			
23	Their juvenile remand home is a good place to manage children with mental disorders			
24	Children with mental disorders should be taken to religious houses for treatment			
25	Health workers can be trained to manage children with mental disorder			
26	Treating mental illness in children is always very expensive			
27	Would you feel afraid to talk to children and adolescents with mental illness			
28	Would you be upset or disturbed if your child or relative were in the same school or in the midst of children with mental disorders			

29	Children with intellectual disability should not be allowed to attend school with normal children			
30	Would you allow your child or relative to maintain a friendly relationship with a child or adolescent with mental illness?			
31	Would you be embarrassed if your friends knew that someone in your close family had child or adolescent with mental illness			
32	Would you be comfortable to have children and adolescents with mental disorders as patients under your care?			
33	Do you feel children and adolescents who are mentally ill should be nursed with other children with physically illnesses?			
34	Child and adolescent mental health problems can be prevented within the same public health frame work as communicable diseases			
35	Do you feel child and adolescent mental disorders can be successfully treated in hospital?			
36	What words would you use to describe a child or adolescent with mental disorders?			

PART THREE: QUESTIONS ON BEHAVIOURAL DISORDER

S/No		Agree	Disagree	Not sure
1	Mental illness can occur in children and adolescents			
2	Psychiatric disorders in children are commoner in females than males			
3	Conduct disorder occurs more in males then females			
4	Up to 4% of children have conduct disorder			
5	The following are symptoms of conduct disorder			
	a. Running away from home			
	b. Lying			
	c. Stealing			
	d. Inattention			
	e. Sadness			
	f. Truancy			
6	Possible causes of conduct disorder include			
	a. Parental divorce			
	b. Criminality in father			
	c. Desire for attention			
7	Conduct disorder can be managed by			
	a. Behavioural Modification techniques			
	b. Cognitive behavioural technique			
	c. Group therapy			
	d. Drugs			
8	Attention deficit hyperactivity disorder(ADHD) occurs in children and adolescents			
9	ADHD is more common in males than in females			
10	ADHD does not occur in adolescents			
11	Common signs of ADHD include:			
	a. Impaired attention			
	b. Over activity			

	c. Impulsivity			
	d. Laughing to self			
12	ADHD is apparent before the age of 6years			
13	Possible causes of ADHD include			
	a. Brain abnormalities			
	b. Genetic factors			
	c. Diet			
	d. Food allergy			
14	ADHD is best managed by:			
	a. Medication			
	b. Punishment			
	c. Behaviour modification techniques			
15	A hyperactive, inattentive child should always be punished			
16	Behavioural disorder in children and adolescents are best managed with medication			
17	Appropriate behaviours in children and adolescents with behavioural disorder should be rewarded			
18	Simple clear and concise instructions should be given to control behaviour in children and adolescents with behavioural disorders			
19	Children and adolescents with mental disorders can attend regular school			
20	Parents of children and adolescents with mental health problems should be involved in the treatment plan of their children			
21	Treatment of children and adolescents with mental health problems should be multidisciplinary			

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