

MENTAL HEALTH KAP OF HEALTH CARE WORKERS/BELIZE

EFFECTS OF A MENTAL HEALTH TRAINING PROGRAM ON HEALTH CARE
WORKERS' KNOWLEDGE AND ATTITUDE AND PRACTICE IN BELIZE

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ABSTRACT

This study was conducted to assess mental health knowledge, attitude and practices among health care workers in Belize before and immediately after a competency based training program in mental health. A baseline Knowledge, Attitudes and Practices (KAP) survey was given to health personnel, mainly nurses, working primary and secondary care. The intervention was a 13-week face-to-face training course for health care professionals with the objective of increasing their competency in mental health and reducing stigma. After the training a post intervention KAP survey was conducted among the original respondents. 88 health care workers completed the baseline survey and 61 of those respondents completed the post-intervention questionnaire. The results showed that the level of knowledge of the participants had improved by the training intervention and that in general, the intervention was effective in correcting some misconceptions about mental illness and reducing stigmatizing attitudes among the participants.

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AUTHOR'S DECLARATION

I declare that this work is original except where indicated by special reference in the text and no part of the dissertation has been submitted for any other degree. Any views expressed in the dissertation are those of the author. The dissertation has not been presented to any other university for examination.

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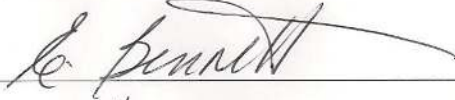
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ABBREVIATIONS

HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
KAP	Knowledge, Attitudes and Practices
KHMH	Karl Heusner Memorial Hospital
LAMIC	Low- and Middle- Income Countries
MGD	Millennium Development Goal
NCD	Non-Communicable Disease
NDACC	National Drug Abuse Control Council
PAHO	Pan American Health Organization
PHC	Primary Health Care
PHN	Public Health Nurse
PNP	Psychiatric Nurse Practitioner
RHN	Rural Health Nurse
UB	University of Belize
WHO	World Health Organization
WHO-AIMS	World Health Organization- Assessment Instrument for Mental Health Systems
WONCA	World Association of Family Doctors

CHAPTER 1: INTRODUCTION

Mental health remains a low priority on the agenda of many health ministries around the world which fuels the vast unmet need in mental health treatment (Patel 2007; Wasylenki 2010). In some low-income countries, a treatment gap of over 85% exists for mental disorders. The “treatment gap” refers to the total difference between the true prevalence of a disorder and the treated proportion of individuals affected by the disorder (Kohn, Saxena, Levav & Saraceno 2004). This gap exists despite evidence showing that mental health care can be effective and affordable especially if non-specialized workers were trained to deliver interventions in a stepped-wise manner (Patel & Prince 2010). In the World Health Organization’s (WHO) *World Health Report 2001*, it was stated that mental health disorders were increasingly being identified as major contributors to the global health burden with more than 30% of the years lived with disabilities (YLD) being attributed to such disorders. About 450 million people were estimated to be suffering from a mental health disorder and approximately one in four families currently had one or more of their members suffering from such disorders.

Mental disorders are accompanied by tremendous direct and indirect burden. The burden of distressing symptoms is amplified by stigma and discrimination which impairs the individual’s ability to participate in work and leisure activities. Likewise, families and caregivers are also burdened by stigma and discrimination due to their association with their ill relative which affects their ability to provide physical and emotional support. For families with a member diagnosed with a mental disorder, the unquantifiable burden of suffering and lost opportunities is borne as time and financial resources are expended (World Health Report 2001).

The understanding of mental health disorders has improved significantly over the past five decades due to advances in scientific knowledge and treatment and the need to protect the human rights of individuals receiving care in community and in institutions (WHO 2003). Consequently, there has been less focus on institution-based care with greater attention placed on delivering mental health interventions through general health systems and improving community mental health services.

Mental health service reforms in Latin America and Caribbean countries began around the 1960s with community mental health initiatives and the call for integrated mental health services and alternatives to care centered on mental hospitals. These efforts were later strengthened as a result of the underlying measures proposed in the Declaration of Caracas in 1990 at the Conference on

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Restructuring Psychiatric Care in Latin America (Caldas de Almedia, 2008). These measures to address the mental health needs of the people of the Americas included integration of mental health into primary care, development of services in the community, and combating the stigma that accompanies the diagnosis of a mental disorder (Periago, 2005). According to the WHO and the World Association of Family Doctors (WONCA), many best practices to realize these reforms in mental health systems exist however, no one model will be suitable for all countries but the general principles can be used appropriately and successful reforms can be accomplished (WHO/WONCA 2008).

The Belize Mental Health Policy has as a central objective the improvement of access to mental health care for the population in the communities where they live (Ministry of Health Belize National Mental Health Policy 2010). The policy proposes the integration of mental health into primary health care as a major strategy to achieve this goal. A very important step to integration is increasing the capacity of primary care workers through training to adequately prepare them to care for persons with mental illness in their communities. Suitable training of primary care workers on mental health issues is essential for mental health integration to equip them with the appropriate knowledge and skills required to effectively assess, diagnose, treat, support and refer persons with mental disorders. Training must attempt to demystify and normalize the existence of mental illnesses and address the tendency for health staff to endorse the same stigma held by the broader society toward people with mental illness (WHO/WONCA 2008).

In Belize, health care providers in the primary health care and in the community routinely encounter persons with mental illness in their work. This is not surprising since studies estimate that about one-fourth of persons seeking services in primary health care suffer from a psychiatric disorder (Sartorius *et al* 1996). Additionally, persons with mental disorders now seek care in the community where they reside due to mental health services reform which involved the closing of the mental hospital and the establishment of balanced care. Thornicroft and Tansella (2003) describe balanced care as a model in which mental health care is provided in or near the communities of the population served. If needed, hospitalizations at the nearest general inpatient facility are brief and used only if no other alternatives exist. Prior to these changes, the confidence, knowledge and skills of community health care providers regarding working with persons with mental illness was not assessed. Ignacio and colleagues (1983) found that at the primary care level there was a lack of knowledge concerning

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mental health problems which was associated with their under-detection, limited knowledge in psychotropic drug therapy and an inability of personnel to visualize the practical forms mental health care that can be implemented at this level. Likewise, primary health care providers often report a lack of skills in caring for persons with mental illness (Harms, 2009). Such skills include behavioral science skills such as interviewing, counseling and interpersonal skills (WHO 2007). However, in a study conducted by Iezzoni (2006) involving a focus group of medical students from two Boston universities, it was discovered that in some cases the “lack of skills” especially in interviewing people with mental health disorders was primarily due to the interviewees’ perception of being unsafe in the presence of those persons. This perception of dangerousness regarding the mentally ill is as a result of stigma that is intricately attached to mental illness (Watson & Corrigan 2001), Stigma is a powerful attribute that discredits an individual in social relationships (Byrne, 2000). Stigma is complex and is often rooted in ignorance (Thornicroft, Rose, Kassam & Sartorius 2007). It involves labeling someone as being mentally ill which invariably generates negative perceptions such as persons with mental illness are dangerous. Subsequently, persons known to have mental disorders are prejudged and stereotyped which lead to social distancing. Discrimination against the mentally ill often ensues (Angermeyer 2003; Watson & Corrigan 2001). In addition to the perception of being dangerous, persons with mental illness are also widely perceived as being weak, violent, and incompetent and are responsible for their illness (Watson & Corrigan 2001). According to Watson and Corrigan persons with mental illness are painfully aware of the stigma of their group and internalize these perceptions and stigmatize themselves. Self-stigma negatively affects the self esteem and self efficacy of persons with mental health disorders.

Stigma is prevalent among the general public (Corrigan 2002) and its pervasiveness has been studied among groups including the police (Ruiz, 1993), teachers and students (Zahid, 2006) and health professionals (Sartorius, 2002). These studies reveal the presence of varying degrees and patterns of stigma towards persons with mental illness which influences the relationship between them and members of these groups. Stigma seems to be prevalent even among those in the mental health field including psychiatrists who have been credited with advanced knowledge and training to assist persons with mental illness. (Thornicroft, Rose & Mehta 2010). The endorsement of stigma by health care providers adversely affect the care they deliver and presents a major obstacle to good mental health care thus affecting the quality of life of persons with mental illness (Sartorius, 2002). Stigma has also been shown to have a negative effect on health-seeking behaviors among the mentally ill

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(Watson & Corrigan, 2001). People do not access care “because they do not want to be labeled a “mental patient” nor do they want to suffer the prejudice and discrimination this label entails” (Watson & Corrigan 2001. Pg. 2).

Healthcare providers are constantly interfacing with the community and as a result are well-positioned to tackle the problem of stigma (Pinto-Foltz & Logsdon 2009). Their endorsement of the stigma of the general public towards those with mental health disorders can be positively altered through educational programs that focus on improving knowledge and competencies related to mental health and illness (Pinto-Foltz & Logsdon). It is critical that health care practitioners improve their mental health knowledge and overcome negative attitudes toward persons with mental health disorders to provide effective and quality care.

Stigma involves “problems with knowledge (ignorance), attitudes (prejudice), and behavior (discrimination)” (Thorncroft 2007). Because there is the tendency for health care providers to endorse stigma towards persons with mental illness, it was necessary to assess the knowledge, attitude and current practices of health care providers selected to participate in a training program aimed at extending mental health care to rural communities in Belize. A self-administered KAP survey was designed and delivered into two parts: first, a pre-training survey was administered immediately before the launching of a training program. A preliminary assessment of the results was generated and the findings were used to guide the development of the training curriculum and the delivery of the lectures by the facilitators. A post-intervention survey was given to sixty-one participants who had completed the training program. The results of the two surveys were compared to ascertain the effects, if any, of an educational program on health care providers’ knowledge, attitude and practices. The results of this study will provide insight into the endorsement of stigma by health care professionals towards persons with mental illness particularly among health care providers in Belize. To the author’s knowledge, studies on the stigma and its effect on delivery of mental health care have not been previously conducted among this population. It is expected that the results of this survey will highlight factors in particular cultural ones that perpetuate negative attitudes towards persons with mental health disorders. This study will also be useful to inform the development of strategies aimed at eliminating stigma as a barrier to mental health care and the provision health protection to persons with mental illness. It will provide an opportunity to engage

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health professionals and nurture conscious awareness of stigma and its implications for access to community mental health services.

Much is already known about the deleterious effects of stigma and the benefits of training in combating it (World Health Report 2001). High expectations are being placed on this mental health training program to address perceived deficiencies of knowledge, attitude and practices among these health professionals. It is clear that training and mental health education is valuable only if these community-based health workers adopt good practices and compassion outside the classroom.

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Background

Belize is situated on the Caribbean coast in Central America just south of Mexico. The country shares a border to the west and south with Guatemala and the eastern border is



the Caribbean Sea. Belize was a colony of Great Britain and was previously named British Honduras. It achieved full independence on 21st September 1981. Belize has a land area of 22,960 sq. km and is the only English-speaking country in Central America.

Belize has strong ties with

its Central American neighbors but despite its geographic location it resembles Caribbean countries in its political structure, culture and economy (PAHO 1998). Belize is divided into six districts: Corozal, Orange Walk, Belize, Cayo, Stann Creek and Toledo and is comprised of two cities, seven towns and 191 villages. The capital city, Belmopan is located in the Cayo District and is where the headquarters of the government is located. According to the 2010 Population and Household Survey, the estimated population was 312,698 with almost equal proportions of women and men. There are five major ethnic groups in Belize with each group having distinct cultural features that separate them from each other. The two largest groups are the Mestizo which comprises approximately 50% of population and the Creole which accounts for 21%. Historically, the English-speaking Creole had been the dominant ethnic group but due emigration to countries such as the United States and the influx of Spanish-speaking immigrants from Central American countries, the language orientation of the Belizean population is changing. Other ethnic groups include the Maya (10%), Garifuna (4.6%), Mennonites, Chinese and others. About 52% of the population of Belize lives in rural areas which is where many

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immigrants from neighboring Central American countries reside (Statistical Institute of Belize, 2010).

The country is a democratic state and the government operates under the principles of a parliamentary democracy. The Cabinet is comprised of the Prime Minister and other elected and appointed ministers who manage different portfolios, including health.

The Ministry of Health manages public health care which delivers services through a network of institutions at the primary, secondary, and tertiary levels. The system has undergone sector restructuring as a part of the Health Sector Reform Project and has been divided into four regions – northern, central, western and southern. Health facilities which consist of hospitals, polyclinics and health centers deliver health services, including pharmaceuticals and vaccinations, at no or very minimal cost to Belizean citizens. There are seven public hospitals, one in each district and one in the capital city, Belmopan. Karl Heusner Memorial Hospital which is located in the Central Region is the national referral hospital and provides general and specialized services for primary, secondary, and some tertiary care. District hospitals function as primary care level facilities and provide some secondary care as well. There are 75 public health facilities providing primarily primary health care services. Forty (40) of those facilities are considered health centers and thirty five (35) rural health posts. Health centers provide a variety of maternal and child health services as well as general health education. Each center serves 2,000 to 4,000 persons, and most also provide a mobile clinic that visits smaller and more remote villages every four to six weeks. Mobile clinics account for approximately 40% of the centers' service delivery which are provided at rural health posts where they exist. Services in mental and dental health are also provided through this public facility network usually by specialists who conduct regular mobile clinics to the communities.

The District of Belize has the greatest density of health care providers relative to its population while the Cayo District has the lowest relative density. Urban health care providers out-number rural health workers by a factor of 6.4 to 1. Although 52% of the population of Belize lives in rural areas, only 13.6% of health care providers reside there.

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As a result, distant communities with high proportion of rural and indigenous population are underserved by physicians, nurses and other health professionals (PAHO 2009).

The University of Belize took over basic nursing education from the Bliss School of Nursing in 2002 and now offers Bachelor's Degree programs as well as various certificate programs in nursing. To date, nurses represent 66.25% of healthcare professionals in the country. Advance level training programs such as Psychiatric Nursing and Public Health Nursing are offered on a demand basis. The majority of nurses are Belizean nationals however there is a representation of other nationalities such as Nigerians, Cubans and Nicaraguans in the workforce. Belize has a nursing population of 469 nurses where 328 are Professional Nurses and 141 are Practical Nurses. Of the trained nurses, 65 are Rural Health Nurses and 8 are Public Health Nurses. Most Professional and Practical Nurses work in secondary care facilities while the Public Health and Rural Health Nurses work in community health centers in rural and remote areas outside cities and district towns. These nurses are generally the first point of contact for the provision of health care prevention and promotion. Support services are located at regional and community hospitals which are accessible by road or by boat as in the case of the two health centers located on off-shore cayes.

Because of the community approach to nursing, the Public and Rural Health Nurses were taught skills in emergency care, maternal and child health care and management of chronic illnesses. Skills in the management of mental illnesses are inadequate as both the Public Health and Rural Health Nursing training curricula do not possess a psychiatric nursing component. Despite this, the community nurses are expected to manage medications and provide other mental health care and support to persons with mental illness and their families as they are often the only health personnel in many rural communities. As a result, these communities are largely underserved in mental health services as psychiatric clinics to these areas are provided through sporadic mobile clinics conducted by the Psychiatric Nurse Practitioner (PNP). Limited human resources, lack of transportation and long distances are some of the issues that contribute to PNPs contend with to provide services to these areas. On these mobile clinics, the PNPs liaise with the community nurses but due to their minimal training in mental illness management, the

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community nurses do not routinely provide care for individuals suffering from mental health disorders and emotional problems.

Over the past two decades, the Belize Mental Health Program has been gradually transforming the mental health services with the aim of creating an integrated, cost effective and equitable district-based health care system (WHO/WONCA 2008). The impetus for these reforms was to make accessible good quality mental health care within a mental health service that was concentrated around inpatient admissions and custodial care. Also there was a growing awareness of the numerous mental health challenges affecting the nation that had the potential to negatively impact the mental health of the citizens. The adverse psychological effects of deprivation due to a high level of poverty, the skyrocketing crime rate that threaten the security of many communities and the seasonal exposure to life-threatening hurricanes are among the challenges that were and are still facing the nation of Belize.

The burden of mental health disorders in Belize have never been studied to determine the magnitude of the problem however statistical information from the Ministry of Health (MOH) indicate a steady increase in the number of consultations for mental health disorders in the mental health clinics throughout the country over the past few years. It is estimated that approximately 25,000 adults in Belize are likely to be impacted by mental health disorders including psychotic disorders, depression, anxiety disorders, and substance abuse (PAHO 2008). It is also estimated that lower and middle income countries (LAMIC) such as Belize, have an average one-year prevalence rate of 1.0% for psychotic illnesses including schizophrenia, 4.9% for major depression and 5.7% prevalence rate for alcohol use abuse or dependence. It is approximated that over one-third of individuals with nonaffective psychosis, over half of those with an anxiety disorder, and some three-fourths of those with alcohol use abuse or dependence did not receive mental health care from either specialized or general health services. Only 49% of them receive any form of treatment, reflecting a substantial treatment gap in the population validating the fact that the burden of mental disorders is enormous and the gap between what is needed and what is available is extensive (Kohn, et al 2005).

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Belize has a progressive mental health policy that promotes the principles of community based care and integration of mental health into primary health care. This is primarily because integrating mental health into primary health care has been shown to have widespread benefits including the reduction of mental health care costs and provide the best practice in the provision of treatment, rehabilitation and general care of psychiatric patients. In addition, primary health care offers the most suitable delivery model since common mental disorders can either be prevented or managed successfully at this level (WHO 1998).

The psychiatric nurse practitioners' training program involved the training of generalist nurses in order to equip them with advanced knowledge and clinical expertise in assessment, diagnosis, and health care management of mental health disorders. Upon the completion of the training program the psychiatric nurse practitioners were deployed to mainly primary health care facilities where they immediately began to offer comprehensive and daily hands-on service to children and adults in their communities. They also provided consultation liaison services to general hospitals and inpatient management of persons admitted to ward for acute mental health conditions. In addition, they collaborated closely with other health professionals at the health facilities as well as provided consultation and referral services to community agencies and departments. Because of the important design feature of the autonomy to the Psychiatric Nurse Practitioners to diagnose and treat patients on their own they quickly became the backbone of the mental health system. This design component led to the Belize Mental Health Program being selected as one of twelve best-practice sites from around the world in 2008 by the World Health Organization in their book *Integrating Mental Health into Primary Care* (2008). In an article entitled *Prioritizing Mental Health Services in the Community* (WHO/ Ministry of Health-Belize, 2009), the Psychiatric Nurse Practitioners Community Mental Health Program was listed as a key achievement of the Belize Mental Health Program because of the resulting reduction in psychiatric hospitalizations and a sustained increase in the number of patients seen in the outpatients clinics. Subsequently, there was a reduction in the need for long-stay custodial care, the decentralization of

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mental health care and the early stages of integrated mental health care at the primary care level.

Presently the mental health Service in Belize is largely community-based, with seven urban mental health clinics staffed primarily by 18 Psychiatric Nurse Practitioners (PNPs). Three psychiatrists provide supervision and support to the PNPs on a regular basis. Most clients seen by the PNPs are self or family referred while other referrals come from general outpatient clinics, the human services department, schools and other community organizations. There is usually an adequate but limited supply of psychotropic drugs that are provided by the government however private pharmacies provide a wider selection. There is one long stay sheltered facility with 22 beds located in the capital city of Belmopan and inpatient admissions to a limited number of hospital beds on the general ward are allowed for acute cases.

In a recent assessment of the mental health system in Belize conducted using the World Health Organization - Assessment Instrument for Mental Health Systems (WHO-AIMS 2009); it was shown that stigma presents significant barriers to the integration of mental health services. This report described stigma as being “pervasive” (Page 26) and was still widely experienced by persons with mental illness despite efforts to integrate mental health at the community level. Among the other important barriers identified by the report were the lack of fully integrated services and a deficiency in infrastructure to improve access to mental health care in one’s community (WHO-AIMS). In response to these findings, the mental health program perceived that developing the workforce by providing training in basic mental health competency for community and primary health care workers would be a major first-step in overcoming these barriers. The World Health Organization (WHO) recognizes that human resources are the strength of a mental health service and encourages the improvement of their competency in mental health promotion, and in prevention, treatment and management of mental illnesses as a viable strategy to integrate mental health into primary health care. Any strategy to integrate mental health into general health care has to examine and address stigma for its successful implementation as both health professionals and the public alike have been known to

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harbor negative attitudes and behaviors towards persons with mental illness (WHO/WONCA). In addition to training, adequate distribution of trained staff within the country is central to improving the acceptability, accessibility and affordability of mental health care in countries where only limited human resource for mental health exist. The WHO Human Resources and Training in Mental Health Manual (2007) describes competency training in mental health as involving the improvement of mental health knowledge and judgment, practical and interpersonal skills and the range of personal qualities and attitudes. The WHO recommends that training at primary health care level develops important skills such as detection and treatment of mental health problems, mental health promotion and behavioral science skills such as interviewing, counseling and interpersonal skills.

Despite the psychiatric nurse practitioners scheduling monthly mobile clinics to rural communities, these areas were still underserved due to the long interval of visits and the frequent unavailability of transportation for mobile visits. At the clinic level full integration into primary health care was not achieved as there was little collaboration between general and mental health services although they coexisted at the same facilities. The most common disorders being managed by the mental health services in the primary health care clinics continued to be the psychotic illnesses (WHO-AIMS 2009) while those mental illnesses representing the majority of the burden of diseases such as depression and anxiety were underrepresented in the mental health services statistics. It was unclear if persons with these disorders were receiving care in the general health service or if these conditions were not being identified. It was anticipated that through this training project, the community nurses would be competent in identifying mental disorders, including Depressive Disorders and would be able to provide basic care in those cases. Referral of complex cases would be made to specialist services at the outpatient clinics which were serviced by the psychiatric nurse practitioners.

Challenges in Mental Health Care: An Overview

Negative attitudes and practices towards persons with mental illness are widespread in the health care system in Belize. This is not surprising since stigma by the general public is a major challenge facing persons with mental illness and their families in Belize. For example, people with mental illnesses especially with schizophrenia who are homeless are often ridiculed and even injured by the general public.

Many users of the services are afraid to disclose their illness because they try to avoid the indelible label of being “crazy” and the resulting social isolation and discrimination. These negative experiences are handed out not only by the public but consumers often report such treatment by family members as well. One consumer recalls receiving constant insults and devaluating comments from her spouse. She describes the tremendous pain she felt when she was told that she deserved her illness and that her life was over. She battles daily with paranoia and low self esteem which have proven a challenge for her to maintain gainful employment and access treatment (2012).

The pervasiveness of stigma in the Belizean culture is a major obstacle to accessing treatment. Denial and shame of family members are often obstacles to access treatment. It is not uncommon to hear comments that accepting psychiatric treatment is the confirmation that a person is mentally ill or that medications are the cause the person’s mental illness i.e. if one goes for treatment it means that he are crazy. People seem willing to scapegoat the very system they seek help from in order to have a more acceptable explanation for a person’s psychotic behavior. Families, especially of young clients, seek constant reassurance from mental health professionals that their relative is “not crazy” (2012) despite obvious signs of psychosis. As a result, seeking treatment is delayed because local remedies such as vitamins, healing baths and rituals, prayer and “bush medicine” are accessed sooner than health clinics as these treatments are in

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confirmation with personal beliefs about mental illness. In such cases, the mental health services are seen as a last resort rather than first choice.

These experiences are compounded by poor attitude of health care workers reportedly who do not maintain eye contact with patients and ignore them when they go to the local clinic for treatment. There is no question that health care professionals endorse the commonly held stereotypes that the public hold and have little interaction with persons with mental illness because they are believed to be violent, dangerous and erratic. One worker in primary care had expressed fear of such persons and was afraid to care for them for fear of doing or saying the wrong thing to 'set them off'. With this attitude it is believable that persons with mental illness often complained of being ignored and denied care when they visit some of the health centers and hospitals throughout the country. It is unclear if a lack of knowledge is the issue since most professionals have had mental health lectures in their formal preparation. Despite this, they have often been heard advising persons with depression to be strong and that they need vitamins to strengthen their nerves since like the public, they believe that weakness is the cause of mental illnesses. As a matter of fact, a primary care worker had advised a client who was prescribed antidepressant to not take the medicines because she will 'get hooked' (i.e. become addicted) on them (2011). A common practice in both primary and secondary care is for health care workers to immediately refer persons considered as "mental cases" who come for general complaints to psychiatric services without the benefit of an assessment. Mental health personnel usually intervene in these cases and would often need to accompany these persons to see the medical doctor for them to receive care.

The closure of Rockview Mental Hospital has produce a sudden and massive push towards the mainstreaming of mental health services into general health services. This move has been met with both resistance and acceptance within the health system. Since the closure the responsibilities of general health care staff in hospitals and community facilities now include providing care to persons with mental illness complaints. It is concerning that negative views towards persons with mental illness can have implications on patient care since some staff express reluctance in approaching and caring for patients with mental disorder because they fear that the patients will behave unpredictably. This

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demonstrates the urgent need for not only the improvement of the clinical skills of the workers, but also in providing education aimed at changing attitudes and beliefs. It is essential that these health care staff develop a sense of comfort in working with people with mental illness, whether within the mental healthcare system, or in secondary or primary health care. Of course adequately sensitization of all stakeholders involved with the integration process is paramount as studies show attitude, knowledge and practice are closely related concepts and have significantly influence on mental health practice which in turn can have a tremendous influence on health outcomes.

The Training Course for Health Workers

The training program was a collaborative project between several entities namely the Ministry of Health of Belize, The Pan American Health Organization (PAHO), the Mental Health Association of Belize and the Mental Health Reform Research Trust, London, UK. The aim of the project was to strengthen the provision of mental health services in primary health care by improving competencies of community nurses in mental health. It was recognized that generalist workers in rural communities and general hospitals were expected to offer services to people with mental illness and mental health disorders without receiving adequate access to the training or support that was required for them to become comfortable with communicating with persons with mental illness and provide adequate mental health services. The project also strove to assess the changes in knowledge, attitude and practices before and immediately after the training program. The collaborators were cognizant that the popular misconceptions held by the general public towards the mentally ill may also be held by health care workers. These misconceptions had to be dispelled for them to be able to provide effective care for those with mental illness that was based on scientific knowledge.

The Belize Mental Health Program invited local universities to submit training proposals for the delivery of the course and the selection was made by a committee made up of representatives of collaborating agencies. Important considerations were the amount of time the participants would be taken away from regular duties and the ease of delivery of the suggested training modules. With this in mind, four sites were utilized for training for better accessibility for the participants as these sites were located in the four health regions near regional hospitals. Training sessions were held two days per week (Fridays/Saturdays) at each center and comprised of 48 hours of theory and 16 hours of practical experience. Participants were given time-off by the Ministry of Health to attend the training sessions. The main reference for the training program was the *WHO Policy Guidance Package – Human Resources and Training in Mental Health* which provided guidance in the competencies required for primary health care workers to deliver mental health care at this level. The training course introduced six modules which were considered essential skills for primary health care workers to have. Each module covered

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concepts that were tailored to the Belizean situation. For example, lectures in disaster mental health was considered important since the participants are often first responders in their communities in the event of a hurricane, flood or other disaster. (Table 1)

Table 1: Instructional Modules and major contextual focus

Module	Topics	Major Concepts	Contact Hours
I	Mental health promotion and prevention of disorders	<ul style="list-style-type: none"> - Public Mental Health - Determinants of Mental Health - Mental Health Promotion - Belize Mental Health System 	8
II	Common Mental Health Disorders and Psychotic Disorders	<ul style="list-style-type: none"> - Depression - Anxiety - Schizophrenia and like disorders - Bipolar Disorder 	16
III	Alcohol and Substance Abuse	<ul style="list-style-type: none"> - Alcohol - Cocaine - Marijuana - Prescription Drugs 	8
IV	Community Mental Health	<ul style="list-style-type: none"> - Relapse Prevention - Crisis Intervention - Basic Counseling Techniques - Suicide - Grief 	8
V	Related Topics	<ul style="list-style-type: none"> - Mental Health disorders of children & elderly - Disaster Mental Health - Mental Health and Human Rights 	8
VI	Clinical Practicum	<ul style="list-style-type: none"> - Applied Counseling Skills - Treatment Planning - Mental Health Education 	6

Source: Training in Community Mental Health project proposal

The practicums were conducted within health centers and hospitals in all the districts and were supervised by the Psychiatric Nurse Practitioners. For this portion of the training, students were required to conduct interviews using the techniques taught in class as well as design a health promotional or mental health educational session for a client with a

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disorder of choice. The participants' clinical skills were evaluated by the PNPs during the supervision sessions.

The training course focused on information delivery and skill development, however there was also reinforcement on the de-mystification of mental health work to achieve the changes in attitudes essential for working with people with mental health problems/illness.

The training was originally intended for nurses working in the primary health care setting only but later it was offered to nurses working in secondary care, health educators and outreach case workers and district coordinators of the National Drug Abuse Control Council. This was because the mental health program felt that the modules were robust enough to effectively train a variety of health care workers that routinely have contact with persons with mental health disorders in their daily work. Also, due to the closure of the country's mental hospital, there has been an increase in number of psychiatric admissions on the general wards. Rockview Hospital was the only existing mental health institution dedicated to providing mental health care to the Belizean population since 1979. Because of its solitary existence it provided all levels of general and mental health care for its diverse residents. Prior to the establishment of Rockview several miles outside Belize City, Seaview or "crazy house" existed in the city but served to isolate the mentally ill persons from the community and safely confining them rather than providing treatment and therapy (Bullard 1973). Rockview was staffed with untrained attendants, a few mental health aides and even fewer general nurses. The facility contained 70 beds: 35 each for male and female patients (Commijs 1991). Gradually due to reforms in mental health care, the capacity of the hospital was reduced to 55 beds. In 2008, 22 patients were released to family care and the remaining patients in Rockview were relocated to a long-term care 22-bed facility in Belmopan City. This created an even greater demand for community care as more persons with mental illness were living in the community and were accessing the community health centers for non-acute services and the district general hospitals for acute care. Training of secondary care nurses to manage these cases has become of utmost urgency and importance.

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A total of 131 health workers completed the training and descriptions of the categories of the participants are as follows:

- **Professional Nurses:** These nurses are Bachelors' level professionals who work in hospitals and health centers. Their professional training has a mental health component of 6 credit course (90 theoretical + 120 clinical hours)
- **Public Health Nurses:** The Public Health Nursing Curriculum does not have a mental health component however all Public Health Nurses (PHNs) were first Professional Nurses with expanded role training. PHNs work in health centers mainly in the maternal and child health program.
- **Practical Nurses:** Practical Nurses have completed a 1-year training course with 3 credit hours or 48 theoretical hours + 80 clinical hours in mental health. A few practical nurses work in health centers but the majority work in the hospital setting.
- **Rural Health Nurses:** The Rural Health nurses are community nurses and are mainly found in rural and urban health centers. They provide general health care services and maternal and child health care. Their training course does not include a mental health component.
- **National Drug Abuse Control Council (NDACC) Outreach Caseworkers:** These persons are responsible for the implementation, coordination and monitoring of all outreach cases of the Drug Demand Reduction Program within the assigned districts. They are not formally trained but participate in a number of workshops some facilitated by the mental health program.
- **Health Educators:** These persons belong to the health promotion arm of the Ministry of Health and are responsible for the planning, coordination and implementation of health promotion programs, projects, interventions and activities throughout Belize. Health educators are not formally trained but have attended few mental health related workshops.

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- **Psychiatric Aides** assist with caring for persons with mental illness who are hospitalized.

Participants of different qualifications from each region attended the training and the mix of the different categories of health workers in the training sessions was advantageous as it fostered community networking. (Table 2)

Table 2: Community Mental Health Training Participants by regions and Qualifications

	Central Health Region	Northern Health Region	Western Health Region	Southern Health Region	Total
NADCC Outreach Case Workers	2	2	3	1	8
Health Educators	0	1	1	1	3
Practical Nurses	7	3	9	6	25
Professional Nurses	14	1	10	9	34
Rural Health Nurses	16	16	7	15	54
Public Health Nurses	0	0	4	1	5
Psychiatric Aides	1	0	1	0	2
Total	40	23	35	33	131

Organization of Mental Health Services

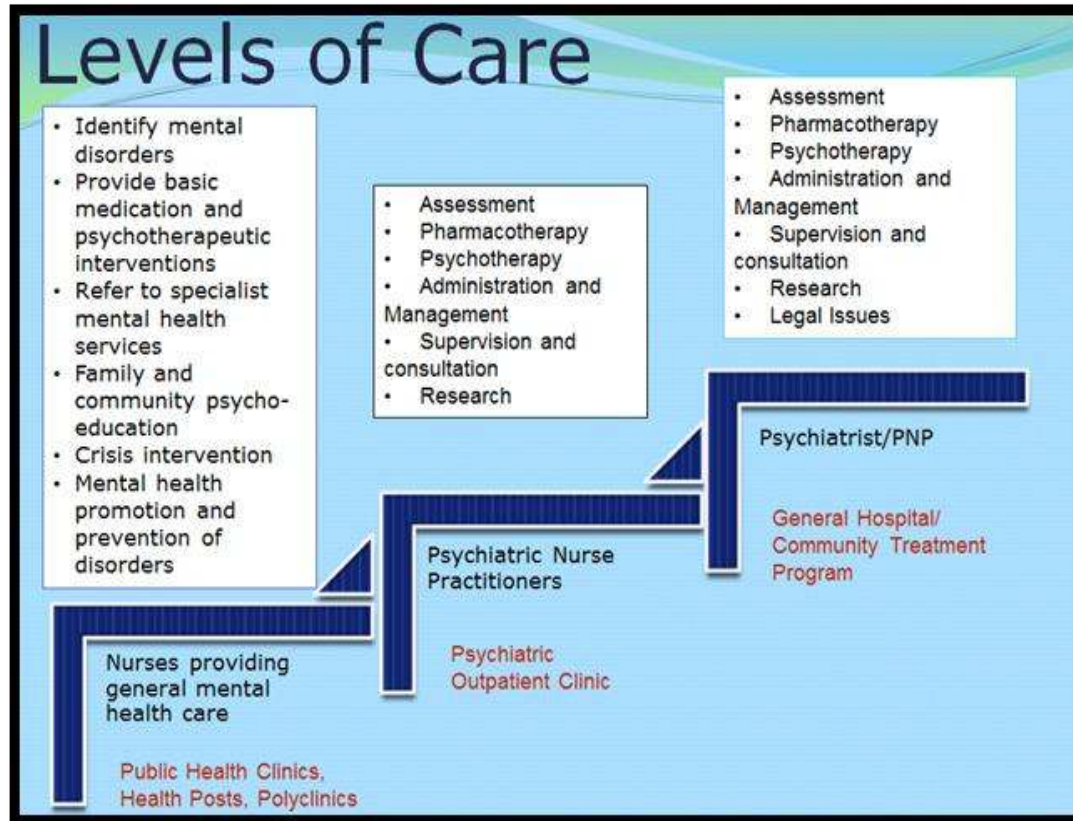
This training project was supported by the mental health program as a part of its effort to organize the mental health services of Belize to achieve better integration into primary health care. Belize already has a mental health care system which includes outpatient psychiatric clinics in every district and the capital city of Belmopan. Having provided training at this level the psychiatric nurse practitioners will now assume a supervisory and mentoring role to these community nurses. The country has a minimal number of psychiatrists who in turn provide supervision to the psychiatric nurses.

With the greater degree of integration of mental health services resulting from this training program, access to basic mental health services will be improved at the community level and difficult-to-manage clients will be referred to the psychiatric nurse

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practitioner or psychiatrist. In effect, a model of graduated mental health care delivery will be achieved. With this approach different skill mix within the health system will be utilized at different levels (Figure I).

Figure 1: Proposed Organization of post-training Mental Health Care in Belize



In this context, skill-mix refers to the combination of skills currently available to provide mental health care (Buchanan, Ball & O'May 2000). An appropriate skill-mix supports task shifting which is a strategy for the organization of mental health services to increased patient access, reduce health care costs the mental health workforce needs-based shortage (Fulton *et al* 2011). Fulton and colleagues define task shifting as delegating tasks to existing or new staff with either less training or narrowly tailored training such as competency-based training. Task shifting can be structured in several ways including shifting tasks from higher- to lower-skilled health workers e.g. from a nurse to a community health worker (Dovlo 2004). Similarly, the training of Community nurses in mental health will establish the lowest appropriate service tier in the first

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instance as they will be equipped with the knowledge and skills that will to enable them to:

- i. identify mental disorders
- ii. provide basic medication
- iii. provide basic and counseling support
- iv. refer to specialist mental health services
- v. offer family and community psycho-education
- vi. intervene in crisis situations
- vii. conduct, and engage in mental health promotional activities and prevention of mental disorders.

Ongoing mobile visits by the psychiatric nurse practitioners and psychiatrist will allow the opportunity for referral to intensive/specialist services in health centers and hospitals as clinically required. In this way the level of professional input is augmented gradually, until satisfactory health status is achieved of the consumers. With this new approach, the role of the mental health specialists will be redefined from providing most of the clinical care to one which involves ongoing training and supervision of the community health staff. They will also be expected to manage the care of persons with complex mental health problems (Saraceno et al 2007).

Purpose of the Research

Consistent with the strategies indicated in the National Mental Health Policy of Belize to integrate mental health into primary health care and in response to the increased numbers of persons with mental health disorders living in their communities, the Mental Health Program in collaboration with the Mental Health Reform Research Trust of London sponsored the creation of a curriculum whose development was guided by a survey to assess the knowledge, attitude and current practices regarding mental illness among community nurses. The curriculum was designed to train community health professionals in mental health. This survey was re-administered to evaluate the impact of the educational intervention on knowledge and stigma-related attitude. Since there was a dearth of information available on this subject, the research will add to mental health

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knowledge, attitudes and practices of health care providers and the impact of training on this triad. The questions that were examined by this research were:

1. What are the knowledge, attitude and practice by health care providers toward persons with mental health disorders living in communities in Belize?
2. Does participation in a competency based training program for health care providers which includes basic mental health information and stigma awareness increased their knowledge and improve their attitudes towards persons with mental health disorders?

Limitations of the Study

The study was limited by the following.

1. The questionnaires were given only to persons attending the launching ceremony and the number of respondents was not a proportional representation of the various qualifications and district of residence of the 131 participants of the training program.
2. The existence of social desirability bias which may mislead conclusions drawn from the survey must also be considered.
3. Since instruments to adequately measure the objectives were not identified, a suitable questionnaire was developed but while efforts were made to establish face validity, some limitations in relation to the instruments' reliability are recognized.

CHAPTER 2: LITERATURE REVIEW

According to the World Health Organization, training for primary health care workers is just one of the factors necessary for the successful integration of mental health into primary health care (WHO 2001). Integration of mental health within general health care in countries where there is an acute shortage of mental health professionals is a viable strategy for increasing access to mental health care to underserved populations and decreasing the existing treatment gap (WHO 2005). Adequate training of primary care personnel is considered an important prerequisite for mental health integration however training must be accompanied by skills practice and specialist supervision (WHO/WONCA 2008). The WHO article entitled *Integrating Mental Health into Primary Health Care* (2007) points out that training should focus on the detection and treatment of mental and must also take into account that primary care workers may be reluctant to work with people with mental disorders because they may be uncomfortable with caring for this population. Training primary care workers should include basic competencies in detection of mental disorders; provide basic care and referral to specialist services (WHO 2005). Some countries have implemented training programs in mental health for primary health care personnel as a step towards the integration of mental health into general health services. These training programs have demonstrated to have a positive effect on improving knowledge and skill and improve attitude towards persons with mental illness. Such was the case in Nigeria where Odejide et al (2002) conducted pre-and post training study of non-physician staff who underwent a training program in the management of depression in primary health care. The researchers found that after the intervention, there were great gains in the knowledge of management of depression including medication therapy which indicated that this type of training could be helpful in the process of integrating mental health into primary health care.

The World Health Organization states that investment in the improvement of mental health education among health care staff is crucial since many workers may be uncomfortable with caring for persons with mental illness and may question their role in caring for them (WHO 2007). This discomfort is often grounded in stigma which is

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widespread and discriminatory amongst primary health care providers in some countries (Kapungwe 2011)

At the core of stigma is the triad of poor knowledge, negative attitudes and unsound practices and when applied to persons with mental illness they translate to ignorance, prejudice and discrimination (Thorncroft, 2007). Stigma has been studied for many decades and is an age-old problem that persons with mental illness experience (Martin, 2008). The World Health Organization states that stigma results from a process whereby certain individuals and groups are unjustifiably rendered shameful excluded and discriminated against. Goffman (1963) describes stigma as an ‘attribute that is deeply discrediting’ (pg. 3) and believes that stigma has its origin among the Greeks who employed the practice of identifying persons known to have negative moral status such as a criminal or a slave. These persons were marked with cuts or burns into the flesh so that they were easily identified by the larger society. The society would then know that the persons carrying these marks were of lesser value than others and were to be avoided in public settings. The contemporary interpretation of the term stigma is not so much the actual mark but the undesirable characteristics that is imposed on the individual that bears the mark and is perceived as discrediting in the eyes of others. Goffman also believes that persons with mental illnesses carry the type of stigma that represents a blemish of character in which they are perceived as dangerous, weak, and incompetent, cannot care for themselves or recover. The negative response is so powerful that it obscures the individual’s personal identity which often leads to social rejection. Like Goffman, The *Mayo Foundation for Medical Education and Research* describes stigma as a “mark of shame or disgrace” with four interconnecting components: labeling; stereotyping; creating a division between a superior “us” and an inferior “them”; and discriminating against the person who has been labeled (Kankiewicz 2007). Stigma serves the purpose of separating individuals from one another based on judgments that are socially conferred.

Compared with other stigmatized illnesses and disorders, mental disorders probably carry more stigma (Corrigan 2004). According to Corrigan, compared with other disabled groups, the mentally ill have, for years, been regarded with more disfavor and with less

sympathy. The ensuing public rejection and avoidance further compound their disability (Rabkin, 1974). It can be said that stigma is universal and is intricately linked to mental illnesses.

This stigma is not limited to those with the mental disorder but it is extended to the immediate and even remote family members. Stigma by association is also conferred to institutions and personnel that provide care for the mentally ill (Goffman 1963). The value of the stigmatized persons who have a mental disorder is reduced in the eyes of communities and even governments (Sartorius, 2007). Some people argue that stigma against those with mental illness seems to be a problem on international levels as well. Stigma may be one of several reasons why mental health is such a low priority on the public health agenda. (Saraceno 2007). Saraceno pointed out that despite direct links between mental health and the Millennium Development Goals (MDGs), it was not included as a MDG nor was it selected as a related target. The importance of this omission is that if mental health is not on the international agenda then opportunities to attract essential funds and the gathering of political support needed for the difficult decisions that are often part of mental health services reform will not be realized.

Stigma in Legislation

As far back as the 1700's the belief that society had to be protected from the mentally ill was defined in British legislation which gave justices the power to apprehend and detain pauper lunatics who were 'so far disordered in their senses that they may be too dangerous to be permitted to go abroad' (Bewley, 2008). The mentally ill were segregated from the rest of society through confinement in lunatic asylums and madhouses. This led to these persons being cut off from the rest of the society which resulted in the loss of their community, friendship and family affiliations (Arboleda-Florez & Sartorius, 2008). To date this segregation and discrimination continue in many countries through support mental health care in large and often isolated mental hospitals where patients have been confined for many years. This leads to the denial of the basic human rights of freedom, autonomy and self-determination (McDaid 2008). Szmukler (2010) wrote that in many countries, mental health legislations still promote the

underlying stigmatizing assumption that people with mental disorders are not fully autonomous, are inherently dangerous and communities need to be protected from them. The message often communicated is that persons with mental disorders are different and need to have special legislation and whether they can consent or not, can be treated by force. The notion that dangerousness is inherent in the diagnosis of mental illness and that it can be predicted in the mentally ill is pervasive (Szmukler & Hallaway, 1998).

In the United States, about one-third of the states still maintain laws that restrict the rights of persons with mental illness in relation to holding office, voting, serving jury duty and parenting (Corrigan, Markowitz & Watson, 2004). These practices are considered *institutional* or *structural discrimination* which describes policies of private and government institutions that limit the opportunities of people with mental illness and legislation which intentionally or unintentionally hinder the decisions of people with mental illness (Corrigan, Markowitz & Watson).

Stigma in Mental Health Policies and Procedures

Policies and procedures of the mental health system also contribute to stigma. Psychiatry has contributed to the modern-day negative views of mental illness through the history of the litany of nonscientific ideas and treatments which included lobotomy, lunacy theory, insulin therapy and various contraptions of confinement (Byrne 2000). The careless applications of diagnostic labels to patients without adequately protecting patient information contribute to the propagation of labeling which is inherent to stigma (Sartorius 2002). This is done through social sharing of information about a person's mental illness diagnosis which condones and maintains stigmatizing behaviors (Arboleda-Florez & Sartorius, 2008). The mental health system contributes to poor information control and the associated stigma in the use of cheaper treatments which produce disturbing, painful and revealing side effects. As a result persons are unable to conceal their illness which subsequently becomes a permanent part of their personal and social identities (Goffman 1963). Sartorius also believes that mental health staff also stigmatize patients by requesting longer holidays than other personnel or higher salary allowances for working with the mentally ill who are dangerous. Also, legislation for the

protection of some people with mental illness is supported by the mental health system without acknowledging that the same legislation may be harmful to others (Sartorius 2002). Psychiatry's overreliance on the justice system in providing treatment of persons with mental illness is another example of practices which continue to encourage the perception of dangerousness which contributes to stigma (Byrne 2001).

The Media and Stigma

Another source of structural discrimination is the media. Many people understand the world through what is communicated in the media (Corrigan Markowitz & Watson). Sometimes, though, the images portrayed propagate prejudice and discrimination. People with mental illness are usually portrayed in three ways in media and film: (1) homicidal maniacs who instill fear, (2) childlike or (3) they have a weak character and are responsible for their illness (Corrigan & Watson 2002). Of all these portrayals dangerousness to others and criminality are the most frequent portrayal of mental illness seen in the media (Scheffer 2003).

Public & Self Stigma

Corrigan and Watson (2002) describe two major impacts of stigma: public and self stigma with both consisting of the three components of stereotype, prejudice and discrimination. Public stigma is defined as the reaction that the general population has to people with mental illness. Public stereotype involves negative beliefs about persons with mental illness such as they are dangerous, weak, incompetent, will never be able to function and are not able to make any meaningful contribution to society (Corrigan & Watson, 2002; West 2011). Prejudice describes public agreement with stereotypes and the resulting negative emotional reactions such as anger or fear. Discrimination incorporates the behavioral reaction to prejudice e.g., avoidance, refusing employment and housing opportunities and withholding medical and nonmedical help (Corrigan 2002). The public is now required to face the real but for the most part, hidden issue of mental illness due to deinstitutionalization and community-based mental health care (Borinstein 1992). But instead of lessening, research shows that the perception of

dangerousness is actually on the increase and that the stigma of mental illness remains an influential negative experience in the lives of people with such conditions (Link, 1999). Over the years, knowledge has increased and innovative and informed treatments have been developed in response to advances in new knowledge (Martin 2008). Pescoscolido *et al* (2010) discovered in their research that there has indeed been an increase in the public understanding of the etiology of mental illness which has led to an increased support for services for the care of the mentally ill. Notably, despite this acknowledgement there has been no significant reduction in the level of stigma held by the public (Pescoscolido *et al* 2010; Byrne 2000). Stigma is expressed by the public and experienced by the individual in different ways. Wahl (1999) conducted a consumer experience survey and found the most commonly reported experience of stigma is hearing stigmatizing comments. 80% of those who were surveyed had overheard people making insulting and unpleasant comments about persons with mental illness. Offensive portrayal in the media is also a common expression of stigmatizing attitudes (Lai, 2001; Wahl 1999; van Brakel, 2005). Other experiences include treatment as if less competent after revealing their illness, being avoided and rejected, being refused employment even though qualified after revelation of mental illness and denial of health insurance (Wahl, 1999). Individuals who perpetuate stigma are likely to socially distance themselves from persons with mental illness. Social distancing by the public is manifested in numerous ways including discrimination in employment, housing, medical care, and social relationships (Pescoscolido 2010).

Stigma from Special Groups

Stigma is a pervasive problem that transcends national and cultural boundaries and negatively affects individuals socially, emotionally, medically and in every aspect of life. It is not surprising then, that the negative views held by the public at large are also held by different groups within society. Weiss (1994) conducted a longitudinal study among elementary school children at kindergarten and then again when the subjects were eight years old. The research revealed that negative attitudes towards persons with mental illness were evident from kindergarten and these attitudes are stable and enduring even at this age. There was not a significant change in attitude in older children as well. Weiss

found that children, regardless of age, viewed the mentally ill as less like them and had a paternalistic regard for persons with mental illness. A study was conducted among police officers by Watson (2004) in which police officers taking an in-service course were given various vignettes about persons needing assistance. Persons in the vignettes were either labeled as having schizophrenia or no information on their mental state was provided. The results indicated that the officers viewed the person with the schizophrenia label as more dangerous than those that they had no mental illness information for previously. In this study, it was found that the label of 'schizophrenia' increases the perceptions of dangerousness which is one of the most pervasive negative perceptions about persons with mental illness among the general population.

Zahid and colleagues (2006) conducted a survey among teachers and students in Pakistan to ascertain their attitude towards persons with mental illness. The researchers circulated a questionnaire to assess the respondents' attitude towards persons with common mental disorders. Concepts such as dangerousness, unpredictability, easiness to talk to, focus of blame and treatment and recovery were assessed. The survey revealed predominantly negative attitudes towards persons diagnosed with schizophrenia, depression and alcohol abuse. The majority of the respondents, in particular the younger ones, endorsed the view of dangerousness that is inherent in a diagnosis of mental illness.

Stigma from Health Professionals

Unfortunately stigma towards persons with mental illness arises not only from the general public but from health professionals as well. Consumers often relate that their experiences of general and mental healthcare staff involve distressing levels of ignorance, prejudice and discrimination (Thorncroft 2008). Nurses and physicians alike have been studied to assess their opinions and beliefs towards persons with mental illness. Research has shown that those who have a role in the treatment and support of the mentally ill share the same stigmatizing attitudes as the public which affects the quality of care these professionals give (Birch, 2005). Health care providers are credited with advanced knowledge on mental illness which conveys the expectation of disagreement with the negative public attitude and beliefs. However, the Royal College of Psychiatrists Report

entitled *Mental Illness: Stigma and Discrimination within the Medical Profession*, (2005) revealed that although there have been positive improvements in services and attitudes towards persons with mental illnesses in the last century, 40% of persons consulting with general practitioners for mental illness symptoms feel stigmatized and discriminated against, reflecting the attitude of the population at large. Likewise Arboleda-Florez and Sartorius (2008) uncovered similar findings in a research conducted in Spain in which medical and nursing students were interviewed about their general knowledge of Schizophrenia. The researchers found that the groups possessed a high level of knowledge and awareness of mental illness however a large percentage felt that their patients will never recover, are dangerous and violent and had mixed feelings about accepting them in social situations. The authors pointed out that the symptoms associated with the acute phase of a psychotic illness seem to create more stigma than the label alone. Phelan (2001) wrote that doctors who are inexperienced may be uncomfortable with interacting with persons with mental illness and may not enquire about other illnesses or forgo a physical examination to hasten the consultation.

Stigma from General Practitioners

Lawrie *et al* (1998) conducted a random sampling of general practitioners in which they were asked to indicate their level of agreement with thirteen attitudinal statements based on various vignette that were identical apart from mention of a previous diagnosis of schizophrenia, depression, diabetes or no illness. According to the results, general practitioners were less happy to have to attend to a patient with schizophrenia and were concerned about the potential for violence. Patients with depression and diabetes were more likely to be offered treatment or referred for further management. From this study it was concluded that concerns of the general practitioners regarding the patient with schizophrenia were beyond their illness which may affect the ability for such patients to receive integrated care that they may need. Mukherjee and colleagues (2002) surveyed doctors and medical students in a London teaching hospital to ascertain their attitudes towards persons with psychiatric illnesses. The researchers found that more than half of the respondents felt that patients with schizophrenia and drug and alcohol addiction were dangerous and unpredictable. These results were assuaged by the positive attitude doctors

had towards the treatability of mental illnesses and led to the conclusion that education and exposure may be beneficial in the reduction of stigma among this population.

Stigma from Nursing Staff

Research conducted among nurses yield similar results of stigmatizing attitudes.

Shyangwa, et al (2003) conducted a survey to assess the knowledge and attitude about mental illness among nursing staff in Nepal and found that a substantial number of those interviewed felt that mentally ill were ‘insane’ ‘violent’ and ‘dangerous’. It was pointed out that similar views were expressed in a study conducted in US, where majority (82.4%) respondents believed that symptoms of mental illness are associated with potential violence. In another study conducted by Deribew (2005) among Ethiopian nurses, a similar perception of dangerousness was evident. For this study Deribew employed a self-administered KAP survey among nurses working at twelve local health centers to assess their attitude towards persons with mental health problems. In a descriptive and cross-sectional study of Nigerian health workers’ attitude towards caring for psychiatric patients, it was found that there was fear surrounding the notion of having someone with a psychiatric disorder admitted within the general hospital and that they would not want to have to work next to psychiatric wards. Segregation of the wards was the preferred arrangement for psychiatric care (Chikaodiri, 2009).

Stigma from Mental Health Workers

When it comes to those working in the mental health field there may be an even greater expectations of a positive attitude towards persons with mental illness than other health professionals and lay persons. Interestingly though, Schulze (2007) reported that mental health professionals’ attitude towards the patients they serve is in line with the public’s views. Schulze believes that those in the psychiatry profession can simultaneously be stigmatizers (perpetuators of stigma), stigma recipients and agents of de-stigmatization. There were several studies uncovered in this review that describe mental health professionals in these various roles. As stigmatizers mental health providers sometimes give discouraging advice to, make disparaging remarks about and reject persons with

mental illness under their care. This was discovered in a study conducted by Wahl in 1999 in which 100 persons were interviewed to ascertain their first-hand experiences of living with their mental illness. Wahl concluded that this type of discouragement has even more devastating consequences than that of the general public. Mental health professionals tend to show little interest in the opinion of their patients regarding treatment interventions. This was the sentiment expressed in interviews conducted by Reidy (1993) among consumers of mental health services in Massachusetts. These consumers also describe their interaction with mental health staff as involving forced treatments and/or threats of forced treatments and workers assigning a lower status to mental health patients than themselves, for example having separate bathroom facilities and eating areas in mental health facilities. It would appear, then, that theoretical education and contact with people with mental illness in the usual psychiatry setting are not enough to reduce stigma in health professionals (Arboleda-Florez; Sartorius 2008).

A Double Challenge - Public and Self Stigma

Public stigma is a very personal and emotional experience for the person with mental illness and it affects the individual receiving it in many ways. Stigma poses a double challenge for persons with mental illness: the symptoms and incapacities as a result of their illness and the stereotypes and the negative preconceptions about the disease (Corrigan & Watson 2002; Corrigan 2005). Initially after being diagnosed, the immediate psychological effects include disbelief, shame, terror, grief, and anger (Gray 2002). Later, persons often experience social rejection, diminished social efficacy and social withdrawal; diminished self esteem and consequently stigmatizes themselves (Corrigan, 2004; Gray 2002; Wahl, 1999; Watson, 2007; West, 2011). Self-stigmatization occurs when service users endorse others' low expectations of them which results in feelings of hopelessness and the envisioning of a bleak future (Gray 2002). Using the Internalized Stigma of Mental Illness Scale West (2011) assessed the personal experience of 144 subjects from programs designed for persons diagnosed with severe mental illness. This research affirmed that internalized stigma affected a high percentage of people with severe mental illness with approximately 36% of the participants of this study showing evidence of elevated internalized stigma (2011). Watson also conducted a survey of 71

individuals with severe mental illness from a community support program and found that the subjects who endorsed the legitimacy of mental illness stigma and discrimination increased their vulnerability to self-stigma (Watson 2007).

Self-Stereotyping

Persons with mental illness also stereotype themselves by harboring negative beliefs of incompetence and weakness of character about themselves. Both publically and personally, these beliefs are endorsed and agreed upon and prejudicial attitudes are held (Watson and Corrigan 2001). The public reacts with fear and anger towards these individuals and they in turn internalize this negative reaction and develop low self esteem and self efficacy. Public prejudice lead to a variety of discriminatory behaviors towards persons with mental illness such as denying them help including medical help, employment and housing opportunities. Understandably, the person then fails to pursue work and housing which effectively is self-discriminatory. An example was cited by David Whalen (2008), in an article prepared for the Canadian Psychiatric Association entitled the *Stigma Associated with Mental Illness* in which he discussed a research conducted in the United States. It was revealed that more than half of employers surveyed would be reluctant to hire someone who is mentally ill and about twenty-five percent of employers would dismiss someone who had not disclosed a mental illness. This constant rejection may eventually lead the individual to the conclusion that they are unemployable and will hesitate to seek employment.

Stigma and Health Seeking

However, studies point out that despite the improvement in knowledge and understanding of mental illness, stigma still remains a major struggle for those suffering with mental illnesses (Pescoscolido 2010; Turner, 2007). Stigma has been identified as a significant reason why individuals do not seek treatment or why others begin but fail to adhere to treatment regime (Corrigan, 2004). Corrigan also stated that those who suffer from mental illnesses fear that the public will learn about their illness either by advertent or inadvertent revelation by mental health care professionals or being observed coming from

the psychiatrist's office and the assumption of mental illness will be made. As a result, persons avoid treatment in an effort to conceal their stigma and avoid places and people that mark them. This is done to prevent the public identification of the label "mentally ill" and the ensuing diminished self esteem. The fear of being stigmatized by others presents a significant barrier to accessing care and adherence to treatment among persons with mental health disorders. Failure to adhere to antipsychotic regimen increased hospitalization by three-fold accounting for substantial increase in hospital cost worldwide (Corrigan, 2004). The avoidance or delay of treatment can have other devastating consequences such as the development of stress-related diseases, worsening of clinical outcomes, inability to lead a normal life and even death (Link & Phelan 2006).

Stigma by Association or Courtesy Stigma

Goffman (1963) wrote about courtesy stigma when referring to the stigma by association placed on family and even friends of persons with mental illnesses. In some cases families with a member diagnosed with a mental health disorder are less likely to practice social distancing, are more comfortable and have an overall positive attitude towards with persons with mental illness as was found in a study conducted in Jamaica (Gibson, Abel, White & Hickling 2008). However Phelan and colleagues (1998) examined perceptions and reactions regarding stigma among family members of patients hospitalized at inpatient facilities in New York and found differing results. The researchers found that families try to conceal hospitalization and would most likely do so if they did not live with the ill relative. Larson and Corrigan (2008) suggest that family stigma contains the stereotypes of blame, shame, and contamination. Typically, the general public attributes poor parenting skills as a cause of mental illness and may blame families for it. Family members may experience shame which may lead them to avoid contact with neighbors and friends. The close association with the ill family member has contaminated the rest of the family leading to diminished self worth. The response is for family members to avoid social situations and spend energy and resources to hide the secret. Very often they experience social rejection and discrimination which erode the optimism and confidence of family members who care for their relatives with mental illness. Consequently family

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members retreat from the public and avoid social interactions as a way of coping with the ensuing rejection and embarrassment (Perlick 2007).

Courtesy stigma has also been levied on health professionals and institutions that care for the mentally ill. In an article of the Global Initiative on Psychiatry entitled *The Role of Professionals in Mental Health Care* (Global Initiative on Psychiatry 2005) it was observed that courtesy stigma or stigma by association rubs off on mental health care workers thus assigning them a lower status than other professionals. As recipients of stigma, mental health professionals are viewed as mentally abnormal, corrupt or evil (Stewart 2005) and mental health staff in general receives lower status from the public and their colleagues than other workers and professionals in other areas of health care (Hinshaw 2007). The mental health field is not a popular selection for specialization among doctors and nurses. Weiss Roberts (2010) conducted a review of a collection of international papers written on psychiatry training in medical education. The findings showed that respondents believe that medical students who were interested psychiatry as a specialty were perceived as odd, peculiar or neurotic, academically weak thus unable to obtain a residency position other than psychiatry. In this study, it was also shown that family members, friends and colleagues criticized and discouraged decisions of persons from entering the Psychiatry field. In a study conducted in Australia, it was discovered that caring for the mentally ill is an unpopular selection for nursing practice for graduates from pre-registration programs therefore jeopardizing the sustainable supply of nurses to work in this field (Stevens 1997). Reasons given by the subjects for not choosing the mental health field included concern for their well-being and fear of the clientele. It was interesting to note that these attitudes were not based on personal contact but from secondary sources such as the media and movies. Stuhlmiller (2003) believes that it may be difficult for nurses to cultivate positive regard towards persons with mental illness because first contact is usually during mental health clinical placements when patients are acutely ill and the opportunity to interact with them during recovery is very limited. Halter (2008) conducted a study of 122 nurses to assess the concept of stigma by association. In her study the subjects indicated that of 10 specialties, psychiatric nursing was the least preferred and that psychiatric nurses were not often perceived as logical,

dynamic and respected. In an article entitled *Why is Mental Health Nursing Unpopular* (Hitchens 2008) it was mentioned that psychiatric nurses were seen as idle which may stem from the belief that nurses should be busy at all times rather than escaping real work by just talking to patients. Stigma by association may also explain why mental health professionals are often marginalized and mental health services receive less investment than other medical services. Consequently, many mental health services are understaffed and are unable to perform at an optimal level thus perpetuating the inefficient image (Vallares & Sartorius 2008).

Strategies to Combat Stigma and Discrimination

Recognizing that stigma and discrimination have an extensive negative effect on the quality of life of persons with mental illness, many countries have been concerned with ways to change stigma and end discrimination (Corrigan 2000). Arboleda-Florez and Sartorius (2008) have identified four broad strategies for programs combating stigma and discrimination and the abuse of rights of persons with mental illness. These are (1) stigma-busting by stake-holder groups, (2) education for the public and targeted groups, (3) contact and (4) political activism. Corrigan and Penn (1999) researched anti-stigma programs and noted that three of these strategies appear to be most frequently employed and were relatively effective in combating stigma. Corrigan and Penn describe them as (1) *Protest* the stigmatizing portrayal of persons with mental illness publicly for example in films and other media, (2) *contact* between persons with mental illness and especially where positive images of recovery exist and (3) *education* that focus on correct concepts about mental illness to replace false assumptions held by the general public. Firstly, protest which is a moral appeal to stop stigma and suppress stereotypes about mental illnesses (Larson & Corrigan 2008) can be made by interested individuals and groups. According to the National Alliance on Mental Illness (NAMI) persons or groups should contact the publisher, editor, writer, radio station manager and/or sponsors by letter, telephone, fax, and/or e-mail and inform them how an article, TV or radio show, or advertisement to correct information that is not based on facts or which incorrect and/or offends, hurts, demeans, or humiliates a person with a mental illness. Some research show, however, that instruction to suppress stigma has only minor effects on negative

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attitudes and does not reduce discriminatory behaviors towards persons with mental illness (Larson & Corrigan 2008; Penn & Couture 2002). Secondly, contact involves having some form of face-to-face interaction with someone who has a mental illness. This may be in a variety of settings including social, treatment or even under experimental conditions (Couture & Penn 2003). Contact leads to familiarity and has demonstrated significant improvement in attitudes towards persons with mental illness and reduction in negative stereotypes (Corrigan & Matthews 2003). There is convincing evidence indicating that among the strategies to reduce stigma direct social contact with people with mental illness is one of the most effective. This has been shown in studies conducted among police officers, school students, journalists and the clergy (Thornicroft, Brohan, Kassam, Lewis-Holmes 2008). Lastly, central to educational programs is the theory that an increase in knowledge about mental illness would lead to a decrease in the endorsement of stigma and discrimination (Corrigan et al 2001). Evidence from studies of educational programs about mental illness suggests that adults with a better understanding of mental illness were less likely to endorse stigma and discrimination (Roman and Floyd 1981; Link and Cullen 1986; Link et al. 1987; Brockington et al. 1993). Ping Tsao, Tummala, and Weiss Roberts (2008) believe that psychiatrists can educate unenlightened physicians, including psychiatrists, psychologists, and nurse about the success of psychiatric treatment. It is important to note, though, that education of health professionals as a part of their basic training does little to decrease the stigma in professionals and students because stereotypes are reinforced when first contact between the student and the person with mental illness is usually during clinical placements when the patient are hospitalized for an acute condition (Arloleda-Florez & Satrorius 2008). The WHO believes that a more comprehensive approach to nursing education which involves early introduction of mental health concepts that are reinforced and extended throughout the training program along with practical learning opportunities aimed at skill development may be most effective. Post-basic training should be aimed at improving nurses' knowledge, attitudes and skills with emphasis on community based treatment rather than custodial conditions (WHO 2007). A model of training that improve the skills or competencies of workers within the existing mental health system may provide many benefits in resource-poor settings. These benefits include cost effectiveness of service,

the alignment of appropriate skills with the mental health needs of the population, the involvement of community and traditional resources, the increase of access to mental health care and the reduction of stigma among health professionals (Kutcher 2005).

Review of Instrumentation to measure mental health related knowledge, attitude and practices

This study employed the use of a customized KAP questionnaire to measure the constructs of stigma among health workers who potentially would be providing care for persons with mental illness in the community. The KAP survey was the method of choice for this study because it allowed for measurement of post-intervention changes in human knowledge, attitudes and practices in response to a particular intervention. In this case the KAP was selected to design a training curriculum for the community mental health training. It was important to identify gaps in knowledge, constraints and barriers, especially attitudinal ones, towards persons with mental illness, which may interfere with the provision of integrated mental health care to the community. The post-training KAP survey was utilized to evaluate the impact of the training program on primarily the knowledge and attitude of the participants. KAP surveys have been utilized since the 1950s primarily in the area of family planning but now it also holds prestige as a choice methodology used to investigate health behavior (Launiala 2009). The KAP study is versatile and has been used in several programs including public health, water supply and sanitation, family planning, education and other programs. As in this study, KAP surveys have also been utilized in the measurement of health related stigma (van Brackel, 2005). KAP surveys are easy to conduct and are relatively cost-effective and there is an assumption that the results are generalizable to the wider population (Launiala, 2009). These features made the KAP questionnaire most suitable to assess the trainees' attitudes before and after the training course in mental health.

By definition, KAP studies measure knowledge, attitude and practices about a particular topic among the population under study.

Knowledge

Knowledge refers to the understanding of mental illness, including causes, treatment, symptoms, etc. In this study the assessment of knowledge about mental health and illness among the trainees was necessary as they came from different professional backgrounds and their baseline level of mental health knowledge varied. Identifying gaps in knowledge was also important to guide the development of the training curriculum so that correct scientific information was communicated. Since knowledge regarding mental illness can be severely influenced by cultural beliefs, it was important to extract, acknowledge and correct misconceptions if and where they existed. Assessing the participants' level of knowledge also helped the trainers to tailor the delivery of the materials to satisfy the various level of professional preparation.

Attitude

Attitude encompasses feelings and misconceptions the participants may have towards mental illness and persons with mental illness. Since the mental health field has historically been bombarded with misconceptions and negative perceptions of religious and cultural nature, the evaluation of this dimension was particularly important especially among health care workers. It has already been cited in this study that mental health care can be negatively affected by the stigma and negative attitude of the health professionals who are giving that care. With this awareness, significant emphasis was placed on the measurement of change in attitude before and more importantly after the training course.

Practice

Practice refers to actions based on knowledge and attitude. Practice of health professionals will be directly affected by strategies to integrate mental health into general health care as an increase in contact between these groups is anticipated. Nurses and other professionals will be required to assess, manage and provide some form of intervention to persons with mental illness in their communities. The level of comfort and

skill of the trainees to provide mental health care at their health facilities had to be measured so that the appropriate interventions can be made.

Instruments

Instruments have been developed to assess knowledge, attitude and practice in mental health research. For example, the Community Attitudes towards the Mentally Ill (CAMI) Scale (Taylor & Dear, 1981) has been frequently used in research examining attitudes toward the mentally ill. Wolff (1996) used the CAMI Scale to measure the effect of a public education campaign on community attitudes to mental illness. Another instrument available to measure attitude is the Attitudes to Mental Illness Questionnaire (AMIQ) (Cunningham *et al*, 1953). It has been described as short and having good psychometric properties and is useful to measure stigmatizing attitudes towards the mentally ill (Luty, 2006). The Mental Health Knowledge Schedule (MAKS) has been used to measure the level of information known about mental illnesses as was utilized in the Time to Change anti-stigma program in the United Kingdom. But while these instruments and others not mentioned here have been tried and tested in mental health research, their use in this particular study would not have been appropriate for various reasons. Mental health related practices are assessed based on the accepted practice guidelines and it seems to be closely related to knowledge and available resources (WHO 2003). These separate instruments would have been applicable to capture some of constructs of stigma that were included in the KAP questionnaire however it would have been difficult to use them all to generate the type of data gathered by the KAP. This is because none of them had the capacity by itself to effectively generate data on the interactive triad of knowledge, attitude and practices relevant to a study population that was specialized and having its unique cultural influences that affect each component of this threesome. Also, the utility of several different questionnaires would have been difficult due to lack of resources to train interviewers, conduct adaptation workshops and reproduce to the surveys. However, relevant and practical features from these instruments were incorporated in the KAP used for this study.

Limitations of the KAP Survey to this Study

The limitations of the KAP survey that may be relevant to this study have been previously discussed in the literature. Firstly, the generalization of findings extended beyond the respondents and assumptions were made about the entire trainee population. As a result, the curriculum ignored the trainees that had a satisfactory level of baseline scientific knowledge on mental health also those participants with positive attitudes towards the mentally ill. Attitudes which are highly subjective are also generalized to the entire population. The interpretation of the results did not prescribe to targeted interventions towards individuals but took a “one size fits all” approach. Another problem with the KAP study is that it was taken for granted that the reason people behave a certain way, was because of a lack of knowledge and does not factor in logical choices (Launiala, 2009). In this case the assumption was made that the reason the respondents believed that persons with mental illness could not be managed in the same health facility as other patients was because of a lack of knowledge. However a negative response could be given if the nurse envisioned that the person was acutely ill and cannot be managed in crowded health centers with limited staff.

CHAPTER 3: STUDY DESIGN AND METHODOLOGY

Study Design

The study design was a pretest/posttest knowledge, attitude and practices (KAP) survey, administered to participants of a mental health training course for community workers to collect data to determine if there were changes from the intervention. The post intervention questionnaire was limited to a number of items from the pretest. This was because not all the items of the first test met the post intervention objective of measuring changes in knowledge and attitude therefore such items were not included in the post-test. The results of the pretest and posttest were compared using percentage, crosstabs, Chi-square, and t-test.

Sample

The target population of this survey was the 148 participants invited to participate in the mental health training for community workers. These individuals were invited because they provide mental health services throughout the country in different capacities. Included were professional nurses, public health nurses, practical nurses, National Drug Abuse Control Council Outreach Case Workers, health educators of the Ministry of Health and psychiatric aides. 88 of the invitees who were also eventual trainees of the program participated in the training survey. In summary, the inclusion criteria of the survey group were nurses and other non-medical personnel who were selected as trainees for the course, who were present at the launching ceremony and who were willing to participate in the study.

The majority of the participants were women (94%), which was a reflection of the higher number of females than males working in the nursing field in Belize. Similarly, the ethnicity of respondents reflects the ethnicity of the country population with approximately one-third of the respondents being Mestizo and another one-third being Creole. Garifuna was approximately 15% and Maya was seven percent. The majority of the respondents were Rural Health Nurses (RHNs) (42%) and Professional Nurses (28%). (See Table 4.)

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The participants were young professional with almost 60% of them working in their profession for less than ten years. On the other end of the spectrum, almost a quarter of the participants were working in their profession for more than 21 years. Most of the participants worked in the public service in health center, polyclinics, and community and regional hospitals (Table 3).

Table 3: Respondents by Health Facility

	Health Post	Community Hospitals	Regional Hospitals	Polyclinics	Health Centers	Other	Total
n	1	12	10	19	32	14	88
%	1%	17%	11%	22%	36%	16%	100%

Sixty-one of the 88 participants who did the pretest and of the 131 who completed the training (intervention), did the posttest. The posttest was done within two months after the training.

Research Instruments

A pretest and a post-test instrument were used in this study to determine the effect of the intervention on the knowledge, attitude and practices of the medical officers who participated in the study (see Appendixes A and B).

The pretest was divided into five sections with a total of 34 questions as follow:

- **Demographic information** (8 questions): Respondents were asked basic information about age, gender and ethnicity, the highest level of professional training achieved and district of residence. This information was gathered to define study population and to identify characteristics for be cross-tabulation with data from the different sections being surveyed.
- **Questions on integration** (4 questions): These questions were designed to examine the respondents' attitudes towards the idea of integrated mental health services. Participants were asked whether they agreed with the integration of mental health services into general health care; whether community nurses should

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be trained to provide mental health care in community health facilities and how important was this training to their work. They were also asked to indicate where mental health ranked in the list of health related that were the focus of primary health care topics (e.g. HIV/AIDS, domestic violence, non-communicable diseases and infectious diseases). Many issues of public health concern such as HIV/AIDS, STIs, etc. are being organized using the integrated primary health care model to strengthen linkages and provide equitable access to communities (Dudley & Garner 2011). Mental health integration shares these same objectives which mean that the scope of the primary health care worker is expanding and their attention will be divided among these services. This question was asked to see where the respondents saw mental health on their list of priorities in primary health care. The integration process involves community nurses and secondary care nurses having more contact with persons with mental health disorders. They will be required to perform tasks that traditionally they did not perform such as administering psychotropic medication and providing basic counseling. The questions on integration were included in the questionnaire to ascertain if the respondents were in agreement with integrated mental health services and how they felt about their role in the integration process. A high level of resistance to the integration progress will adversely affect its implementation.

- **Questions on knowledge** (6 questions) were aimed at assessing body of knowledge acquired about mental illnesses, their causes and treatment. In this section, respondents were asked if they had received mental health lectures and if they had, how many hours had they received within the last five years. The reasoning behind these questions was that the training curriculum needed to be robust enough to satisfy the knowledge requirements of nurses who were recently trained as well as the more experienced nurses. Also, since the participants were coming from backgrounds of varying levels of professional qualifications, it was anticipated that a knowledge gap would exist. The facilitators delivering the training needed to be aware of the baseline knowledge to adjust the level and type of information delivery. To assess the competency of the participants to provide mental health care, they were asked if they felt that lectures received during their

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professional training adequately prepared them to care for persons with mental illness. It was important to identify how much task-oriented training was needed to increase the participants' comfort in providing mental health care.

Respondents' knowledge of the effectiveness of medications and the ability of patients to recover and care for themselves was tested primarily to determine whether there was an understanding and appreciation of positive treatment outcomes for mental illnesses and if recovery was possible. Investigation of knowledge and culture-based beliefs about the cause of mental illness was also conducted in this section. It was the intention to assess knowledge about the scientific etiology of mental illness as well as beliefs that are not evidentiary but are based on cultural interpretations and have an influence on a person's understanding of mental illness. Respondents were asked to select any or all of the environmental, biological or culture-specific choices they felt were contributing to the development of mental illness. According to explanatory models of mental illness, treatment practices are influenced by what is believed to be the cause of mental illness (Corrigan, Kerr & Knudsen 2005). For example, people who believe that demons and spirits are the causes of mental illnesses will seek to have an exorcism rather than medication and counseling. Likewise, if Obeah or black magic is believed to be the cause as is often held in Belize, then people will employ the service of a "bush-doctor" to help. The review of literature in this study discussed the tendency for professionals to reflect the beliefs of their community and culture, therefore this section sought to uncover if the participants endorsed these beliefs.

- **Questions to assess attitude** (7 questions): These questions were designed to assess the endorsement of misconceptions generally held towards persons with mental illness. This section sought to understand the participants' general feelings about mental illness and persons with a mental health disorder. There is an extensive history regarding stereotypes, prejudices and negative attitudes towards persons with mental illness (Zartaloudi & Madianos 2010). It is perceived that health professionals in the community will have more exposure to persons with mental health disorders as the process of integration proceeds. Professionals may

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endorse preconceived perceptions and values about mental illness which may influence their ability to interact and provide care to these clients (Sartorius 2002). Hence, it was important to examine these attitudes, beliefs and perceptions about this patient group that they will be having more contact with. The questionnaire sought to examine elements of stigma against persons with mental illness such as dangerousness, violence and unpredictability. In this section, two respondents were asked to rate two statements related to their attitude about social exclusion of the mentally ill. They were asked if persons with mental illness should be able to receive treatment in general health facilities like everyone else and whether they should be confined to a hospital for the rest of their lives. Answers to these questions will give insight into the presence of exclusionary attitudes and practices among the participants.

- **Questions about practices** (9 Questions) assessed current and future practices regarding the care of persons with mental illness in the community. These questions were included to assess the interviewees' level of comfort in interacting with persons with mental illness. They were asked if they felt it was difficult to interact with someone with mental illness and whether they were comfortable with attending to such persons. Nurses working in the community must be comfortable with attending to such persons if they will be providing care to them (Morrison 2011). Additional questions to assess the participants knowledge of the mental health system and if they knew how to access specialist support if necessary. The responses have implications for the strengthening of the communication system between community services and specialist mental health services.

The post-intervention survey was significantly downsized as some of the questions fulfilled their purpose and were excluded. The objective of the post-intervention survey was to evaluate the impact of the training project on these ideas immediately after the training as the trainees were expected to directly provide care for the mentally ill in their communities. It was felt the baseline assessment of attitude towards integration of mental health services was sufficient for the purposes of the study since it was expected that this

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would not be affected by training. Other questions excluded were those in the “knowledge” section pertaining to lectures received before the training program, the effectiveness of medication to treat mental health disorders and if people with mental illness required constant care. Most of the questions on attitude were repeated since after preliminary analysis of the baseline survey these were indicative of negative stereotypical responses towards persons with mental disorders. It was necessary to assess the impact of training regarding this section. Questions in the “Practice” section pertaining to communication between the mental health system and community nurses were excluded as well. This final post-intervention survey consisted of 14 questions; 3 questions eliciting demographic data and 8 questions assessing knowledge and attitude. 3 new questions to assess the value and relevance of the content of the training were added. (See Appendix B.)

To ensure that the instruments collected valid and reliable data, i.e., reflected the specific knowledge, attitudes and practice values for the project, they were developed from scratch using the design principles and content cited in the literature. For example, the *WHO Guide to Developing Knowledge, Attitude and Practices Surveys* (2008), suggest steps to developing KAP surveys include consultation with data sources to develop the survey questionnaire then pre-tested before finalizing the instrument to identify areas needing improvement. In keeping with these recommendations of the WHO the questions for this survey were discussed by mental health staff during programmed meetings. During these discussions most of the psychiatric nurse practitioners felt that community nurses were afraid to approach persons with mental illness in their communities to administer medications and to conduct assessment. In general, they felt the training program would be beneficial for better management of these persons with mental illness in the absence of the mental health staff. Small focus groups with nurses working at the Northern and Southern Regional Hospitals were conducted to get an idea of current knowledge among these nurses. Generally, nurses who participated in the group were open to receive training and many expressed that they felt that their skills were inadequate to provide mental health care. Some were concerned about the level of support they would receive from the mental health practitioners if community nurses

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were required to provide mental health care. The interviewees were concerned that they would be doing the work of the psychiatric nurse practitioners and would not have time for their regular clients. The questions were created to measure the experiences, opinions and behaviors of the study population as accurately as possible. Some questions were designed based on emailed suggestions by Lonia Mwape of the Chainama College of Health Sciences who conducted a research in connection with a project to integrate mental health into primary health care in Zambia (Mwape 2010). The suggestions included:

- **KNOWLEDGE:** Whether the participants received lectures in psychiatry during their training; whether the lectures were adequate; their ability to identify and treat mental illness; ability to prescribe and administer drugs; what they think cause of mental illness are (depending on their culture).
- **ATTITUDE:** Whether they think people with mental illness are unpredictable, violent, and dangerous; whether they should be kept in an isolated place; they should not be treated in the same health facility as other patients; whether they should be allowed to have children.
- **PRACTICE:** The referral system; whether the facility is able to evaluate patients with mental illness; whether any feedback was given when they refer patients.

In order to assure the clarity, precision and reliability of the questions, the instrument was piloted over the period of a few weeks before the actual administration and modifications were made. For the pilot study six questionnaires were administered to nurses of the four health regions using convenient sampling of those who were on duty on the day of the evaluation. Even though the 24 piloted questionnaires were administered to persons selected to participate in the training they were asked not to respond to the final survey. The responses were reviewed and appropriated changes and corrections were made before the questionnaire was finalized.

Data Collection

The pretest data were collected at the launching ceremony for the Community Mental Health Training Program on February 24th 2011. A self-administered questionnaire was given to the participants who attended the ceremony. Towards the end of the ceremony the participants were given the test to complete and leave at the registration desk when they were leaving. The participants did not write their name so the questionnaires were anonymous.

The psychiatric nurse practitioners of the various districts were recruited to administer the posttest. This method was used because accessibility to the participants was difficult since they were located in rural communities in their districts. Since the PNPs were located in the different districts and conducted mobile visits to the clinics of the participants, it was convenient for them to administer the survey on these visits. The PNPs were advised to ask the trainees whether they completed the pre-training survey and if a positive answer was given, they were ask to complete the posttest. Again, the participants were assured of their anonymity as the PNPs were advised to ask them to not write their names. The completed questionnaires were collected by the PNPs and mailed to the researcher in Belize City.

Data Analysis

The data were entered and analyzed in SPSS. Descriptive statistics, including mean, mode, percentage, and crosstabs, were used to analyze the data. The data were also presented in tables and graphs. Chi square and t-test were used to test statistical significance between pretest and posttest.

CHAPTER 4: DATA ANALYSIS

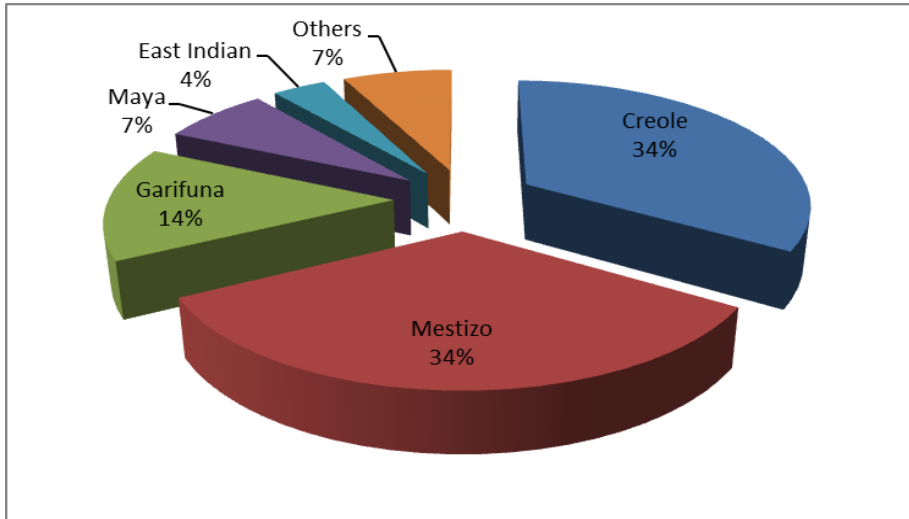
Health care workers of public and private institutions in the 6 districts (Corozal, Orange Walk, Belize, Cayo, Stann Creek and Toledo) participated in the pre and post training surveys. The baseline assessment provided data from 88 respondents and 61 of these respondents completed the post-intervention questionnaire. The pre-training survey was not intended as a stand-alone survey, but the results obtained from the preliminary survey were important to address questions in this paper. The majority of the interviewees were women (94%), which was a reflection of the higher number of females than males working in the nursing field in Belize. The majority (33%) of them ranged between the ages of 36-45 years. A significant percentage (37.5%) of the respondents had been working in their professional capacity for less than 5 years and the majority (57.9%) for less than ten years. Twenty-two percent of the respondent had been working between 21-40 years. See Table 4.

Table 4: Gender, age, qualification, experience of respondents (Pretest)

	Frequency	%
Gender		
Female	83	94.3
Male	5	5.7
Age (years)		
18-25	19	21.5
26-35	18	20.4
36-45	29	32.9
46-55	17	19.3
Older than 55	5	5.7
Years of Professional Service		
< 5	33	37.5
5 – 10	18	20.4
11 – 20	18	20.4
21 – 30	14	15.9
31 – 40	5	5.7

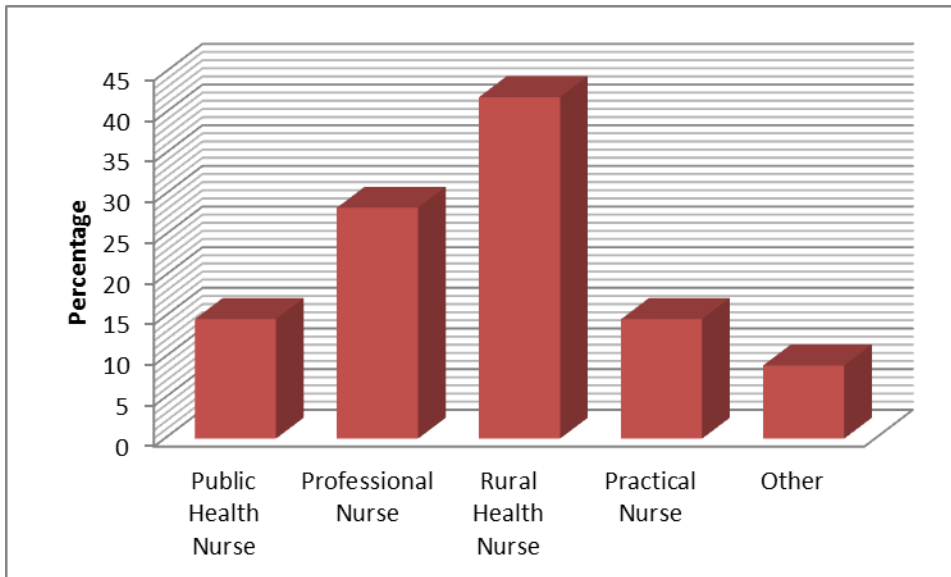
The ethnic diversity of respondents had the following breakdown: 34% of the respondents reported themselves as Creole; 4% East Indian; 14% Garifuna; 7% Maya and 34% Mestizo. The remaining 7% responded to the “other” category (Figure 2).

Figure 2: Ethnicity of participants (pretest)



Most of the respondents were Rural Health Nurses (RHNs) (42%) and Professional Nurses (28%). Equal percentage (14.7%) of the respondents was public health nurses and practical nurses. The “Other” respondents (9.0%) included Psychiatric Aides, National Drug Abuse Control Council (NDACC) outreach workers, and health educators of the Ministry of Health (Figure 3).

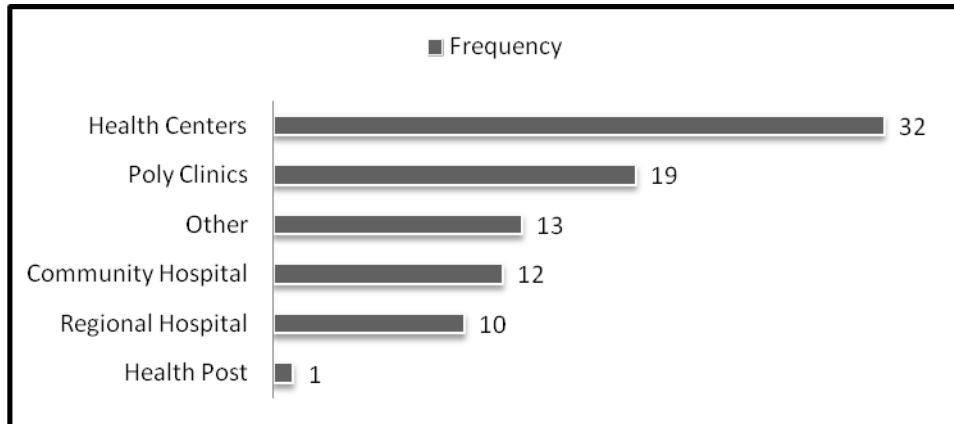
Figure 3: Professional qualifications of respondents (Pretest)



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The majority of the respondents worked in primary health care facilities such as health centers (32%) and polyclinics (19%) and 22% were working at community and regional hospitals (Figure 4). The respondents who chose “other” did not work at any of these facilities and most likely were from the National Drug Council. (Figure 4)

Figure 4: Place of work of respondents (Pretest)



It was not necessary to include the questions pertaining to the integration of mental health into primary health care in the posttest. The subjects recruited for the pre-training survey were asked to give their views on the issue of integration of mental health into general health care. For simplicity, the responses from the 5-point Likert scale (strongly agree, agree, undecided, disagree and strongly disagree), were collapsed into three categories representing positive, undecided or negative responses. Generally speaking, the responses to the issue of integration were encouraging with most respondents (90%) viewing this approach positively. The majority of respondents (92%) agreed that nurses working in the community should be trained to identify and manage mental disorders (Table 5). Nearly all of the nurses surveyed (n=86 98%) indicated that such training would be important to their work.

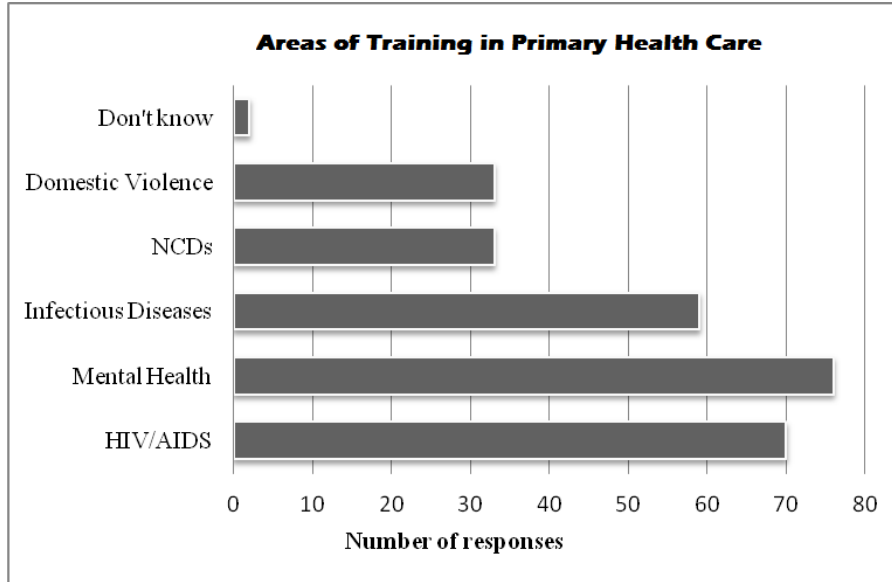
Table 5: Question on the Integration of Mental Health into Primary Health Care

	Positive	Undecided	Negative
	n (%)	n (%)	n (%)
Should mental health care be integrated into primary health care	79 (89.7)	5 (6)	4 (4.5)
Should nurses working in the community be trained to identify and manage mental disorders	81 (92)	3 (3.4)	4 (4.5)
How important will training be to current work	86 (97.7)	2 (2.2)	0 (0)

Of the important areas for additional training in primary health care mental health was selected as the most important subject area for training in at this time (Figure 5). HIV/AIDS, infectious diseases, NCDs, and domestic violence were identified as other important areas for training as well. It was important to gauge the participants' willingness and comfort with community psychiatric care. (See Figure 5.)

More than half of the respondents (66%) reported that they had received less than 5 hours of mental health training within the last five years and 56% of them agreed that their professional education and training workshops adequately prepared them to care for people with mental illness.

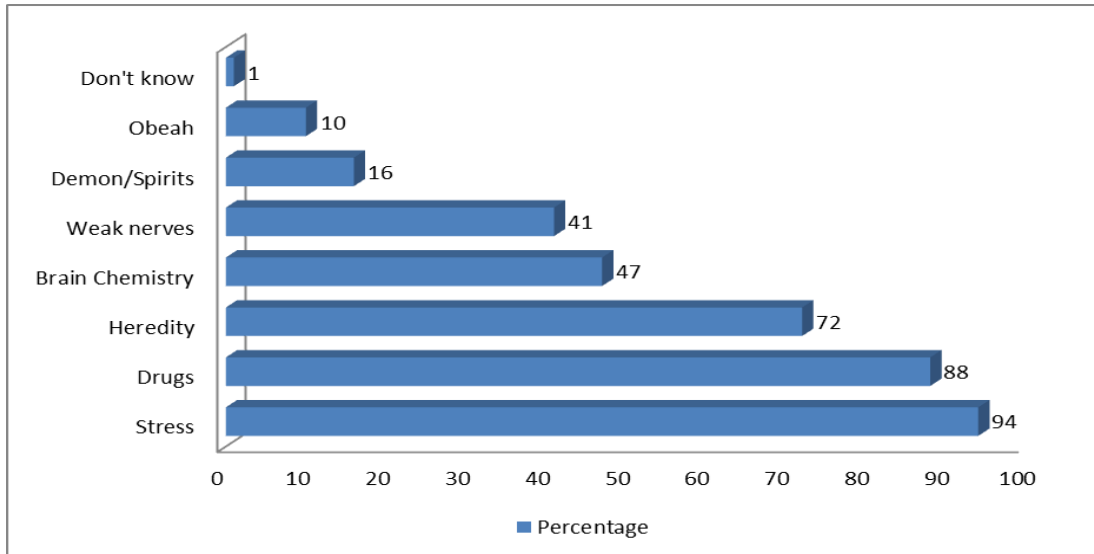
Figure 5: Most important areas for nurses to receive training



Pre-intervention Findings

This section presents the result obtained from the analysis of the pre-training survey of knowledge regarding mental illness among the training participants.

Figure 6: Baseline knowledge on causes of mental illness



Baseline questions about knowledge included questions on the cause of mental illness, the effectiveness of medication and whether persons with mental illness needed constant

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care. Participants were allowed to make multiple selections regarding what they felt was the cause of mental illness. The ranking the responses by the most often selected was as follows: stress (94%), Drugs (88%), heredity (72%), brain chemistry (47%), weak nerves (41%), Demon/spirits (16%), Obeah (10%) and other/don't know (1%) (Figure 6). 84% agreed that medications were effective in treating mental illness, 9% were undecided and 7% disagreed on this question. Of the study population who responded to the question on whether persons with mental illness needed constant care, the majority of the respondents 72 (82%) agreed that they did, 5 (6%) was undecided and 11 (13%) disagreed. (Table 6)

Table 6: Respondents belief of how mental illness should be treated

	Positive	Undecided	Negative
	n (%)	n (%)	n (%)
Medications are effective in treatment of mental illness.	74 (84)	8 (9)	6 (7)
People with mental illness need constant care.	72 (82)	5 (6)	11 (13)

Post-Intervention Findings

61 trainees of which 59 (97%) were females and 2 (3%) males responded to the post-intervention questionnaire. 33% of those were rural health nurses, 30% professional nurses and 18% practical nurses. Small percentages were Public Health Nurses (11%) and approximately 8% were non-nursing respondents. Most of the respondents resided in the Belize District (30%), followed by Cayo (25%), Stann Creek (14%), Corozal (12%), Orange Walk (12%) then Toledo (8%). (See Table 7)

Table 7: Gender, qualification, district of residents of respondents (Posttest)

	Frequency	%
Gender		
Female	59	96.7
Male	2	3.3
Professional Education		
Public Health Nurse	7	11.5
Professional Nurse	18	29.5
Rural Health Nurse	20	32.8
Practical Nurse	11	18.0
Other	5	8.2
District of Residence		
Corozal	7	11.5
Orange Walk	7	11.5
Belize	18	29.5
Cayo	15	24.6
Stann Creek	9	14.8
Toledo	5	8.2

Pre and Post Intervention knowledge comparison

Pre and post-training assessment of participants’ knowledge of the cause of mental illnesses was assessed. The overall general knowledge about the diseases was considered to be good among the study participants. The p-value for the difference between the pretest and posttest for item one was 0.107. This indicates that the intervention did not have any statistical significant change in knowledge regarding this item. It would have better if more of the knowledge items on the pretest were repeated on the posttest for the inferences and conclusions about knowledge changes between the pretest and posttest to be more valid.

To test knowledge relating to the cause of mental illnesses, participants were asked to select any or all causes of mental illness from the list provided. Both negative and positive changes were evident by comparing the pre and post training KAP data however

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a more significant improvement in the general knowledge score was observed. The majority of the respondents most frequently selected environmental factors such as stress (94%) and drugs (88%) as causes in the pretest. These two factors were less accepted as causes of mental illness in the posttest. At the time of the pretest many were aware that hereditary (72%) and brain chemistry were factors contributing to the cause of mental illness. Brain chemistry, however, recorded the largest positive difference of nineteen percentage points compared to the other choices from 47% in the pretest to 66% in the second survey. This was a statistically significant change from the pretest to the posttest with a p-value of 0.022. This change in perception was a possible indication of a gain of new knowledge by the participants regarding the role of biological factors as a contributing cause of mental illness. All the other choices except for the ‘Don’t know’ category showed negative variance in percentage points with ‘weak nerves’ showing the largest negative difference of minus 28 percentage points between the two tests (41%-13%). Of the eight variables considered for causes of mental illness, the one with the most statistical significant change between the pretest and the posttest was ‘weak nerves’ with a p-value of .001. See Table 8.

Table 8: Pretest/posttest knowledge about the cause of mental illness

What causes mental illness	Pretest		Posttest		Chi-square p-value
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	
Stress	83	94	50	82	.017
Obeah	9	10	3	5	.242
Brain chemistry	41	47	40	66	.022
Weak nerves	36	41	8	13	.001
Drugs	79	88	46	75	.035
Demon/Spirits	14	16	4	7	.085
Don’t know	1	1	4	7	
Other	1	1	0	0	

Public health nurses surveyed showed increases in the posttest over the pretest for stress (pretest 4.5, posttest 8.2), brain chemistry (pretest 1.1, posttest 8.2) and drugs (pretest 4.5, posttest 8.2). The professional nurses did not show any increase in posttest over the pretest. The rural health nurses showed an increased in brain chemistry from 12.5% to 21.3%. In the case of practical nurses more of them said stress in the posttest (14.8%)

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than in the pretest (12.5%). A smaller percentage of nurses select some of the causes in the posttest than in the pretest. In the case of public health nurses a smaller percentage said demon/spirit (pretest 2.3, posttest 1.6) and for professional nurses it was stress (pretest 27.2, posttest 24.6), obeah (pretest 4.5, posttest 3.3), weak nerves (pretest 9.1, posttest 4.9), and demon/spirit (pretest 4.5, posttest 3.3). Rural health nurses showed a decrease in the most causes compared to the other nurses. They had decreases in stress (pretest 40.9, posttest 27.9), obeah (pretest 2.3, posttest 0.0), weak nerves (pretest 18.2, posttest 6.6), drugs (pretest 37.5, posttest 21.3), and demon/spirit (pretest 5.7, posttest 0.0). (See Table 9).

In comparing the knowledge items with the different ethnic groups, the data did not show a significant difference between ethnicity and cause of mental illness in the pretest scores ($p=0.753$). The size of the sample may have played a role and further testing with a larger sample size may yield different results considering the cultural diversity of the Belizean population.

Data was broken down to study the relationship between qualifications and the belief about what cause of mental illness was also generated. This was done to evaluate if there was a difference between the baseline knowledge of the different categories of participants. Most of the participants selected both environmental and biological factors as causes of mental illness but higher scores were observed among professional and rural health nurses. 20% of the professional nurses compared with 13% of rural health nurses and 10% of practical nurses selected brain chemistry as a cause in the pre-training survey. This percentage did not change significantly in the post training data for professional nurses but there was an increase in the responses of practical and rural health nurse in this area.

The subjects were asked to give an overall evaluation of the course by asking them to respond to three questions on the post-test. These were (1) I gained new knowledge from this training session (2) This training was relevant to my practice and (3) I will use the skills learnt in my work. No one responded negatively to any of the three questions. 99% felt that they gained new knowledge, 99% felt that the training was relevant to their practice and 98% indicated that they will use the new skills taught in their future work.

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Table 9: Frequency and distribution of job title of respondents by cause of mental illness

<i>Job Title</i>	Stress		Obeah		Brain Chemistry		Weak Nerves		Drugs		Demon/Spirit		Don't Know		Other	
	Pre test	Post test	Pre test	Post test	Pre test	Post test	Pre test	Post test	Pre test	Post test	Pre test	Post test	Pre test	Post test	Pre test	Post test
	*n	*n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Public Health Nurse	4	5	0	1	1	5	2	2	4	5	2	1	0	1	1	0
	(4.5)	(8.2)	(0)	(1.6)	(1.1)	(8.2)	(2.3)	(3.3)	(4.5)	(8.2)	(2.3)	(1.6)	(0)	(1.6)	(1.1)	(0)
Professional Nurse	24	15	4	2	18	12	8	3	23	16	4	2	0	0	0	0
	(27.2)	(24.6)	(4.5)	(3.3)	(20.5)	(19.8)	(9.1)	(4.9)	(26.1)	(26.2)	(4.5)	(3.3)	(0)	(0)	(0)	(0)
Rural Health Nurse	36	17	2	0	11	13	16	4	33	13	5	0	1	1	0	1
	(40.9)	(27.9)	(2.3)	(0)	(12.5)	(21.3)	(18.2)	(6.6)	(37.5)	(21.3)	(5.7)	(0)	(1.1)	(1.6)	(0)	(1.6)
Practical Nurse	11	9	3	0	9	7	6	1	11	8	2	1	0	0	0	0
	(12.5)	(14.8)	(3.4)	(0)	(10.2)	(11.4)	(6.8)	(1.6)	(12.5)	(13.1)	(2.3)	(1.6)	(0)	(0)	(0)	(0)
Other	8	4	0	0	2	2	4	0	8	4	1	0	0	0	0	0
	(9.1)	(6.6)	(0)	(0)	(2.3)	(3.3)	(4.5)	(0)	(9.1)	(6.6)	(1.1)	(0)	(0)	(0)	(0)	(0)
Total	83	50	9	3	41	39	36	10	79	46	14	4	1	2	1	1
%	(94.3)	(82)	(10.2)	(4.9)	(46.6)	(64)	(40.9)	(16.4)	(89.7)	(75.4)	(15.9)	(6.5)	(1.1)	(3.3)	(1.1)	(1.6)

* n pretest = 88 n posttest=61

Attitude pre and post training comparison

The overall attitude score for the participants on the pretest was 2.82 and on the posttest it was 2.97 with a significant difference at the p-value level of .05 ($t(13) = 2.162, p = .032$) between these tests. See Table 8. There were greater variability in the pretest scores (standard deviation=.43) than in the posttest scores (standard deviation =.32). The pretest had 88 respondents and the posttest had 57. Items 5, 6, 7, 8, 10 and 11 on the posttest measured attitude and are combined to measure the overall attitude (Table 10). These items were also asked on the pretest.

Table 10: Pretest and posttest overall attitude scores for participants

<i>Test</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>
Pretest	88	2.824	.430
Posttest	57	2.968	.323

About 57% (n=49) of the respondents disagreed that persons with mental illness are dangerous before the training program, remarkably, the percentage of the post training interviewees who disagreed with the statement increased by approximately 30 percent. See Table 11. Likewise with the question whether persons with mental ill are violent, 60% (n=53) of the subjects disagreed before the training and increased to 82% (n=50) after the intervention. Approximately two-thirds of the respondents believed that persons with mental illness are unpredictable before the training and five percent less thought so after the training.

Respondents were asked whether people with mental illnesses should be able to receive treatment in the same health center as people with physical illnesses. 68% in the pretest and 23% in the posttest said they should. This is significant since specialist mental health services currently do not have the resources needed to meet the demands for treatment in extended communities. Mental health centers in communities are often the only health facility available to provide care for physical illnesses and maternity and child health services. The only attitudinal question that was very positive before and after the training was that persons with mental illness

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can lead normal lives. For this statement 90% agreed before and 97% agreed after the training which was statistically significant at the p-value level of .05.

Twenty-three percent of the respondents agree before the training that it is hard to talk to someone with mental health problems. After the training this percentage dropped to five percent which is a significant change at the p-value level of .05. The majority of respondents before (65%) and after (79%) the training was comfortable attending to persons with mental illness. This was a significant change ($p < .05$) in attitude which is attributed to the training.

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Table 9: Attitude and perception about persons with mental illness

Attitude/Practice items	Positive (strongly agree + agree)		Undecided		Negative (disagree + strongly disagree)	
	<i>Pretest</i>	<i>posttest</i>	<i>pretest</i>	<i>posttest</i>	<i>pretest</i>	<i>posttest</i>
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
People with Mental Illness are dangerous	19 (21.6)	5 (8.2)	20 (22.7)	3 (4.9)	49(56.7)	53 (86.9)
People with Mental Illness are violent	17 (19.3)	3 (4.9)	18 (20.1)	7 (11.5)	53(60.2)	50 (82.0)
People with Mental Illness are unpredictable	59 (67.0)	38 (62.3)	17 (19.3)	8 (13.1)	12(13.6)	12 (19.7)
People with mental illnesses should be able to receive treatment in the same health center as people with physical illnesses	60 (68.2)	14 (23.0)	14 (16.0)	3 (4.9)	14(16)	4 (6.6)*
People with mental illness can lead normal lives	79 (89.8)	59 (96.7)	9 (10.2)	1 (1.6)	0(0.0)	0 (0.0)
It is hard to talk to someone with mental health problems	20 (22.8)	3 (4.9)	10 (11.4)	6 (9.8)	58(70.0)	52 (85.2)
I am comfortable with attending to people with mental illness	57 (64.8)	48 (78.7)	17 (19.3)	9 (14.8)	14(16.0)	4 (6.6)

n pretest = 88 n posttest = 61

* 65.5% of interviewees did not respond to question in post-test survey

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

This study explored knowledge, attitudes and practices of health care providers before and after a mental health training program. The training was an initial step towards organizing services to provide integrated mental health care to the Belizean population. Integrated services will most likely mean an increase in contact between health care workers and consumers in all levels of health care. This improvement in the capacity of health human resource is the foundation of the organization of health services to provide an optimal mix of health services as recommended by the World Health Organization (WHO 2007).

To complement this initiative, there has been and the parallel training of primary health care physicians in the detection and treatment of mental health disorders. Training at the secondary care level has also been identified as needing immediate attention since the closure of the dedicated mental hospital has placed increased demands for acute mental health care at regional and community hospitals. Ultimately the mental health program seeks to create a service which includes mental health services at all facets of primary health care, specialist community treatment services including assertive community care and psychiatric services at general hospitals. Long-stay facilities for mental health care will no longer be the focus of mental health care. This proposal recognizes the need for an effective referral and communication system between these levels and specialist services to ensure continuity of care and easy transition between levels and services. To ensure the success of this plan to restructure its mental health services, the mental health program recognizes the importance of normalizing mental illnesses, de-mystifying mental health care and addressing the pervasive problem of stigma.

As noted in the literature review of this study, stigma involves problems with knowledge, attitudes and behavior (Thorncroft, 2007). This research aimed to find out if these areas were affected by a curriculum designed to improve knowledge about mental illness and skill in mental health care. The results revealed a general willingness amongst health workers to receive training in mental health and supported the integrated care of persons with mental illness into their daily practice. Most respondents viewed the integration of mental health into primary health care favorably which indicates that health care staff had probably been previously sensitized about this issue.

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The training was well received since mental health was identified to be one of the important areas for training at this time. The closure of the mental hospital (Rockview) in 2008 involved the relocation of the long-stay patients to a facility in the nation's capital and the discharge of several patients to family care in the community (WHO 2008). As a result these staff had already been caring for persons with mental health disorders, especially those with Schizophrenia more often now than before the closure. Also since the closure of Rockview, persons with mental health complaints were now frequenting the emergency rooms of general hospitals and admissions for persons with acute symptoms of psychosis were now being allowed on the general wards. This was evidenced by statistics from the Mental Health Services indicating that in 2009 there were 65 admissions to Karl Heusner Memorial Hospital (KMH) and 39 in 2010 for psychiatric conditions (Mental Health Program Annual Report 2010). Before 2008, the KMH did not accommodate admissions for psychiatric conditions as patients accessing the emergency room who were in need of further inpatient psychiatric care were transferred to Rockview Hospital. Since admissions for mental health conditions on the general ward were not the normal practice, this training in mental health was relevant and timely.

Research Question I

The first question in this study sought to determine what were the knowledge, attitude and practice by health care providers toward persons with mental health disorders living in communities in Belize. To establish the context for considering this question, pre-training exposure to mental health lectures was assessed. It was discovered that more than half of the respondents (66%) reported that they had received less than 5 hours of mental health training within the last five years and 56% of them agreed that their professional education and training workshops adequately prepared them to care for people with mental illness. Professional nurses, Public Health Nurses and Practical nurses had formal lectures on mental health in their professional training. The Rural Health Nurses did not have any such lectures. The baseline study results were significant for nine of ten participants indicating that stress was the principal contributing cause to the development of mental illnesses. "Drugs" was a popular choice for this question as well with 88% of the respondents selecting this as a cause. 72% believed heredity and 47% chose brain chemistry. This study also demonstrated that widely held public misconceptions about the causes of mental illnesses were endorsed by the study group as well.

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Over 40% of the respondents believed that weak nerves was the cause of mental illness, but a minority (16%) thought demon/ spirits and obeah (10%) were factors in the etiology of mental illness. In Belize it is common for persons with mental illness such as depression and psychosis to be thought of or told that they have “weak nerves” and are often encouraged to “not allow” themselves to become mentally ill. People very commonly buy vitamins to “strengthen the nerves” if they show symptoms such as difficulty sleeping or nervousness. It was interesting to see this belief reflected in the responses of the interviewees. It was encouraging, however, that this selection was not as popular in the post-training scores. Obeah was included as a selection referring to a folkloric sorcery practice that is widely believed to be the cause of mental illnesses in Belize. Respondents of the rural health nursing professions selected these responses most often than the other category of nurses. A possible explanation might be that the training curriculum for this group did not include a mental health component. Almost 75% of those surveyed agreed that medication was effective in the treatment of mental illness which has important implications for knowledge and practice as well. Medication control of symptoms such as hallucinations and mood swings is important if persons with mental illnesses were to live in their communities without needing constant care. It was somewhat surprising, then, that over 80% of the respondents felt that persons with mental illness in fact needed constant care. The reason for this is unclear but it may have something to do with the pairing of chronicity of severe mental illnesses with the belief that those with such diagnoses need constant care.

Research Question II

This dissertation has also examined whether participation in a competency based training program for health care providers which includes basic mental health information and stigma awareness would increase their knowledge and improve their attitudes towards persons with mental health disorders. In considering question two, it can be said that overall the intervention proved to have been effective in correcting some misconceptions about mental illness and reducing stigmatizing attitudes among the participants. The results of the post-training study showed when the participants were asked if persons with mental illness were dangerous and violent, the majority indicated a negative response which was a significant improvement over pre-training results. It was noted that the notion of unpredictability of persons with mental disorders persisted even after the intervention but it would be hard to tell if the persistence of this

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belief may interfere with the integration process since the scores on the other attitude questions had improved significantly after the training. Future research may need to examine if this attitude has changed with time as increased contact with persons with mental illness and primary health care workers is anticipated.

The study revealed a significant change in the pre and post test percentages of participants who responded to questions about dangerousness and violence among persons with mental illness. After the training more of the respondents were less inclined to believe that persons with mental illness were dangerous and violent. These changes can be directly credited to the intervention. This is an important change since dangerousness is the most frequent stereotype associated with mental illness (Scheffer 2003). It was very encouraging, too, to note that most of the respondents felt that persons with mental illness can lead normal lives. This indicates a belief that with care, recovery for such persons is possible. This was supported by the large number of positive responses in the pretest regarding the effectiveness of medication and people with mental illness not needing constant care. Notably there were still positive responses for obeah and demon and spirit as possible causes in both the pre and post evaluations but the numbers were small. 16% of the respondents in the pretest and 7% in the posttest attributed the causes of mental illnesses to demon and spirit and 10% in the pretest and 5% in the posttest said obeah causes mental illness.

While 68% percentage of the respondents agreed that persons with mental illness were unpredictable before and 62.3% did so after they had completed the training program, 70% in the pretest and 85.2% of the posttest respondents indicated that they felt that it would not be difficult for them to talk with persons with mental illnesses. Almost 80% of the interviewees indicated that they were comfortable in assisting someone diagnosed with a mental disorder after the training intervention. These results have important implications for practice at the community level as interviewing of and contact with persons seeking mental health care is vital to the management of mental disorders. Pretest results were encouraging regarding the question on whether the respondents believed that persons with mental illness should be able to receive care in the same health facility with persons with physical illness. In the post-test, however, less than half of those surveyed responded to this particular question on the questionnaire. The reasons for

the non-response are unclear but there is no evidence to suggest that the intervention itself was responsible for persons opting to not respond to this question in the posttest.

The overall results revealed that participants were well informed about mental illness and were able to indicate that the etiology of mental illnesses was multi-factorial. The respondents were more aware of the biological influence in mental illnesses after the training program as brain chemistry as a contributing cause showed the largest positive difference between the pre and post tests. These differences varied depending upon the qualification of the nurses in the study. There was no change in the knowledge responses among professional nurses before and after the training. This may be attributed to the presence of a mental health component in their professional preparation thus they had come in with prior knowledge. The community nurses (Rural Health) seemed to have acquired new knowledge, more so than all the other category of nurses who completed the training program. This may be due to the fact that these nurses had not received lectures in mental health in their nursing training and had less baseline knowledge than the other category of nurses.

In summary the results of this study indicate that the pre-training level of knowledge of the participants was considered to be adequate and the trainees benefited from the training as the final results indicated that the intervention positively affected knowledge about the causes of mental disorders. The most significant changes in knowledge were recorded among the Rural Health Nurses who were the main target group of the training intervention.

Recommendations for Future Research

Future research should also aim at replicating a more detailed study among this population with larger, representative samples and possibly using instruments that have been validated through previous research to measure specific constructs of stigma. It would also be useful to understand the experiences of consumers with mental illness who receive care from these trainees to determine the presence and the effects of stigmatizing attitudes.

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Recommendations

Mental health care in Belize has changed focus from hospital to the community therefore there is an urgent need for general health services and nursing education to be aware of the changing educational needs of nurses posed by the expanding scope of their practice. The findings of this study have a number of important implications for future practice.

1. It is highly recommended that the University of Belize incorporates aspects of this curriculum in the formal preparation of nurses so that future nurses will be well prepared to provide community mental health care.
2. It is also recommended that this training be extended to those nurses currently working in primary and secondary care who were unable to participate in this round of training.
3. Since the impact of the training on the rates of mental health consultations and referrals and the benefits to people with mental illness is unknown it is recommended that the Ministry of Health to implement a system of auditing community nurses' practice to assess their level of engagement in the delivery of mental health care.
4. It is necessary that future and current health care providers participate in programs aimed at reducing stigma towards persons with mental illness. Strategies that include contact with persons with mental health disorders living in the community should be included in such programs. Such strategies should be incorporated into the educational experiences of university prepared nurses.

These recommendations are all the more important since the direction of the mental health program is towards integration of mental health into primary health care.

The mental health training program resulted in significant positive changes in knowledge and attitude, and promises to have a positive impact on the incorporation of mental health into primary health services. There seem to be some residual attitudinal problems which may improve as contact with persons with mental illness is increased at the community level. The impact of this training program on the practices of community nurses in providing mental health care is unknown at this time.

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APPENDIX A: Pretest

**MENTAL HEALTH KNOWLEDGE, ATTITUDE AND
PRACTICES QUESTIONNAIRE FOR PRIMARY CARE
NURSES IN BELIZE**

Pre-training KAP Questionnaire

INFORMATION FOR THE RESPONDENT

This survey is designed for nurses working in the primary health care setting in Belize with the main objective of assessing knowledge, attitudes and practices regarding mental health, mental disorders and persons with mental disorders. The information gathered from this survey will be used to guide and inform future training in mental health for general care nurses, particularly those working in the primary health care setting.

Your participation in this survey is voluntary and you may choose to answer some or none of the questions. Your responses will be kept anonymous so do not write your name on the questionnaire.

Thank you for participating.

Section A

Demographic Information:

1. How old are you?
 1. 18-25
 2. 26-35
 3. 36-45
 4. 46-55
 5. Above 55

2. What is your gender?
 1. Male
 2. Female

3. Which ethnic group do you belong to?
 1. Mestizo
 2. East Indian
 3. Creole
 4. Garifuna
 5. Maya
 6. Other: _____

4. What is the highest level of health profession education you have completed?
 1. Public Health Nurse
 2. Professional Nurse
 3. Rural Health Nurse
 4. Practical Nurse
 5. Other: _____

5. How long have you been working in your highest professional capacity?
 1. Less than 5years
 2. 5-10years
 3. 10-20 years
 4. 20-30 years
 5. 30-40 years
 6. More than 40 years

6. In which district is the health facility you work at located?
 1. Corozal
 2. Orange Walk
 3. Belize
 4. Cayo
 5. Stann Creek
 6. Toledo

7. What type of health facility do you work at?
 1. Community Hospital
 2. Polyclinic
 3. Health Center
 4. Health Post
 5. Hospital
 6. Other: _____

8. How long have you been working at this health facility?
 1. Less than 5 years
 2. 5-10 years
 3. 11-20 years
 4. 21-30 years
 5. 31-40 years
 6. More than 40 years

Section B

Questions on Integration

For each of the questions below, please indicate the extent of your agreement or disagreement by placing a tick in the appropriate box.

	Agree Strongly	Agree	Undecided	Disagree	Disagree Strongly
1. Do you agree that mental health care should be integrated into primary health care?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Do you agree that nurses working in the community should be trained in identification and management of mental disorders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. How important do you think this training will be in your work?					
1. Unimportant					4. Important
2. Of little importance					5. Very important
3. Moderately important					6. Don't know
4. In your opinion, which of the following areas should be the focus of training for nurses in primary health care at this time? (Check one or all that apply)					
1. HIV/AIDS					5. Domestic violence
2. Infectious disease					6. Don't know
3. Mental Health					7. Other: _____
4. Non communicable diseases					

Section C

Questions to assess Knowledge

1. Have you ever received lectures on mental health topics?
 1. Yes
 2. No > skip to question 4

2. Approximately how many hours of lectures have you received over the last 5 years?

1. Less than 5 hours	4. 20-30 hours
2. 5-10 hours	5. More than 30 hours
3. 10-20 hours	6. Don't know

	Agree Strongly	Agree	Undecided	Disagree	Disagree Strongly
--	----------------	-------	-----------	----------	-------------------

- | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 3. I believe that the lectures adequately prepare me to care for people with mental illness. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Medications are effective in treatment of mental illness. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. People with mental illness need constant care. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. What do you think cause mental illnesses? (Circle one or all that apply)
- | | |
|--------------------|---------------------|
| 1. Stress | 6. Demon/Spirits |
| 2. Obeah | 7. Don't know other |
| 3. Brain chemistry | 8. Other: _____ |
| 4. Weak nerves | |
| 5. Drugs | |

Section D

Questions to assess Attitude

	Agree Strongly	Agree	Undecided	Disagree	Disagree Strongly
1. People with mental illness are usually dangerous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. People with mental illness are usually violent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. People with mental illness are usually unpredictable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. People with mental illnesses should be able to receive treatment in the same health center as people with physical illnesses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. People with mental illness should be confined to a facility or hospital for the rest of their lives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Rockview was the most appropriate place for people with mental illness to live.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. People with mental illness can lead a normal life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section E

Questions about Practice

	Agree Strongly	Agree	Undecided	Disagree	Disagree Strongly
1. It is hard to talk to someone with mental health problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am comfortable with attending to people with mental illness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Have you ever provided treatment to persons with mental illness in your community?					
1. Yes					
2. No					
3. Don't know					
4. Where or to whom would you most likely refer someone with a mental illness for treatment? (Circle one)					
1. Medical officer					
2. Psychiatric nurse Practitioner					
3. Psychiatrist					
4. Emergency room					
5. Don't know					
6. Other: _____					
5. Have you ever referred anyone with a mental illness for treatment?					
1. Yes					
6. No > skip to question Did you receive feedback on the patients you have referred?					
1. Yes					
2. No					
3. Do not know					
7. Do you believe that you receive sufficient support from the mental health services?					
1. Yes					
2. No					
3. Don't know					
8. Are you satisfied with the competence of the mental health professional(s) in your health region?					
1. Yes					
2. No					
3. Don't know					
9. Do you think that the health facility where you work can accommodate the care of persons with mental illness					
1. Yes					
2. No					
Don't know					

Appendix B: Posttest

MENTAL HEALTH KNOWLEDGE, ATTITUDE AND PRACTICES QUESTIONNAIRE AMONG HEALTH PERSONNEL IN BELIZE

Post-intervention KAP Questionnaire

INFORMATION FOR THE RESPONDENT

This is a follow-up to the questionnaire you completed prior to participation in the Community Mental Health Training Program. It is designed to assess changes in how health personnel manage patients with mental illness and their attitudes and beliefs towards such patients. It also asks about your impressions of the training program. To measure any changes in attitudes since the training, many of the questions you answered in the first survey are repeated. These questions are important for the purpose of research so it would be greatly appreciated if you would please complete the entire questionnaire. Your responses to the questionnaire will be kept confidential. Only cumulative data will be used in reporting the results of the surveys.

Section A

1. What is your gender?
 1. Male
 2. Female

2. What is the highest level of health profession education you have completed?
 1. Public Health Nurse
 2. Professional Nurse
 3. Rural Health Nurse
 4. Practical Nurse
 5. Other: _____

3. In which district is the health facility you work at located?
 1. Corozal
 2. Orange Walk
 3. Belize
 4. Cayo
 5. Stann Creek
 6. Toledo

Section B

4. What do you think cause mental illnesses? (circle all that apply)

1. Stress
2. Obeah
3. Brain Chemistry
4. Weak Nerves
5. Drugs
6. Demons/Spirits
7. Don't Know
8. Other

	Agree Strongly	Agree	Undecided	Disagree	Disagree Strongly
5. People with mental illness are usually dangerous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. People with mental illness are usually violent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. People with mental illness are usually unpredictable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. People with mental illnesses should be able to receive treatment in the same health center as people with physical illnesses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. People with mental illness can lead normal lives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Agree Strongly	Agree	Undecided	Disagree	Disagree Strongly
10. It is hard to talk to someone with mental health problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I am comfortable with attending to people with mental illness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I gained new knowledge from this training session	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. This training was relevant to my practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I will use the skills learnt in my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for participating.