# Evaluation of a mental health literacy programme on community leaders' knowledge about and attitude towards people with mental disorders in Ghana: Cluster randomised controlled trial.

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# Abstract

In Ghana, poor knowledge about mental disorders, compounded by negative attitudes developed from deep-rooted stigma, may be responsible for inappropriate behaviour towards people with mental disorders. The effects of negative societal reactions toward individuals with mental disorders and their families may be minimised considerably if people are exposed to credible and adequate information about mental disorders. The broad aim of this study was to evaluate the effectiveness of a mental health literacy programme on Ghanaian assembly members' knowledge about and attitudes toward people with mental disorders. In addition, the study sought to evaluate the perspectives of the assembly members who participated in the programme about its usefulness and in what ways, if any, they used this acquired information in their routine dealings with people with mental disorders and their families.

This was a mixed method, sequential explanatory design, comprising a cluster randomised controlled trial and a process evaluation. A mental health literacy programme, based on a problem-solving Story-bridge approach, underpinned by andragogy, was developed for the study. Ten district assemblies were randomised into intervention and control clusters. Overall, an equal sample of 70 assembly members in the intervention group received the programme while the control group received a plain language basic brochure about mental health issues. Data were collected from both groups at baseline and 12-week follow-up. In addition, a mixed method process evaluation was undertaken with the intervention group.

Principal findings of the study indicated that the programme was somewhat effective in improving participants' knowledge about and attitudes toward people with mental disorders. Overall, both clusters demonstrated an increase in their mean scores at follow-up; however, the intervention cluster demonstrated a greater improvement than the control cluster. Apart from the community mental health ideology outcome measure, which had a medium and statistically significant difference between the two groups in changes over the two time-points, all other outcome measures had small differences which were not statistically significant. The process evaluation highlighted the usefulness of the programme. Participants expressed value in the programme; improved knowledge, increased confidence and willingness to engage, and increased empathetic and non-judgemental attitudes toward people with mental disorders and their families. In addition, participants commended the delivery of the programme, and recommended ways to boost realisation of the programme objectives and education activities that could be introduced to improve community mental health literacy. Overall, the findings indicate that it is possible to improve people's knowledge about and attitudes toward people with mental disorders and their families. The outcomes suggest that mental health education should be intensified to improve mental health literacy and reduce deep-rooted stigma. These improvements, in turn, may contribute to positive attitudes towards people with mental disorders and their families, enhance the quality of mental health service delivery, and decrease the treatment gap and burden of mental disorders in Ghana.

# Doctor of Philosophy Declaration

I, Yaw Amankwa Arthur, declare that the Ph.D. thesis entitled 'Evaluation of a mental health literacy programme on community leaders' knowledge about and attitudes towards people with mental disorders in Ghana: Cluster randomised controlled trial' is no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature

[redacted]

Date

5th October 2018.

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## Definition of terms

The following terms are used frequently in this thesis:

- **Assembly member** is the official name of a community leader in Ghana who has been elected by his/her community or appointed by the President to a district assembly for a period of four years.
- **Mental health literacy** is defined as 'knowledge and beliefs about mental disorders which aid their recognition, management and prevention' (Jorm et al., 1997a, p. 182).
- **Stigmatisation** relates to a set of negative attitudes, false beliefs and fears about mental disorders resulting from prejudice, lack of knowledge or ignorance (Corrigan & Watson, 2002).
- "**Public stigma** is the prejudice and discrimination that emerges when the general population endorses specific stereotypes; e.g., "people with mental illnesses are incompetent and incapable of maintaining a real job" (Corrigan et al., 2010, p. 260)
- "**Self-stigma** occurs when people with mental illnesses internalize stereotypes, apply the attitudes to themselves, and suffer diminished self-esteem and lessened self-efficacy" (Corrigan & Shapiro, 2010, p. 909)
- **Discrimination** occurs when an individual is offered less opportunity to achieve any life goals because of a specific trait, sex, age, race or health status. Stigmatising attitudes may lead to discrimination, particularly for individuals with mental disorders who become victims of unjust denial of employment, education, housing, socialisation and access to treatment (Corrigan, 2000).
- **Story-bridge** are scenes in a vignette presented visually in an arc form where the scenes are linked together to form a story.
- **Cluster randomised controlled trial** is a design for experiments in which randomisation is done at the cluster level (group of subjects) not the individual level.
- **Andragogy** is "the art and science of helping adults learn"(Knowles, 1968, p. 47).
- **Schizophrenia** is defined as "a group of characteristic symptoms, such as delusions, hallucinations, and negative symptoms (i.e., diminished emotional expression or avolition); deterioration in social, occupational, or interpersonal functioning; and continuous signs of the disturbance for at least 6 months" (Black & Grant, 2014, p. 71).
- **Depression** is defined as a major reduction in mood, with or without feelings of hopelessness, helplessness and guilt (Parker, 2007).

- **The programme** in this study refers to the mental health literacy training programme conducted for the intervention group.

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# List of abbreviations

WHO: World Health Organization
CMHI: Community mental health ideology

**Participant ID** in Qualitative process evaluation

IC: Intervention cluster
Prefix 1–3: Group
M: Male
F: Female
01–25: Interviewee number
For example, person IC2.M23 is in intervention cluster group 2, male, no. 23

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# Chapter One

# Introduction

## 1.1 Introduction

Lack of knowledge about mental disorders may be responsible for inappropriate responses and detrimental stigmatising attitudes towards individuals at the onset of a mental disorder. These may cause profound distress for a seemingly stable family. However, exposure to credible and adequate information about mental health issues may improve the situation considerably. In this thesis, I present a study into how participation in a mental health literacy programme by community leaders in Ghana, commonly referred to as assembly members, affected their knowledge about and attitudes toward people with mental disorders. The chapter commences with background information about the study. Then, the research question, aims of the study and research hypotheses are presented. This is followed by a definition of terms used, and a discussion of the significance of the study. The chapter concludes with an outline of the thesis.

## 1.2 Background of the study

Globally, there are heightened concerns about the need to improve the mental health literacy of populations. These concerns are underpinned by inappropriate and negative attention received by persons with mental health problems and their families, from the public, social networks and other family members (Black & Grant, 2014; Corrigan & Watson, 2002; Farrelly et al., 2014). Negative attitudes and intolerance towards individuals with mental disorders are often attributed to inadequate knowledge about these disorders, which can adversely affect help-seeking attitudes and behaviours (Jorm, 2012). This is because people do not know where to go, the type of treatments that exist and the resources that are available for them to use (Jorm, 2012). Recent global studies indicate an increasing prevalence of mental disorders (Alonso, Chatterji, He, & Kessler, 2014), a situation that is compounded by wide treatment gaps, that is, the gap between the number of people with mental disorders who require, and those who receive, treatment (Lund et al., 2015). In less developed countries, treatment gaps are estimated to range between 75% and 90% (Docherty et al., 2017; Gureje et al., 2015; Lund et al., 2015). This figure is even greater for Ghana, a less developed country within the sub-Saharan African region, where estimates of it exceed 90% (Roberts, Mogan, & Asare, 2014). Commonly cited explanations for treatment gaps include lack of access to specialists and services, incorrect perceptions and beliefs about causation, quality of available care, distance to services, lack of knowledge about available resources, and stigma[1] (Acharya et al., 2017; Broffman et al., 2017; Corrigan, 2004).

Stigma arises from negative stereotypes and prejudices against individuals with mental disorders, inducing fear, anger and dislike (Corrigan & Shapiro, 2010). Stigma is a global phenomenon and is particularly prevalent in sub-Saharan African countries including Ghana (Abdullah & Brown, 2011; Audu, Idris, Olisah, & Sheikh, 2011; Corrigan, 2000; Corrigan, Morris, Michaels, Rafacz, & Rüsch, 2012). In Ghana, stigma provides people with an ill-conceived justification to discriminate against individuals with mental disorders, to the point of isolating them from the rest of the community (Baffoe, 2013). Doku et al. (2011) assert that stigma may be the reason why, at the government level, mental health is discriminated against through lack of provision of resources to the mental health sector. For example, Roberts et al. (2014) point out that the government spent a meagre 1.4 % of the total health budget on mental health. Other detrimental effects of stigma on people with mental disorder include medication non-adherence, exacerbation of anxiety and depressive symptoms, social isolation, substance misuse and treatment drop-out (Britt et al., 2008; Keyes et al., 2010).

To address stigma in the general population, researchers like Jorm (2012) and Corrigan et al. (2012) suggest that individuals' knowledge about mental health needs to be improved to deal with the adverse effects of stigma. Jorm et al. (1997a) coined the term mental health literacy and defined it as 'knowledge and beliefs about mental disorders which aid their recognition, management or prevention' (p. 182). In developed countries, intervention studies into mental health literacy have reported improvements in knowledge about and less stigmatising attitudes toward people with mental disorders (Brijnath, Protheroe, Mahtani, & Antoniades, 2016; Corrigan et al., 2012; Lam, Jorm, & Wong,

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[1] See Chapter 3, Section 3.2 for a definition and discussion of stigma.

2010). Poor mental health literacy levels have been reported in less developed countries (Kapungwe et al., 2010; Sorsdahl & Stein, 2010), with few intervention studies undertaken to improve mental health literacy (Thornicroft et al., 2016), especially in Ghana (Roberts et al., 2014; Wilson & Somhlaba, 2016). If individuals with mental health problems, their family members and social networks have poor knowledge about mental disorders, coupled with negative beliefs and attitudes, they are less capable of providing early and appropriate interventions and are reluctant to provide any assistance (Kitchener & Jorm, 2008; Pedersen & Paves, 2014). Alternatively, improving their knowledge and developing appropriate attitudes about people with mental disorders could allow them to provide immediate and effective assistance to individuals with mental disorders and may contribute to more favourable outcomes. Currently, little is known about mental health literacy levels of assembly members[2] in Ghana.

## 1.3 Research question

To what extent does participation in a problem-solving ‘Story-bridge’[3] mental health literacy programme affect assembly members’ knowledge about and attitudes toward people with mental disorders?

## 1.4 Aims of the study

The broad aim of the study was to evaluate the effectiveness of a problem-solving Story-bridge mental health literacy programme on assembly members’ knowledge about and attitudes toward people with mental disorders. The specific aims were to:

1. Evaluate if participation in the programme improved community leaders’ knowledge about and attitudes toward people with mental disorders. (Quantitative)
2. Evaluate the perspectives of the community leaders who participated in the programme about its usefulness and in what ways, if any, they used this acquired information in their routine dealings with people with mental disorders and their families. (Qualitative)

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[2] See Chapter 4 Section 3.5.1 for a justification for using assembly members as the target group.

[3] See Chapter 4 Section 3.8.2 for a description of the ‘Story-bridge’ approach resource.

## 1.5 Research hypotheses

1. Assembly members who participate in the programme would have higher level of knowledge about mental disorders than those in the control cluster who receive a brochure (Appendix 1) about mental health issues.
2. Assembly members who participate in the programme would have more positive attitudes about people with mental disorders than those in the control cluster who receive a brochure about mental health issues.

## 1.6 Justification for the study

This study, which sought to evaluate the effectiveness of a problem-solving Story-bridge mental health literacy programme on knowledge about and attitudes toward people with mental disorders, is significant and timely. Its significance is premised on the fact that, to date, no research has been conducted in Ghana using the problem-solving Story-bridge approach as a concept to improve the mental health literacy of assembly members and evaluated using a cluster randomised controlled trial. The study is timely because, as Sipsma et al. (2013) and Wilson and Somhlaba (2016) have noted, research into mental health literacy in Ghana has received little attention. The research is also timely because Ghana has passed a new *Mental Health Act 846* of 2012 (Government of Ghana, 2012) to provide a policy framework for mental health service delivery and improve mental health practice. However, improvements in mental health practice will be undermined if people have poor knowledge about mental health problems and stigmatising attitudes toward people with mental disorder (Doku et al., 2011).

Overall, three significant factors influenced the conduct of this study. It was anticipated that a community-based approach to improve assembly members' knowledge about and attitudes toward people with mental disorders would benefit their communities and districts[4]. At a community level, increasing their knowledge may improve help-seeking attitudes and assist in suggesting appropriate interventions for people with mental health problems. In addition, their influential position would make them well-placed to encourage positive attitudes toward mental health problems in the community. At a

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[4] Several communities or towns make up a district. See Chapter 4, Section 2.6.

district level, assembly members' improved knowledge and attitudes may motivate them to appreciate mental health issues better in their deliberations. As decision makers, they may view the general improvement in mental health literacy of their community members as a community-based and cost-effective approach to addressing a national problem. Assembly members may also have a greater appreciation of the need to be proactive rather than reactive in committing resources to improving mental health literacy in their communities. Consequently, this may reduce or eliminate stigmatising and discriminatory attitudes and encourage individuals with and families to seek early appropriate interventions and access treatment.

The present study differs from other studies in Ghana because, for the first time, it will use the problem-solving Story-bridge approach, which is recognised as helpful in improving mental health literacy (Lubman, McCann, Renzaho, Kyle, & Mugavin, 2014). The study will be evaluated using a rigorous measure, such as the cluster randomised controlled trial design, using the key features of an RCT, which is regarded as the 'gold standard' in research evaluation (Fielding, Ogbuagu, Sivasubramaniam, MacLennan, & Ramsay, 2016). The design will enable the study to meet the eligibility criteria for inclusion in systematic reviews that seek to evaluate the effectiveness of mental health literacy programmes particularly in the sub-Saharan African region. Discussions and conclusions drawn from such reviews may influence the adoption and development of such mental health literacy programmes in Ghana. Anticipated outcomes from the present study, which include improved knowledge about and attitudes toward people with mental disorders, may provide the basis for future research and government mental health policy formulation that seek to improve the mental health literacy of the Ghanaian populace.

## 1.7 Outline of the thesis

This thesis is presented in seven chapters. In Chapter Two, a review of literature on the global prevalence of mental disorders is presented, followed by an overview of depression and schizophrenia, and an examination of mental health legislation and practice in Ghana. In Chapter Three, a review of literature on stigma and mental health literacy and interventions to address stigma and improve mental health literacy, is undertaken. In Chapter Four, the conceptual framework for the study is examined, and the design and methods of the study are detailed. In Chapter Five, the quantitative findings of the cluster randomised controlled trial are presented. In Chapter Six, the findings of the process evaluation of the mental health literacy programme are presented. In Chapter Seven, the concluding chapter, a discussion of the overall findings of the study including the strengths and limitations of the study and the recommendations are presented.

# Chapter Two

# Review of Literature

## 2.1 Introduction

In this chapter, issues related to mental disorders are examined in three main sections. In the first section, a review of the global prevalence of mental disorders, including sub-Saharan Africa and Ghana, is presented. In the second section, an overview of common mental disorders is given, with a focus on depression and schizophrenia. Finally, mental health legislation and practice in Ghana is examined, including developments, challenges and cultural issues related to mental health in Ghana.

## 2.2 Overview of the prevalence of mental health problems

Mental disorders are a leading cause of disability worldwide, with psychiatric conditions accounting for 14% of global disease burden (Omar et al., 2010). The global lifetime prevalence of mental disorders was measured by the World Health Organization (WHO) World Mental Health Survey Initiative. The survey was initiated in 2005 and is, by far, the largest continuing cross-national project to estimate the prevalence of mental disorders (Alonso et al., 2014). The survey was conducted across 28 countries, with more than 150,000 respondents. The estimated lifetime prevalence of any mental disorder ranged between 18.1% and 36.1% (Alonso et al., 2014). Further assessment using the Diagnostic Statistical Manual of Mental Disorders (DSM-IV) and WHO Composite International Diagnostic Interview (CIDI Version 3.0) indicated higher prevalences, ranging between one-third and one-sixth of the population in the United States, Belgium, South African and Japan (Alonso et al., 2014). In the same survey, the authors stated that the 12-month prevalence rates for any mental disorders varied from 6% for a country like Japan to more than 30% for Brazil and the United States. Steel et al. (2014), in a systematic review of 174 studies across 63 countries, found that one in five adults (17.6%) had experienced a mental disorder within the 12-month period preceding the review and 29.2% had experienced a common mental disorder at some time in their lives.

Mental disorders in the sub-Saharan Africa region are estimated to be high, but there is a need for more up-to-date national data. A feature story on the World Bank Group website entitled ‘As Liberia and Sierra Leone recover from civil wars and Ebola, demand for mental health services surges’ commented on the lack of current scientific data on the prevalence of common mental disorders in sub-Saharan African countries like Liberia, Sierra Leone and Guinea (Mayhew, 2016). The author made reference to a study by Johnson et al. (2008), who concluded that 40% of Liberians had symptoms of major depression and 44% appeared to have post-traumatic stress disorder five years after the end of the civil war in that country. The author further suggested that the Ebola outbreak in Guinea, Liberia and Sierra Leone, the lack of mental health professionals and resources, and secrecy attached to the onset of a mental disorder by an individual or family members may have increased the frequency of common mental disorders in that region (Mayhew, 2016). Despite these projections, lower prevalence rates have been reported elsewhere. For example, a sub-Saharan African survey found that 12% of respondents in Nigeria had been diagnosed with a common mental disorder and 6% had experienced a mental disorder in the preceding 12 months (Alonso et al., 2014). In the same survey, South Africa had an estimated prevalence of more than 15% (Alonso et al., 2014). Another study in part of Kenya also reported a 10.8% incidence of common mental disorders (Jenkins et al., 2012). The discrepancy in perceived higher prevalence rates and reported lower occurrence rates may be attributable to inaccurate responses to survey questions (Alonso et al., 2014).

In Ghana, as in other sub-Saharan African countries, there is a lack of current national empirical data on the prevalence of common mental disorders (Sipsma et al., 2013). Most prevalence studies in the country are small scale and conclusions related to national prevalence of common mental disorders are generally speculative (Read & Doku, 2012). However, almost a decade ago when Ghana’s population was 21.6 million, the WHO (2007) estimated that 10% of the population had a mild-to-moderate mental disorder and an additional 3% had a severe disorder. The WHO (2007) further stated that only 32,283 people had received treatment, indicating a treatment gap of 98%. Sipsma et al. (2013) assessed the national prevalence of poor mental health in Ghana. They used country-wide data collated between 2009 and 2010 by the Institute of Statistical, Social and Economic Research at the University of Ghana and Economic Growth Centre at Yale University in the United States. Sipsma et al. (2013) concluded that 18.7% of respondents reported moderate or severe psychological distress. They also reported that, comparatively, psychological distress was higher in women than men, with 21.2% of women experiencing moderate-to-severe psychological distress compared with 15.5% of men. In addition to these two reports, Roberts et al. (2014) estimated that 95% of people who had a mental disorder lacked access to treatment, heightening concerns about treatment gaps. Although research has not been conducted to estimate the exact national prevalence of mental disorders in Ghana (De Menil et al., 2012), the reported large treatment gaps and scarce epidemiological data on psychopathology (Wilson & Somhlaba, 2016) indicate that there is a high prevalence of common mental disorders in Ghana, and the majority of affected individuals are untreated. A common mental disorder and a highly stigmatised disorder are discussed in the next section.

## 2.3 A common mental disorder and a highly stigmatised disorder

‘Common mental disorders are the heterogeneous ICD-10 categories of mood-, anxiety-, and stress-related disorders’ (Chowdhary, Rahman, Verdeli, & Patel, 2014, p. 160). These disorders are often grouped together for public health purposes because they frequently co-occur and have common risk factors and interventions (Chowdhary et al., 2014). In the 1990s they were considered as ‘minor mental disorders,’ yet studies indicated that these disorders were more common and placed significant financial and logistical burdens on health care systems (Risal, 2011). As a consequence, they were referred to as ‘common mental disorders’ (Risal, 2011). Another disorder, schizophrenia, while not as common, is a significant public health concern globally because of its adverse consequences for individuals and family members (WHO, 2016).

In this review, I will focus on depression and schizophrenia; two disorders that have major impact on the lives of families, carers and individuals with these disorders and on public resources. The focus on depression is justified because, globally, it is the leading cause of disability and a key contributor to death by suicide (WHO, 2017). Furthermore, in Ghana depression is claimed to be the major cause of a recent spate of suicides in the country (Hammond, 2017). The focus on schizophrenia is premised on it being stigmatised globally, and because it has major debilitating effects on the person's cognition, emotions and behaviour in social, educational and work activities (Chien, Leung, Yeung, & Wong, 2013). In Ghana, the public commonly believe the disorder is caused by a supernatural force as punishment for wrongdoings, and this results in stigmatisation of affected individuals and their families (Cooper et al., 2010; Opare-Henaku, 2013)[5].

### 2.3.1 Depression

Depression is defined in various ways, but central to these definitions is an underlying negative mood. Parker (2007) defined depression as a major reduction in mood, with or without feelings of hopelessness, helplessness and guilt. The definition of depression has been clarified in the current *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5), an authoritative resource used by clinicians to diagnose and classify mental disorders. In it, the criteria used to diagnose a condition as depression are listed (Appendix 2). Among other things, it states that 'five (or more) of the symptoms must be present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure' (American Psychiatric Association, 2013, p. 160). Depression usually occurs with symptoms of anxiety, which leads to significant difficulties in one's ability to perform daily living activities (Marcus, Yasamy, Ommeren, Chisholm, & Saxena, 2012). The intensity of depression may be diagnosed as 'severe,' 'moderate' or 'mild' and usually runs a recurrent course (Ohene & Addom, 2015).

Globally, depression is estimated to affect 322 million people and it is the leading cause of disease burden (WHO, 2017). Studies have revealed that in developed countries the average lifetime and 12-month prevalence estimates for depression are 14.6% and 5.5% respectively, while in less developed countries they are 11.1% and 5.9% respectively (Bromet et al., 2011). As of 2015, depression affected 4.4% of the global population and more prevalent among females (5.1%) than males (3.6%) (WHO, 2017), with the average age of onset being 25.7 years in developed countries and 24 years in less developed

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[5] See Chapter 4, Section 3.7.2 for a detailed rationale for focusing on depression and schizophrenia.

countries (Bromet et al., 2011). According to the Chief Psychiatrist of the Ghana Health Service, at least 10,250,000 Ghanaians, representing about 41% of the population, are suffering from mental distress and depression, with the majority being women (Ghanaweb, 2014). Furthermore, between 2005 and 2015, depression ranked as the third highest cause of disability in Ghana (WHO, 2017).

Recent evidence suggests that the interaction of social, biological and psychological factors contributes to individuals experiencing depression (Gotlib & Hammen, 2015). Social risk factors for depression include change in marital status, socio-economic status, social skills, family functioning and attachment (Hammen & Watkins, 2013). An example of this is seen in recently married couples; issues of trust, over-dependency on a partner, relationship management and conflicts may be distressing, thus creating deep dissatisfaction that can make one or both spouses vulnerable to depression (Hammen & Watkins, 2013).

Socio-economic factors like poverty, poor living conditions and illness are risk factors for depression. These factors may be modifiable to some extent depending on an individual's ability and their social network that helps them to deal with the onset of depression (Farrer, Gulliver, Bennett, Fassnacht, & Griffiths, 2016). A study by Rajkumar et al. (2009) indicated that poverty and ill-health among 1,000 elderly persons in a rural community in India led to a higher incidence of depression. They also reported that those with adequate social support were less likely to develop depression. A person's inability to relate to people confidently is another risk factor for depression, as suggested by Farrer et al. (2016). Using an online survey, they sought to find the psychosocial factors that predicted major depression among 611 university students in Australia. They found that students who lacked self-confidence and had concerns about their body image were at high risk of major depression.

For a family to function normally, the presence of both parents and the formation of healthy attachments are important for the healthy development of all family members. However, when a steady parent or guardian is not present, adverse family experiences, including rejection, unresponsiveness and confrontation, can lead to lack of self-worth, particularly in children. These experiences disrupt the acquisition of important life skills to deal with difficult and stressful situations and may make family members susceptible to depression (Hammen & Watkins, 2013) throughout their life.

Biological risk factors for depression include family history of depression, physical illness, medical causes[6], substance use, and the effects of neurotransmitters[7] such as serotonin[8], dopamine[9] and norepinephrine[10] in the body. Decreased amounts of norepinephrine and serotonin at receptor sites in the brain can lead to depression (Shives, 2008). Research on family structures, including twin and adoption studies, have indicated that common genes, environmental and cultural factors may contribute to the recurrence of depression in families if the biological parents have the disorder (Levinson et al., 2003; Mondimore et al., 2006; Sullivan, Neale, & Kendler, 2000). For example, Hammen and Brennan (2001) and Pilowsky et al. (2006) suggested that biological children of depressed adults have a 50% chance of developing a mental disorder, with 20% to 40% of these offspring developing depression.

Psychological risk factors, such as significant loss in a person's life, absence of supportive networks and poor social integration increase vulnerability to depression (Wasserman, 2011). For instance, the extent to which a person is integrated into a society and makes use of available societal resources is significant in dealing with stressful and difficult times (Wasserman, 2011). Individuals with depression may report that activities like socialising with friends and family, work, sex and recreation no longer interest them (Hammen & Watkins, 2013). This loss of interest may be related to reports of unusual feelings of sadness even when they are in the midst of people or engaged in activities that should make them happy (Coleman, 2012). There may also be changes in sleep patterns, appetite and weight. The person may experience poor sleeping patterns, difficulty getting to sleep or sleeping excessively. Individuals may have poor appetite with weight loss or an increase in appetite (Hammen & Watkins, 2013). In addition, persons with depression express negative thoughts about themselves. This can be in the form of feelings of

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[6] Such as diabetes, cardiovascular disease and morbid obesity (American Psychiatric Association, 2013).

[7] Neurotransmitters are brain chemicals that relay information between the brain and the body through nerve cells called neurons.

[8] Serotonin has an important role in controlling psychobiological functions such as irritability, anxiety, mood, cognition and behaviour (Dubovsky, Davies, & Dubovsky, 2003).

[9] Dopamine also regulates motivation, focus, mental and motor activity (Wasserman, 2011).

[10] Norepinephrine prepares the body to handle stressful situations.

worthlessness, hopelessness, incompetence and being excessively self-critical (Hammen & Watkins, 2013), which collectively may lead to thoughts of death and suicide (Coleman, 2012). Cognitive activities, like concentration, memory or making basic decisions, may become a challenge (Coleman, 2012; Hammen & Watkins, 2013). Persons with depression may also experience a change in their psychomotor function, with either reduced energy or restless behaviour. Slow bodily movements or slow speech with monotonous voice and drooping eyes are signs of reduced energy in the person, while fidgeting, gesturing and pacing are signs of restless behaviour (Hammen & Watkins, 2013).

Generally, treatment for depression is biological or psychological or a combination of these (Coleman, 2012; Gotlib & Hammen, 2015; Hammen & Watkins, 2013). Biological treatment options include antidepressant medication, electroconvulsive therapy (ECT)[11], transcranial magnetic stimulation[12], and physical exercise. Psychological treatment options include cognitive behaviour therapy (CBT), interpersonal therapy, psychodynamic therapy, guided self-help and mindfulness therapy. There are several other approaches to the treatment and management of depression, including yoga, self-help strategies, relaxation, herbal remedies and light therapy[13] (Cramer, Lauche, Langhorst, & Dobos, 2013; Thachil, Mohan, & Bhugra, 2007; Wu et al., 2015). However, discussion of treatment of depression in the present study will focus on biological treatments, particularly antidepressant medication, and psychological treatments because these are the most commonly used treatment modalities.

Antidepressant medications are the main form of biological treatment for depression. Antidepressants act to inhibit neuronal uptake to regulate the balance of neurotransmitters in brain cells (Arroll et al., 2009). The two groups of antidepressants most commonly used are selective serotonin reuptake inhibitors (SSRIs), which are normally

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[11] ECT is the inducement of a seizure by attaching electrodes to the scalp and applying varied electrical currents (shock) to the brain (Lisanby, 2007). The purpose of ECT is to try to alter functional brain activation and enhance control of behaviour (Bajbouj et al., 2006).

[12] Transcranial magnetic stimulation is a brain intervention to improve symptoms of depression. It is non-invasive process that uses magnetic fields to intensify reaction in distinct nerve regions and related neural circuits by noninvasively generating intracerebral currents in the brain (George et al., 2010).

[13] Light therapy entails the exposure of a person to a bright light at specific intensity for about 30 minutes for couple of days (Wu, Sung, Lee, & Smith, 2015). It is used mostly for people with seasonal affective disorder (SAD), which often occurs in Autumn and Winter and abates in Spring and Summer.

recommended as the first line of treatment, and tricyclic antidepressants, which are offered as second-line treatment (Gournay, 2008; Joakim, Asseburg, & Henriksson, 2012). Both groups of medications are prescribed according to the needs of the individual, with consideration of symptoms and possible adverse effects that may be experienced (Rayner et al., 2010). Clinically, antidepressant medications can take around six weeks to reduce symptoms and their effectiveness is assessed after 16–24 weeks or longer (Cipriani et al., 2009). When using antidepressants, sleep and appetite difficulties are first to improve, followed by anxiety, agitation and hopelessness. Specific symptoms, including poor concentration, reduced energy, helplessness and decreased libido, are expected to improve subsequently but this may take longer than expected (Sadock & Sadock, 2008).

The effectiveness of antidepressants has been established in various studies. Arroll et al. (2009) conducted a systematic review to establish the effectiveness and acceptability of antidepressants in patients with depression in primary care. The authors concluded that (SSRIs) and tricyclic antidepressants were effective in the treatment of depression in primary care. In addition, Arroll et al. (2016) conducted a systematic review and meta-analysis to update a previous Cochrane review of antidepressants in primary care. The update included adding newer antidepressant classes, SNRI (serotonin–norepinephrine reuptake inhibitor) and NaSSA (noradrenergic and specific serotonergic antidepressant), and the assessment of the effectiveness of individual antidepressant medications. The researchers concluded that antidepressants were effective when used in primary care compared with placebo.

Cho, Son, Kim, and Park (2016) conducted a randomised controlled trial (RCT) in Washington DC with the objective of comparing the effectiveness of antidepressant medication and psychotherapy among low-income young minority women. They recruited 267 individuals and assigned them randomly to receive CBT, antidepressant medication or community referral. Data were collected with a structured version of the Hamilton Depression Rating Scale at baseline and monthly for the first six months after beginning treatment and then at the 8th, 10th and 12th month of the treatment. The authors concluded that antidepressant medication was more effective than CBT only in reducing depressive symptoms irrespective of their severity at different time points during the study (Cho et al., 2016).

However, the effectiveness of antidepressants has been questioned in the literature. Pigott, Leventhal, Alter, and Boren (2010) conducted a systematic review of four large trials on the efficacy of antidepressants and concluded that antidepressants were not as effective as previously reported in published results of trials. Furthermore, Cox et al. (2014) conducted a systematic review of eleven studies comprising 1,307 participants to examine the effectiveness of psychological therapies and antidepressant medication, alone or in combination, to treat depression in children and adolescents. The authors concluded that they could not confirm the effectiveness of these treatment options in dealing with depression in children and adolescents. Ostuzzi, Matcham, Dauchy, Barbui, and Hotopf (2018) conducted a Cochrane systematic review of 10 studies involving 885 participants to examine the effectiveness and acceptability of antidepressants for treating depressive symptoms in patients with cancer. The authors concluded that there was a lack of evidence for the effectiveness of antidepressants. Similarly, Eshun-Wilson et al. (2018) also conducted a Cochrane systematic review to evaluate the effectiveness of antidepressant therapy for treatment of depression in people living with HIV infection. After reviewing 10 studies with 709 participants, the authors concluded that depression may be improved by antidepressants. They added that, the relevance of this outcome may be limited to the current context because of methodological limitations in the reviewed studies and the lack of studies representing this specific population. In addition, the acceptance of antidepressant medication can depend on the adverse side effects that individuals experience, including suicidal ideation[14], dizziness, gastrointestinal discomfort, sedation, nausea and sexual dysfunction (Cox et al., 2014; Maguire, Weston, Singh, & Marson, 2014).

Psychological treatments can have a significant effect on reducing the symptoms of depression and improving the well-being of persons with depression (Cuijpers, van Straten, Warmerdam, & Andersson, 2008). Cuijpers et al. (2016) conducted a meta-analysis to ascertain if psychological therapies are efficacious in the treatment of

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[14] Suicide ideation is the contemplation of suicide ranging from brief thoughts of death to serious consideration of suicide or killing oneself (Wilcox et al., 2010).

depression among college students. They compared college students who had depression with adults with depression. The authors concluded that psychological therapies were effective in the treatment of depression in college students and depressed adults but there was no difference in the outcomes between the two groups.

Guided self-help is a psychological intervention where a person is provided with a standardised psychological treatment (either in written form or through multimedia) (Lovell et al., 2008). It teaches the intervention in a step-by-step manner and facilitative assistance is provided by a therapist or a support person (Cuijpers, Donker, van Straten, Li, & Andersson, 2010). The intervention was found to encourage and teach patients to make improvements to their well-being with the information provided. Evidence of the effectiveness of guided self-help is provided by Cuijpers et al. (2010) who conducted a systematic review and meta-analysis of 21 studies with 810 participants. The authors aimed to make a direct comparison of the effectiveness of guided self-help and face-to-face psychotherapies for depression and anxiety disorders. They concluded that there was no significant difference in the effectiveness of guided self-help and face-to-face therapies for depression and anxiety. They also reported that both approaches have similar positive effects and recommended the complementary use of these approaches in clinical practice for the treatment of depression and anxiety.

### 2.3.2 Schizophrenia

Schizophrenia is defined as ‘a group of characteristic symptoms, such as delusions[15], hallucinations[16], and negative symptoms[17] (i.e., diminished emotional expression[18] or avolition[19]); deterioration in social, occupational, or interpersonal functioning; and continuous signs of the disturbance for at least 6 months’ (Black & Grant, 2014, p. 71).

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[15] Delusions are fixed firm beliefs about people, places, ideas and events that are non-existent but seem real to the individual and often an object of disagreement and refusal to accept logical reasoning (Keshavan & Reddy, 2015).

[16] Hallucinations are perceptual experiences by the individual with schizophrenia without any external stimuli. These experiences are perceived to originate from the visual (sight), auditory (hearing), olfactory (smell), and gustatory (taste) systems, that seem so real to them, yet people around them do not have same perception (Keshavan & Reddy, 2015).

[17] Negative symptoms are diminished emotional expressions or avolition (Black & Grant, 2014). Avolition occurs when there is a reduction in motivation to initiate important activities; for example, the individual may remain idle for a long time and express little or no interest in joining social or work events (American Psychiatric Association, 2013).

[18] Diminished emotional expression is signified by the reduction of facial expressions, eye contact, intonation and head and face movements that are commonly used in expressing emotions.

[19] Avolition occurs when there is a reduction in the motivation to initiate important activities; for example, the individual may remain idle for a long time and express little or no interest in joining social or work events (American Psychiatric Association, 2013).

According to the American Psychiatric Association (2013), the lifetime prevalence of schizophrenia is estimated at 0.3–0.7% with differences reported across countries, races, ethnic groups, geographical locations and among immigrants. Systematic reviews of the global incidence of new cases estimate it at 15.2 per 100,000 persons, and schizophrenia affects more males than females in the ratio of 1.4:1 (McGrath, Saha, Chant, & Welham, 2008). The average lifetime morbidity risk is projected to be 7.2 per 1,000 persons (McGrath et al., 2008) and prevalence at a given time (point prevalence) average is 4.5 per 1,000 persons (Tandon, Keshavan, & Nasrallah, 2008). Schizophrenia is most likely to affect younger people aged 17–35 years. The onset occurs earlier in males than in females, typically by a margin of five years; however, older women are more commonly diagnosed with schizophrenia than older men (Keshavan & Reddy, 2015). Individuals may have a single episode and return to normal life while others may have recurring episodes (Keshavan & Reddy, 2015).

Several theories have identified physiological, genetic, and environmental risk factors for schizophrenia (American Psychiatric Association, 2013). None of these risk factors has been singled out as the cause of the disorder and it is believed that multiple variables lead to the development of the disorder (Keshavan & Reddy, 2015). Physiological factors associated with schizophrenia are related to pregnancy and childbirth difficulties, and there is considerable risk if a father is much older than average (American Psychiatric Association, 2013). In addition, critical periods just before and after birth have been identified, including infection, malnutrition, stress and maternal diabetes (American Psychiatric Association, 2013).

Genetic association studies have implicated some genes as a risk factor for schizophrenia (Roofeh, Tumuluru, Shilpakar, & Nimgaonkar, 2013; Sullivan, Kendler, & Neale, 2003). Estimates of genetic vulnerability in the likelihood of inheriting schizophrenia vary between 60% and 70%. An individual has a 7–13% risk of inheriting schizophrenia if one parent has the disorder, which is 10–12 times higher than for the general population. The genetic risk increases substantially to 27–46% for heritability for an individual if both parents have schizophrenia (Cannon, Jane, Matti, & Peter, 2003; Walters, O'Donovan, & Owen, 2011). This is seen in twin studies, where monozygotic (identical) twins have a

48% risk of inheriting schizophrenia from a parent with the disorder, much higher than dizygotic (fraternal) twins, who have a 17% risk (Roofeh et al., 2013). Generally, it has been proposed that abnormalities occur during the neurodevelopmental process that influence behavioural outcomes and this may combine with genetic factors and environmental exposures to trigger the onset and development of schizophrenia (Fernandez-Espejo, Viveros, Núñez, Ellenbroek, & De Fonseca, 2009; Klar, 2010). A study by Brown (2011) indicated that environmental exposures such as infections, migration, nutritional deficits, and famine also play a significant role in the development of schizophrenia. The American Psychiatric Association (2013) also adds that environmental risk factors for schizophrenia include births that occur within particular seasons (late winter and early spring) and children growing up in urban environments. In addition, the effects of adverse childhood experiences, such as sexual abuse, parental physical abuse, antipathy and neglect, as well as the impact of some social environments and social capital, are other theories that have been linked to the incidence of schizophrenia (Fisher et al., 2011; Morgan et al., 2006).

According to DSM-5, schizophrenia is diagnosed when there are two or more of the following symptoms: delusions, hallucinations, disorganised speech,[20] grossly disorganised or catatonic behaviour,[21] or negative symptoms that must be present for most of the time within a period of one month and at least one of these symptoms must be *delusions, hallucinations* or *disorganised speech* (American Psychiatric Association, 2013). ‘These three are core “positive symptoms”[22] that are diagnosed with high reliability and might reasonably be considered necessary for a diagnosis of schizophrenia’ (Black & Grant, 2014, p. 74). The symptoms result in a range of cognitive, behavioural and emotional malfunctions but no particular symptom is indicative of the disorder (American Psychiatric Association, 2013)

The consequences of schizophrenia are profound and may have a debilitating effect on

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[20] Disorganised speech is where individuals say something that has no logic and their thoughts appear confused as if there is no direction in their thoughts (Keshavan & Reddy, 2015).

[21] Grossly disorganised behaviour may be apparent in various ways, ranging from childlike silliness to unexpected distress making activities in daily living difficult to perform (American Psychiatric Association, 2013). Catatonic behaviour is an obvious reduction in reacting to the environment, ranging from resistance to directives, adopting rigid and strange postures, utter verbal and motor inactivity or extreme motor activity without a just cause (American Psychiatric Association, 2013).

[22] Positive symptoms include hallucinations, delusions, thought disorder and disorganised speech (Castle & Buckley, 2015).

the person. In the first instance, lack of concentration and memory impairment make thought and speech processes difficult; therefore, appropriate behaviour required for daily living becomes a problem (American Psychiatric Association, 2013). Furthermore, there is emotional dysfunction, social withdrawal and isolation, which can lead to difficulty in functioning socially and in work situations, such as pursuing educational goals, engaging in permanent employment, and maintaining friends (Minzenberg, Yoon, & Carter, 2008). Treatment of schizophrenia comprises pharmacological and psychosocial interventions. Pharmacological intervention involves the use of psychotropic medication, predominantly antipsychotic drugs (Usher, Foster, & Bullock, 2008). Antipsychotics work by moderating neurotransmitters in the brain, particularly dopamine, reducing its abnormal transmission by blocking its receptors in the brain (Kapur, Agid, Mizrahi, & Li, 2006; Towlson, Vértes, Müller, & Ahnert, 2018). This mechanism improves the emotions, mood and behaviour of a person with schizophrenia (Kapur et al., 2006). There are two distinct types of antipsychotic medication: typical and atypical. Typical antipsychotics are generally referred to as first generation antipsychotics (FGAs) because they are in the group of medications developed from the early 1950s for the treatment of schizophrenia (Foussias & Remington, 2010; Sampford et al., 2016). These include chlorpromazine, fluphenazine, haloperidol, pimozide, and pericyazine (Foussias & Remington, 2010; Sampford et al., 2016). FGAs have been linked to adverse effects including movement disorders and reduced mood. More recently, atypical antipsychotics or second-generation antipsychotics (SGAs) have been developed, starting with clozapine, which are claimed to be superior to FGAs (Foussias & Remington, 2010). The SGA group includes olanzapine, clozapine, amisulpride, risperidone and quetiapine, among others (Foussias & Remington, 2010; Sampford et al., 2016). These are administered orally or intramuscular by injection. Daily oral administration of antipsychotic medication is associated with nonadherence and in some cases, missing even one day's dose can be a potential risk for relapse[23] (West et al., 2008). As a consequence, depot antipsychotics[24] have been used to maintain treatment for patients who are mostly non-adherent with their oral antipsychotics (Bosanac & Castle, 2015).

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[23] Relapse is the reoccurrence of symptoms after a clear response to treatment. The symptoms worsen and often require the person to be re-hospitalised (Schennach et al., 2012).

[24] Depot antipsychotics are specially prepared medications administered by intramuscular injection. They have the same composition as a tablet taken orally but are released slowly into the body over a period of weeks.

Generally, the management and treatment of schizophrenia depends on the phase of the disorder (Gaebel, 2011). The acute psychotic phase is the initial onset stage where individuals usually experience their first episode, which can last for about 4–8 weeks. Treatment is directed at dealing with the acute symptoms of hallucination, delusion and unusual suspicion within the individual (Gaebel, 2011). In the next stage, the stabilisation phase, acute symptoms may have been controlled but there is risk of an episode recurring if medication is halted suddenly or the patient experiences stress (Gaebel, 2011). Therefore, continuous medication with the same drug and dose is essential for smooth transition into the final maintenance phase (Stroup & Marder, 2013). The objective at this stage is to avoid a psychotic relapse and antipsychotics are effective at stabilising the recovery. In addition, the person is involved in psychosocial treatment for full functional recovery, complete re-integration into society and pursuit of personal goals (Stroup & Marder, 2013).

The effectiveness of pharmacological treatment in individuals with schizophrenia has been established. Foussias and Remington (2010) conducted an extensive assessment of two large trials that evaluated the effectiveness of antipsychotics for treatment of schizophrenia. They concluded that typical and atypical antipsychotics were effective in the treatment of schizophrenia despite their associated side effects (increased weight gain and metabolic adverse effects). In addition, Leucht et al. (2012) conducted a Cochrane systematic review to examine the outcome of continuing antipsychotic medication for individuals with schizophrenia compared with another group that did not have antipsychotic medication. The authors reviewed 65 RCT involving 6,493 participants comparing antipsychotic medication with a placebo. The authors concluded that antipsychotics drugs were superior to the placebo in avoiding a relapse.

Psychosocial approaches include psychological therapy, psycho-education, social skills training, and family interventions (Addington, Piskulic, & Marshall, 2010; Dixon et al., 2010). These interventions revolve around changes in behaviour and normally focus on the effects of the behaviour. The approach to these interventions is collaborative, focusing on the source of distress and working through the therapeutic process to improve the symptoms and functional outcomes in individuals with schizophrenia (Addington et al., 2010; Dixon et al., 2010).

The possibility of psychosocial interventions for schizophrenia has been reported in some studies. For example, in a Cochrane systematic review, Jones, Hacker, Cormack, Meaden, and Irving (2012) sought to evaluate the usefulness of CBT for persons with schizophrenia in comparison with other psychosocial interventions such as family therapy, psychoeducation and supportive therapy. The authors reported that, overall, no difference was noted between the effectiveness of CBT and other psychosocial therapies in reducing relapse and re-hospitalisation. Again, comparatively, no approach was better or worse than another at improving mental state and managing the positive and negative symptoms of schizophrenia. The authors suggested that CBT and other psychosocial interventions may be better at keeping and retaining persons with schizophrenia in treatment compared with the number of withdrawals from drug trials (Jones et al., 2012). In another study, Lee et al. (2013) examined the impact of group assertiveness training among patients with chronic schizophrenia in a RCT. The intervention group received 12 sessions of assertiveness training whilst the control group received 12 sessions of supportive care. The researchers concluded that in the intervention group, self-esteem and assertiveness skills were improved by the social skills training. Tungpunkom, Maayan, and Soares-Weiser (2012) conducted a systematic review to examine effects of life skills activities for individuals with chronic mental health problems in comparison with other interventions or standard care. The authors concluded that the quality of life or social performance skills of an individual with schizophrenia may not be improved by social skills training. Overall, a combination of pharmacological and psychosocial interventions may have a higher chance of improving symptomatic and functional outcomes of an affected individual.

## 2.4 Mental health legislation and practice in Ghana

### 2.4.1 Mental health legislation

Mental health legislation was first introduced in Ghana in 1888; however, this legislation remained unchanged for 84 years when calls were made for more up-to-date laws. Historically, the *Lunatic Asylum Ordinance* (Cap 79) of 1888 was the first legislation about the care of persons with mental health problems (Lily, Osei, & Ohene, 2014). The

Ordinance came into being on 4th February 1888, and according to Forster (1962) it was specifically a law ordering compulsory custodial segregation without treatment options for people with mental health problems. The law was meant to benefit society as it sought to offer protection from individuals with mental disorders who were perceived to be restless and violent (Forster, 1962). Even though records indicate that psychiatry developed and introduced different humane treatment methods for dealing with persons with mental disorders over the years (Forster, 1962), the Ordinance remained in existence until 1972 when it was amended (Lily et al., 2014).

The next legislative instrument was The National Redemption Council Decree (30) *Mental Health Act* of 1972 (Lily et al., 2014). The Act was an improvement over the 1888 Ordinance because it made provision for voluntary treatment and care, which was absent in the Ordinance. It made further provision for involuntary treatment, law enforcement, procedures to conduct involuntary admissions and ways to implement the legislation. However, in practice these provisions were overlooked and emphasis was placed primarily on the institutional care of individuals with mental disorders (Roberts et al., 2014). This legislation was never implemented and remained in existence for almost three decades (Doku, Wusu-Takyi, & Awakame, 2012). Akyeampong (2015) suggests that the political and economic challenges faced by Ghana during these decades may have hindered any legislative changes to psychiatric practice. Even though the decree had some components of WHO's *Assessment Instrument for Mental Health Systems*, it was still outmoded and was contrary to current international standards on mental health care, particularly the human rights of people with mental disorders (Roberts et al., 2014). Hence, in 2004, a concerted effort was made to abolish the *Mental Health Act* of 1972, with technical and financial support provided by the Mental Health Department of the World Health Organization (Doku et al., 2012). Subsequently, a draft Mental Health Bill was prepared in 2009 and submitted to Parliament to replace the *Mental Health Act* 1972 but its passage was delayed. The frustrations of the then Chief Psychiatrist of the Ministry of the Health, Dr Asare, were highlighted in the Ghana News Agency online health news report captioned 'Former Chief Psychiatrist decries lack of interest in mental health.' He commented that lack of interest in and knowledge about mental health problems by policy managers and parliamentarians had delayed the passage of the bill (Ghana News Agency, 2009).

Finally, in March 2012, Ghana passed the current *Mental Health Act 846* of 2012 (Government of Ghana, 2012), which was consistent with international standards (Lily et al., 2014). This Act focuses on closing the gap between needs and the services of the mental health system by adopting community-based mental health care while also paying attention to the rights of individuals with mental disorders (Lily et al., 2014). It seeks to discourage stigmatisation and improve the reintegration of treated patients into their communities. The Act also emphasises the need to improve access to inpatient and outpatient mental health care in local communities, and seeks to regulate mental health practitioners in the public and private sectors (Lily et al., 2014). To ensure these objectives are achieved, provision was made for the establishment of a Mental Health Authority headed by a Chief Executive Officer to oversee implementation of the Act. The Act further stipulates the creation of a mental health fund to support the activities of the new Authority financially (Walker & Osei, 2017) including providing funds for the care and management of mental disorders (Doku et al., 2012). The regulation of traditional and faith-based services in mental health is also emphasised in the Act (Government of Ghana, 2012). This stipulates that the Mental Health Authority must collaborate with the Traditional and Alternative Medicine Council and other regulatory bodies to enforce adherence with accreditation and standards of mental health care under the *Health Institutions and Facilities Act 829* of 2011.In addition, regional visiting committees must be established to monitor public or private mental health facilities and submit reports to the Mental Health Authority (Government of Ghana, 2012). A major limitation in implementing this legislation is the absence of an enabling Legislative Instrument backing the Act (Walker, 2015). Legally, the Parliament of Ghana must pass a Legislative Instrument by which the *Mental Health Act* 2012 will be implemented. The absence of a Legislative Instrument implies that the Act cannot be implemented and enforced. In effect, the established Mental Health Authority cannot initiate strategies to resource the operations of the Authority and their real impact cannot be measured (Doku et al., 2012; Walker, 2015).

Overall, public influence and the political will to upgrade mental health services in Ghana to meet international standards influenced the passage of the *Mental Health Act 846* of 2012. The Act was pivotal in initiating changes in mental health practice in Ghana, particularly organisational structure and governance of mental health services and the introduction of new categories of mental health workers.

#### *2.4.1.1. Organisational structure and governance of mental health services*

The organisational structure and governance for mental health services has undergone several major transformations since the inauguration of the Mental Health Board in November 2013 (Agbi, 2016). Previously, mental health services were directed by the Mental Health Unit within the Ghana Health Service, which implemented policies formulated by the Ministry of Health. The Mental Health Unit was centralised and had country-wide powers and advised the government on all mental health issues. The Unit had oversight responsibility for the country’s public psychiatric hospitals, psychiatric units within regional hospitals and private psychiatric institutions, including traditional and faith healers (Ofori-Atta, Read, & Lund, 2014). When the Mental Health Authority was established in 2013, some functions of the Mental Health Unit were subsumed by this Authority (Ofori-Atta et al., 2014). In effect, the Authority has oversight responsibility for the implementation of, and ensuring adherence to, high standards in mental healthcare across the country (Walker & Osei, 2017). The Ghana Health Service retained responsibility for operationalising mental healthcare in all communities and regions (Walker & Osei, 2017). As a consequence, mental health service structure and governance was transformed, and the Mental Health Authority appointed National Directors to lead the implementation of the *Mental Health Act* (Agbi, 2016). To decentralise the mental health system, Regional and District Mental Health Sub-Committees were established, headed by Regional/District Mental Health Coordinators. These Coordinators act as representatives of the Mental Health Authority and work closely with the Health Directorates within the regions and districts (Government of Ghana, 2012). However, Doku et al. (2011) commented that the process of integrating mental health care into primary health care was not addressed adequately. Therefore, mental health service clients may be dissatisfied with services in their communities and redirect their concerns to the main psychiatric hospitals or informal healers, ultimately defeating the purpose of providing mental health care at the community level.

An additional organisational development includes the establishment of the Mental Health Fund, the main source of funding for the Mental Health Authority to support its work (Agbi, 2016). Ofori-Atta et al. (2015) reported that a new information system was developed for the three main psychiatric hospitals and integrated with the existing Ghana Health Service web-based District Health Information System. The system strengthened the entry and storage of large volumes of patient data and analyses of them are used for clinical and management decisions. In spite of these developments, the mental health sector remains beset with organisational challenges, particularly financial constraints and scarcity of operational resources including medical logistics, computers, hygienic toilet facilities for patients, beds, office and clinic space (Doku et al., 2011; Roberts et al., 2014).

The public mental health sector is funded primarily by the government together with small donations from non-government organisations (Roberts et al., 2014). The sector receives about 0.5% of the total health budget, representing about 0.007% of gross domestic product (Canavan et al., 2013), and 80% of its budget is allocated to the country's three government psychiatric hospitals (Ofori-Atta et al., 2014; Roberts et al., 2014). These funds are only sufficient to provide basic necessities like medication, clothing, detergents, toiletries and disinfectants for patients, and provision of food for patients can be challenging (Ofori-Atta et al., 2014). In addition, mental health patients are assumed to be poor, hence, public mental health services are provided free of charge. The implication is that the sector is limited in its sources of funding, and any funding delays by the government results in operational crises. The current financial situation is dire; for example, because of a funding shortfall in 2016 Accra Psychiatric Hospital suspended its outpatient department and emergency services (Richter, 2016). This action prompted the Chief Executive Officer of the Mental Health Authority to alert the government and public about the imminent closure of the hospital if the funding shortfall was not resolved (Richter, 2016). Subsequently, the government provided funding of GHc 279,000 (equivalent to almost AUD$90,000) to assist the hospital to deal with the situation (Andoh, 2016). Other organisations, such as the Nursing and Midwifery Council of

Ghana (Ghana News Agency, 2016) and Tobinco Foundation[25], donated money and consumables to support the hospital (Frimpong, 2016).

Linked to financial constraints is the inability to acquire adequate operational resources, which has adverse consequences (Jack, Canavan, Ofori-Atta, Taylor, & Bradley, 2013). The low priority attached to the provision of mental health services in the country has contributed to this operational challenge (Doku et al., 2011). Shortage of drugs is a common phenomenon, and patients or caregivers of patients are forced to buy their own drugs (Awenva et al., 2010; Osei, 2018a; Roberts et al., 2014). Lack of hygienic toilet facilities compromise patients' health and patients have been forced to sleep on the floor because of lack of beds. These conditions posed an additional health risk to patients and workers. Furthermore, sub-standard care and human rights abuses have been reported in some government psychiatric facilities (Doku et al., 2011), commonly described as state-sponsored human rights abuses (Osei, 2017). Consequently, patients are reluctant to seek treatment because resources are not available for it (Mascayano, Armijo, & Yang, 2015).

#### *2.4.1.2. Mental health workforce*

Currently in Ghana, only three colleges train Registered Mental Health Nurses, compared with 71 colleges that train Registered General Nurses. Between 2012 and 2016, Registered Mental Health Nurse colleges produced an average of 381 graduates annually whereas the Registered General Nurse colleges produced an average of 3,138 graduates annually (F. Nyante, personal communication, May 15, 2017). The low number of mental health nurse graduates produced annually coupled with difficulties in retaining the mental health workforce (Agyapong, Osei, Farren, & McAuliffe, 2015) has resulted in a workforce that is insufficient to meet the needs of the public mental health sector (Roberts et al., 2014). To illustrate, in 2015 there were only 1,600 mental health nurses in this sector, considerably fewer than the WHO recommended number of 20,000 for the country (Duho, 2015). The situation is even more critical for psychiatrists, with only 20 psychiatrists serving a population of more than 25 million, when the sector needs over 100 as suggested by the Head of the Mental Health Authority (Osei, 2018a). This situation

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[25] Currently known as Samuel Amo Tobbin Foundation established as an NGO under the auspices of Tobinco Group of companies in Ghana to manage its Corporate Social responsibility.

was illustrated in Ho Municipality, with a population of about 225,026, which had only one psychiatrist and four mental health nurses (Tawiah, Adongo, & Aikins, 2015). As a consequence of the shortage of mental health nurses and psychiatrists, the country's existing mental health nurses have onerous workloads that negatively affect the quality of care they provide (Jack et al., 2013). The inadequate supply of mental health professionals across the country is exacerbated by emigration, influenced by career development, work-related dissatisfaction and stigma (Adzei & Sakyi, 2014; Doku et al., 2011; Jack et al., 2013). The ripple effect of a limited workforce is an increase in workloads, which in turn encourages some to leave the sector and discourages others from entering this field of practice (Gilbert & Dako-Gyeke, 2018; Jack et al., 2013).

The strategy adopted to address this human resource gap was to upgrade the knowledge, skills and qualification of four categories of practising health professionals (The Kintampo Project, 2011)[26]. Physician Assistants (formerly known as Medical Assistants), Community Oral Health Officers, Field Technicians and Community Health Nurses are generically-prepared clinicians and were chosen to fill this gap. The strategy was consistent with the new direction for mental health care that emphasised a community-based approach that required mental health professionals equipped with skills and knowledge to work in rural communities. It was planned that, after training, they would be upgraded to Clinical Psychiatric Officers or Community Mental Health Officers depending on their entry qualification. The rationale was that most of these workers were already in practice, mostly in primary healthcare settings in rural and underserved areas, thus it was anticipated that specific training in psychiatry would enhance their capacity in psychiatric practice (The Kintampo Project, 2011). The expectations were that addressing patients' mental health needs within the context of mainstream general health care settings may be more attractive to family members, and that patients, especially those with concerns about stigma, would find the visit to community medical officers similar to their routine visits (Patel et al., 2013). Another advantage of this training is that it offered interested persons a career pathway for their professional development, so they were more likely to remain in their practice setting (Jack et al., 2013).

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[26] The Kintampo project is a collaboration between Ghana Health Service, the College of Health and Well Being, Kintampo, The Kintampo Trust, a charitable organisation in Ghana, and Southern Health National Health Service Foundation Trust in the United Kingdom. The objective is to train new mental health workers to provide care or persons with mental illness in poor and rural areas in Ghana.

The basic entry requirement for training as a Clinical Psychiatric Officer or Community Mental Health Nurse is that prospective students should possess the relevant certificate for their category or a certificate from a recognised health training institution. They must have practised for a minimum of two years in a deprived community or three years in a non-deprived area (The Kintampo Project, 2011). To qualify as a Clinical Psychiatric Officer, a student undergoes training for 18 months with 6 months as an intern and is awarded a degree in Community Medicine and Clinical Psychiatry. Practising Clinical Psychiatric Officers have a high-level scope of practice, including diagnosis of mental disorders and prescribing medication (The Kintampo Project, 2011). Community Mental Health Officers undergo training for one academic year and are awarded a Diploma in Community Mental Health upon successful completion. Their scope of practice is more restricted than that of Clinical Psychiatric Officers, but includes early detection of mental disorders, assisting individuals to manage their disorders, monitoring treatment adherence, and educating communities about mental health issues and disorders (The Kintampo Project, 2011). Training for these new categories of mental health worker takes place at the College of Health and Well Being, Kintampo, under the auspice of the Kintampo Project. By 2015, the Kintampo Project had produced 26 Clinical Psychiatric Officers and 518 Community Mental Health Officers (E. Okyere, personal communication, November 18, 2016). Subsequently, it is expected that mental health nurses will work with these professionals at a community level. However, this may not be possible because mental health nurses are concentrated in the three public psychiatric hospitals in the major cities of Accra and Cape Coast. Only a few are based in the community, where the level of service provided is markedly below the level of need (Doku et al., 2011; Jack et al., 2013).

#### *2.4.1.3 Cultural influences on mental health practice*

Perceptions about causality of mental illness and attitudes towards people with mental disorders are influenced by the cultural context of the community in which affected individuals reside (Kimotho, 2018). Before the advent of colonialism in the Gold Coast (now Ghana) by the British in 1874 (Adu-Boahen, 2006), the cultural practice of management and treatment of individuals with mental disorders resided with traditional healers (fetish priests[27] or native doctors) (Forster, 1962). Perceptions and beliefs about the causes of mental disorders were linked to the supernatural or spiritual world. People believed that mental disorders were spiritual illnesses connected to evil spirits and supernatural powers (Cooper et al., 2010). The belief was that one may have suffered a spiritual attack from evil spirits or a curse from a god or deity for failing to respect their dictates and vengeance through spiritual means (Kyei, Dueck, Indart, & Nyarko, 2014). An example is given by one traditional healer's understanding of the spiritual influence in mental disorders: *'at times, it could happen that somebody might have gone in for another person's wife and then he will be struck by a "juju"*[28]*, or somebody might steal another person's belonging, or it could happen that, as a result of some litigation, somebody may go mad'* (Cooper et al., 2010, p. 561). This belief gave traditional healers who dealt with the spiritual world the monopoly over the treatment of mental disorders. Later, under the *Lunatic Asylum Ordinance* (Cap 79) of 1888, custodial segregation was ordered for persons with mental disorders without any treatment options, a practice common in almost all the neighbouring colonised countries (Akyeampong, 2015). Thus, medical attention for mental disorders even in neighbouring countries was non-existent and people had no choice but to see a traditional healer. This situation may have reinforced people's beliefs about the causes of mental disorders and hence, their ongoing reliance on traditional healers for treatment (Cooper et al., 2010; Opare-Henaku, 2013).

People also have beliefs about the biomedical influences on a person with a mental disorder. When a person with a mental health problem, their family members or caregivers seeks psychiatric attention from a hospital, the person's culture influences how the person expresses his or her condition. Ohene and Addom (2015) suggest that a clinician cannot overlook the cultural context of the patient. For example, the core psychological symptoms of depression (loss of interest, poor concentration, and lowered self-esteem) may be reported. Ohene and Addom (2015) explains that somatic and non-somatic symptoms will be expressed differently. For example, headaches will be expressed as feeling some sort of heat or burning sensation in the head, pains - generalised bodily pains and crawling sensations all over the body and sleep associated with

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[27] A fetish priest is a person who serves as a mediator between the spirit and the living.

[28] 'Juju' refers to supernatural power.

nightmares and bad dreams causing sleeplessness. Non-somatic symptoms presented may include worry and anxiety, ideas of guilt but these will also have to be elicited and expression such as ‘thinking too much’ or ‘worrying too much’ may also be used to represent obsessive rumination (Ohene & Addom, 2015; Read & Doku, 2012). Furthermore, other symptoms, like suicidal thoughts will be presented as ‘bad thoughts’ as patients tend to struggle to find the right words to describe their mood. Culturally, death by suicide is abhorred in Ghana. It carries a stigma that family members must deal with. Suicide ideation[29] is strongly detested (Akotia, Knizek, Kinyanda, & Hjelmeland, 2014; Hjelmeland et al., 2008) and may be expressed with great difficulty. Ghanaians generally believe in eternal condemnation of suicide in the afterlife judgement; hence, they are reluctant to express suicidal thoughts even if they persist in their mind (Ohene & Addom, 2015). This implies that if clinicians ignore the cultural background of patients, misdiagnosis may occur, and patients may not be treated adequately, thus reinforcing the belief that the illness is from a spiritual source.

Self-referral to a spiritual source (pastor, priest, spiritual leader or traditional healer) to seek treatment for mental illness may become the next option (Opare-Henaku, 2013). Two important factors reinforce this choice; the religiosity of Ghanaians, and easier access to spiritual leaders than psychiatrists. According to the most recent national census in 2010, approximately 94% of the general population indicated they were Christian (71.2% of the population), Islamic (17.6%), or traditional worshippers (5.2%) (Ghana Statistical Service, 2012). Thus, if a problem is perceived to be of spiritual origin, assistance to address the problem is sought from a spiritual leader. The quest for spiritual solutions to mental health problems has also been influenced by the influx of Pentecostal churches in almost every part of the country, coupled with advertisements about their capacity to solve spiritual problems (Cooper et al., 2010). Their popularity has made them often the first point of call when seeking information about the cause of a mental health problem and possible solutions (Cooper et al., 2010). In addition, there are more traditional healers available than psychiatrists. Cooper et al. (2010) report that there is one registered traditional healer for every 200 people, whereas the number of psychiatrists

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[29] Suicide ideation is the contemplation of suicide ranging from brief thoughts of death as a better option to serious consideration of suicide (Wilcox et al., 2010).

is considerably fewer (Duho, 2015). The implication is that traditional healers are easier to access than psychiatrists, and because of the stigma of mental illness, individuals may get more sympathy from the community if they consult a traditional healer instead of a psychiatrist (Opare-Henaku, 2013). Furthermore, traditional healers are more appealing because they are less expensive than psychiatrists to access (Cooper et al., 2010) and their spiritual and psychosocial support and practices may also be consistent with people's beliefs about the aetiology of mental illness (Cooper et al., 2010).Despite the preference for traditional healers, psychiatrists are also consulted about treatment for mental health problems. In some cases, when treatment from the traditional healer is unsatisfactory, caregivers of people with mental disorders seek psychiatric attention and expect effective treatment. They also attend churches, engage in fervent prayers and hope that their family member will be cured (Ayuurebobi, Doku, Asante, & Owusu-Agyei, 2015; Opare-Henaku, 2013).

From the forgoing discussion, it is apparent that the government of Ghana has made some significant advances in developing mental health legislation and governance, even though they have been slow in implementing them. However, the positive impacts of these advances have been severely hampered by the effects of the challenges discussed. These effects have contributed, directly or indirectly, to the low level of mental health literacy in Ghanaian people. For example, financial constraints and shortage of professionals in the mental health sector seems to have impacted negatively on service quality which seems to have disappointed service users. In addition, because of lack of political will, the government has not implemented a vigorous campaign or program to improve mental health literacy. A good quality mental health service might encourage people to seek new knowledge about mental health issues. Furthermore, the disproportionate ratio of traditional healers to psychiatrists, where demand for traditional healers far outweighs that for psychiatrists, is also likely to reinforce stigmatisation and discrimination and discourage people from seeking evidence-based knowledge to improve their mental health literacy.

Generally, people’s attitudes towards mental disorders are a result of stereotypes[30] that have led to stigmatisation of persons with mental disorders. Stigmatisation is a major challenge to mental health practice in Ghana, and this will be discussed in the next chapter.

## 2.5 Summary

The global prevalence of depression is high and so is the stigma associated with schizophrenia. Persons with mental disorders in sub-Saharan African countries, particularly Ghana, are not spared from the debilitating effects of these disorders. In Ghana, legislative development in mental health has generally been slow, but the recently introduced *Mental Health Act 846* of 2012 seeks to transform mental health service delivery to an international standard. However, mental health practice has been inundated with challenges, specifically shortfalls in finance, operational and human resources. Lack of mental health resources has undermined access to mental health services in the country and has encouraged consultation with spiritual and traditional healers for treatment of mental disorders. This situation has reinforced people’s beliefs about supernatural and spiritual influences as the cause of mental disorder and undermined the community-based approach to mental health care emphasised in the new *Mental Health Act*.

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[30] ‘Stereotypes are sets of beliefs, usually stated as categorical generalizations that people hold about the members of their own and other groups. These beliefs are ordinarily oversimplified and seldom correspond with the objective facts’ (Rinehart, 1963, p. 137).

# Chapter Three

# Stigma and Mental Health Literacy

## 3.1 Introduction

In this chapter, literature relating to stigma and mental health literacy are examined. An overview of stigma is provided, and stigmatisation in developed countries and in sub-Saharan African countries, including Ghana, is discussed. Next, approaches to addressing stigmatisation and discrimination are explored. This is followed by a discussion about mental health literacy, examining it from the perspectives of developed countries, sub-Saharan African and Ghana. Finally, a review of research on interventions to improve mental health literacy and reduce stigma of mental disorders is presented.

## 3.2 Stigma

Goffman (1963) defined stigma as an 'attribute that is deeply discrediting and that reduces the bearer from a whole and usual person to a tainted, discounted one' (p. 3). The individual who is deemed stigmatised 'possesses some attribute, or characteristic, that conveys a social identity that is devalued in a particular social context' (Crocker, Major, & Steele, 1998, p. 505). The consequences of possessing this attribute or characteristic may result in an individual being negatively portrayed by others (Kurzban & Leary, 2001), which unreasonably obstructs the individual from participating effectively in societal interactions, work activities and independent living (Corrigan, 2000). With reference to mental disorders, stigma refers to a group of negative attitudes and beliefs that encourages the general public to discriminate against individuals with mental disorders (Burke, 2006). A common reaction to stigma is avoidance of people with mental disorders, and is evidenced by reluctance to interact, work with or be near them, culminating in social rejection (Burke, 2006). Stigma occurs as result of negative stereotypes in societies, creating prejudiced minds that induce fear and anger, motivating people to discriminate against people with mental disorders (Corrigan & Watson, 2002). Jones et al. (1984) proposed six factors related to the condition of people with mental disorder that makes them susceptible to stigma or social rejection: concealability, course, disruptiveness, origin, aesthetic, and peril. Concealability denotes the extent to which one can easily detect the presence of the condition or if/how the individual can mask the disorder from others. Course refers to how stable/unstable the condition is and how the disorder affects an individual's daily functioning. Disruptiveness examines the extent to which the condition affects the individual's social interactions. Origin refers to how the disorder was developed, comparing congenital with non-congenital causes, rate of its development and the individual's responsibility in causing the disorder. Aesthetic refers to the negative affective reactions that people have towards persons with physical disfigurement or distortion. Finally, peril refers to the belief about how violent or dangerousness the individual can be as result of the condition. Feldman and Crandall (2007) examined these factors and concluded that if the person was dangerous as result of the disorder, personally responsible for the disorder, or had a rare condition, then people were more inclined to distance themselves socially.

Stigma has two dimensions: public stigma and self-stigma (Corrigan & Watson, 2002). Public stigma arises when most members of the public believe in the negative descriptions associated with persons with mental disorders. These descriptions include being incompetent, blameworthy, dangerous and violent (Corrigan, 2004). Public stigma gives people reasons to discriminate against persons with mental disorders, in some cases physically assaulting them without reason, refusing work opportunities, taking away their self-determination and segregating them from others (Baffoe, 2013). Addressing public stigma is the primary focus of the present study[31]. Self-stigma is developed psychologically by persons with mental disorders when they internally believe in the public stigma and apply these beliefs to themselves. Subsequently, persons may lose confidence in themselves and this affects their self-esteem (Corrigan & Shapiro, 2010). In such situations, they perceive themselves as incompetent and, therefore, do not show any interest in, for example, seeking treatment, employment or pursuing education (Thornicroft et al., 2016). Stigma has been found to diminish self-esteem and deny people social opportunities (Corrigan, 2004). It can also exacerbate anxiety and depressive symptoms, substance use, social isolation, medication non-adherence and treatment drop-out (Britt et al., 2008; Keyes et al., 2010). Thus, stigma may emerge as the most difficult barrier to living 'normal' and productive lives by persons with mental disorders and their families (Baffoe, 2013; Stefanovics et al., 2016).

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[31] See Chapter 4, Section 3.7.1 for reasons on focusing on public stigma.

### 3.2.1 Stigmatisation in developed countries

The stigma associated with mental disorders is not a new phenomenon in developed countries (Alonso et al., 2008). Numerous studies have assessed the prevalence of stigma among different populations. In Australia, for example, Reavley and Jorm (2012), investigated changes in stigmatising attitudes of the public over eight years. They adopted the same case vignettes and questions used in a national mental health literacy survey conducted in 2003/4. The vignettes described a hypothetical person with early or chronic schizophrenia, depression or depression with suicidal thoughts. Questions were asked relating to stigmatising attitudes, including social distance, perceived and personal stigma. The authors reported that, compared with the earlier survey, there was a decrease in social distance scores for all vignettes except for chronic schizophrenia, which showed an increase. In addition, beliefs about unpredictability and dangerousness associated with these disorders and behaviours had also increased over the period (Reavley & Jorm, 2012).

In another study, Kvaale et al. (2013) conducted a meta-analysis of 25 studies undertaken in developed countries to examine the relationship between biogenetic[32] understandings of mental disorders and stigma (social distance, blame and perceptions of dangerousness). They carried out separate analyses for each type of stigma, with sample sizes ranging between 4,278 and 23,816. The authors found that a significant portion of community samples associated the biogenetic cause of a mental disorder with perceived dangerousness and social distance. They also reported that, among student samples, the link between a belief in the genetic cause of schizophrenia and attribution of blame was negative (Kvaale et al., 2013).

Using an online survey with 1,000 Japanese adults, Yoshioka, Reavley, Rossetto, and Nakane (2016) assessed the relationship between beliefs about the causes of schizophrenia and depression and stigmatising attitudes towards individuals with these disorders. The authors found that participants held the belief that personality (weakness or nervousness), psychosocial (traumatic event, problems from childhood) and biogenetic

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[32] Biological and genetics (biogenetics) – assumption that causes of mental disorders can be understood with biological and genetic explanations (Kvaale et al., 2013).

(genetic, virus or infection) factors caused mental illness and these beliefs were related to perceived stigma among the participants. There was also higher personal and perceived stigma towards persons with depression or schizophrenia if it was perceived that they were personally responsible for their disorder (Yoshioka et al., 2016). These negative societal reactions may adversely affect people with mental disorders and their families (González-Torres, Oraa, Arístegui, Fernández-Rivas, & Guimon, 2007). In addition, individuals with mental disorders have assimilated these social stereotypes about themselves, resulting in loss of self-confidence in participating in social activities (Lauber & Rössler, 2007). Therefore, in responding to public stigma, people with mental disorders and their families may choose not to disclose the disorder, avoid contact with other people and be secretive about the disorder (Angermeyer & Matschinger, 2003; McCann, Lubman, & Clark, 2011).

### 3.2.2 Stigmatisation in sub-Saharan African countries

There is a considerable body of evidence documenting that experiences of stigma, discrimination and human rights abuses related to mental disorders are common and severe in sub-Saharan African countries (Barke, Nyarko, & Klecha, 2011; Drew et al., 2011; Lasalvia et al., 2013; Sorsdahl & Stein, 2010). Kapungwe et al. (2010) conducted a study in Zambia to obtain a deeper understanding of the presence, causes and means of addressing stigma and discrimination against people with mental disorders. After conducting six focus group discussions and 50 semi-structured interviews, they reported the pervasiveness of stigma and discrimination across the social divide, even among key government officials. To illustrate, a respondent highlighted the existence of stigma within the government, commenting that: ‘One of the biggest problems is the law itself….it actually deposits [sic] a person with a mental illness as a dangerous person, as a person with no worth. The way [sic] law describes me. Who am I? The identity that I am given by the law is an imbecile, an idiot...’ (Kapungwe et al., 2010, p. 197). The authors also noted misunderstandings about mental illness aetiology, fear of contagion and perceived dangerousness of people with mental disorders. In Ethiopia, Girma et al. (2013) measured public stigma against individuals with mental disorders and the factors associated with stigma. They found that the level of stigma expressed was related to knowledge and education. Stigma was more prevalent in rural than urban communities, perhaps as result of illiteracy and poor dissemination of information on mental disorders. People with an explanatory idea about the cause of the disorder or with higher levels of education showed lower levels of stigma. The authors advocated for improvement in knowledge about mental disorders to minimise stigma, similar to recommendations of other researchers in the region (Atilola, 2015; Egbe et al., 2014; Kapungwe et al., 2010; Lasalvia, 2015).

### 3.2.3 Stigmatisation in Ghana

Stigma associated with mental disorders in Ghana has been a longstanding issue. Barke et al. (2011) investigated the attitudes of an urban population towards people with mental illness and examined the views of patients in southern Ghana. The researchers reported high levels of public stigma towards people with mental illness within the population. The majority (61.2%) of participants from the general population believed that individuals with mental disorders were responsible for their disorder, and over two-thirds (68.3%) believed that these individuals were incompetent and decisions should be made on their behalf (Barke et al., 2011). A significant portion also perceived that persons with mental disorders posed a risk and hence, they would not live next to them. In addition, persons with a mental disorder reported experiencing extensive stigma, particularly in social distance, marriage, and looking for employment, and this made them feel devalued (Barke et al., 2011). Tawiah et al. (2015) also investigated how the experiences of stigmatisation impacted on the lives of people with mental disorders and their caregivers. Individuals with mental disorders reported experiencing economic, psychological and social stigma. Of these, social stigma was mostly reported, constituting 72% of the stigma experienced. They reported being subjected to ridicule and mockery, including being blamed for the onset of the disorder. Other effects of stigma they experienced included being denied food (14%) and loss of self-esteem (13%). Discrimination experienced by people with mental disorders included loss of employment, exclusion from usual family activities, spousal desertion, disregarding their opinion and loss of friends or previous close relationships (Gyamfi, Hegadoren, & Park, 2018). Consequently, they felt rejected and neglected, lost trust in others and worried about their future (Gyamfi et al., 2018).

Caregivers were also stigmatised and discriminated against. Caregivers' experiences included social exclusion and, for example, people who previously provided financial assistance willingly were no longer interested in supporting them. These experiences are similar to the findings of a study by Barke et al. (2011) and Baffoe (2013) who investigated stigmatisation of mental disorder in Ghana. These authors reported experiences of stigma by persons with mental disorders who felt devalued as result of derogatory and negatives words used to describe them. Their participants also commented about the social exclusion they experienced when employment opportunities and chances to pursue educational ambitions were unjustly denied them, hence limiting their social interaction (Baffoe, 2013; Barke et al., 2011).

Negative family experiences of stigma have also been documented. Quinn (2007) and Ayuurebobi et al. (2015) reported that these experiences included ridicule, mockery and lack of support from community members and from some extended family members. Fear of stigma led some families to neglect their mentally ill family member. Even when families have accepted their member back into the family home after treatment, some experience public stigma, particularly from within their own community (Tawiah et al., 2015). Families that cannot withstand the stigma sometimes abandon the person who has received treatment at a psychiatric hospital (Tawiah et al., 2015). The overall impact of these experiences causes social exclusion, culminating in psychological and emotional distress for families and the individual with the mental illness (Ayuurebobi et al., 2015; Quinn, 2007). Such discriminatory experiences influence people with mental disorders, caregivers and their families to adopt a range of coping strategies to deal with stigma, including withdrawing from social activities, seeking solace and comfort in church, and avoiding marriage or having a partner (Ayuurebobi et al., 2015; Tawiah et al., 2015). While these coping strategies may be helpful in the short term, relationships with existing social networks may deteriorate in the long term because of social isolation. Furthermore, such coping behaviour may lead to reluctance to seek help or difficulty in accessing treatment, thus worsening the relative's condition as well as adversely affecting the well-being of the family and caregivers (McCann et al., 2011).

### 3.2.4 Addressing stigma and discrimination

Findings from studies on stigma have underscored that mental health education needs to be improved to address stigmatisation and discrimination. Approaches to addressing self-stigma have included cognitive behaviour therapy and social skills training. Such approaches aim to assist persons with mental disorders to challenge and overcome negative thoughts and inappropriate behaviours they may have developed as a result of stigma (Griffiths, Carron-Arthur, Parsons, & Reid, 2014). Education, mass media, interpersonal contact and protest are popular ways of addressing public stigma, the primary focus of anti-stigma programmes (Corrigan & Shapiro, 2010). Protest is a strategy that highlights the injustices of stigma and berates offenders, often in the public domain, for their stereotypes and discriminatory attitudes and behaviours. However, some evidence suggests that protest campaigns that ask people to suppress their prejudice can produce an unintended ‘rebound’ in which prejudice about a group remains unchanged or actually worsens (Corrigan & Shapiro, 2010).

Mass media has been used to replace myths with factual information. For example, a myth in developed countries like the United Kingdom and the USA is that persons with mental disorders are dangerous and violent (Link & Phelan, 2013; Taylor & Gunn, 1999) and in sub-Saharan African countries, that mental disorders are caused by spiritual forces or have supernatural connotations (Cooper et al., 2010). Thus, the mass media can be used to dispel these myths and replace them with credible information with the objective of reducing discrimination and negative community attitudes, as demonstrated by Sane Australia. For example, the myth that mental illness is attributable to laziness, spiritual or physical weakness is replaced with the fact that mental illness is an illness like diabetes, heart disease and cancer (Sane, 2017). As an approach to addressing stigma, contact refers to the interpersonal contact with members of the stigmatised group. Members of the general population who meet and interact with people with mental disorders are likely to show decreased prejudice (Corrigan & Shapiro, 2010). For example, Kosyluk et al. (2016) examined the outcomes of education and contact-based anti-stigma programmes among college students in United States. The researchers reported that both approaches were effective in reducing social distance and stigmatising attitudes of the students and in improving treatment-seeking attitudes.

Education is one approach that is used to address stigma. This approach challenges prejudices, stereotypes and discriminatory attitudes towards people with mental disorders and their families. Education focuses on why these ideas and attitudes are harmful and the harmful effects of stigma on people with mental disorders, their caregivers and family. Education also provides people with accurate information about mental disorders and suggests appropriate attitudes and behaviours towards individuals with mental disorders (Corrigan & Shapiro, 2010). Education as an anti-stigma approach is cost-effective and can reach out to the general population (Corrigan & Shapiro, 2010), and is effective in addressing stigmatising attitudes (Kosyluk et al., 2016; Michaels et al., 2014). Generally, anti-stigma programmes have focused on improving mental health literacy, and this is discussed in the next section.

## 3.3 Mental health literacy

The term 'mental health literacy', coined by Jorm et al. (1997a), is defined as 'knowledge and beliefs about mental disorders which aid their recognition, management or prevention' (p. 182). Mental health literacy emphasises the need for the public to acquire knowledge and develop appropriate beliefs about mental health disorders in order to be helpful in suggesting or helping with effective interventions.

### 3.3.1 Mental health literacy in developed countries

Several studies have been undertaken to assess the mental health literacy of parents (Lubman et al., 2014), adolescents (Coles et al., 2016; Hernan, Philpot, Edmonds, & Reddy, 2010), general public (Dahlberg, Waern, & Runeson, 2008; Jorm, Kitchener, O'Kearney, & Dear, 2004), and health professionals (Jorm, Morgan, & Wright, 2008). Coles et al. (2016) conducted a study of 1,104 adolescents in a New York public high school to measure their mental health literacy levels. The participants were presented with clinical vignettes of persons with social anxiety disorder and depression. They were asked to read each vignette and respond to questions evaluating their recognition of the disorder. The researchers found that participants were more able to recognise depression than social anxiety disorder. They also found that female adolescents had better help-seeking attitudes than their male counterparts, and both were more likely to recommend help-seeking for depression than social anxiety. Females had higher mental health literacy than males. Furnham, Annis, and Cleridou (2014) conducted a study of high school and university students in the United Kingdom to investigate if gender had an influence on mental health literacy. The authors reported that female participants had better recognition and labelling of mental disorders than males, and females were more likely to suggest professional help-seeking. Despite these differences, overall, gender differences in mental health literacy may not be significant as earlier proposed (Burns & Rapee, 2006; Cotton, Wright, Harris, Jorm, & McGorry, 2006).

### 3.3.2 Mental health literacy in sub-Saharan Africa countries

Reviews of mental health literacy in sub-Saharan African countries suggest that public knowledge about mental health disorders is generally poor (Ganasen et al., 2008). Sorsdahl and Stein (2010) studied 1,087 members of the public in South Africa to assess their mental health literacy levels. The researchers gave participants vignettes of certain mental disorders with information that satisfied the DSM-IV diagnostic criteria, and this was followed by a set of questions on causation and treatment options that required their responses. The authors noted that, in general, participants could not accurately identify a mental disorder in the vignettes and participants attributed the cause of mental disorders more to psychosocial than biomedical causes. Participants were more likely to choose psychotherapy as source of professional help but less likely to opt for medication as treatment. In addition, stigma was common among participants, with strong stigmatising attitudes towards people with schizophrenia and substance abuse. The authors recommended intensive education of the public about mental disorders.

Atilola (2015) conducted a systematic review of 19 studies to ascertain the level of mental health literacy in the sub-Saharan African region, including Ghana. The majority of these studies used quantitative methods. Most studies reported poor mental health literacy in participants, which could be interpreted as poor mental health literacy levels for the region. The review author disagreed with this assertion, arguing that sub-Saharan Africa was multicultural, multi-ethnic and had some culturally-induced methods of explaining mental disorders. He claimed that these methods were not examined rigorously in the reviewed studies that used quantitative methods, and this omission may have affected participants’ responses adversely. Atilola (2015) recommended that more research was needed into the various aspects of mental health literacy in the sub-Saharan region. He also recommended that sociocultural beliefs and practices about mental disorders that were explored qualitatively should be taken into consideration in the design of such studies. Generally, most studies in sub-Saharan Africa countries have recommended the need for improvements in mental health literacy to aid public mental health interventions and collaboration between contemporary psychiatric and traditional treatment and care (Audu et al., 2011; Sorsdahl & Stein, 2010; Teferra & Shibre, 2012; Ventevogel, Jordans, Reis, & de Jong, 2013).

### 3.3.3 Mental health literacy in Ghana

Few studies on mental health literacy have been conducted in Ghana. Read and Doku (2012) conducted a literature review of research on mental health between 1955 and 2009. They reported research on several topics, including schizophrenia, depression, psychological intervention, traditional healers, and help-seeking/family response. However, none of these studies focused on mental health literacy. Commenting on research about mental health in Ghana, Wilson and Somhlaba (2016) affirmed that some areas had been studied. However, they stated that 'no research directly addressing positive aspects of mental health' (p. 5) had been conducted and, by inference, this includes mental health literacy. In contrast, Ofori-Atta et al. (2014) claimed that mental health awareness and public education campaigns had taken place over recent years, including programmes organised during World Mental Health Day and by non-government organisations in mental health for schools, churches and the general public. However, there is a lack of published evaluation reports of these programmes. Consequently, specific mental health literacy research needs to be conducted to assess people's knowledge about, and attitudes toward individuals with, mental disorders (Cooper et al., 2010; Doku et al., 2011).

### 3.3.4 Community-based approaches to mental health literacy in Ghana

In Ghana, inadequate research and education in mental health literacy may have influenced people's inappropriate responses to mental health problems and issues. These responses are reinforced by cultural practices that contribute to the negative experiences of people with mental health disorders (Ayuurebobi et al., 2015; Tawiah et al., 2015). Hence, it is a common practice of family members and caregivers of persons with mental disorders to consult churches and traditional healers seeking cultural psychotherapeutic relief (Awenva et al., 2010; Cooper et al., 2010; Kapungwe et al., 2010; Quinn, 2007; Tawiah et al., 2015). This practice confirms people's attachment to their cultural ideologies in the face of biomedical situations. Therefore, strategies that seek to educate communities about mental health issues should take account of family values and cultural beliefs (Ganasen et al., 2008). An in-depth appreciation of these values and beliefs of a target population will, arguably, enable more effective strategies to be developed and implemented (Ganasen et al., 2008).

Bassett and Moore (2013) support the idea of a community-based approach to improving mental health literacy because it builds on the social capital of the community, which, ultimately, ensures community trust and social cohesion and support for the approach. The authors further argue that a community-based approach encourages communal participation and makes use of existing network structures operating within a community. This approach is also consistent with the focus of the new *Mental Health Act 846* of 2012, which emphasises direct mental health care in the community (Government of Ghana, 2012). Purposefully, some non-government organisations, the Kintampo Project and Ghana Health Service have adopted a community-based approach to improving mental health literacy.

Some non-government organisations interested in mental health, such as Care & Action in Mental Health for Africa, Mental Health Foundation of Ghana and Basic Needs, Mind Freedom, have used community-based approaches in their activities. These organisations have engaged in public education and mental health awareness programmes in communities, particularly targeting women (Roberts et al., 2014). Women have been targeted mainly because they are more at risk of developing a mental health disorder and are mostly the caregivers of persons with mental disorders (De Menil et al., 2012; Sipsma et al., 2013). For example, the 'New maternal mental health project in Ghana' by Basic Needs provides education and empowerment activities to women caregiver groups about mental health issues in the northern part of Ghana (BasicNeeds, 2016).

The Kintampo Project also adopted a community-based approach to improve mental health literacy in rural communities. The project produced a new category of mental health care workers known as Community Mental Health Nurses to operate within and educate communities in the rural parts of the country (The Kintampo Project, 2011). Since it commenced in 2011, this initiative has recruited over 518 Community Mental Health Nurses to practise in several communities across the country. In addition to their core care responsibilities, they educate members of the community to have a better understanding of mental health problems and to be supportive of individuals with mental disorders (The Kintampo Project, 2011).

A collaboration of Ministry of Health, Ghana Health Service, Ghana National Service Scheme and Department of Psychiatry/Psychology planned a project using graduate psychology students in a community-based approach (Jack et al., 2013). Approximately 250 first-year students with knowledge in clinical and community psychology were recruited in a pilot project known as Psycho Corps Project in 2012 and 2013 to facilitate the improvement of mental health literacy in communities (Jack et al., 2013). The students were posted to do their national service[33] in communities, working in partnership with existing Community Mental Health Officers. Their objective was to conduct mental health care education and assist families with mental disorders in an effort to reduce stigma of mental disorders (Jack et al., 2013). Challenges experienced by the students included lack of logistical support (transport, finance, and information and communications technology), aggression by clients and public stigma. However, the project made some positive impact because community members expressed appreciation for the students' efforts. In addition, caseloads in some units increased as community members sought their services, possibly attributable to a decrease in public stigma (Jack et al., 2013).

Overall, the strategies described above have made an important contribution to the adoption of a community-based approach to improving mental health literacy and decreasing public stigma. However, the strategies did not involve participation of community leaders. The potential value of using community leaders to improve mental

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[33] It is a compulsory programme run by the Government of Ghana for tertiary students to have workplace experience immediately after graduation for a period of one year (http://nss.gov.gh/home/nss-act).

health literacy has been reported in studies conducted in other countries (Hossain, Gorman, & Eley, 2009; Pierce, Liaw, Dobell, & Anderson, 2010). Hossain et al. (2009) sought to improve the mental health of farmers in a rural community in Australia through opinion leaders such as rural Extension Officers and Customer Service Officers. These officials were usually in frequent contact with farmers and they were most likely to be the people to whom farmers turned for emotional support and advice when they faced mental health issues. However, these officials lacked the knowledge and skills to deal with mental health issues. Therefore, the researchers argued that it would be beneficial to equip these officials with the requisite knowledge and skills to recognise mental health problems and assist effectively farmers who needed help. A similar community leader approach was used in a project that sought to curb or reduce suicide in young males in a rural region in Australia (Pierce et al., 2010). The project was based around football clubs with an existing social structure. The clubs' coaches were perceived as leaders and were chosen as participants because they were easily identified and respected. It was anticipated that empowering leaders with adequate knowledge and skills about mental health would improve ways to recognise and help members with mental health problems within the football community quickly and effectively. Generally, these studies reported that significant positive impacts were recorded in their expected outcome measures. This occurred largely because after empowerment the participants become empathetic to the needs of their communities. Using the acquired knowledge and skills added to their influence as leaders in their various communities and they were able to help appropriately.

### 3.3.5 Interventions to improve mental health literacy

Work has been done to improve the mental health literacy in people in developed countries and in sub-Saharan African countries with positive outcomes. The tailoring of interventions to improve mental health literacy has been guided by the five main components of mental health literacy (Jorm et al., 1997a): (a) knowledge of how to prevent mental disorders, (b) recognition of when a disorder is developing, (c) knowledge of help-seeking options and treatments available, (d) knowledge of effective self-help strategies for milder problems, and (e) first aid skills to support others who are developing a mental disorder or are in a mental health crisis.

Generally, interventions in developed and sub-Saharan African countries have been educational but their content and mode of delivery has differed. Researchers have adopted face-to-face (Jorm, Kitchener, Kanowski, & Kelly, 2007; Kutcher et al., 2016b; Lubman et al., 2014; Ojio et al., 2015), online (Kiropoulos, Griffiths, & Blashki, 2011; Li, Chau, Wong, Lai, & Yip, 2013; Taylor-Rodgers & Batterham, 2014) or a combination of methods (Reavley, McCann, Cvetkovski, & Jorm, 2014a). The approximate timing of interventions also varied across studies, ranging from one hour to several days to months and years. Researchers applied different evaluation methods to their research. Some used a two-step evaluative method (pre-test, post-test), like Kutcher et al. (2016b) and Makanjuola, Doku, Jenkins, and Gureje (2012) while others included a follow-up (Ojio et al., 2015; Taylor-Rodgers & Batterham, 2014). Researchers, like Gulliver et al. (2012) and Kiropoulos et al. (2011) used RCTs, whilst Reavley et al. (2014a) used a cluster randomised trial to evaluate outcomes.

A study in Japan, conducted by Ojio et al. (2015), evaluated a programme led by school staff in which 118 secondary school students were taught about mental disorders by their schoolteachers in two, 50-minute sessions. Methods of delivering the programme included lectures, use of animations and group discussion. The authors evaluated the study at three stages (pre-test, post-test and 3-month follow-up). They concluded that the students' help-seeking attitudes and their capacity to recognise mental disorders and offer assistance to peers with mental health problems had improved significantly (Ojio et al., 2015).

Similar outcomes were seen by Mendenhall, Jackson, and Hase (2013), who evaluated 176 out of 517 individuals who had completed a Mental Health First Aid (MHFA)[34] programme between 2009 and early 2012 through High Plains Mental Health Centre in a rural area of Kansas in the United States. In their post-course survey, MHFA graduates reported increased knowledge, changed attitudes toward mental disorder, changed behaviour toward a person with mental disorder, and increased confidence in helping a person dealing with mental disorder. The authors also found that participants were more likely to report change in how they behaved toward individuals with mental disorder,

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[34] Mental Health First Aid (MHFA) is a training programme designed to equip participants with skills to provide initial help in mental health crisis situations and for on-going mental health problems (Kitchener & Jorm, 2004).

indicating the potential positive impact of MHFA in employment settings, even for those where personnel were familiar with mental health issues.

Adopting a different approach in content and delivery, Lubman et al. (2014) studied first-generation African migrant parents and children in Australia. They reported poor mental health literacy and high levels of stigma about mental health problems among parents. Based on the parents’ responses, a health promotion resource was developed, piloted and evaluated in educational and community settings. Participants reported being more knowledgeable about mental health and drug and alcohol problems, they had learned how to communicate effectively with their teenage children and had improved help–seeking attitudes.

Kiropoulos et al. (2011) examined the effects of multicultural information on depression provided online to Italian- and Greek-born immigrants living in Australia. Using a RCT, they allocated participants to an intervention group (n=110) who were exposed to information on depression, including stigma associated with the disorder, delivered in a culturally sensitive manner for 60–90 minutes. Control group participants (n=92) were interviewed for a similar time about their beliefs on depression. The study was evaluated with a questionnaire before and after the intervention and at one- week follow-up. The findings showed that the intervention group had significantly higher scores on depression literacy and lower personal stigma than the control group. The authors concluded that the internet may be a viable and helpful means for improving knowledge about depression and reducing self- stigma.

Brijnath et al. (2016) conducted a systematic review to examine the effectiveness of web-based interventions in improving mental health literacy. The review included 14 studies; 10 RCTs and 4 quasi-experimental studies. The authors concluded that the internet was a practical way to improve mental health literacy. They also suggested that in order to be more effective internet interventions should contain a structured programme, be culturally sensitive to specific populations, be interactive and encourage experiential learning (Brijnath et al., 2016).

In Tanzania, Kutcher, Wei, and Coniglio (2016a) conducted a study to assess the impact of a training programme with 60 teachers using a culturally suitable resource (the *African*

*Guide*). The resource was adapted from a Canadian mental health literacy resource for schools called *The Guide* (Kutcher, Wei, & Morgan, 2015). In this study, the content of the *African Guide* was a teacher's self-study guide, a self-evaluation test and six modules delivered in the classroom over three days. The researchers measured participants' knowledge of and attitudes toward mental health before and after the programme. Kutcher et al. (2016b) concluded that teachers' knowledge about mental health improved and their stigmatising attitudes decreased significantly. In Nigeria, Makanjuola et al. (2012) evaluated the effect of a mental health training intervention for 24 tutors of community health officers. The programme took place over one week and had a broad content, which included mental health and mental disorders, core skills in mental health practice, common neurological disorders, and issues of policy and legislation in mental health. The findings indicated that the training programme had enhanced participants' knowledge of and attitudes about mental health issues.

Overall, the outcome of the mental health literacy studies reviewed highlight that if people are provided with adequate and specific knowledge and skills, they may be able to identify and react effectively to signs of distress, decreased functioning and other developing signs of mental problems (Kelly, Jorm, & Wright, 2007). They may also be resourceful in supporting individuals who are developing mental health problems or have a mental disorder (Kelly et al., 2007). Consequently, the current study seeks to expose a group of assembly members (community leaders) to a mental health literacy programme, to improve their knowledge about, and attitudes toward, people with mental disorders and their families.

## 3.4 Summary

The consequences of stigma and discrimination are considerable and detrimental to individuals with mental disorders and their families. Individuals with mental disorders often experience social exclusion and are denied employment and housing. Their self-determination is frequently undermined, inhibiting their self-esteem, and some may not pursue education. These attitudes worsen their mental disorders, because some may refuse to seek treatment, become medication non-adherent, withdraw from treatment or isolate themselves from their community. Family members and caregivers are not spared the discriminatory effects of stigma. Overall, these negative outcomes highlight the need to adopt measures to address stigma. Several researchers contend that if people's mental health literacy is improved, they will access evidence-based intervention early and their stigmatising attitudes will be reduced. Mental health literacy interventions have primarily been educational, conducted face-to-face, online or through a combination of methods. Global reviews of these interventions have reported some level of improvement in participants' mental health literacy. While community-based approaches have been undertaken recently in Ghana to improve mental health literacy in communities, there is a need for evidence-based research to be conducted to evaluate the effect of these types of interventions. The objective of the present study is to engage community leaders (assembly members) in a mental health literacy programme, and to assess if participation improves their mental health literacy.

# Chapter Four

# Research Design and Methods

## 4.1 Introduction

In this chapter, the design and methods of the study that evaluated the effectiveness of a mental health literacy programme on Ghanaian assembly members' knowledge about and attitudes toward people with mental disorders (focus on depression and schizophrenia), are presented. A mixed methods design, incorporating a cluster randomised controlled trial and a process evaluation, was used to evaluate the programme. The chapter begins by outlining the conceptual framework and design rationale for the study. Next, the methods of study, including selection, participant recruitment and sample size, are outlined. The procedure for delivering the programme is then described. This is followed by a summary of the data collection process and instruments used in the study. The rigour of the study and ethical considerations are then discussed. Finally, an explanation of how data were analysed is presented.

## 4.2 Conceptual framework for the study

The conceptual framework for this study was based on Knowles (1968) theory of adult learning called *andragogy* meaning 'the art and science of helping adults learn' (p. 43), which he claimed was different from pedagogy, childhood learning. He suggested that adults are self-directed, experienced, oriented and motivated to learn (Knowles, 1968). Grounded in the idea of experience (Falk & Dierking, 2000), Knowles' approach to adult learning is experiential, perceiving new knowledge and skills to be of immediate value to the needs of adults. This helps adults deal with the responsibilities of their everyday lives (Gatti-Petito et al., 2013).

The evolution of the term 'andragogy' dates back to 1833, when a German educationalist, Alexander Kapp, first introduced the term to indicate his view that adults learned differently from children (Forrest & Peterson, 2006). The term went into disuse until Eugen Rosenstock revived it in 1921 at the Academy of Labour, a school for workers in Frankfurt (Knowles, Holton III, & Swanson, 1998). Rosenstock claimed that adult education required a different pedagogical approach that included exceptional methods, philosophy and use of experienced teachers. Further work on the concept of adult learning was undertaken by Eduard Lindeman in his book *The Meaning of Adult Education* in 1926. He emphasised that education of the adult learner should be based on one's life experiences and this should continue throughout adulthood (Ozuah, 2005). Knowles expanded on Lindeman's work in andragogy and popularised the term in the United States in 1968. He expatiated his ideas in *The Modern Practice of Adult Education: Andragogy Versus Pedagogy*, which outlined a detailed theory to provide a logical, consistent and scientific direction to the practice of adult education (Davenport & Davenport, 1985).

Knowles (1980) defined an adult from two perspectives. From a social perspective, 'a person is an adult to the extent that, that individual is performing social roles typically assigned by our culture to those it considers to be adults – the roles of worker, spouse, parent, responsible citizen, soldier and the like' (p. 24). From a psychological perspective, he stated that, 'a person is an adult to the extent that, that the individual perceives himself or herself to be essentially responsible for his or her own life' (Knowles, 1980, p. 24). Both definitions guided Knowles' perspective on andragogy. Knowles (1970) argued that andragogy is based on four important principles about the attributes of adult learners and these must be noted, embedded and taken advantage of in the instructional strategy of a teaching and learning process for adult learners.

1. **Adult learners have a self-concept of being self-directing and autonomous.** Adults have a sense of self awareness and they carry this idea to any educational event. They need to be recognised and respected as being able to direct their own lives. Consequently, adults like being part of the planning process of a learning experience but do not like learning to be imposed on them. They resent and resist situations that put them in a dependency role because it develops an internal conflict—between their expectation to be taught as children and the deeper psychological need to be self-directed (Ozuah, 2005).
2. **Adults bring a wealth of experience to the learning process.** Adult learners accumulate an increasing wealth of knowledge and experience, which is an important learning resource. These experiences are used in their learning

process. Knowles recommends that educators use facilitatory approaches to tap into these experiences, including discussion, use of case studies, laboratory practice, simulation and problem-solving exercises (Ozuah, 2005).

3. **Adults come to the learning process ready to learn.** Adult learners are ready to learn when they believe there is a need to acquire certain knowledge and skills to be able to address their roles and responsibilities effectively. The relevance of the material to be learnt should be related to real-life situations of the adults, and this enhances their readiness to learn. Therefore, facilitators should be able to contextualise the learning process into adult learners' experiences (Knowles, 1980).
4. **Adults are oriented toward immediate application of learned knowledge.** Adult learning orientation is life-focused, task-oriented or problem-centred, and they tend to view the application of new knowledge as immediate and not for future use. Hence, to induce best learning in adults, it is essential that concepts are related to real-life situations where knowledge and skills can be put to immediate practice (Knowles, 1980).

In the following decade, a number of adult educators influenced Knowles (1984a) beliefs about adult learning and this resulted in him refining his principles. Consequently, he added two more principles about the adult learner:

1. **Adults need to know the reason for learning something.** Adults tend to value learning; therefore, they need to know why they have to learn a new skill. Tough (1979) demonstrated that when adults decide to engage in a learning exercise, they spend considerable amount of time thinking about its usefulness to them as adults. They also think about the adverse implications of not engaging in the exercise. The implication is that the facilitator must lead adult learners to become conscious of why they need to acquire a new skill or have knowledge about something.
2. **Adults are driven by intrinsic motivation to learn.** Adult learners are internally (or intrinsically) motivated and respond to external factors. Adults are self-motivated to seek knowledge and skills to accomplish the desire to achieve

their goals and build their self-esteem. Tough (1979) claimed that most adults are committed to acquiring new knowledge, developing themselves and growing.

Andragogy has been criticised on several grounds. The disagreement was over different philosophical orientations, its classification (was it a technique, method, set of principles or a theory) and significance of the term for adult education (Davenport & Davenport, 1985). The most significant controversy was about the justification of andragogy as a theory of adult learning; this influenced much intellectual discourse in the 1970s and early 1980s. A few authors were critical of Knowles' andragogy and this included Houle (1972), who refuted andragogy as organising principles but rather viewed it as techniques in adult education. His argument was that education in humans was a straightforward method for all and that learning activities were basically the same for adults and children, even though there were differences between adults and children [cited in Davenport and Davenport (1985)]. London and Thornton (1973) contributed to the debate and supported Houle (1972), claiming that there was unity of education and opposing the different perspectives on adults and children, arguing that some principles of andragogy could be used on children. Elias (1979) supported earlier critics by reasserting the essence of uniformity in education. He argued that the distinctions between adults and children did not justify divergent educational approaches. Elias (1979) stressed that the concept of progressive education could be applied to adults and children, and this was the same as andragogy. He believed that the overall concept of education was sufficient for both groups; therefore, andragogy and pedagogy did not warrant separation [cited in Davenport and Davenport (1985)]. Knowles (1980) clarified his thoughts on the issue. He admitted erring by creating a dichotomy between andragogy and pedagogy in subtitling his book, *Modern Practice of Adult Education 'Andragogy versus Pedagogy'* and agreed that the andragogical approach could be applied to children under different situations. Accepting andragogy as more of a model about principles for adult education, he stated:

> *So I am at the point now of seeing that andragogy is simply another model of principles about learners to be used alongside the pedagogical model of principles, thereby providing two alternative models for testing out the principles as to their "fit" with particular situations. Furthermore, the*

> *models are probably most useful when seen not as dichotomous but rather as two ends of a spectrum, with a realistic principle in a given situation falling in between the two ends (Knowles, 1980, p. 43).*

Hartree (1984) also questioned whether there was a theory in andragogy and suggested that these were possibly principles of good educational practice or a description of the nature of the adult learner. Davenport and Davenport (1985, p. 157) identified different classifications that had been given to andragogy 'as a theory of adult education, theory of adult learning, theory of technology of adult learning, method of adult education, technique of adult education, and a set of principles' to indicate the intensity of the debate on the controversy.

Another criticism of Knowles' theory is the extent to which the principles are characteristic of adult learners only. Some children are independent, self-directed learners while some adults are dependent on teachers for the teaching and learning process. The same argument may be made for motivation to learn; while children may be motivated by curiosity or the internal pleasure of learning, adults may be externally motivated to learn, for instance to seek promotion in the workplace or retain their employment (Merriam, 2001). Even the most obvious principle, that adults have deeper life experiences, may or may not function positively in a learning situation. Indeed, certain life experiences can act as barriers to learning (Merriam, Mott, & Lee, 1996). Furthermore, children in certain situations may have a range of experiences qualitatively richer than some adults (Merriam, 2001). Knowles was also criticised for assuming that all adult learners learn in the same way, ignoring systems of oppression and the effects of culture on learning and development (Merriam, Caffarella, & Baumgartner, 2006). Despite these criticisms, andragogy has been accepted into educational practice and has been applied or advocated for its application in different fields. Perhaps teachers in these fields noted that pre-existing pedagogical models of education no longer met the requirements of their field and as result have responded to such needs with dynamic instructional strategies and methods of andragogy that seek to better prepare individuals for their practice (Forrest & Peterson, 2006).

Andragogy has been applied to the field of health care (Clapper, 2010), nursing education (Chambers, Gillard, Turner, & Borschmann, 2013; Couser, Moehrlin, Deitrich, & Hess, 1990; Gatti-Petito et al., 2013; Leigh, Whitted, & Hamilton, 2015), museum educators (McCray, 2016), non-traditional education (Chen, 2014), management (Forrest & Peterson, 2006), and police training (Birzer, 2003). Chambers et al. (2013) undertook a study to evaluate a practice development programme for mental health staff in London. They sought to translate theory into practice by engaging participants in an educational intervention designed to give them a deeper appreciation of mental health patients, particularly those who had experienced restraint, seclusion and control. The aim was to enable participants to provide patients with care that demonstrated respect and dignity for them. The educational intervention was underpinned by the philosophy of andragogy: recognising participants as adult learners, having mutual respect and involving participants within an atmosphere of partnership. The authors initially interviewed 19 patients about their experiences and the kind of care they desired. These responses were analysed thematically, and findings formed the content of the education programme. During the four-week training programme facilitated by experts in the research team, staff were exposed to knowledge and skills in active listening, how to engage in a therapeutic situation, interaction and assisting with daily activities. At evaluation, staff confirmed that their skills in conducting their routine duties had improved and they felt competent and confident in dealing with the patients.

Leigh et al. (2015) also conducted a research on andragogy at Troy University in the United States. Their aim was to appraise the extent to which a Decisional Matrix for Preceptorship Experiences (DMPE) indicated the principles and design elements of andragogy in the final preceptorship experience in the registered nurse baccalaureate programme. They took steps to incorporate the principles and design elements of andragogy into the design of the DMPE. The researchers considered students' academic and work experience and engaged with students on various levels to determine the appropriate learning activity for each student. This was to ensure that specific goals for learning activities and coursework were met. During evaluation, the authors confirmed that the DMPE was indicative of principles and design elements of andragogy and this was reflected in students' performance which exceeded the standards set for performance.

The rationale for adopting andragogy as the conceptual framework for the present study was its principles, which underpinned the overall approach used in the mental health literacy training programme. In addition, the principles of andragogy aligned well with the problem-solving Story-bridge approach in the programme. The framework provided a straightforward strategy for facilitating discussion of a stigmatised but worthy subject. It provided a guide for creating a learning environment that promoted interactivity and experiential learning suitable for adults. In turn, this strategy instilled a self-motivating impetus for participants to discover knowledge and skills for themselves. In addition, the andragogical approach recommends engagement in a learning process with a facilitator, not a teacher. Therefore, the establishment of an adult learning environment and use of the experiences of adult participants was deemed important as it aligned well with the principles of andragogy; hence, its adoption in the current study.

The principle that adults have a self-concept was acknowledged and put to practice in the training programme. According to Knowles (1984b), ‘once adults have arrived at that self-concept they develop a deep psychological need to be seen by others and treated by others as being capable of self-direction’(p. 56). Therefore, it was essential to allow participants to discover knowledge, skills and attitudes for themselves. To direct their own learning, assembly members were asked to reflect on the potential value of the mental health literacy programme to their assembly member role. They suggested that because of their leadership position in their communities they were often confronted with mental health issues, thus, sharing of knowledge with them would be beneficial. Subsequently, during delivery, participants were encouraged to present and share their perspectives, and this generated discussion on the topic by all present. An example of this was when one participant had a particular dilemma in his community – how to approach a family presumed ‘difficult’ about a mentally unwell member for a meaningful outcome. This dilemma was eased by the perspectives of participants who suggested actions likely to address the issue, including acquiring adequate knowledge or involving professionals with knowledge, locating available mental health services within the district and an expression of commitment to support the family to seek assistance. After further deliberations, participants agreed this was a useful model and a possible solution to the dilemma. They realised their interactions facilitated their learning, motivating them to contribute effectively to discussions.

An important consideration was to ensure the appropriate physical environment and frame of mind for the programme (Knowles, 1984b). Setting up the physical environment meant that it should not resemble a traditional classroom setting. Hence, conference halls and training centres were the most suitable environments. In addition, to avoid a traditional classroom seating arrangement, participants were seated in groups and provided with training manuals, making them more relaxed and willing to participate. Engaging with these adult learners, in the right frame of mind for the programme, meant choosing the right words, taking note of their cultural context, and assuring them there was no strict evaluation of their learning. Furthermore, tone of voice and body stance used depicted respect and confidence to elicit mutual respect and trust, support and partnership to ensure a successful learning experience (Knowles, 1984b).

The role of experience in adult learners' lives, as suggested by Knowles, was a valuable resource used in the training programme. These participants came to the programme with various life insights, including mental health experiences. Therefore, the programme was conducted using methods that took advantage of their experiential world. Group discussion enhanced by probing questions and open sharing of knowledge, thoughts and experiences were some of the techniques used. It was a non-threatening learning experience for those who were hearing some ideas for the first time and could relate these to their real-life situations and responsibilities as an adult and community leader. New learning also took place for those who were sharing their knowledge because they could relate the new learning to their past experiences.

In applying the principle of readiness to learn to the adult learner, participants believed that the programme was delivered at an opportune time. This coincided with their tasks as assembly members with regard to mental health reform in their district. The enactment of the new Ghanaian *Mental Health Act 846* of 2012 seeks to improve mental health practice through community-based mental health care places responsibility on assembly members to put strategies in place to ensure positive mental health in their districts. In addition, in the first three months in 2017, electronic and print media had reported 10 instances of suicide and related almost all of them to mental health problems. These phenomena heightened assembly members' concerns about mental health problems. They were especially worried when they could not comprehend what might have been the contributing factors and this made them feel helpless about the situation. After seeking clarification about the content of the programme, participants understood its essence; that it would provide them with knowledge about mental health issues. In turn, they would be more effective in their role as assembly members, particularly during deliberations and decision-taking about mental health issues. In addition, acquired knowledge, skills and attitudes would assist them to address effectively mental health issues for themselves, families and communities. Based on these benefits, the assembly members were willing to learn.

An important principle of adult orientation is that adults learn well when new knowledge, skills and attitudes are presented within the context of their everyday lives (Knowles, 1984b). Through the interactive approach adopted by the researcher, concepts contained in the programme were presented within the context of the real-life situation of participants. Participants were presented with national and regional statistics on the prevalence of depression and schizophrenia. Through discussion, they inferred the consequences from the prevalence, such as social and financial burden. They agreed it was essential to have knowledge about these two disorders to provide appropriate help. Further probing by the researcher/facilitator encouraged participants to share their experiences about these disorders with the larger group. Because of their limited knowledge and stigma, some expressed helplessness or avoidance of persons with mental disorders. To address this limitation, the signs, symptoms and treatment options for depression and schizophrenia were presented in relation to experiences that had been shared by some participants. Group discussion was used to enable the participants to put into practice the newly acquired knowledge and suggest strategies that two families in the vignettes (Appendix 3) might have used in addressing mental health problems (depression and schizophrenia).

## 4.3 Method of study

### 4.3.1 Design rationale

The research paradigm used in the present study was mixed methods research. Johnson, Onwuegbuzie, and Turner (2007) define this as a type of research in which researchers combine elements of qualitative and quantitative research approaches. Mixed methods research was chosen to generate appropriate and sufficient data to address the aims of the present study. Creswell and Clark (2007) describe three ways in which quantitative and qualitative data can be mixed; by integrating the two data sets, having quantitative data build on qualitative data or *vice versa*, or positioning a secondary form of data within a primary database to provide a supportive role in the study. Creswell (2009) recommends that in planning mixed method procedures, consideration should be given to whether data are collected sequentially or concurrently, and which data set is given priority. He added that consideration should be given to whether the data are combined or separated, as well as adoption of a theoretical perspective to guide the study design. These considerations shape the design of a mixed methods study. There are four major types of mixed methods design: triangulation, embedded, explanatory, and exploratory (Creswell & Clark, 2007).

In triangulation design, the objective is to ‘obtain different but complementary data on the same topic’ (Morse, 1991, p. 122) to best understand the research problem. A triangulated design is a one-phase design in which the researcher collects quantitative and qualitative data concurrently and applies equal weight to both sets of data (Creswell & Clark, 2007). This design is used when a researcher wants to compare and contrast quantitative statistical results with qualitative findings, or to validate or expand quantitative results with qualitative data (Creswell & Clark, 2007, p. 62), thus enabling verification, understanding of complex multifaceted phenomena and creation of a premise in the same study (Morse, 2003). For instance, Sarwal (2012) conducted research into the evaluation of an international cancer Congress using a triangulation design. The aim was to investigate if attending the Congress positively influenced participants’ behaviour and activities related to population-based cancer programmes in the short- and long-term. The researcher collected data over a two-year period. The primary data collection instruments were survey and qualitative interviews. Documents related to the Congress and country cancer reports were secondary data sources. From his data, Sarwal conducted a quantitative analysis of the survey and a thematic analysis of the interviews and documents. The survey and qualitative data were triangulated to highlight differences, similarities and key issues in the data. A further step in the data analysis was the transformation of qualitative data into quantitative data by determining the percentage of participant responses in each of the categories to enhance the understanding of the findings. The researcher reported that participants benefited from the Congress, which was reflected in their collaborations and cancer control programmes.

In embedded design, one dataset is embedded or nested in a primary dataset to provide a supportive, secondary role in a study (Creswell & Clark, 2007). Researchers choose this design when it is important to include quantitative or qualitative data to answer a research question within a largely quantitative or qualitative study. Researchers using studies that have different questions which require different data sets to answer them find embedded design helpful because they are can embed a qualitative component within a quantitative design. For example, in a RCT, quantitative data assess the outcomes of treatments while qualitative data can be used to examine the treatment as experienced by participants in the intervention groups. McCann et al. (2012) conducted a RCT across two early intervention psychosis services in Melbourne, Australia. They sought to investigate if caregivers of young people with first-episode psychosis would report better experiences of caring and good health after completing a guided self-help problem-solving course using bibliotherapy. The authors embedded a qualitative process evaluation in the assessment of the trial. The researchers concluded that guided self-help was a useful support mechanism for carers of young person’s experiencing psychosis for the first time (McCann & Lubman, 2014).

In an exploratory design, researchers collect and analyse qualitative and quantitative data in two sequential phases. Primacy is given to the qualitative data set, while the quantitative data set is used to build on and assist the interpretation of the qualitative findings (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Exploratory design is particularly useful when a researcher develops and tests a new psychometric instrument (Creswell et al., 2003). For example, Wallace, Clark, and White (2012) conducted a study in a Canadian medical institution using exploratory design. They aimed to investigate how tutors and students were using mobile computing devices to aid policy development about future use of mobile technology within medical practice. The researchers conducted interviews with 18 participants and undertook a thematic analysis of the data. They then developed a questionnaire from the themes they identified and administered it as an online survey. The questionnaire was pilot tested with six student volunteers before distribution to 2,550 participants. Researchers blended the qualitative results from the interviews with the quantitative results from the survey and concluded that mobile computing devices offered a unique opportunity to medical practice in terms of learning and caring for patients.

An explanatory design consists of two distinct phases: quantitative followed by qualitative (Creswell et al., 2003). In this sequential design, a researcher collects and analyses quantitative data first, followed by qualitative data collection and analysis. The rationale for this approach is that the quantitative data and their subsequent analysis provide a broader understanding of the research problem. The qualitative data and their analysis refine and clarify the statistical results by probing participants' views in more depth (McCann & Lubman, 2014). For example, Baheiraei, Mirghafourvand, Charandabi, Mohammadi, and Nedjat (2014) used an explanatory design to explore the extent to which socio-demographic features and social support influenced health-promoting behaviours of women in Tehran. The researchers also examined participants' health-promoting behaviours. During the first phase, a survey of 1,359 women assessed their perceived social support and personal behaviours that promoted health. This generated the quantitative data. The results were used to develop a protocol for an individual in-depth interview schedule used in the second phase of their study. The researchers then selected a sample of 15 women to interview to explore their experiences with behaviours that affected their health. Baheiraei et al. (2014) integrated the results from both phases and concluded that socio-demographic features and social support of women were essential in the development of health-promoting behaviours.

In the present study, mixed methods research was adopted to achieve the broader aims of evaluating the outcomes and process of a mental health literacy programme. Quantitative data were prioritised and collected in the first phase of data collection, then both qualitative and quantitative data were collected in the second phase. Consequently, a sequential explanatory design was deemed appropriate, similar to the design illustrated in the study above. The primary data collection method was a cluster randomised controlled trial to evaluate assembly members' mental health literacy levels, while both qualitative and quantitative process evaluations were conducted on a sample of the intervention cluster participants to provide a broader and deeper understanding about the usefulness of the programme. A sequential explanatory design was preferred because each data set was collected separately and allowed for further probing of the quantitative findings to provide a fuller picture and deeper understanding of the intervention (Johnson et al., 2007).

### 4.3.2 Quantitative: Cluster randomised controlled trial

A cluster randomised controlled trial was used to collect quantitative data to evaluate participant outcomes in the current study. Cluster randomisation is the process in which larger communities are randomly assigned to intervention or control groups to measure the effects of an intervention. 'Cluster randomisation is appropriate where an intervention is meaningful only at the level of the larger entity or when it is impractical to assign individuals randomly to different treatments' (Michalopoulos, 2005, p. 23). It also controls for the contamination effect, where outcomes for people exposed to an intervention have the potential to affect outcomes for other people not exposed to it. Cluster randomisation is also effective when interventions are designed to affect the behaviour of groups of interrelated people rather than individuals. In addition, cluster randomisation maintains the integrity of a study because researchers can physically separate intervention and control groups (Bloom, 2005). For example, Reavley, McCann, Cvetkovski, and Jorm (2014b) conducted a cluster randomised controlled trial at a university with nine campuses, in Melbourne, Australia. The purpose of the study was to assess if a multifaceted intervention could improve students' mental health literacy, facilitate their help-seeking, and reduce their psychological distress and alcohol misuse. The campuses were paired, with one of each pair assigned randomly to the intervention or control group cluster. The intervention was messages delivered to students about mental disorders and alcohol misuse and appropriate responses towards them. Messages were disseminated in different ways; Facebook pages of students' groups, booklets and fact sheets about mental disorders, emails to student email addresses, awareness programmes on mental health, posters on the back of campus toilet doors and mental health first aid (MHFA) training (www.mhfa.com.au) delivered by officers of the student counselling service. The intervention was conducted over two academic years and data were collected at three time-points (baseline, end of academic Year 1, end of academic Year 2). The findings showed that the intervention had some benefits in improving students' overall mental health literacy (Reavley et al., 2014b).

In the present study, the districts were treated as clusters and randomised into intervention or control clusters. Conclusions were drawn based on how the training programme affected participants' mental health literacy levels (Campbell & Walters, 2014). The researcher opted to use a cluster randomised controlled trial because it was unsuitable to randomly assign persons within each cluster (district) to intervention or control groups. This situation would have tainted the effectiveness of the intervention because participants who had been trained would be capable of influencing the results of participants in the control group because they would be discussing the intervention among themselves (Michalopoulos, 2005). Hence, it was suitable to randomise the programme by cluster rather than by individuals. Table 4.1 provides an outline of the cluster randomised controlled design of the mental health literacy programme. It summarises the population, unit and method of randomisation in which the clusters were paired, based on particular variables, treatment for cluster groups and data collection.

**Table 4.1 Outline of cluster randomised controlled design of mental health literacy programme. Adapted from (Campbell & Walters, 2014).**

| Design item | Description |
|---|---|
| Population | Assembly members within the Brong Ahafo region in Ghana |
| Intervention cluster | Mental health literacy programme (three hours) delivered to the intervention cluster by the researcher (PhD candidate) |
| Comparator (control cluster) | Given a basic brochure about mental health |
| Unit of randomisation | District Assemblies within the region as clusters |
| Method of randomisation | Simple randomisation performed by the Principal Supervisor of the research, assigning districts to intervention or control cluster groups. The researcher was blinded to this part of the exercise. |
| Data collection | Outcome instruments were administered at baseline (Week 0) and follow-up (Week 12) |

#### *4.3.2.1 Treatment fidelity*

Ensuring treatment fidelity of an intervention is a key procedural consideration in any trial examining interventions for behaviour change (Resnick et al., 2005), such as the present cluster randomised controlled trial. Century, Rudnick, and Freeman (2010) defined fidelity as the extent to which the significant parts of an intended intervention are present when that intervention is delivered. Treatment fidelity is the continual evaluation, monitoring and improvement of the reliability and internal validity of a study, and comprises two general components (Borrelli, 2011): (i) treatment integrity, the level to which a treatment is enacted as planned; and (ii) treatment differentiation, the extent to which the arms of two or more studies differ along important features.

Addressing treatment fidelity can enhance commitment to the delivery of an intervention as planned and also ensure that participants experience the complete treatment, thus strengthening statistical power (Resnick et al. (2005). Treatment fidelity can assist in explaining non-significant outcomes and provide a justification for further studies. It may prompt a researcher to review the implementation of an intervention and, if done, it assures confidence in the outcomes (Bellg et al., 2004). The process of ensuring treatment fidelity in a study necessitates attention to five areas. These are *study design,* aimed at ensuring that a study can sufficiently test its hypotheses in relation to the fundamental theory and clinical procedures; *training providers,* evaluating and improving the training of treatment providers so they are capable of delivering the intervention to research participants; *delivery of treatment,* monitoring whether delivery of the intervention is being done as intended; *receipt of treatment,* ensuring that the treatment has been received and understood by participants, and whether they can demonstrate similar cognitive strategies and behavioural skills in a given situation; and *enactment of treatment skills,* confirming that participants can perform treatment-related behavioural skills and cognitive strategies of the intervention in a real-life situation (Bellg et al., 2004; Resnick et al., 2005).

In this study, ensuring treatment fidelity in the intervention was guided by the framework provided by Resnick et al. (2005). The first area of focus, study design, was considered by designing the intervention as a cluster randomised controlled trial, supported by a theoretical framework and well framed hypotheses[35]. The next area of focus for treatment fidelity was training providers. In this case, the student researcher was the provider of the training programme. He underwent training to ensure that he understood the concepts and was able to impart the knowledge. First, he was well educated in the subject matter of the two main mental disorders (depression and schizophrenia) of the training programme by his supervisors. In addition, he also undertook two formal training sessions: introduction to mental health issues and mental disorders and Youth Mental Health First Aid course. These preparations aided in making the trainer an effective facilitator during the programme, for example in presentations (relating concepts to real life situations), posing probing questions to encourage and direct discussions and answering questions from participants. Adhering to the delivery of treatment was also of concern to ensure treatment fidelity in this study. Attention was paid to the content of and length of time in presenting the intervention. The content of the intervention[36] was prepared in a PowerPoint format and it was reviewed by the two supervisors of the project to confirm it met the objectives of the study. The length of time for delivery of the intervention was set at three hours. To ensure that this time was adhered to, a programme guide was prepared and distributed to participants indicating time allocated for each item on the programme (Appendix 4). In addition, a visible large wall clock was placed in the training centre to assist with time management. Furthermore, a participant also volunteered as time keeper to alert the trainer if deviations from the time limits were detected. These strategies were effective because they ensured that the training programme was delivered as intended. All items or concepts in the programme were presented in a reasonably appropriate time but with a few deviations in content and time. These deviations occurred particularly during the delivery of the training programme with the first intervention group. However, these deviations were duly noted and stricter time monitoring and management of unrelated issues during discussions were employed to correct such deviations in subsequent delivery to the other two groups. The next area for treatment fidelity is ensuring receipt of treatment as planned. This required an assessment that participants had received and understood the treatment, knew what to do and could apply this knowledge in real life contexts. Hence, the programme incorporated two 30-minute exercises that provided

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[35] See Chapter 4 section 1 and.2.

[36] See Chapter 4. Section 3.8

participants with the opportunity to practice the knowledge and skills acquired during the programme. In group format, participants were tasked with using the knowledge they acquired to address mental health problems and present their solutions to the whole group. Each group used the knowledge acquired to present their solutions. Common strategies used by groups to address the mental health problems were identified and emphasised to reinforce the knowledge and attitudes acquired. In addition, at the end of the training programme a survey was conducted with all participants based on the treatment implementation model of Lichstein et al. (1994) (See chapter 6 on results of this survey). Finally, to make an assessment of the enactment of the treatment skills, 12 weeks after the programme a sample of the participants were interviewed about the usefulness of the programme in their everyday lives. Participants stated they had used knowledge and attitude acquired from the programme in their lives (See results on qualitative process evaluation).

### 4.3.3 Randomisation

Randomisation is a method of assigning participants to control and treatment groups, where each participant has an equal chance of being allocated to either group (Kang, Ragan, & Park, 2008). Randomisation is conducted for two main reasons. First, to ensure participants in various groups have the same or similar variables. If variables are different, it can have a detrimental influence on the outcomes, rendering the results biased. Second, to ensure that assignment of a participant to a group will not be known by participants, researcher and others. Hence, the issue of selection bias, distorted analysis and inaccurate conclusions will be avoided (Kang et al., 2008).

There are several ways of conducting randomisation: simple, block, and stratified. Simple randomisation is a single sequence of random assignment to a group (Altman & Bland, 1999). This technique provides an unsystematic assignment of a person to a particular group. A popular method of simple randomisation is tossing a coin, using ‘heads’ or ‘tails’ to determine placement in the intervention or control group (Kang et al., 2008). Block randomisation is a technique used to control assignment differences between treatment components of a study (Efird, 2010). In this technique, participants are randomly assigned within blocks based on an equal allocation ratio. This method sequences participants’ allocation by blocks, thereby increasing the probability that each arm will have the same number of participants (Efird, 2010). Stratified randomisation is used when there are known interacting variables in a population. Therefore, groups are created based on these variables; for example, on gender, age, socio-economic status and race. Then, within each group, members are randomised into treatment or control groups. The effect is that all variables are fairly represented in the treatment and control groups (Stanley, 2007).

In the present study, the Principal Supervisor used simple randomisation to randomise the districts into intervention cluster group or control cluster group (Table 4.1). The researcher who conducted the fieldwork was not part of the randomisation process. Recruitment of participants by the researcher began after randomisation had been conducted. The design followed the Consolidated Standards for Reporting of Trials (CONSORT) guidelines for conducting RCTs (Schulz, Altman, & Moher, 2010). The guidelines provide recommendations for an evidence-based reporting of RCTs, including an acceptable format of how trial findings are prepared. This ensures that reports are detailed, transparent and allow for critical examination and interpretation of the study. The CONSORT Statement contains a 25-item checklist and a flow diagram (Figure 5.1, page 91), and text describing the items. The checklist items include a description of how the design, analysis and interpretation of the trial were conducted. The progress of participants, beginning from selection through to recruitment up to the completion of the trial, is also displayed in the flow diagram (Schulz et al., 2010).

### 4.3.4 Process evaluation

Process evaluation is an evaluation conducted within a trial to assess the planning and setting, implementation and receipt of an intervention, and which aids in the explanation of the outcome results (Oakley, Strange, Bonell, Allen, & Stephenson, 2006). It provides significant understanding of why an intervention works successfully and how it can be improved, reasons for failure or unexpected outcomes of an intervention (Craig et al., 2008). Furthermore, it can be used to evaluate the quality and fidelity of an intervention, and to identify and explain contextual factors and extraneous variables that produce differences in outcomes (Oakley et al., 2006). Even though ‘qualitative’ and ‘process’ are often used interchangeably, a process evaluation can be quantitative, qualitative or both.

In a quantitative process evaluation, researchers gather quantitative data to assess an intervention through surveys.

Qualitative process evaluation can be used to evaluate new or complex interventions that entail behavioural or social activities that are not easy to analyse using quantitative methods alone (Bleijenberg et al., 2013). Complex interventions have diverse interacting variables, acting alone or influencing other variables (Craig et al., 2008). The complexity cuts across different dimensions of the intervention, which include the interactions of these variables within control and treatment groups, variations in outcomes, permitted flexibility in designing intervention, uncertainty in responses required of participants in treatment groups (Craig et al., 2008). Consequently, undertaking a thorough process evaluation is an important part of a new intervention that includes social and behavioural activities. This technique provides a more detailed explanation of how participants and providers of the intervention experience a new intervention and the barriers to this intervention (Bleijenberg et al., 2013). This information, acquired mainly through questionnaires, individual interviews and focus group discussions, is needed to evaluate and restructure the intervention to ensure that it is successful and effective in its implementation. Oakley et al. (2006) claim that most complex interventions focus on outcomes, not on the processes involved in implementing an intervention; however, including a process evaluation improves understanding of many complex interventions, including RCTs and cluster randomised controlled trials. Oakley et al. (2006) conducted a cluster randomised controlled trial of 27 secondary schools in England to investigate if peer-delivered sex education was more effective than teacher-delivered sessions in decreasing students’ risky sexual behaviour. Focus group and individual interviews were used to collect data for their qualitative process evaluation. The researchers concluded that the peer-led sex education approach was effective. They also added that conducting a process evaluation of the intervention gave them an in-depth understanding of the study outcomes. For example, the authors noted that contextual variables presented a challenge when conducting research in organisations such as schools, because these variables may also have the potential to affect the outcome of an intervention (Oakley et al., 2006).

In the present study, survey and qualitative interviews were used to collect data for the process evaluation. The guide developed for the process evaluation was based on the Lichstein, Riedel, and Grieve (1994) treatment implementation model for evaluating RCTs. This model has three parts: delivery, receipt and enactment. The delivery component addresses how accurately the timing of the activities in the training programme was presented to participants. The receipt component refers to the accuracy of participants' understanding of the intervention. Enactment refers to the accuracy with which participants apply or use the knowledge acquired in the training programme. This model was used to demonstrate and ensure that all aspects of the intervention had been evaluated. Interviews were semi-structured, guided by an interview guide and audio-recorded, with the permission of the participants. All participants in the intervention cluster completed the process evaluation survey, and 25 participants selected via a stratified random sampling took part in individual qualitative interviews at the follow-up data collection time-point. The interviews were conducted by telephone or face-to-face in a variety of private settings, for example, in or around participants' homes or elsewhere in their communities, with each lasting between 10 to 15 minutes. The process evaluation was an important component of the cluster randomised controlled trial, because it provided an opportunity for a deeper understanding of how participants experienced the mental health literacy programme, the usefulness of the programme, and how they applied the acquired knowledge in their communities.

### 4.3.5 Setting for the study

The study was carried out in the Brong Ahafo Region in the central part of Ghana (Figure 4.1) and Sunyani is the regional capital. The region has a population of 2,310,983, with a rural population of 1,282,510 (55.5%) and urban population of 1,028,473 (44.5%) (www.ghana.gov.gh). The region covers an area of 39,557 square kilometres and is the second largest region in the country, comprising 16.6% of the land mass of Ghana. It shares boundaries with the Northern Region to the north, the Ashanti and Western Regions to the south, the Volta Region to the east, the Eastern Region to the southeast and La Cote d'Ivoire to the west. The region is predominantly a food producing area, with cocoa and timber the two main export commodities.

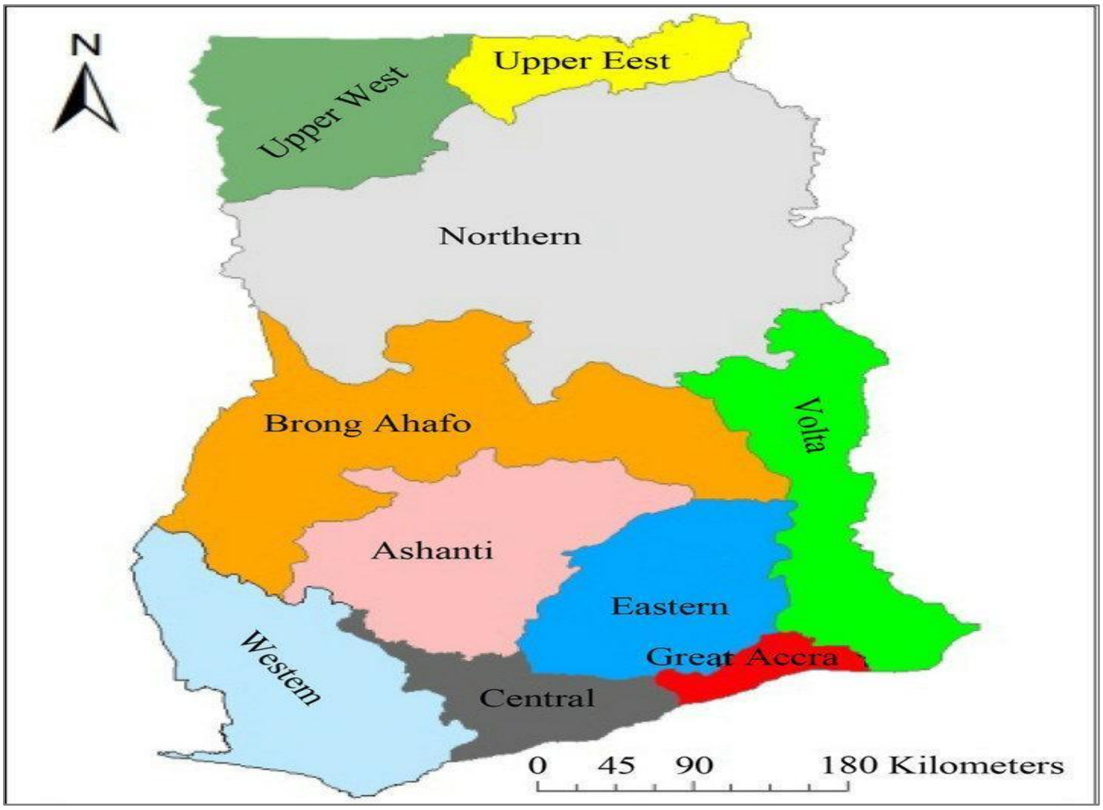

Figure 4.1: Map of Ghana showing Brong Ahafo region[37]

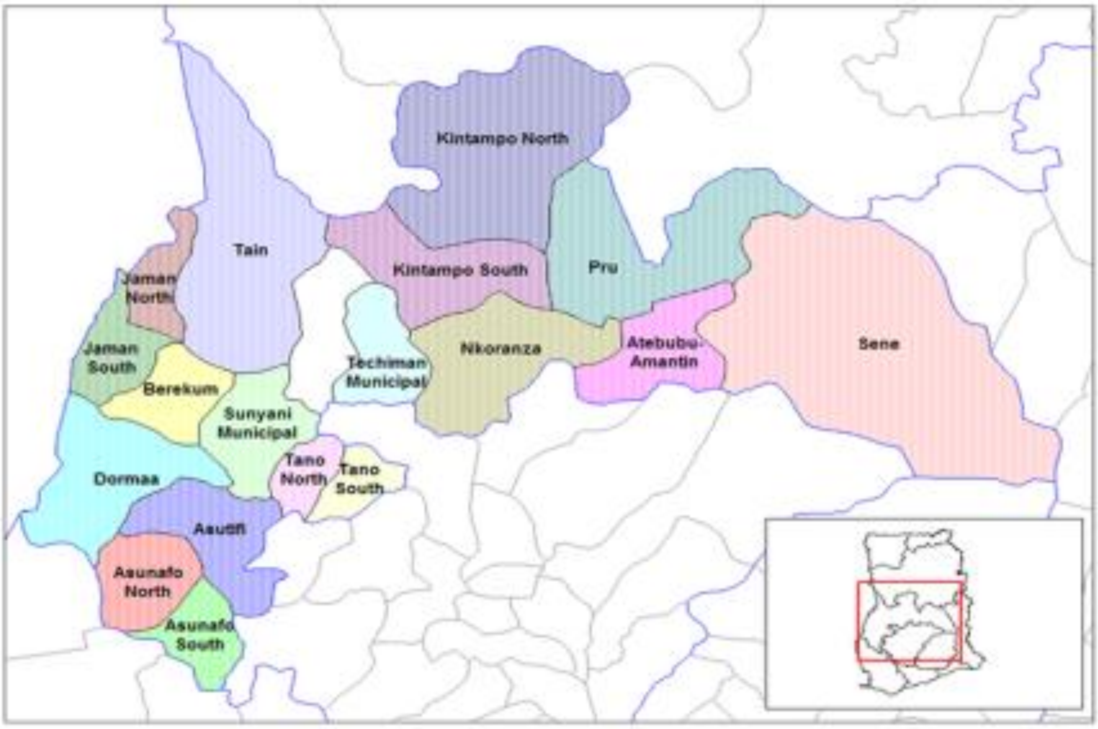

Figure 4.2: Map showing the districts of Brong Ahafo region

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[37] Source: https://www.google.com.au/search?q=REGIONAL+MAPS+OF+GHANA

#### *4.3.5.1 Participants*

The study area has a total of 27 districts, each of which is administered by its own district assembly (Figure 4.2). Officials of district assemblies are known as assembly members, two-thirds of whom are voted into office on a non-partisan basis by the local community, while one-third is appointed by the President. Elected and appointed officials have four-year terms of office (Local Government Act 462; Government of Ghana, 1993). The mission of each district assembly is to improve the living conditions of the people in the district through effective and sustainable mobilisation and utilisation of its resources to reduce poverty (Government of Ghana, 1993). Under the *Local Government Act: Act 462 of 1993*, assembly members are required to engage effectively with their electorate to present government policies and assembly initiatives, and to report the opinions and concerns of their electorate at assembly meetings. These functions underscore the power and influence assembly members have in their communities. Within their communities, assembly members also have oversight responsibility for the provision of security, education, health, social amenities and development projects. Therefore, they are usually contacted first about difficult communal issues, including mental health issues, and are expected to provide interim or sustainable interventions.

The programme was conducted with the intervention group clusters at their respective district capitals where official business and routine meetings for assembly members take place.

#### *4.3.5.2 Using community leaders to enhance mental health literacy and reduce stigma*

In this study, I evaluated the effectiveness of a mental health literacy programme on community leaders' knowledge about and attitudes towards people with mental disorder. Use of community leaders is an efficient and cost-effective strategy because they have access to community resources. Moreover, they are generally well-respected and recognised as trustworthy advisors who can communicate easily with their communities (Theall, Fleckman, & Jacobs, 2015). Therefore, acquiring knowledge from this mental health literacy programme may make them instrumental in encouraging help-seeking attitudes and decreasing public stigma towards community members with mental disorder and their families (McCreary, Kaponda, Davis, Kalengamaliro, & Norr, 2013).

### 4.3.6 Recruitment

In total, there are 766 elected assembly members spread across the 27 district assemblies in the Brong Ahafo region. On average, there are 29 elected assembly members in each district assembly. In the present study, a subset of the total districts (10 out of 27)[38] was recruited to the cluster randomised controlled trial. The districts were recruited based on their geographical position, ease of access to communities within the district and having a fair representation of the rural–urban population mix. The following inclusion and exclusion criteria were used:

Inclusion criteria:

1. All districts assemblies and current assembly members within the Brong Ahafo region were potential clusters and participants.

Exclusion criteria:

1. A district assembly unit and/or assembly member that had received prior training about mental disorders.
2. An assembly member with current or previous work experience as a mental health professional.

#### *4.3.6.1 Recruitment for the cluster randomised controlled trial*

Ten District Assemblies were contacted, and permission was granted by the District Chief Executives of the relevant districts to conduct the study within their assemblies (See Appendix 5 for copies of their permission letters). Assembly members were not approached directly by the researcher to participate in the study. Contact was made with the district assembly officials either through the District Chief Executive or the District Coordinating Director of the various district assemblies. These officials were provided with brief information about the study, including a copy of the plain language statement and consent form (Appendices 6 & 7). The role of these officials was to pre-inform the assembly members, by telephone or face-to-face, about the study. After potential participants were informed by these officials, and with their permission, their contact

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[38] See Chapter 4. Section 3.6.3 on sample size calculation for more information on rationale for recruiting 10 out 27 districts.

details were forwarded to the researcher by telephone or email. Overall, every official contacted in a district assembly provided a list of their assembly members who expressed interest in participating in the study. In total, 346 assembly members expressed interest. The researcher then contacted prospective participant(s) to arrange a meeting. At this meeting, the purpose, rationale, methods and confidentiality of their participation, including the content of the plain language statement, was explained to the potential participants. They were encouraged to ask questions about the study. Subsequently, individuals who expressed willingness to participate were asked to sign the consent form and were given a copy of the plain language statement and consent form for their own reference.

Overall, the populations of the ten districts (clusters) ranged between 52,000 and 130,000, with eight of the districts having a higher proportion of females (Table 4.2). Six of the districts had greater rural settlements and four had more urban populated communities. The main occupations of people in the districts were agriculture, forestry and fishing.

**Table 4.2:** Population and demographic differences among participating districts

| **Districts** | **Population (2010)** [1] | | **Projected Population (2018)** [2] | | **Assembly members** | | **Area**[3] | | **Main occupations**[4] |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Urban | Rural | |
| Tano North | 39,593 | 40,380 | 48,032 | 49,691 | 27 | 6 | 44.6% | 55.4% | Agriculture, forestry and fishing |
| Asutifi North | 26,761 | 25,498 | 31,595 | 32,689 | 23 | 4 | 30.5% | 69.5% | Agriculture, forestry and fishing |
| Asutifi South | 48,386 | 46,744 | 56,257 | 58,205 | 22 | 1 | 22.3% | 77.7% | Agriculture, forestry and fishing |
| Dormaa Ahenkro | 53,589 | 58,522 | 67,240 | 69,572 | 40 | 2 | 36.1% | 63.9% | Agriculture, forestry and fishing |
| Tano South | 38,299 | 39,380 | 46,658 | 48,270 | 49 | 7 | 52.4% | 47.6% | Agriculture, forestry and fishing |
| Berekum | 59,869 | 69,759 | 76,847 | 79,502 | 39 | 6 | 65.5% | 34..5% | Agriculture, forestry and fishing |
| Sunyani West | 61,610 | 61,614 | 72,728 | 75,254 | 23 | 5 | 63.3% | 36.7% | Agriculture, forestry and fishing |
| Wenchi | 44,065 | 45,674 | 53,517 | 55,375 | 28 | 0 | 36.3% | 63.7% | Agriculture, forestry and fishing |
| Techiman North | 28,766 | 30,302 | 35,679 | 36,914 | 24 | 0 | 45.7% | 54.3% | Agriculture, forestry and fishing |
| Techiman Municipal | 71,732 | 76,056 | 87,821 | 90,870 | 38 | 2 | 64.3% | 35.7% | Agriculture, forestry and fishing |

[1] Source – Ghana Statistical service; Population projections by districts 2015-2020 - www.statsghana.gov.gh.

[2] Source – Ghana Statistical service; Population projections by districts 2015-2020 - www.statsghana.gov.gh.

[3] Source – Ghana Statistical service; 2010 Population and Housing Census. District Analytical Reports - www.statsghana.gov.gh.

[4] Source – Ghana Statistical service; 2010 Population and Housing Census. District Analytical Reports - www.statsghana.gov.gh.

#### *4.3.6.2 Recruitment for the process evaluation*

Quantitative – survey

All intervention cluster participants (n=70) who took part in the training programme were invited to complete the process evaluation survey. The survey was completed immediately after the training programme finished and took participants about 10 minutes to complete.

### Qualitative – interview

I planned to interview a random sample of 25 intervention cluster participants in the qualitative process evaluation. From a population of 70 participants in the intervention cluster, a sample of 25 participants (approximately 35.7%) is a representative sample to enable the qualitative process evaluation and is sufficient to enable data saturation of themes (McCann & Lubman, 2014). A sample of 25 is generally considered sufficient to develop themes from a process evaluation. For example, McCann and Lubman (2014) used a sample of 20 to conduct a process evaluation of a RCT of a guided self-help manual for caregivers of young people with first-episode psychosis.

Participants were given information about the interviews at the end of the training programme and asked if they would like to volunteer to participate in the 12-week follow-up interviews. Following the post-intervention data collection in the cluster randomised controlled trial, 59 intervention cluster participants indicated their preparedness to participate in the qualitative process evaluation. They indicated their interest by writing their names and contact telephone numbers on a blank sheet of paper that had been provided. Of these, a stratified random sample of 25 was selected and interviewed. Eighteen interviews were conducted in English and seven in the "twi"[39] language which were translated into English. Linguistic diversity was allowed to make a meaningful assessment of the impact of the mental health literacy programme (Jorm, 2012) . Three interviews were conducted face-to-face and 22 by telephone.

### *Translation of the interview schedule into Twi*

Translation of the interview schedule was done by a team of linguistics experts from University of Ghana. The source language was the English language and the target language was a Ghanaian local language known as Twi. The team worked through the translation process of translating the interview schedule (in English) to Twi. A member of the team did an initial forward translation of the schedule to Twi. To ensure translation accuracy, another member of the team retranslated the Twi version of the interview schedule back to English (Santos Jr, Black, & Sandelowski, 2015). The researcher who was fluent in the Twi language (reading and writing) confirmed no distinct differences in

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[39] Twi is a commonly spoken dialect of the Akan language, especially in southern and central Ghana.

meaning during the process. In addition, to ensure the credibility of the qualitative process evaluation, the Twi interview schedule was pilot tested with four participants who took part in the training programme to confirm the content and meaning. Their responses were not included in the analysis.

#### *Translation of the interviews conducted in Twi*

This translation was conducted by the same team as indicated above. As suggested by Chapple and Ziebland (2017), translation of interviews conducted in Twi began immediately after completion of interviews to allow effective interaction between the researcher and translators during the translation process. The translators used a three-stage process in their approach. They first transcribed the audio recordings of the interviews verbatim to Twi. The next stage was translating the emerging transcripts from Twi to the English language. At this point, certain words for cultural inferences, metaphors, expressions and figures of speech were particularly noted and translated to capture their meaning because word-for-word translation may be incorrect (Chapple & Ziebland, 2017). The final stage was a backward translation of the English transcripts to Twi. Both versions (pre/post) of the Twi transcripts were reviewed and compared by the team to identify and resolve any inconsistencies (Nurjannah, Mills, Park, & Usher, 2014). The versions were consistent with each other with very minor differences which were resolved.

#### *4.3.6.3 Sample size for the cluster randomised controlled trial*

The cluster randomised controlled trial was planned with equally-sized control and treatment clusters, with individuals clustered within districts, and each district comprising an average of 29 assembly members. We anticipated a difference of 5 points in mental health literacy scores as assessed by the *Attitudes and Beliefs about Mental Health Problems: Professional and Public Views* questionnaire (Jorm et al., 1997a) from baseline to Week 12 follow-up. For the intervention cluster, we anticipated a change of 10 points in the intervention group cluster scores from baseline to Week 12 follow-up. We anticipated data variability across both groups to be 10 points. To account for the lack of independence in intervention outcomes by participants within a cluster, which tend to be similar, we also anticipated the intra-class correlation coefficient to be 0.03, of approximately medium magnitude (Auplish et al., 2017). Hence, about 3% of total data variability was anticipated to occur between clusters; corresponding to a clustering design effect of 1.56.

At a 5% level of significance and a power of 80%, a total of 128 participants (64 intervention and 64 control cluster participants) was needed to be able to reject the null hypothesis that the population means of the intervention and control clusters were equal without clustering. Hence, we aimed to recruit 2–3 district assemblies as the intervention group cluster and another 2–3 as the control group cluster. To allow for attrition, an additional 10% of the estimated sample size was recruited, making a total of 140 participants (Cramer, Haller, Dobos, & Lauche, 2016).

### 4.3.7 Procedure

This section explains the justification for the emphasis on a mental health literacy programme including the choice of mental disorders for the programme. This is followed by a description of how the training programme was delivered to the participants and a detailed description of the main resource around which the programme revolves.

#### *4.3.7.1 Rationale for using mental health literacy programme*

There were three main underlying reasons for using the mental health literacy programme with assembly members: to improve their knowledge of and attitudes toward, people with depression and schizophrenia, address the public stigma of mental disorders in their communities, and contribute to research on educational interventions to improving knowledge about mental health disorders in Ghana. Jorm (2012) asserts that if people have adequate knowledge about mental disorders they will be capable of taking appropriate preventive, intervention and treatment measures. Thus, this programme was meant to improve assembly members’ knowledge about and attitudes toward people with mental disorders. Another rationale for using this programme to address public stigma is offered by Corrigan et al. (2012), who stress that addressing public stigma using an educational intervention is effective because it confronts inaccurate stereotypes about mental illnesses and replaces them with factual information. Therefore, educating assembly members, who are influential community leaders, will assist in addressing the public stigma of mental disorders in their communities. Wilson and Somhlaba (2016) claim that, in Ghana, research on mental health issues has focused on a wide range of topics; however, little has been done to promote positive mental health outcomes and few studies have focused on improving mental health literacy in community settings. Hence, this training programme was used to contribute to scholarly work on increasing mental health literacy.

#### *4.3.7.2 Rationale for choice of mental disorders for training programme*

Sipsma et al. (2013) reported an increase in the prevalence of mental disorders in Ghana and these disorders account for 9% of the total disease burden (De Menil et al., 2012). Depression and schizophrenia were chosen as the main foci of the training programme because of their high prevalence (depression) and stigma (especially schizophrenia). In Ghana, print and electronic media regularly report and raise issues about people with mental disorders. For example, on 30th May 2016 *allafrica.com* featured Mr. Joseph Yere, Brong Ahafo Regional Coordinator of Mental Health, with the caption: *Ghana: over 600 mental patients roam Brong Ahafo streets* (Asante 2016). Additionally, on 17th June 2016, *ghnewsnow.com* had the caption: *627 mental derail* [sic] *people on the streets of Brong Ahafo.* They also featured Mr. Joseph Yere, who stated that there were 627 persons with mental health problems roaming the streets of towns and communities in the region. He also added that there has been a significant increase in the number of people with depression in the region (Sarpong, 2016). Common stereotypes and negative perceptions about individuals with mental health issues, such as being dangerous and violent, are frequently reinforced in the electronic media. On 18th February 2016, *www.myjoyonline.com* reported an incident in a town in the study area, with the caption: *Mentally challenged man 'butchers' two at Techiman.* The person with the mental health problem was alleged to have seriously injured two people with a machete and a third person sustained minor injuries. A similar story was reported the following day by the same network *(www.myjoyonline.com): Eight murdered in cold blood by mentally unstable men in the last 24 hours (Ibrahim, 2016)* . These murders occurred in three separate incidents. In one incident, the murderer, who was suspected to be mentally unstable, had killed four of his family members. However, this mentally unstable individual was attacked by a mob and beaten to death. These reported and anecdotal incidents may have increased the public's negative perceptions about people with mental disorders, motivating them to show stigmatising and discriminatory attitudes. Discriminatory behaviour such as denial of help, denial of adequate housing, refusal to provide employment and social exclusion are exhibited towards individuals suffering from mental health problems. Such behaviour can have adverse effects on the health, economic, financial, social and psychological condition of these individuals and their family members and caregivers (Baffoe, 2013; Barke et al., 2011; Tawiah et al., 2015). These stigmatising attitudes and discriminatory behaviours may have contributed to individuals with mental health problems leaving their homes and living on the streets. Lack of knowledge about mental health and stigma of mental disorders may render family members of these individuals helpless in such situations, leading to abandonment. Hence, in the present study it was essential to equip assembly member participants with knowledge about and appropriate attitudes toward people with depression and schizophrenia. In turn, assembly members, as influential persons in the community, would be better positioned to initiate the making of community laws, support the commitment of resources and advocate for community educational programmes that would help ensure better outcomes for people with mental health issues in their communities.

### 4.3.8 Delivery of the training programme

#### *4.3.8.1 Summary of the programme*

The programme was conducted by the student researcher in English because English is the country's official language, used in government, businesses, schools and universities (www.ghanario.com/ghana-faq/16603). The training programme was an interactive three-hour session, conducted in an environment that suited adults learners (Knowles, 1980). It was about people with depression and schizophrenia, delivered using a combination of PowerPoint presentations, video recordings and large and small group discussions. Participants were also given printed material about people with depression and schizophrenia: *Guidelines for Carers of Someone with a Mental Disorder* (www.mhfa.com). The reading material contained information about mental disorders with strategies and attitudes needed to support an individual experiencing a disorder. The programme drew on participants' life experiences in dealing with people with mental disorders in their communities and families. It focused on the application of knowledge of the symptoms and signs of the disorders and appropriate attitudes towards people with mental health problems.

In the introduction to the programme, participants shared their understanding and stereotypes of people with mental disorders. With the aid of a short video clip, five harmful myths about mental disorders were shown to participants and these myths were explained in the clip to reveal the truth about mental disorders. Probing questions were asked to assess participants' familiarity with these myths and how they may have affected their perceptions and particularly their attitudes toward people with mental disorders. Participants were then shown video clips of two individuals talking about their real-life experiences with depression and schizophrenia. Next, the researcher initiated a discussion enabling participants to share their thoughts and experiences, to compare whether they were similar to the real-life experiences of the people in the video clips. Subsequently, PowerPoint presentations were used to introduce the signs, symptoms and treatment options for people with depression and schizophrenia. Another round of discussion was held to allow participants to share their perceptions on the concepts. Following this, participants were introduced to the next phase of the programme, which was the problem-solving 'Story-bridge' concept (Lubman et al., 2014), summarised below.

#### *4.3.8.2 Background and summary of the problem-solving Story-bridge*

The mental health literacy programme developed for this study was adapted from Lubman et al. (2014), who designed and piloted a mental health promotion resource from a strengths-based problem-solving framework for sub-Saharan African immigrant communities living in Melbourne, Australia. The resource was designed to improve young people's and parents' knowledge about mental health problems and to reduce stigmatising attitudes toward young people with these problems. The characters, context and key messages were written by the project team and translated into pictorial vignettes. Each vignette comprised six scenes presenting a specific mental health problem. Each scene presented a key theme (e.g., conflict, negotiation, communication) and when linked together, the scenes depicted the story of a family dealing with a mental health problem of a teenage son or daughter. The scenes in the vignette were presented in a visual manner called a Story-bridge, which is problem-solving based, in an arc form, to show the different situations the family experienced. Lubman et al. (2014) designed the resource to encourage discussion about key communication and conflict resolution parenting strategies.

In the Story-bridge, a scene or sequence of scenes is presented at each end of a bridge, separated by blank spaces. In these blank spaces, participants were asked to identify strategies parents in the vignette could use to ‘bridge the gap’ between the mental health problem presented initially and successful outcomes. These strategies were written into the blank spaces provided on the Story-bridge until all the spaces were filled. The exercise was completed when the blank spaces were full of suggestions; thus, bridging the gap between the problem and the successful solution. Evaluation of the mental health resource in an educational and a community setting found that participants reported improved knowledge about mental health problems and help-seeking attitudes (Lubman et al., 2014).

The problem-solving Story-bridge approach was adopted in the present study because it was a valuable concept that could be used in a group format. The approach encouraged discussion, thus drawing on participants’ knowledge and experience of dealing with people with mental health problems, consistent with an andragogy approach. The final consideration for adopting the resource was that it was developed to promote engagement among family members to deal with mental health problems, and this is consistent with the Ghanaian cultural approach of engaging family members to deal with a wide range of issues (Tsai & Dzorgbo, 2012), including mental health problems.

In this training programme, every scene in the vignette (Appendix 3) was shown to participants in the order in which it appeared in the vignette. Participants were asked to discuss what was happening in the scene. Participants further discussed the story behind each scene. Then, all the scenes were presented together (vignette). Participants were again asked to comment on how the scenes linked up and worked as a story. Using group discussion method, participants were divided into small groups (minimum of six members) with one of them as group leader. They were asked to draw on the knowledge acquired in the programme to suggest strategies or ideas that could be used to address the mental health issue portrayed in each scene. Group leaders presented their suggestions to the larger group, which were then discussed to draw out common themes in their strategies or ideas.

## 4.4 Data collection

Data were collected from both groups at baseline and 12-week follow-up. In addition, a mixed method process evaluation was undertaken with the intervention group, that is, a quantitative evaluation immediately after treatment and a qualitative evaluation at 12-week follow-up.

### 4.4.1 Quantitative

Questionnaires were used to collect quantitative data from participants at baseline and 12 Week follow-up.

#### *4.4.1.1 Instruments*

Three data collection instruments were used: socio-demographic questionnaire, *Attitudes and Beliefs about Mental Health Problems, Professional and Public Views* questionnaire, and *Community Attitudes to Mental Disorder* (CAMI) scale (Appendix 8). Participants were asked to indicate their gender, age, marital status, occupation and highest level of education.

The *Attitudes and Beliefs about Mental Health Problems: Professional and Public Views* questionnaire (Jorm et al., 1997a) was used to measure knowledge of, beliefs about effectiveness of several treatments and attitudes toward people with depression. It presents a hypothetical vignette of ‘Yaw’ who meets the ICD-10 (World Health Organization, 2000) and DSM V-TR (American Psychiatric Association, 2014) criteria for depression. The questionnaire contains 77 items: demographic features (5 items), knowledge of and attitudes toward people with mental health disorder (71 items), and one open response item. The attitudinal items comprise mainly 3- or 5-point Likert-type scales, ranging from ‘helpful’ (1) to ‘harmful’ (3) and ‘strongly agree’ (1) to ‘strongly disagree’ (5). The instrument is well-validated (Reavley, Morgan, & Jorm, 2014c) and has been used in numerous studies. A scoping review conducted by Wei, McGrath, Hayden, and Kutcher (2015) on mental health literacy acknowledged it as one of the most widely used measures for assessing attitudes and beliefs about people with mental illness. The reliability of the instrument (inter-rater reliability: weighted kappa (*k*); Kc=0.15–

1.00) has also been established in two studies (Jorm, Blewitt, Griffiths, Kitchener, & Parslow, 2005; McCann, Lu, & Berryman, 2009).

To measure knowledge of depression, the approach used by Jorm et al. (1997b) and Kitchener and Jorm (2002) was used in the present study. The authors developed a criteria reference scale in line with expert views of health professionals to measure knowledge of depression. Within the scale, indication of general practitioners, psychiatrists, clinical psychologists, antidepressants, counselling and cognitive behaviour therapy as helpful interventions for depression were regarded as representative of knowledge of depression. An indication of each of these interventions as ‘helpful’ was scored ‘1’. Hence, participants’ scores on this scale ranged from 0 to 6, with higher scores indicating higher level of knowledge. Attitudes about mental disorders were measured by personal and perceived stigma scales (Griffiths, Christensen, & Jorm, 2008), including social distance scale (Kitchener & Jorm, 2002; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). In personal stigma, participants were asked about their personal attitudes towards the person (Yaw) described in the vignette. In perceived stigma, their opinion about other people’s attitudes towards Yaw were sought. The total score for each scale ranged from 9 to 45, with lower scores reflecting greater levels of stigma and higher scores indicating lesser levels of stigma. The 4-item scale developed by Link et al. (1999) was used to measure social distance. In this measure, participants indicated how willing they were to make contact with and engage Yaw in different social situations. The total scores for this measure ranged from 5 to 20 with lower scores reflecting a weaker desire for social distance, whilst higher scores reflected a stronger desire for social distance.

The *Community Attitudes Toward Mentally Ill (CAMI)* scale (Taylor & Dear, 1981) was used to measure the prevalence and type of stigma. The scale concentrates on community attitudes towards people with mental disorder. It consists of 40 statements each eliciting a response as to the level of agreement/disagreement on a 5-point scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5). The CAMI measures four attitudinal dimensions towards people with mental disorder: authoritarianism, benevolence, social restrictiveness, and community mental health ideology. Authoritarianism refers to the degree of superiority that participants feel over people with mental disorder, particularly with regard to social status; benevolence refers to the degree of sympathy and concern reserved for people with mental disorder; social restrictiveness refers to the view that someone with a mental disorder is dangerous and so should be tightly controlled and kept away from society; and community mental health ideology (CMHI) refers to the degree of approval participants hold towards community-based mental health services. The scale has been used in other studies (Abbott, 2011; Clayfield, Fletcher, & Grudzinskas Jr, 2011; Siqueira, Abelha, Lovisi, Sarução, & Yang, 2016). It has good reliability with Cronbach alpha ranging from 0.68 to 0.88 (Taylor & Dear, 1981), and a high validity (Glendinning & O'Keeffe, 2015; Morris et al., 2012; Tzouvara & Papadopoulos, 2014).

The CAMI questionnaire (Taylor & Dear, 1981) consists of 40 questions divided into four categories with 10 questions in each subset: Authoritarianism (questions 1–10), Benevolence (questions 11–20), Social Restrictiveness (questions 21–30), and Community Mental Health Ideology (questions 31–40). The questions are rated on a Likert scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5). Each category had five positive items and five negative items. The negative items in the questionnaire were Authoritarianism (questions 1–5), Benevolence (questions 16–20), Social Restrictiveness (questions 21–25), and Community Mental Health Ideology (questions 36–40). To compute the total score, responses to the negative items were reversed so that each question had a preferred response highest score of 5. Total scores for each sub-scale ranged between 10 and 50, with higher scores indicating less stigmatising attitudes and lower scores more stigmatising attitudes.

The *Intervention Evaluation Questionnaire for the Mental Health Literacy Programme* was used to assess three essential aspects of the training programme: the timing of activities in the programme, the effectiveness of the methods of delivery and participants’ willingness to use and impart knowledge acquired in the programme. The questionnaire was used immediately after the completion of the intervention. It consists of 17 statements each requiring a response as to the level of agreement or disagreement on a 5-point scale, ranging from ‘strongly agree’ (1) to ‘strongly disagree’ (5) (Appendix 9). The questionnaire had not been used in previous studies. It was reviewed by the researchers’ supervisors to examine the content and face validity, including the clarity and suitability of questions. Examples of items included: ‘Overall, the amount of time allocated to each activity was about right;’ and ‘Discussion was an effective way to increase my understanding of people with depression and schizophrenia.’

### 4.4.2 Qualitative

The qualitative process evaluation was conducted immediately after 12-week follow-up data collection for the outcome data. A semi-structured interview guide (Appendix 10) was developed to evaluate the perspectives of the assembly members who participated in the mental health literacy programme about the usefulness of the programme and how they had used this acquired knowledge in their routine dealings with people with mental disorders. Follow-up questions were asked to elicit further information:

## 4.5. Rigour of the study

The rigour of the study is discussed in this section under the headings; quantitative measures of rigour and qualitative measures of rigour.

### 4.5.1 Quantitative measures of rigour

A RCT is a powerful design that removes false causality and bias and allows for testing hypotheses of cause and effect relationships (Matthews, 2006). RCTs are recognised as excellent methods for evaluating scientific evidence, with rigorous methods for reporting implementation and process measures (Adab et al., 2015; Jadad & Enkin, 2007). In the present study, a cluster randomised controlled trial design[40] was chosen. Although this is a less rigorous design than an RCT, it was chosen primarily to reduce the contamination effect of treatment among participants. Hence, three main features of RCTs, randomisation, control and manipulation, were used to strengthen the rigour of this study (Jadad & Enkin, 2007).

In the present study, randomisation was at the level of the districts. To reduce bias, randomisation was conducted by the Principal Supervisor of the study without the

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[40] See Chapter 4. Section 3.2.

involvement of the student researcher. Simple randomisation[41] provided the most effective procedure to control district characteristics and all potential extraneous variables. Districts were assigned to the control or intervention (treatment) cluster group by conducting a simple randomisation exercise in Microsoft Excel. This exercise ensured that the districts had the same chance of being placed into the control or intervention cluster groups. Control measures are used in cluster randomised controlled trials to strengthen internal and external validity of the research. In the present study, the control procedure adopted to deal with extraneous variables was providing participants in both cluster groups with the same questionnaire during baseline data collection.

Manipulation in cluster randomised controlled trials ensures that measurement and procedures are accurate and consistent (Macnee & McCabe, 2008). In this study, the independent variable that was manipulated was knowledge of mental disorders. Based on this, the intervention cluster was provided with a 3-hour mental health literacy programme that was expected to affect positively their knowledge about and attitudes toward people with mental disorders. The control cluster was provided with a one-page brochure containing basic information about mental health, which was expected to have no effect. The outcome of this manipulation was assessed with two questionnaires that measured knowledge about and attitudes toward people with mental disorders (See instrument section above).

### 4.5.2 Qualitative measures of rigour

An interview schedule was developed by the researcher by referring to available literature and in consultation with the study supervisors to ensure that the objectives of the study were met. The reliability of the interview schedule was cross-checked and confirmed by two supervisors. Questions were open-ended and written in plain language. At the time-point for follow-up data collection, the researcher telephoned participants who had expressed interest in participating and asked if they were still interested in taking part in an interview. They were reminded that the interviews would be audio-recorded and were assured that their confidentiality and anonymity would be maintained. A positive

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[41] See Chapter 4. Section 3.3

response led to the scheduling of a convenient time and place to conduct the interview.

At the appointed time for each interview, the researcher placed emphasis on being polite and courteous to help build a relationship with the interviewee and to put him/her at ease. This was done, for example, by asking about the well-being of the interviewee, including that of their family and sharing some pleasantries or showing interest in their way of life. This approach made them feel comfortable and participants were willing to respond freely to questions with true accounts of their experiences.

To enhance credibility, an interview schedule was used to ensure each interviewee was asked the same set of questions and the interviews were recorded using a digital audio recorder (King & Horrocks, 2010). Interviewees were also given ample time to reflect on and answer questions. The standards of dependability and confirmability were demonstrated in the analysis of this data (Miles, Huberman, & Saldana, 2014). Dependability was shown with the use of an audit trail to illustrate the development of themes (Table 6.2). Confirmability was ensured by the student researcher presenting relevant coded data extracts from the thematic analysis to his research supervisors, who, in turn, scrutinised them to ensure that the analysis was conducted without bias. To enable transferability of the findings of the study, adequate description of the context of the intervention, participants, settings of the study, and sufficient raw data have been provided to enable readers to evaluate the themes and consider their potential transferability to other context or situations (Braun & Clarke, 2013; McCann & Lubman, 2014).

## 4.6 Ethical considerations

Ethics approval to conduct the study was obtained from Victoria University Human Research Ethics Committee (HRE 16-140) and the Ghana Health Service Ethics Review Committee (GHS-ERC 09/05/16). There were five main ethical considerations in conducting the study: ensuring informed consent; withdrawal; maintaining privacy, confidentiality and anonymity; data storage, access and disposal; and minimising the risk of harm.

### 4.6.1 Informed consent

Informed consent was an important ethical requirement before enrolling participants in the study. Participants were given a copy of the plain language statement. Elements of informed consent include capacity, disclosure, understanding, voluntariness, risk, benefits and methods of the research (Joffe, Cook, Cleary, Clark, & Weeks, 2001). In this study, participants were encouraged to ask questions to ensure their complete understanding of the elements of the informed consent. After all their questions were answered, participants confirmed their understanding and willingness to participate in the study. Participants were then asked to sign the consent form and given a copy for their reference with a copy of the plain language statement.

### 4.6.2 Withdrawal

Participants had an unconditional right not to take part in, or to withdraw from, the study. They were assured that they could withdraw from the study at any time and if they did so, this would not affect their role as an assembly member. In spite of this assurance, none of the participants withdrew from the study.

### 4.6.3 Privacy, confidentiality, and anonymity

Participant privacy, confidentiality, and anonymity were maintained. Participants were identified by numerical codes and the findings of the study are reported as group data in this thesis and in professional conference presentations and scientific papers. To ensure anonymity in the digital recording of the interviews, names were withheld by the researcher and numerical codes were used to identify participants.

### 4.6.4 Data storage, access and disposal

Consent forms and a hard copy of data were stored in a locked filing cabinet in Professor McCann's office in the Discipline of Nursing, Victoria University. Electronic data files were also saved on Professor McCann's computer, protected by a password known only to the investigator, who had responsibility for security of the data. The student researcher also held password-protected electronic copies of the data in the R-drive. All data files, including questionnaires and consent forms, will be stored for five years post publication and then destroyed. Hard copies of data will be shredded, and soft copies of data will be erased from source drives.

### 4.6.5 Minimising the risk of harm

There was no harm anticipated in this study and none did occur. In the event of a participant experiencing minor emotional discomfort during the study, the researcher would (a) offer basic emotional support, such as listening and empathising; (b) advise the person that participation was voluntary, and he/she could choose to withdraw at any time; (c) if required, arrange for a participant to see a psychiatrist; and (d) direct the person to the regional/district mental health services and counselling services. There was no record of any participant experiencing emotional discomfort.

## 4.7 Data analysis

### 4.7.1 Quantitative

My primary hypotheses were that assembly member participants who took part in a mental health literacy programme would have higher level of knowledge about mental disorders and more positive attitudes toward people with these disorders than those who received a brochure about mental health issues. Data were analysed using IBM® SPSS® Statistics Version 24, (Chicago, Illinois, 2016). Before commencing statistical analysis, data were checked for accuracy and missing values. The data were further explored using box plots and histograms to check for outliers, skewness[42] and kurtosis[43] in the distribution of the data. Socio-demographic characteristics of the study participants were summarised using frequencies and percentages. The chi-squared statistic was used to test for significant differences in socio-demographic characteristics (gender, marital status, age, highest education level and occupation) between the intervention and control cluster groups at baseline. Logistic regression analyses were carried out to identify significant predictors of missing data at post intervention. Results were reported as odd ratios (OR)

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[42] Skewness is used to describe data distributions around a central value and how the distribution deviates from symmetry when compared with the normal bell-shaped curve (Shanmugam & Chattamvelli, 2015).

[43] Kurtosis shows the sharpness of the peak of a frequency distribution curve, indicating how the values are grouped around the mid-point in the distribution (Cain, Zhang, & Yuan, 2017).

and 95% confidence intervals (CI). A two-sided p-value of <0.05 was considered statistically significant. Cronbach's alpha[44] was used to measure the reliability of each scale. Cronbach's alpha is a numerical value expressed between 0 and 1, with recommended alpha values ranging from 0.70 to 0.90 (DeVellis, 2012; Tavakol & Dennick, 2011). Some reported alpha values of mental health literacy measures have ranged between 0.50 and 0.95 (Wei et al., 2015). However, a high alpha coefficient may not always imply a high degree of internal consistency (Tavakol & Dennick, 2011); therefore, Streiner (2003) suggests that researchers should not rely on published alpha estimates but conduct their own measurements. Cronbach's alpha coefficient was calculated for the responses on each scale/sub-scale in the present study. The coefficient scores generated from the analyses indicated each had a satisfactory reliability (Table 4.2). Authoritarianism[45], a sub-scale of the *Community Attitudes Toward the Mentally Ill* (CAMI) scale, had a low coefficient score suggesting its unreliability, hence it was subsequently excluded from all analyses.

**Table: 4.2 Results of Cronbach's alpha analyses indicating reliability of sub-scales.**

| Scale/Sub-scale | Instrument | Cronbach's alpha | No. of items |
|---|---|---|---|
| Social distance | SD | 0.78 | 4 |
| Knowledge | AB | 0.53 | 6 |
| Personal stigma | AB | 0.59 | 9 |
| Perceived stigma (by others) | AB | 0.73 | 9 |
| Authoritarianism | CAMI | 0.03 | 10 |
| Benevolence | CAMI | 0.54 | 10 |
| Social restrictiveness | CAMI | 0.67 | 10 |
| CMHI | CAMI | 0.59 | 10 |

Legend: SD = Social Distance scale, AB = Attitudes and Beliefs scale, CMHI Community Mental Health Ideology sub scale, CAMI = Community Attitudes Toward the Mentally Ill scale.

Analyses of the outcomes were assessed on an intention to treat[46] basis. All participants

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[44] Cronbach's alpha is a measure used to test the internal consistency or reliability of items in a scale (Vaske, Beaman, & Sponarski, 2017)

[45] Authoritarianism measures the perceived inferiority of people with mental disorders and who need coercive handling.

[46] Intention to treat means that every participant at baseline is included in the analysis and analysed based on their initial group. Discontinuation or refusal of treatment, missing at follow-up, changes to treatment group or even violations of study protocol are ignored as reasons to exclude a participant from the analyses (Sainani, 2010).

were analysed according to their assigned treatment cluster, and analyses were confined to those who had completed baseline data collection. Analyses were conducted using mixed-model repeated measures (MMRMs) with time (baseline and follow-up) as a within-group factor and group (control and intervention) as a between-group factor. Relationships between observations at different time points were modelled as an unstructured covariance matrix. In MMRMs, the associations between observations taken from the same participant are considered (Kherad-Pajouh & Renaud, 2015), which allowed the use of all available data of participants, including those with missing data (Davis, 2014). The method generates unbiased estimates of intervention effects and assumes missing data to be missing completely at random[47] or missing at random[48]. A random effect of district was estimated within each model to account for the clustering of participants within districts.

Between-group effect sizes (Cohen's *d*) were computed by dividing the difference between the observed group means by their total standard deviation (Cohen, 1992). Values generated gave an indication of the magnitude of effect of the intervention or the extent of the relation between the intervention and the outcome (Hedges, 2008). The effect sizes of the outcome measures were indicated according to the estimates of Cohen's definition of small ($d$=0.20), medium ($d$=0.50) and large ($d$=0.80) effect sizes (Cohen, 1992). The residuals from each MMRM model were assessed if they were reasonably normally distributed. Square root transformations were performed on models that were considered to have an abnormal distribution to adjust the skewness of the distribution to normalcy. The estimated marginal means from the model were used to generate graphs, with error bars representing one standard error above and below the mean. *A priori* contrast[49] compared changes from baseline to follow-up between groups. Intra-cluster coefficients[50] of the outcome measures were calculated from the estimates of covariance parameters of the model. Generalised linear mixed models (GLMMs)[51] were used to

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[47] 'Missing completely at random (MCAR) is that the likelihood of missing data is unrelated to any observed or unobserved variables'(Dziura, Post, Zhao, Fu, & Peduzzi, 2013, p. 345).

[48] 'Missing at random (MAR) is when the likelihood of missing data is related to observed variables but not to unobserved variables' (Dziura et al., 2013, p. 346).

[49] A planned decision to evaluate some differences before running the intervention (Abdi & Williams, 2010).

[50] An intra-cluster coefficient is used to measure how outcomes would be for individuals within clusters than for others in different clusters. It describes the amount of variability in the dataset that is due to variation between clusters (Pagel et al., 2011).

[51] GLMM is an analytical tool that combines the features of linear mixed models and generalised linear model to address outcomes that have non-normal distributions and those with binary outcomes (Benedetti, Platt, & Atherton, 2014; Bolker et al., 2009) (

analyse data that had non-normal distribution (Knowledge sub-scale, Social distance scale) and a dichotomous variable (Recognition).

### 4.7.2 Qualitative

The thematic analysis framework proposed by Braun and Clarke (2006) was used to analyse the qualitative data generated from interviews with a sample of participants who took part in the training programme. Thematic analysis is a method used to identify, analyse and report themes that are recurring and significant across qualitative data (Smith & Firth, 2011). While there are other methods of analysing qualitative data, thematic analysis was chosen because it would highlight important patterns in the cognitive and affective dimensions of the programme (Joffe, 2011). The framework involved minimal organisation of data and provided the researcher with enough flexibility to capture significant themes and describe them in elaborate detail (Braun & Clarke, 2006).

There were six phases in the thematic analytic process (Braun & Clarke, 2006). In the first phase, the researcher immersed himself in the data by listening to audio recordings of participants' responses and reading the transcripts repeatedly. Thus, the researcher came to the analysis with some prior knowledge of the data and initial analytic thoughts. The second phase entailed generation of codes after noting interesting and significant elements in the data. Phase three began when all data had been initially coded and collated. This involved sorting the different codes into potential themes and sub-themes based on their relationship and collating all relevant coded data extracts within the identified themes. In the fourth phase, a review of the themes was done to ensure that they related to the identified codes. The objective was to ensure that data within themes cohered meaningfully and there were clear and identifiable distinctions between the themes to allow a satisfactory thematic map to be devised. In the fifth phase, the themes were defined and named concisely, to give the reader an immediate sense of what the theme was about. The sixth and final phase involved the final analysis and write-up of the report. This involved the use of selected, vivid and compelling extracts examples to write a concise, coherent and logical argument in relation to the research question (Braun & Clarke, 2006). See Table 6.2 for an example of codes from the data.

## 4.8 Summary

In this study, the effectiveness of a mental health literacy programme on assembly members' knowledge about and attitudes toward people with mental disorder in Ghana was evaluated. A sequential explanatory mixed method design was adopted incorporating a cluster randomised controlled trial and a process evaluation. This approach was appropriate because the cluster randomised controlled trial generated quantitative data to evaluate the effectiveness of the mental health literacy programme while the qualitative process evaluation analysed participants' perspectives about the usefulness of the programme and attitudes toward mental disorder. Ethical considerations were strictly adhered to throughout the study.

# Chapter Five

# Results of the Mental Health Literacy Programme

## 5.1 Introduction

The aim of the study was to evaluate the effectiveness of a problem-solving Story-bridge-approach in a mental health literacy programme on assembly members' knowledge about and attitudes toward people with mental disorders. In this chapter, the results of the cluster randomised controlled trial of the mental health literacy programme (hereafter the programme) are presented. First, participant flow in the study and the socio-demographic characteristics of the participants are summarised. Then, a comparison of the socio-demographic characteristics of the intervention and the control cluster groups at baseline is presented. Next, significant predictors of missing data post-intervention are given. Finally, the results of the analyses of the intervention effects on the group mean differences in the outcome measures, outcomes from the mixed model repeated measures and generalised linear mixed model (GLMM) are reported.

## 5.2 Participant flow and socio-demographic characteristics of participants

There were 10 District Assemblies (10 clusters) with a total of 346 assembly members who were assessed for eligibility and all met the inclusion criteria (Figure 5.1). After randomisation, five clusters containing 190 assembly members were allocated to the intervention group and five clusters containing 156 members were allocated to the control group. An estimated sample size of 70 participants had been planned for each group[52]. Availability of some district assemblies for recruitment into the study was constrained by their mandatory activities[53] following the general election in the country. These activities had the potential to have adverse effects on recruitment and data collection time-points, and there were also time constraints in conducting my Ph.D. fieldwork in Ghana. Because of these constraints, three clusters were chosen for participation and two clusters were excluded from each treatment group (Figure 5.1).

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[52] See Chapter 4. Section 3.6.3

[53] For instance, in-house assembly campaigning and election of the Presiding Member (chairperson of general assembly meetings) and confirmation of the nominated District Chief Executive through an electoral process, in each District Assembly.

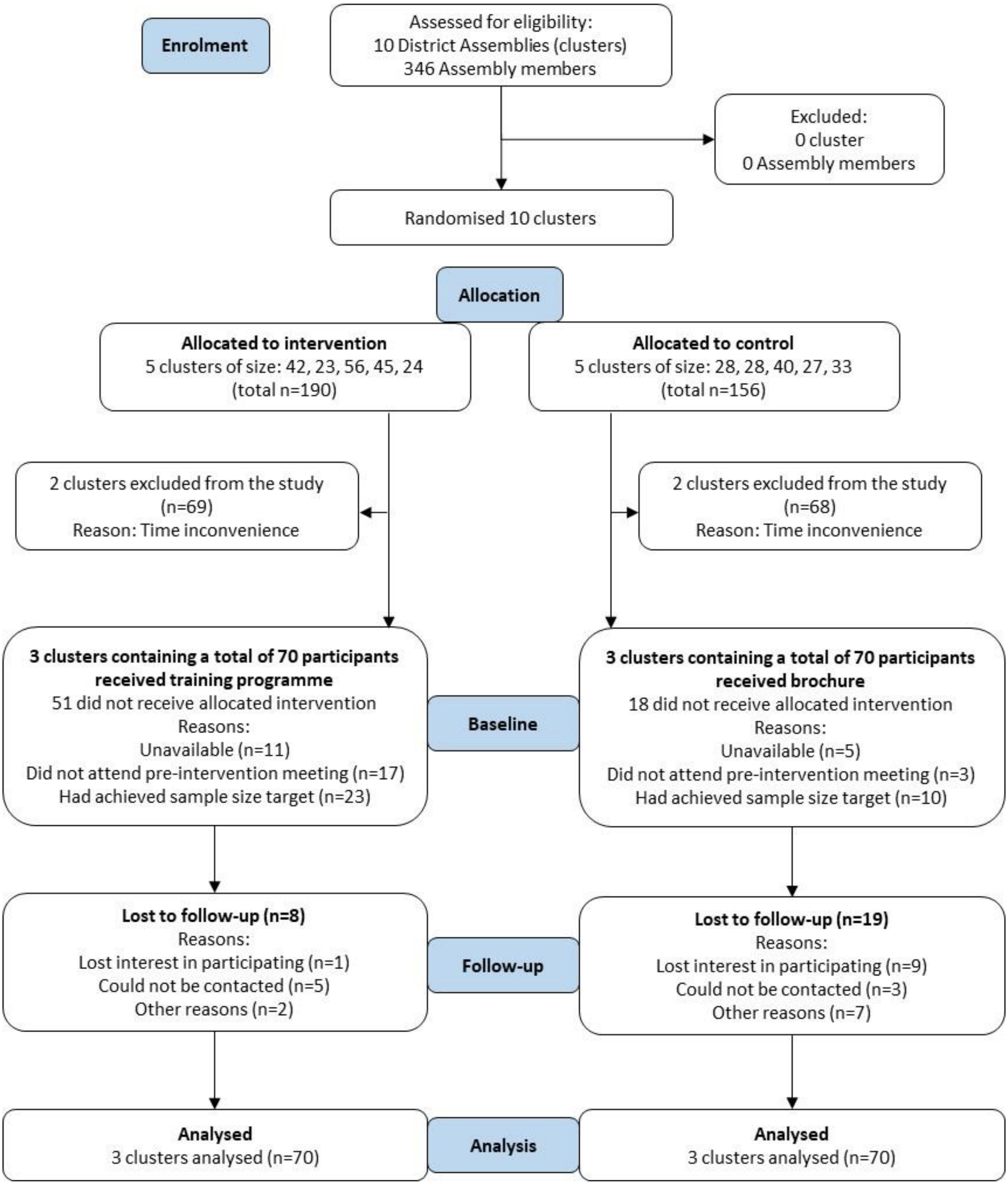

**Figure 5.1: CONSORT flow diagram of the number of participants at each stage of the cluster randomised controlled trial**

In total, 140 assembly members were recruited, 70 in each arm of the study (Figure 5.1). Most participants were male (87.1%), the modal age[54] was 40–49 years and participants had at least a basic[55] level of education, with the majority having completed tertiary[56] level education. In terms of marital status, 90% of participants were married and the remainder were single. Regarding occupational status, almost half were professionals[57] and one-third worked in farming.

## 5.3 Baseline socio-demographic characteristics comparison of the intervention and control cluster groups

In Table 5.1, a comparison of the socio-demographic characteristics of the intervention and control cluster groups at baseline is presented. Chi-squared analysis revealed that the two groups were similar in gender distribution, age, educational level, marital status and occupation, and there were no significant differences between the groups.

**Table 5.1: Socio-demographic characteristics of the intervention and control cluster groups at baseline**

| Variable | Overall n=140 | | Intervention n=70 | | Control n=70 | | $\chi^2$[1] | *p* value[2] |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | | |
| Gender | | | | | | | 0.26 | 0.614 |
| Male | 122 | 87.1 | 62 | 88.6 | 60 | 85.7 | | |
| Female | 18 | 12.9 | 8 | 11.4 | 10 | 14.3 | | |
| Age | | | | | | | 1.36 | 0.716 |
| 18–39 | 47 | 33.6 | 25 | 35.7 | 22 | 31.4 | | |
| 40–49 | 49 | 35.0 | 25 | 35.7 | 24 | 34.3 | | |
| 50 and over | 44 | 31.4 | 20 | 28.5 | 24 | 34.3 | | |
| Educational level | | | | | | | 1.60 | 0.450 |
| Basic | 18 | 12.9 | 8 | 11.4 | 10 | 14.3 | | |
| Secondary[3] | 47 | 33.6 | 27 | 38.6 | 21 | 28.6 | | |
| Tertiary | 75 | 53.5 | 35 | 50.0 | 39 | 57.1 | | |
| Marital status | | | | | | | 0.067 | 0.796 |
| Married | 123 | 87.9 | 61 | 87.1 | 62 | 88.6 | | |
| Single | 17 | 12.1 | 9 | 12.9 | 8 | 11.4 | | |
| Occupation | | | | | | | 4.152 | 0.125 |
| Farming | 42 | 30.0 | 25 | 35.7 | 17 | 24.3 | | |

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[54] Modal age: Age group with the highest frequency.

[55] Basic level of education includes kindergarten/preparatory school and junior high school (Gondwe & Walenkamp, 2011).

[56] Tertiary level education includes universities, polytechnics and colleges (Gondwe & Walenkamp, 2011).

[57] Employed as teachers, administrators, secretaries, civil servants etc.

| Variable | Overall | | Intervention | | Control | | $\chi^2$[1] | *p* value[2] |
|---|---|---|---|---|---|---|---|---|
| Professional | 67 | 47.9 | 34 | 48.6 | 33 | 47.1 | | |
| Other | 31 | 22.1 | 11 | 15.7 | 20 | 28.6 | | |

Legend: [1]$\chi$2 is the chi-squared statistic; this was examined together with the degrees of freedom to obtain the p value; [2]Chi-squared test was used to test statistical significance ($p<0.5$) for differences in the socio-demographic characteristics of the intervention and control group; [3]Secondary includes completion of senior high school, secondary technical school (pre-technical and craft/trade courses) and technical institutes (general technical and craft/trade courses, including secretarial and commercial courses) (Gondwe & Walenkamp, 2011).

## 5.4 Predictors of missingness at post-intervention

Twenty-seven (19.3%) participants had missing data at the 12-week follow-up data collection. The socio-demographic data of these participants were analysed using a logistic regression model to predict missingness[58] in the data. The results indicated that participants' occupation was the only characteristic that predicted missingness (Table 5.2). In particular, 'professionals' and 'others' were more likely to miss follow-up data collection while 'farmers' were less likely to miss follow-up data collection.

Overall, there were significant differences between completers and non-completers in the study with regards to their group allocation (intervention or control), $X^2(1)=5.55$, $p$ =.02. A greater percentage completed the study in the intervention group (88.6%) compared to in the control group (72.9%). In comparing their knowledge scores, there was no significant difference between those who scored 1 and those who scored 0 between completers and non-completers, $\chi^2(1)=0.53$, $p=0.82$. Similarly, there were no significant differences between those who responded correctly or incorrectly to the recognition of disorder in the vignette on depression (Appendix 8) between completers and non-completers, $\chi^2(1)=0.28$, $p=0.60$.

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[58] Missingness - Likelihood of data missing from a dataset.

**Table 5.2 Results of simple logistic regression analyses predicting missingness of data**

| Predictor | Odds Ratio | 95% confidence interval | *P* value |
|---|---|---|---|
| Gender | | | |
| Males | Reference | | |
| Females | 1.748 | 0.565–5.412 | 0.333 |
| Marital status | | | |
| Married | Reference | | |
| Single | 1.338 | 0.399–4.481 | 0.637 |
| Age | | | |
| 18–39 | Reference | | |
| 40–49 | 0.950 | 0.341–2.648 | 0.922 |
| 50 and over | 1.086 | 0.387–3.046 | 0.876 |
| Education | | | |
| Basic level | Reference | | |
| Secondary level | 1.171 | 0.214–6.417 | 0.856 |
| Tertiary level | 2.714 | 0.571–12.909 | 0.209 |
| Occupation | | | |
| Farming | Reference | | |
| Professional | 4.078 | 1.110–14.990 | 0.034 |
| Others | 4.522 | 1.089–18.771 | 0.038 |

## 5.5 Outcome measures

In this section, the results of the analyses conducted on the estimated mean scores of the outcome measures by the intervention and control group at baseline and follow-up are presented. Differences in the estimated values at the two time-points (baseline and 12-week follow-up) for both groups are explained.

### 5.5.1 Analyses of the sub-scales of the Attitudes and Beliefs about Mental Health Problems: Professional and Public Views questionnaire

The *Attitudes and Beliefs about Mental Health Problems: Professional and Public Views* questionnaire measures knowledge of beliefs about effectiveness of various treatments and attitudes toward people with depression. Three sub-scales of the questionnaire were analysed: knowledge of helpful interventions, personal stigma and perceived stigma (by others) sub-scales. The Social Distance Scale, which was embedded in the questionnaire, was also analysed.

#### *5.5.1.1 Knowledge of helpful interventions*

The knowledge sub-scale measures a person's knowledge about helpful interventions for depression. Knowledge sub-scale scores range from 0–6, with higher scores suggesting better knowledge of helpful interventions for depression. The estimated mean scores on the knowledge sub-scale for the two groups over the two time-points are presented in Figure 5.2 and Table 5.3. The graph illustrates similar mean knowledge scores in both groups at baseline, with the mean and standard deviation for the intervention group being 4.69 (SD=1.28) and for the control group 4.52 (SD=1.32). At follow-up, each group showed a modest increase in knowledge scores, although the increase was greater in the intervention group (mean=5.66, SD=0.65) than the control group (mean 5.39, SD=0.94). A Mixed Model Repeated Measures (MMRM) was conducted on the knowledge sub-scale, with time (baseline and follow-up) as a within-group factor and group (control and intervention) as a between-group factor (Table 5.4). There was a statistically significant increase over time in mean knowledge scores for both groups, $F(1, 116.76)=53.76$, $p<0.001$. The main effect for the group was not significant, $F(1, 118.57)=1.74$, $p=0.19$. The interaction between group and time was also not significant, $F(1,116.76)=0.35$, $p=0.56$, implying there was no significant difference in the mean change in knowledge scores for the control and intervention groups. The intra-cluster coefficient on this score was 0.00 (Table 5.4), suggesting that the clusters were independent of each other in their response to this measure. The mean difference in knowledge change between them was 0.15 (95% CI: –35 to 0.65), $d=0.34$ (95% CI: –0.03 to 0.71), and the magnitude of the difference in the mean scores was small (Cohen's $d=0.34$) (Table 5.4). Overall, compared with control group, the intervention group increased their knowledge about helpful interventions for depression; however, the difference was not large enough to be statistically significant.

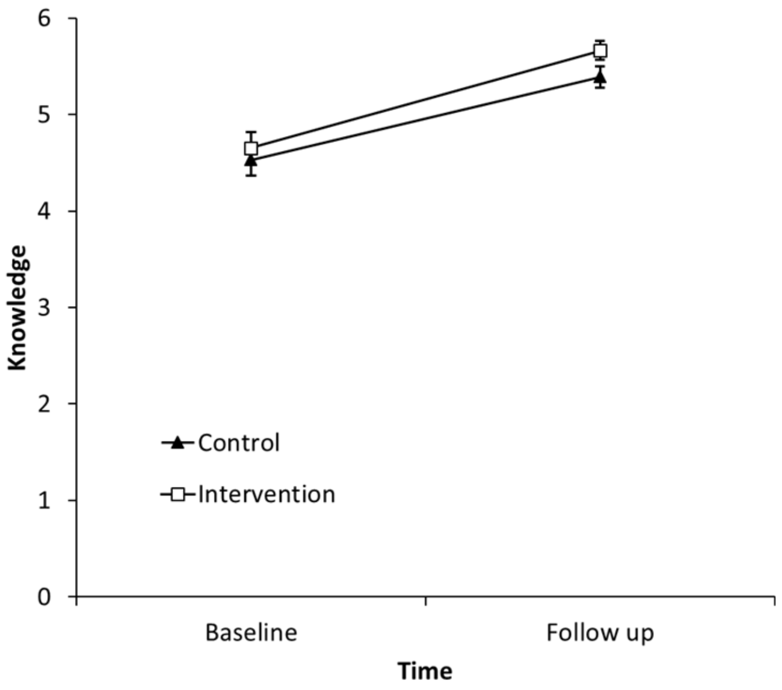

**Figure 5.2: Estimated marginal means and standard errors for knowledge scores, estimated under group-by-time model**

The residuals[59] (Table 5.5) from MMRM were analysed. Visual inspection of the distributions suggested a significant negative skew at baseline and follow-up for both groups. A square root transformation was performed on knowledge scores to normalise the skewness of the distribution of residuals. The interaction of group and time was not significant when the MMRM was conducted with the transformed knowledge score, $F(1, 115.71)=0.437$, $p=0.510$. This analysis confirmed the robustness of the conclusions reached using the untransformed data. As interpretation of summary measures of transformed scores is unusual and problematic, subsequent analyses were performed with untransformed knowledge scores using the GLMM and results are presented in Section 5.6.

#### *5.5.1.2 Personal stigma*

The personal stigma sub-scale measures a person's personal attitude towards people with mental disorders. Personal stigma sub-scale scores range from 5–45, where higher scores

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[59] The difference between the predicted mean scores by the model and the observed mean scores.

suggest less personal stigma. The personal stigma mean scores for both groups over the two time-points are presented in Figure 5.3 and Table 5.4. The graph in Figure 5.3 shows similar mean scores at baseline for both groups (intervention group: mean=28.83, SD=4.79; control group: mean=26.74, SD=6.77). As shown in the Figure, there was a marginal increase over the baseline mean scores in each group at follow-up. However, the intervention group showed a slightly greater increase in mean personal stigma scores (mean=30.13, SD=5.50) than the control group (mean=29.35, SD=3.92).

An MMRM was conducted on the personal stigma sub-scale scores. The main effect of time was statistically significant, $F(1, 128.97)=11.32$, $p<0.001$; however, the main effect for groups was not significant, $F(1, 4.05)=1.11$, $p=0.35$. The interaction of group and time was also not significant and showed that no differences occurred over time in mean personal stigma scores between the two groups, $F(1,128.97)=1.01$, $p=0.31$. The mean difference in personal stigma scores between the groups at follow-up was 1.18 (95% CI: –3.51 to 1.14), $d=0.16$ (95% CI: –0.21 to 0.53) and the size of the differences in the mean scores was small (Cohen's $d=0.16$) (Table 5.4). The analysis also indicated an intra-cluster coefficient of 0.06 (Table 5.4), suggesting very small variability between the clusters on this outcome measure. Overall, there was a reduction in personal stigma scores in both groups, with a slightly greater reduction in the intervention group than the control group, but the difference was not large enough to be statistically significant. The residuals of this model were examined and predicted scores at baseline were approximate, with means of 0.03 and 0.00 for the intervention and control group respectively (Table 5.5). Skewness was to the right and slightly negatively skewed at the same time point for the groups. Generally, visual inspection indicated the residuals were reasonably distributed and did not warrant any transformation.

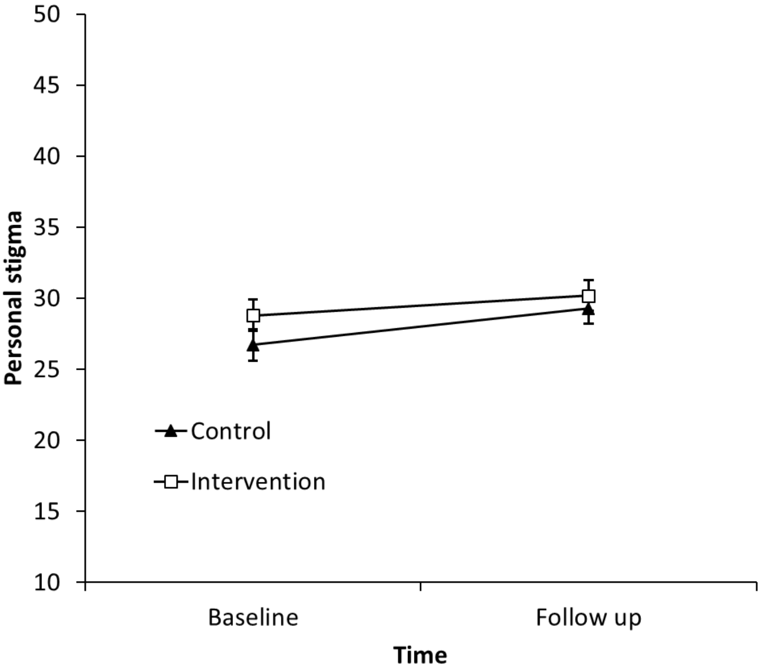

**Figure 5.3. Estimated marginal means and standard errors for personal stigma scores, estimated under group-by-time model**

#### *5.5.1.3 Perceived stigma (by others)*

The perceived stigma sub-scale measures a person's beliefs about other people's attitudes towards individuals with mental disorders. Perceived stigma sub-scale scores range from 9–45, where higher scores suggest less perceived stigma. The estimated mean scores on the perceived stigma sub-scale for the two groups over the two time-points are outlined in Figure 5.4 and Table 5.4. As shown in Figure 5.4, the two groups are positioned apart at baseline, with the mean and standard deviation for the intervention group being 26.24 (SD=5.59) and for the control group 22.12 (SD=6.79). At follow-up, the perceived stigma mean score for the intervention group had fallen (24.25, SD=6.25), suggesting they now perceived more public stigma, whereas the perceived stigma mean score for the control group had increased slightly (23.33, SD=4.69), indicating they perceived less public stigma. This is illustrated in the graph below (Figure 5.4), where the line of the intervention group sloped down to the right, indicating a decrease in their mean perceived stigma scores, while that of the control group sloped slightly up to the right, indicating an increase in their mean score.

An MMRM carried out on the perceived stigma scores showed that the main effect for the groups was statistically significant, *F*(1, 132.86)=9.37, *p*<0.001; however, main effect for time was not significant, *F*(1, 125.71)=0.49, *p*=0.48. The interaction of group and time was significant, *F*(1,125.71)=5.87, *p*=0.01 (Table 5.4), indicating significant differences in perceived stigma scores over time between the intervention and control groups. For the control group, their mean perceived stigma score at follow-up increased by 1.10 points compared with their baseline score. However, for the intervention group, their mean perceived stigma score at follow-up decreased by 2.00 points from their baseline score. The analysis also indicated an intra-cluster correlation of 0.00, suggesting the clusters were independent of each other. The mean difference in change in perceived stigma scores between the groups was –3.10 (95% CI: –5.63 to –0.57), *d*=0.17 (95% CI: –0.21 to 53) and the magnitude of the difference in the means was small (Cohen's *d*=0.17) (Table 5.4). Overall, the intervention group perceived more stigma in other people than the control group did but the difference was not large enough to be statistically significant.

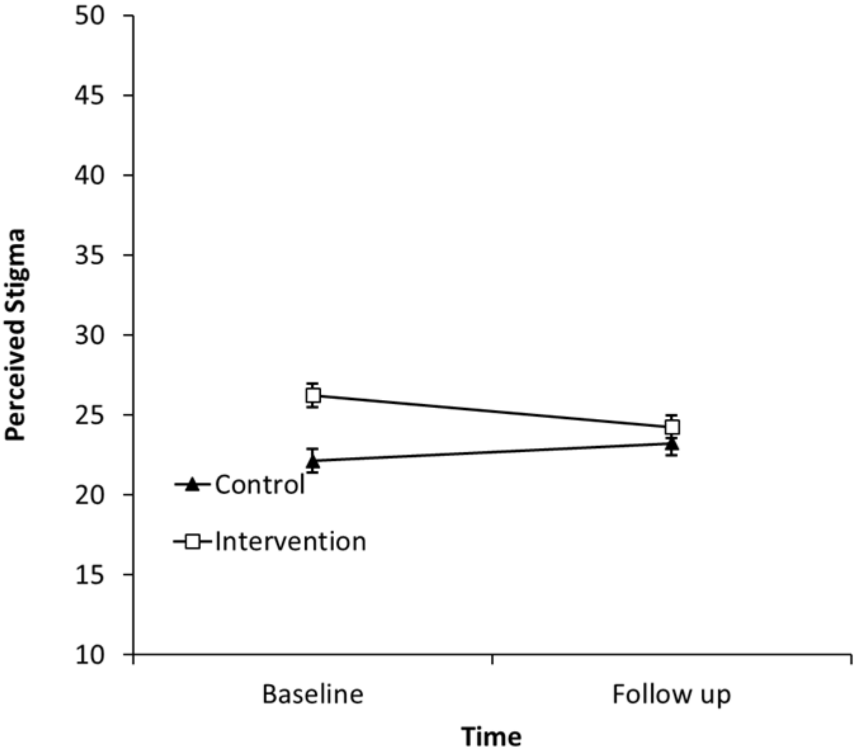

**Figure 5.4: Estimated marginal means and standard errors for perceived stigma scores, estimated under group-by-time model.**

The residuals (Table 5.5) from the model were found to be positively skewed in the intervention group at follow-up. The model did not fit well for two people (outliers) because there was a difference of 20 points from what the model predicted. This was rectified using a square root transformation on the perceived stigma scores and the pattern of significance and outcomes was maintained, *F*(1, 126.58)=7.42, *p*<0.001.

### 5.5.2 Analyses of the Social Distance Scale

The Social Distance Scale measures a person's desire to distance themselves socially from people with mental disorders. Social distance scores range from 5–20, where lower scores suggest less desire to distance oneself socially from people with mental disorders. The mean social distance scores for the intervention and control groups over the two time-points are outlined in Figure 5.5 and Table 5.4. The graph in Figure 5.5 shows similar mean scores for social distance for both groups at baseline, with mean and standard deviation for the intervention group being 11.69 (SD=3.87) and the control group 10.42 (SD=4.40). At follow-up, both groups showed a similar reduction in social distance scores, with their respective lines sloping down to the right. However, with a modest decrease in this score the intervention group (mean 9.30, SD=4.45) had a lower social distance score than the control group (mean 9.58, SD=4.40).

A MMRM conducted on the social distance scores indicated that there was a statistically significant change over time for both groups, *F*(1,118.56)=12.43,*p*<0.001 (Table 5.4). However, the main effect for groups was not significant, F(1,128.70)=0.60, *p*=0.44. There was a noted change in the interaction of time and group, but the change was not large enough to be significant, *F(1,118.56)=2.82, p*=0.10 (Table 5.4). Further investigation determined the mean difference in social distance scores over time. This showed that there was a reduction in both groups (intervention, –2.39 and control, –1.04).). The mean difference in change in Social distance scores between the groups was –1.54 (95% CI: –3.37 to 0.27), and the magnitude of the difference in the means was small to medium (Cohen's d=0.43, 95% CI: 0.05 to 0.80).

The intra-cluster coefficient on this score was 0.00 (Table 5.4), suggesting that the clusters were independent of each other in their response to this measure. Overall, while both groups reported a reduction in their desire to distance themselves socially from people with mental disorder, the reduction was greater in the intervention group but was not large enough to be statistically significant.

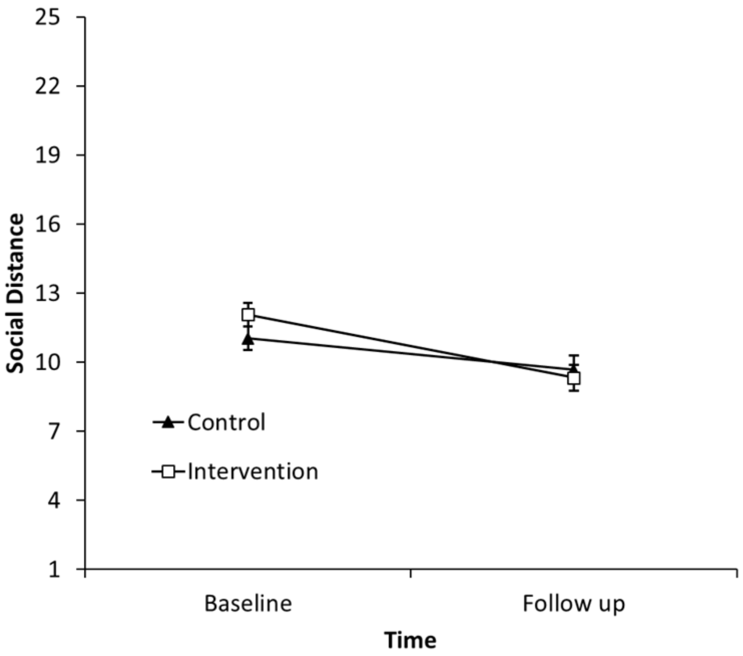

**Figure 5.5: Estimated marginal means and standard errors for social distance scores, estimated under group-by-time model**

The residuals from the model were investigated for normality. Visual examination indicated a positive skew for the control group at both time-points (Table 5.5). A square root transformation to address the non-normality did not predict follow-up scores well or change the pattern of the significance and outcomes, $F(1, 120.91)=2.56$, $p=0.11$. Further analysis was conducted with the GLMM and the results are outlined in Section 5.6.

### 5.5.3 Analyses of the sub-scales of the Community Attitude toward the Mentally Ill (CAMI) Scale

The CAMI[60] scale measures community attitudes toward the people with mentally illness. There are four sub-scales in this scale: authoritarianism, benevolence, social restrictiveness, and community mental health ideology. In this study, the authoritarianism sub-scale was not included the data analysis because Cronbach’s analyses had indicated it had a low coefficient score, suggesting it was not a reliable measure (0.03).[61]

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[60] See Chapter 4. Section3.1

[61] See Chapter4. Section 7.1 for explanation of exclusion of authoritarianism from the analyses.

#### *5.5.3.1 Benevolence*

The benevolence sub-scale measures a person’s perceived sympathy, concern for, and responsibility to help, people with mental disorder. Benevolence sub-scale scores range from 5–50, where higher scores suggest a greater level of sympathy and desire to help people with mental disorders. The mean scores on the benevolence sub-scale for the intervention and control groups at the two time-points are presented in Figure 5.6 and Table 5.4. The graph shows similar moderate mean scores in both groups at baseline (intervention group: mean=35.49, SD=4.91; control group mean=36.77, SD=6.37). At follow-up, mean scores were higher for both groups, with the intervention group (mean=39.01, SD=3.76) showing a slightly higher increase than the control group (mean=38.08, SD=3.80).

An MMRM (Table 5.4) analysis of benevolence sub-scale scores found that, compared with baseline, there was a statistical significant main effect for time, $F(1, 127.97)=24.19$, $p<0.001$, unlike main effects for group, which was not significant, $F(1, 4.42)=0.00$, $p=0.97$. The interaction of group and time was significant, $F(1, 127.97)=5.56$, $p=0.02$, suggesting that there were differences over time in benevolence scores between the groups. The mean difference in benevolence scores between the groups over time was 2.34 (95% CI: 0.37 to 4.30), $d=0.26$ (95% CI: –0.12 to 0.62)) and the magnitude of the differences in the means was small (Cohen’s $d=0.26$) (Table 5.4). This indicated a significant increase in benevolence scores in the intervention group compared with the control group. An intra-cluster coefficient of 0.03 was detected in the analysis, suggesting that there was a very small amount of variation between the clusters, and there was low correlation of responses between the clusters (Table 5.4). The residuals of the model were analysed and showed that skewness was low by group and time-points (Table 5.5). Mean estimates were approximate for the control group (0.04 and 0.00) and intervention group (0.01 and 0.08) at baseline and follow-up respectively (Table 5.5). Overall, the residuals were observed to be within reasonable limits and the data did not require further analysis to normalise them.

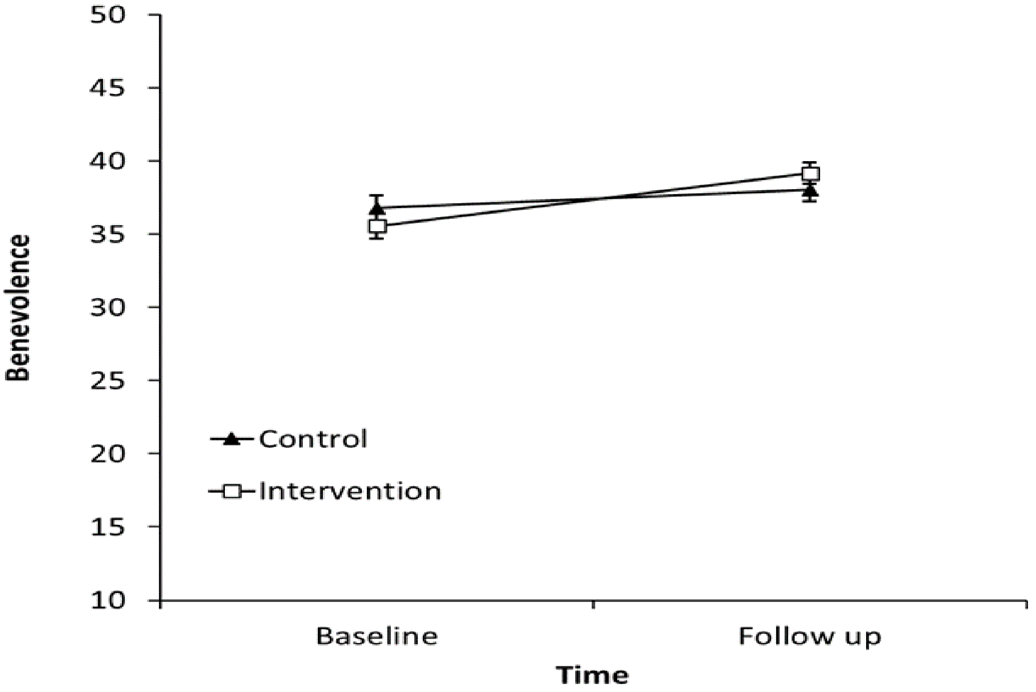

**Figure 5.6: Estimated marginal means and standard errors for benevolence scores, estimated under group-by-time model**

### *5.5.3.2 Social restrictiveness*

The social restrictiveness sub-scale measures a person's belief in, perceived dangerousness of, assignment of responsibility to, and social isolation of, people with mental disorders. Social restrictiveness sub-scale scores range from 5 to 50, with higher score suggesting stronger belief in the autonomy, social inclusion and harmlessness of people with mental disorders. The mean scores on the social restrictiveness sub-scale for the two groups at baseline and follow-up are presented in Figure 5.7 and Table 5.4. There were similar mean scores in both groups at baseline (intervention group mean=35.79, SD= 5.86; control group mean=35.06, SD=6.21). The graph in Figure 5.7 shows an increase in mean scores at follow-up in both groups, indicated by the upward slope of their lines to the right, with the intervention group (mean=38.82, SD=4.30) demonstrating a greater increase than the control group (mean=36.59, SD=5.51).

An MMRM conducted on social restrictiveness indicated that there was a statistically significant main effect for time, $F(1,130.46)=14.63$ $p<0.001$, with higher mean scores at follow-up. The main effects for group, *F*(1, 4.27)=2.42, *p*=0.19, and the interaction of group and time were not significant, *F*(1, 130.46)=1.68, *p*=0.19. The mean difference in change scores over time between the two groups was 1.57 (95% CI: 0.82 to 3.98), *d*=0.46 (95% CI: 0.08 to 0.83) and the degree of the difference in the means was small (Cohen's *d*=0.46) (Table 5.4). An intra-cluster coefficient of 0.02 was detected in the analysis of this measure (Table 5.4). This suggested a very small amount of variation between the clusters and there was low correlation of responses between the clusters. Overall, the results suggest that while both groups increased their social restrictiveness scores, the intervention group's increase was larger; however, the difference between the two groups was not large enough to be statistically significant. The residuals of the model were assessed and predictions by the model were accurate, with the mean value between 0.00 and 0.04 for both groups at each time-point (Table 5.5). The distribution of the scores was fractionally skewed and found to be within an acceptable range requiring no further transformation.

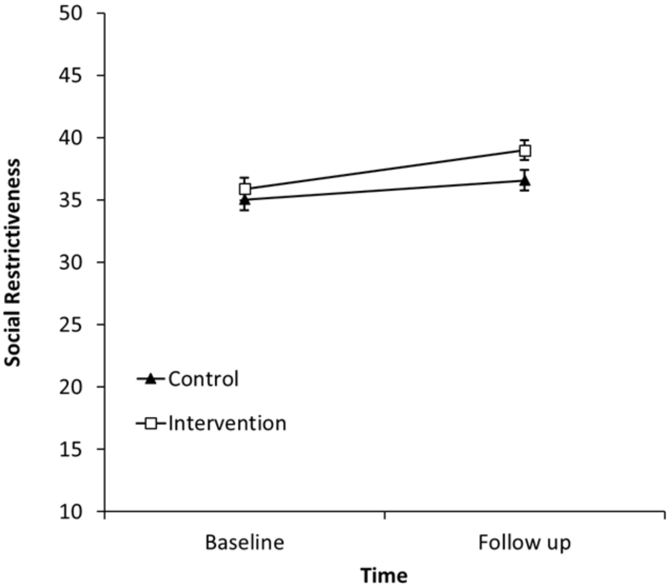

**Figure 5.7: Estimated marginal means and standard errors for social restrictiveness scores, estimated under group-by-time model**

#### *5.5.3.3 Community Mental Health Ideology*

The Community Mental Health Ideology (CMHI) sub-scale measures attitudes toward the provision of community mental health facilities and services for people with mental disorders in the community. CMHI sub-scales score range from 5 to 50, with higher scores suggesting a more positive attitude toward the provision of these facilities and services in the community. The mean scores for the CMHI sub-scale scores for the two groups at both time-points are outlined in Figure 5.8 and Table 5.4. The graph shows similar mean scores for both groups at baseline, with the mean and standard deviation for the intervention group being 33.00 (SD=27.8) and for the control group 33.87 (SD=4.28). Although both groups had higher CMHI scores at follow-up, the intervention group (mean =38.61, SD=4.28) showed a greater increase than the control group (mean=35.64, SD=5.54) (Figure 5.8). This finding suggests that following the intervention, the intervention group had a more positive attitude towards the provision of mental health facilities and services for people with mental disorders in the community than the control group.

An MMRM found that there was a statistically significant main effect for time *F*(1, 125.98)=41.50, *p*=0.01, with higher CMHI mean scores at follow-up compared with baseline. The main effect for group was not significant, *F*(1, 2.89)=1.15, *p*=0.36; however, the interaction of group and time was significant, *F*(1, 125.98)=11.47, *p*=0.01. Evaluating the change in mean scores at follow-up between the two groups indicated a mean difference of 3.92 (95% CI: 1.63 to 6.21), *d*=0.60 (95% CI: 0.22 to 0.98)) and the magnitude of the differences in the means was medium (Cohen's *d*=0.60) (Table 5.4). An intra-cluster coefficient of 0.02 was found in the analysis (Table 5.4), suggesting a very small amount of variation between the clusters and there was low correlation of responses between the clusters. Overall, this indicates a significant increase in CMHI scores in the intervention group, suggesting that they were more inclined to approve the establishment of mental health facilities and services, accept and live with people with mental disorders and support the provision of mental health services for them within their communities. The residuals of the model were examined and predictions by the model were mostly accurate, with estimated mean values between 0.00 and 0.04 for both groups at each time-point (Table 5.5). The distributions showed very little skew either positively at baseline (0.27 and 0.40) or negatively at follow-up (–0.10 and –0.45) for intervention and control respectively (Table 5.5) which were found to be within a reasonable range requiring no further transformation.

**Table 5.3: Group by time means and standard deviation of outcomes measures**

| Outcome measures | Intervention | | | | Control | | | |
|---|---|---|---|---|---|---|---|---|
| | Baseline | | Follow-up | | Baseline | | Follow-up | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Knowledge | 4.69 | 1.28 | 5.66 | .65 | 4.52 | 1.32 | 5.39 | .94 |
| Personal stigma | 28.83 | 4.79 | 30.13 | 5.50 | 26.74 | 6.77 | 29.35 | 3.92 |
| Perceived stigma | 26.24 | 5.59 | 24.25 | 6.25 | 22.12 | 6.76 | 23.33 | 4.69 |
| Social distance | 11.69 | 3.87 | 9.30 | 4.45 | 10.42 | 4.40 | 9.58 | 4.40 |
| Benevolence | 35.49 | 4.91 | 39.01 | 3.76 | 36.77 | 6.37 | 38.08 | 3.80 |
| Social restrictiveness | 35.79 | 5.86 | 38.82 | 4.30 | 35.06 | 6.21 | 36.59 | 5.51 |
| CMHI | 33.00 | 5.57 | 38.61 | 4.28 | 33.87 | 4.28 | 35.64 | 5.54 |

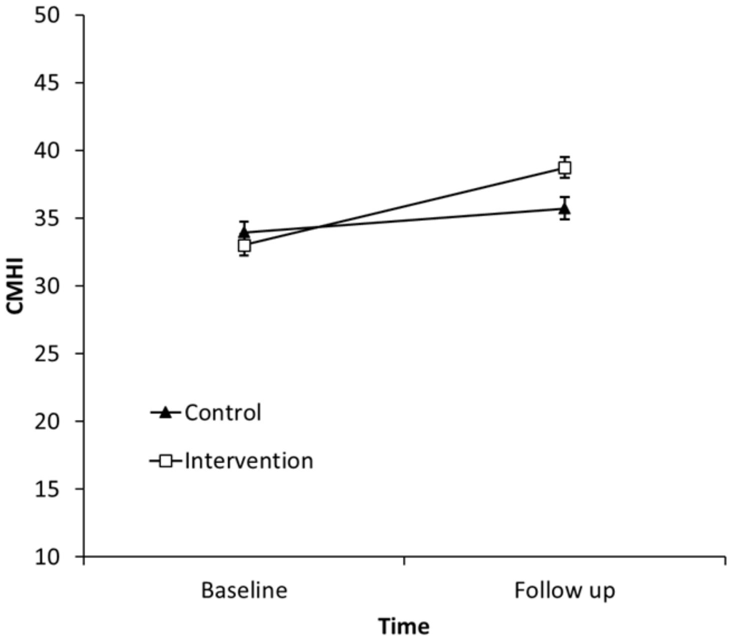

Figure 5.8: **Estimated marginal means and standard errors for Community Mental Health Ideology (CMHI) scores, estimated under group-by-time model**

**Table 5.4: Main effects of group, time and interaction of group by time on outcome measures derived from Mixed Model Repeated Measures (MMRM)**

| Outcome measures | F ratio | N (df)[1] | D (df)[2] | p | Effect size (d)[3] | ICC[4] |
|---|---|---|---|---|---|---|
| Knowledge | | | | | | |
| Group effect | 1.74 | 1 | 116.76 | 0.19 | | |
| Time effect | 53.76 | 1 | 116.76 | 0.001 | | |
| Group by time | 0.35 | 1 | 116.76 | 0.56 | 0.34 (small) | 0.00 |
| Personal stigma | | | | | | |
| Group effect | 1.11 | 1 | 4.05 | 0.35 | | |
| Time effect | 11.32 | 1 | 128.97 | 0.001 | | |
| Group by time | 1.01 | 1 | 128.97 | 0.31 | 0.16 (small) | 0.06 |
| Perceived stigma | | | | | | |
| Group effect | 9.37 | 1 | 132.86 | .001 | | |
| Time effect | 0.49 | 1 | 125.71 | 0.48 | | |
| Group by time | 5.87 | 1 | 125.71 | 0.01 | 0.17 (small) | 0.00 |
| Social distance | | | | | | |
| Group effect | .60 | 1 | 128.70 | 0.44 | | |
| Time effect | 12.43 | 1 | 118.56 | .001 | | |
| Group by time | 2.82 | 1 | 118.56 | 0.10 | 0.04 (small) | 0.00 |
| Benevolence | | | | | | |
| Group effect | 0.00 | 1 | 4.42 | 0.97 | | |
| Time effect | 24.19 | 1 | 127.97 | 0.001 | | |
| Group by time | 5.56 | 1 | 127.97 | 0.02 | 0.26 (small) | 0.03 |
| Social restrictiveness | | | | | | |
| Group effect | 2.42 | 1 | 4.27 | 0.19 | | |
| Time effect | 14.63 | 1 | 130.46 | 0.001 | | |
| Group by time | 1.68 | 1 | 130.46 | 0.19 | 0.46 (small) | 0.02 |
| CMHI | | | | | | |
| Group effect | 1.15 | 1 | 125.98 | 0.36 | | |
| Time effect | 41.50 | 1 | 125.98 | 0.01 | | |
| Group by time | 11.47 | 1 | 125.98 | 0.01 | 0.60 (medium) | 0.02 |

Legend: [1]N(df): Numerator degree of freedom; [2]D(df): Denominator degree of freedom; [3]Effect size: (Cohen's *d*); [4]ICC: Intra-cluster coefficient

**Table 5.5: Group by time means, standard deviation and skewness statistic derived from residuals from MMRM of outcome measures**

| Outcome measures | Intervention | | | | | | Control | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baseline | | | Follow-up | | | Baseline | | | Follow-up | | |
| | M[1] | SD[2] | SK[3] | M | SD | SK | M | SD | SK | M | SD | SK |
| Knowledge | 0.04 | 1.28 | –0.90 | –0.00 | 0.65 | –2.10 | –0.00 | 1.32 | –0.61 | 0.00 | 0.94 | –1.78 |
| Personal stigma | 0.03 | 4.55 | –0.37 | –0.01 | 5.43 | 0.06 | 0.00 | 6.60 | 0.04 | 0.09 | 3.66 | 0.48 |
| Perceived stigma | 0.00 | 5.59 | 0.41 | 0.02 | 6.25 | 1.28 | 0.00 | 6.76 | 0.20 | 0.11 | 4.69 | –0.07 |
| Social distance | 0.02 | 3.85 | 0.35 | 0.01 | 4.46 | 0.95 | 0.01 | 4.42 | 0.42 | –0.11 | 4.43 | 0.94 |
| Benevolence | 0.04 | 4.84 | 0.21 | 0.00 | 3.76 | 0.45 | 0.01 | 6.15 | 0.05 | 0.08 | 3.63 | 0.54 |
| Social restrictive-ness | 0.04 | 5.81 | 0.05 | 0.01 | 4.27 | 0.42 | 0.01 | 6.14 | –0.31 | –0.00 | 5.40 | –0.09 |
| CMHI | 0.04 | 5.53 | 0.27 | –0.00 | 4.28 | –0.10 | 0.00 | 5.62 | 0.40 | 0.20 | 5.47 | –0.45 |

Legend: [1]M: Mean; [2]SD: Standard deviation; [3]SK: Skewness

## 5.6 Generalised linear mixed model: Dealing with non-normal distribution and binary response.

Generalised linear mixed model (GLMMs) were used to analyse highly skewed and non-normal data[62] (knowledge and social distance sub-scales) and another variable that had a binary response[63] (recognition of disorder in the vignette[64]). The GLMM is best suited for analyses such as these because it combines the features of linear mixed models and generalised linear models (Bolker et al., 2009) to address highly skewed and non-normal outcome distributions (Diegelmann et al., 2018) and handle binary outcomes (Benedetti et al., 2014) as in the following outcomes and variables.

### *5.6.1 Knowledge*

Considering the skewed nature of the knowledge sub-scale, several transformations including log and square root were applied. However, even after these transformations, the normality assumption was violated. Hence, GLMM analysis of this sub-scale was conducted to deal with the non-normal distribution. The sub-scale scores were dichotomised using a cut-off point of 5, with scores ≥ 5 represented as '1' and < 5 as '0' as the scoring method. Selection of the cut-off point was based on the median of the scores over the two time-points. The model predicts the probability of participants from each cluster group obtaining a good knowledge score at the two time-points. The results from the GLMM are presented in Table 5.6. The table shows that the model predicted similar probabilities and standard error for both groups at baseline, with the probability and standard error for the intervention group being 0.62 (SE=0.07) and for the control group 0.60 (SE=0.06). At follow-up, the model predicted a modest increase in the estimated probabilities for both groups, although the increase was greater in the intervention group ($p$=0.94, SE=0.03) compared with the control group ($p$=0.86, SE=0.05). The GLMM analysis carried out on the binary knowledge scores showed that the main effect for time was statistically significant, $F$(1, 21.70)=181, $p$=0.00 (Table 5.7); however, main effect for group was not significant, $F$(1, 1.26)=181, $p$=0.26. The interaction of group and time

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[62] Data are judged to be non-normal data when they do not produce the theoretical curve which is bell-shaped and symmetrical when plotted.

[63] A binary response implies only one of two possible responses.eg yes/no, true/false.

[64] Participants were required to respond to an open-ended question asking them to identify the mental disorder of 'Yaw' a hypothetical person described in the vignette in the questionnaire (Appendix 8)

was also not significant, *F*(1, 1.070)=181, *p*=0.30. The analyses detected that the odds ratio (OR) of an increase in knowledge scores for the intervention group was 2.23 times greater than for the control group (OR=2.23, CI: 0.48 to 10.27). The intra-cluster correlation for this sub-scale was 0.00, suggesting that there were significant variations in the responses from the clusters.

### *5.6.2 Social distance*

The GLMM analysis of the social distance scale was conducted to address the non-normal distribution and high skewness of the data. The social distance scale scores were dichotomised using a cut-off point of 10, with scores ≥ 11 represented by '1' and ≤ 10 as '0'. Selection of the cut-off point was considered after exploring the median of the scores over the two time-points. In this scale, the model predicted the probability that participants in each group would score 1 at baseline and follow-up. The results from the GLMM are presented in Table 5.6. The table shows that the model predicted different probabilities and standard errors for the groups at baseline, with the probability (standard error) for the intervention group being 0.61 (SE=0.06) and the control group 0.53 (SE=0.06). At follow-up, the model predicted similar rates of reduction in the probability for each group from their baseline estimates. The model predicted a 28% decrease to a probability of 0.33 for the intervention group (*p*=0.33, SE=0.06) and a 26% drop to probability of 0.37 for the control group (*p*=0.37, SE=0.07) (Table 5.6). In summary, the model predicted that both groups would demonstrate a reduction in their desire to distance themselves socially from people with mental disorders, however, the intervention group would demonstrate a greater reduction in desire for social distance than the control group.

The GLMM analysis conducted on the social distance scale indicated that there was statistically significant change over time for both groups, *F*(1, 10.99)=233, *p*≤0.00 (Table 5.7); however, the main effect for group was not significant, *F*(1, 0.122)=233, *p*=0.73. The interaction between group and time was also not significant, *F*(1, 0.817)=233, *p*=0.37. The odds ratio of an increase in the social distance scores of the intervention group was 0.6 times greater than for the control group (OR=0.618, CI: 0.216 to 1.766). The analysis also indicated an intra-cluster correlation of 0.00, suggesting the clusters were independent of each other.

### *5.6.3 Recognition of disorder in vignette*

The recognition of disorder in a vignette variable was created as a dichotomous variable and responses were coded as correct or incorrect. A correct response was scored '1' and an incorrect response was scored '0'. For this variable, the model predicted that 4% of participants in the control group (*p*=0.04, SE=0.03) and 9% in the intervention group (*p*=0.09, SE=0.03) would respond correctly to this variable (Table 5.6). At follow-up, the model predicted an increase in the estimates for both groups, although the increase was higher in the intervention group (*p*=0.32, SE=0.06) compared with the control group (*p*=0.14, SE=0.05).

A GLMM analysis was conducted on the recognition of disorder in a vignette variable and indicated that the main effect for time was statistically significant, F(1, 10.86)=231, *p*≤0.00 (Table 5.7); however, main effect for group was not significant, F(1, 3.74)=6, *p*=0.10. The interaction of group and time was also not significant, F(1, 0.16)=231, *p*=0.69. Overall, this suggests an increase in both groups' ability to recognise depression over time. Intervention group scores increased more than the control group, but the difference was not large enough to be statistically significant. The observed proportions for the time-points per group compared with the predicted probabilities of the model indicated that the model was a good fit for the data. The odds ratio reported from the analysis suggests that the intervention group's odds of correctly recognising depression was 1.4 times greater than the control group's (OR=1.43, CI: 0.25 to 8.06). An intra-cluster coefficient of 0.02 was detected in the analysis, suggesting that there was a small amount of variation between the clusters and low correlation of responses between the clusters, and this difference was not large enough to be statistically significant.

**Table 5.6. Group by time estimated means, standard error and confidence interval derived from the GLMM**

| Outcome measure | Intervention | | | | | | Control | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baseline | | | Follow-up | | | Baseline | | | Follow-up | | |
| | X[1] | SE[2] | CI[3] | X | SE | CI | X | SE | CI | X | SE | CI |
| Knowledge | 0.62 | 0.07 | 0.48–0.74 | 0.94 | 0.03 | 0.84–0.98 | 0.61 | 0.07 | 0.47–0.73 | 0.86 | 0.05 | 0.74–0.93 |
| Social distance | 0.61 | 0.06 | 0.49–0.72 | 0.34 | 0.06 | 0.23–0.48 | 0.53 | 0.06 | 0.40–0.64 | 0.37 | 0.07 | 0.25–0.51 |
| Recognition | 0.09 | 0.03 | 0.03–0.19 | 0.32 | 0.06 | 0.16–0.53 | 0.04 | 0.03 | 0.01–0.13 | 0.14 | 0.05 | 0.06–0.28 |

Legend: [1]X: Probability; [2]SE: Standard Error; [3]CI: 95% Confidence Interval

**Table 5.7: Estimates of main effects of group, time and interaction of group by time for measures of knowledge, social distance and recognition derived from the GLMM**

| Outcome measure | *F* ratio | Numerator df[1] | Denominator df | *P* value | Odds ratio | ICC |
|---|---|---|---|---|---|---|
| Knowledge | | | | | | |
| Group effect | 1.264 | 1 | 181 | 0.262 | | |
| Time effect | 21.697 | 1 | 181 | 0.000 | | |
| Group by time effect | 1.070 | 1 | 181 | 0.302 | 2.228 | 0.00 |
| Social distance | | | | | | |
| Group effect | 0.122 | 1 | 233 | 0.727 | | |
| Time effect | 10.986 | 1 | 233 | 0.001 | | |
| Group by time effect | 0.817 | 1 | 233 | 0.367 | 0.618 | 0.00 |
| Recognition | | | | | | |
| Group effect | 3.743 | 1 | 6 | 0.100 | | |
| Time effect | 10.860 | 1 | 231 | 0.001 | | |
| Group by time effect | 0.164 | 1 | 231 | 0.685 | 1.428 | 0.02 |

Legend: [1]df: degrees of freedom

## 5.7 Summary

Overall, 140 participants were recruited into the study and 27 did not take part in follow-up data collection. The socio-demographic characteristics of both groups were similar at baseline, and occupation was the only characteristic found to be a significant predictor of missingness in the data. The results showed an increase in the estimated mean scores of the outcome measures in the intervention and control groups at follow-up. The size of the increase differed between groups, with the intervention group demonstrating a larger increase than the control group in most outcome measures. However, apart from the CMHI sub-scale, the differences between the two groups in changes over the two time-points were not large enough to be statistically significant. The strength of the differences was generally small, apart from CMHI sub-scale, which had a medium effect size.

# Chapter Six

# Process Evaluation of the Mental Health Literacy Programme

## 6.1 Introduction

In this chapter, the findings of the mixed methods (quantitative and qualitative) process evaluation of the cluster randomised controlled trial of the mental health literacy programme (hereafter, the programme) are presented. The process evaluation was undertaken following the intervention to assess the intervention cluster participants' perspectives about the usefulness of the programme. In this chapter, a summary of the participants is presented. This is followed by a descriptive summary of the results of the quantitative process evaluation. Then, a report of the themes that emerged from the thematic analysis of the interview transcripts is presented, supported with illustrative exemplars. Finally, suggestions to enhance the achievement of the programme objectives and improve the mental health literacy of the community are presented.

## 6.2 Summary of participants

The intervention cluster consisted of three groups from three district assemblies, with a total of 70 participants. All took part in the quantitative part of the process evaluation immediately after the treatment. To obtain a sample of 25 for the qualitative part of the process evaluation[65], participants were then invited to volunteer to participate. Fifty-nine volunteered to take part and 11 declined; the reasons for opting out were not ascertained. For the qualitative process evaluation, stratified random sampling considering age, number of interested participants in a group and gender was used to ensure that the sample was proportionally representative of each assembly group. Five of the eight females in the intervention cluster volunteered to participate in the interviews. These female participants were sampled purposefully to reduce gender bias and to obtain their perspectives about the usefulness of the programme.

Overall, 25 assembly members in the intervention cluster were interviewed 12-week after

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[65] See Chapter 4, Section.3.6.2.

the treatment for the qualitative part of the process evaluation: five males and one female from cluster Group One, nine males and four females from Group Two, and six males from Group Three.

## 6.3 Quantitative process evaluation

This part of the study was conducted to appraise the delivery of the programme, receipt and enactment of information by participants.

### 6.3.1 Delivery of the programme

Participants were asked to about the duration of the programme (Table 6.1). Over 97% strongly agreed or agreed that the duration of the programme was about right. In addition, 90% of participants strongly agreed or agreed that the amount of information included in each activity was appropriate.

### 6.3.2 Receipt of information in the programme

Participants were asked to rate the effectiveness of the various ways[66] in which they received information in the programme (Table 6.1). Overall, their responses were positive. For example, the average ratings for printed material, videos and PowerPoint presentations as effective methods of providing information was 88.6%. Discussion was rated by almost all the participants (98.6%) as an effective way to develop positive attitudes toward people with depression and schizophrenia. Similarly, 97.2% regarded the Story-bridge exercises and related discussions as an effective approach to improving participants' understanding of people with depression and schizophrenia, and approximately 97% agreed to recommend the mental health literacy programme to others.

### 6.3.3 Enactment of information obtained in the programme

Participants were asked about their intentions to apply the knowledge acquired from taking part in the programme (Table 6.1). They indicated a strong endorsement for applying their knowledge in dealing with mental health problems. For example, over 97%

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[66] Printed material, videos, PowerPoint presentation, discussions and Story-bridge exercises.

either agreed or strongly agreed that the programme contained helpful information that they could use in their role as assembly members. All participants indicated that they planned to use the strategies acquired from the Story-bridge exercises to help them deal with people with mental disorders. In terms of assessing their personal capacities, most now felt more knowledgeable (94.3%) and confident (98.6%) to offer help to people with mental disorders.

**Table 6.1: Results of the quantitative process evaluation by participants (N=70)**

| **Components** | **Strongly agree N (%)** | **Agree N (%)** | **Neutral N (%)** | **Disagree N (%)** | **Strongly disagree N (%)** |
|---|---|---|---|---|---|
| Delivery of the programme | | | | | |
| Overall, the length of the training programme was about right. | 37 (52.9) | 31 (44.3) | 0 (0) | 1 (1.4) | 1 (1.4) |
| Overall, the amount of time allocated to each activity was about right. | 23 (32.9) | 40 (57.1) | 4 (5.7) | 2 (2.9) | 1(1.4) |
| Receipt of information in the programme | | | | | |
| The printed material was an effective way to provide information about mental disorders. | 41 (58.6) | 24 (34.3) | 1 (1.4) | 4 (5.7) | 0 (0) |
| The videos were an effective way to provide information about depression and schizophrenia. | 37 (52.9) | 22 (31.4) | 3 (4.3) | 7 (10.0) | 1 (1.4) |
| Discussion was an effective way to increase my understanding of people with depression and schizophrenia. | 45 (64.3) | 22 (31.4) | 0 (0) | 2 (2.9) | 1 (1.4) |
| The PowerPoint presentations were an effective way to provide information about depression and schizophrenia. | 32 (45.7) | 30 (42.9) | 0 (0) | 4 (5.7) | 4 (5.7) |
| The exercises in the Story-bridge helped increase my understanding of people with depression and schizophrenia. | 37 (52.9) | 31 (44.3) | 0 (0) | 1 (1.4) | 1(1.4) |
| Discussion was an effective way to help me develop positive attitudes toward people with depression and schizophrenia. | 40 (57.2) | 29 (41.4) | 1(1.4) | (0) | (0) |
| I would recommend this mental | 41 (58.6) | 27 | 2 (2.8) | (0) | (0) |

| **Components** | **Strongly agree N (%)** | **Agree N (%)** | **Neutral N (%)** | **Disagree N (%)** | **Strongly disagree N (%)** |
|---|---|---|---|---|---|
| health literacy programme to others. | | (38.6) | | | |
| Enactment of information obtained in the programme | | | | | |
| Overall, the mental health literacy programme contained useful information that I can make use of in my role as an assembly member and as an adult. | 37 (52.9) | 31 (44.3) | 2 (2.8) | (0) | (0) |
| I intend to promote favourable attitudes towards people with mental health problems in my community. | 41 (58.6) | 26 (37.1) | 1 (1.4) | (0) | 2 (2.9) |
| I plan to use the strategies I acquired during the Story-bridge exercises to deal with people with mental health problems. | 34 (48.6) | 32 (45.7) | 3 (4.3) | 1(1.4) | (0) |
| I plan to use the strategies I acquired during the Story-bridge exercises to deal with people with mental health problems. | 32 (45.7) | 38 (54.3) | (0) | (0) | (0) |
| As a result of participating in the training programme, I feel *more knowledgeable* about providing assistance in situations associated with people with mental health problems. | 38 (54.3) | 28 (40.0) | 1 (1.4) | 2 (2.9) | 1 (1.4) |
| As a result of participating in the training programme, I feel *more confident* to provide assistance in situations associated with people with mental health problems. | 39 (55.7) | 30 (42.9) | 1 (1.4) | (0) | (0) |
| I plan to refer to the ‘Guidelines for Carers of Someone with a Mental Disorder’ in dealing with people with mental health problems. | 28 (40.0) | 39 (55.7) | (0) | 2 (2.9) | 1 (1.4) |
| I would recommend the ‘Guidelines for Carers of Someone with a Mental Disorder’ to other people in my communities when dealing with people with mental health problems. | 38 (54.3) | 32 (45.7) | (0) | (0) | (0) |

## 6.4 Qualitative process evaluation

Three main themes were abstracted from the data reflecting participants' perspectives about the usefulness of the programme: *Overcoming fear of perceived dangerousness*, *Increasing willingness to engage*, and *Becoming empathetic and non-judgemental* (Table 6.2).

**Table 6.2: Summary of themes, sub-themes and codes**

| Themes | Sub-themes | Codes |
|---|---|---|
| Overcoming fear of perceived dangerousness | Fear of people with mental disorders<br>Training helps overcome fear | Fear is deep-rooted within us<br>They are not as dangerous as we think |
| Increasing willingness to engage | Greater knowledge enhances engagement (with the person and family)<br>Increased confidence strengthens engagement | Have acquired knowledge to recognise mental disorders.<br>Better care of family members with mental disorders in daily living activities<br>Pursue engagement with a strategy to encourage help-seeking attitudes<br>Engagement for better quality of life outcomes |
| Becoming empathetic and non-judgemental | Developing empathy | Discourage neglect and encourage acceptance |
| | Being non-judgemental | Appreciate the difficulties of people with mental disorders<br>Avoid being judgemental with an individual with a mental disorder |

## 6.4. Qualitative process evaluation

### 6.4.1 Overcoming fear of perceived dangerousness

Participants expressed how the programme helped them to overcome their fear of perceived dangerousness of people with mental disorders. Two related sub-themes were abstracted from the data: *Fear of people with mental disorders*, and *Training helps overcome fear*.

#### *6.4.1.1 Fear of people with mental disorders*

Most participants expressed that prior to participating in the programme they feared people with mental disorders. They attributed this fear to a belief that people with these conditions were violent and dangerous and had the potential to harm others without provocation. This perception was reinforced, in part, by media reports, which created in them a (mis)perception that people with mental disorders were a threat to the community and should be feared.

> *They were people I disliked … I feared them. I know that they are dangerous … they can hurt. (IC1.M5)*

A common reaction to this perception was avoidance, where participants were reluctant to approach or be close to a person with a mental disorder. This perception about dangerousness and the violent nature of people with mental disorders contributed to a generalised apprehension and fear of them in the community. The following exemplars illustrate how this negative perception resonated with participants.

> *At first, I was scared whenever I saw such people. (IC2.M12)*

> *Previously, I thought such people are so dangerous that when you see somebody suffering from this problem, you dare not venture [near] the person because they can damage [hurt] you. (IC3.M25)*

#### *6.4.1.2 Training helps overcome fear*

The programme was helpful in allaying participants' fear of people with a mental disorder. During the programme, a video presentation and follow-up discussion provided them with information that aimed to demystify myths, including perceptions of dangerousness. The video highlighted that people with these disorders were more likely to experience verbal abuse, aggression and violence from the general public than to be perpetrators of these behaviours. Participants related this information to their own observations, experiences and knowledge of physical attacks and sexual abuse perpetrated against people with mental disorders. Having analysed information from the video illustration, their personal knowledge and shared experiences of the issue, they concluded that people with these disorders were more likely to be victims than perpetrators of violence. This knowledge was instrumental in changing their misperceptions and helped dispel their fears.

> *At first, we thought a person with such a mental problem could be dangerous to approach and might hurt you, but because of the knowledge we acquired through the training, we understand that through counselling and a tactful approach he (or she) could be friendly and approachable. (IC2.F8)*

Having overcome this fear, participants indicated a willingness to get closer to people with mental disorders.

> *Immediately after the programme, I know that when you go closer to them, you will know their feelings and interact with them, and that will reduce their tendency of becoming very dangerous.* (IC1.M5)

Participants also indicated how the programme had helped them to communicate with people with a mental disorder.

> *At first, I was scared whenever I saw such people, but now the person I am trying to help recover from his situation is a good friend of mine and I can converse with him. (IC2.M12)*

### 6.4.2 Increased willingness to engage

Participants expressed how the programme had improved their willingness to engage with people with mental disorders and their families. Two sub-themes were abstracted from the data indicating their willingness to engage: *Greater knowledge enhances engagement* (with the person and family)*, and Increased confidence strengthens engagement.*

#### *6.4.2.1 Greater knowledge enhances engagement*

Participants' previous lack of knowledge about and fear of people with mental disorders contributed to their reluctance to engage with these individuals and their families. They felt helpless in their role as community leaders in such situations.

> *First of all, if somebody faces the problem,* [and] *because I am an assembly woman without any knowledge about mental disorders, I took it for granted that it was part of life and I didn't have any solution for, and couldn't do anything about, it***.** (IC2.F10)

Participation in the programme improved their knowledge of the signs and symptoms, causes and effects, risk factors and treatment options for depression and schizophrenia. Their knowledge was further enhanced as information provided was complemented by video presentations of the lived experiences of people with these disorders.

> *The training programme has really equipped me with the knowledge of mental health issues, so right now, as an assembly man, in case I meet such a situation, I will be able to communicate with the family of that person, so that I will also educate the family to understand the problem of that person suffering from mental illness.* (IC2.M16)

Participants also had the opportunity to discuss their knowledge and share their experiences openly with others in their group. They realised that, while knowledge was important, having a positive attitude towards people with these disorders was equally essential. Participants appreciated the issues about attitudes that were shared in their intervention cluster and this affected their attitudes favourably.

As a consequence of the knowledge acquired and attitudinal change, they expressed satisfaction in their capability to engage with people with mental disorders and their families.

> *I now know that, if I meet somebody in that situation I must approach their parents and inform them, so that I can interact with them to find out the steps they have taken. If they have not taken any steps, then I will advise them to take him* [the person] *to the hospital. I will urge them to go in for medicine for the child; because there is medicine available for this illness. Again, there are doctors who treat them, and I will direct them to take the person to the hospital.* (IC2.F9)

The acquired knowledge further heightened participants' sensitivity to the importance of being attentive to the needs of people with these disorders.

> *I got to know that* [with] *such people, particular care and attention must be paid to them. Because sometimes if we reject them, then it means their problem is going to worsen. So, I have come to realise that we have to appreciate and accommodate them. By so doing, we can help them to recover from their situation.* (IC3.M23)

The need for special care and attention was demonstrated by a participant who commented that, as result of participating in the programme, the support she gave to her own daughter with a mental disorder had improved in comparison to the care she provided previously.

> *So, all that I did was to take her to the hospital. All that I did was to collect her medication and administer it to her, and all that I knew was that she could sleep and wake up. I didn't have any knowledge about the illness. But after we had the training with you, I now know how to talk with her, when to give her food and medication, and how to live with her.* (IC2.F9)

#### *6.4.2.2 Increased confidence strengthens engagement*

Participation in the programme also increased participants' confidence to engage with individuals and their families about these conditions. The problem-solving Story-bridge exercises were particularly helpful in this regard. The exercises required them to discuss strategies for engaging with a person with a mental disorder (depression or schizophrenia), and how to address their condition.

> *... so, relating to the story* [created during the Story-bridge exercises] *when the landlord came to tell me my sister looks at the same place, refuses to sit down and would look at the same direction, I remembered the story of Kojo*[67] [from the Story-bridge exercises]*. I said, "this is what ... a mental health problem is," so I quickly ran there, and I took the lady to the psychiatry* [sic] *hospital.* (IC2F7)

> *It* [the Story-bridge exercises] *has taught us a lot; how to approach people, how to talk to people, how to identify their problems, and then how to help them, the place we are supposed to send them, so that they can come back to* [recover to lead] *a normal life.* (IC2.M6)

Participants suggested several strategies and, through group discussion, refined them to achieve the best possible outcomes. They acknowledged that they were familiar with most of the proposed strategies and had the capability to use them. This helped bolster their self-confidence to be proactive and engage with people with mental disorders and their families. The focus of engagement was to encourage and assist individuals and families to seek help for their affected family member as this would, in their view, assist in the

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[67] Ghanaian name for a male, commonly used among the Akan ethnic group.

recovery of the person.

> *I have more knowledge that enables me to interact with members of the person's family and explain to them how they should deal with the person to ensure his cure* [recovery] *and be able to live with them peacefully.* (IC1.F11)
>
> *It has given me ways and a manner for me to approach a person with a mental health problem. That's why I am saying it is good, because it's given me strategies to use to approach a person with a mental health problem and then to help him to recover.* (IC1.M3)

Similarly, participants shared concerns about the well-being of people with mental disorders, particularly after recovery. They noted that social isolation could be an impediment to leading a fulfilling life, even after recovery. They commented about the need to support and encourage people to pursue life goals after recovery. Thus, they promoted a positive attitude and behaviour by community members to provide people with mental disorders with opportunities to experience a better quality of life.

> *I have gotten to know that people with mental disorders, after they have come back to normal life, we shouldn't discourage them from marrying into our family. We should employ them as our workers, we should live with them in the normal way of life as we used to do.* (IC3.M20)

### 6.4.3 Becoming empathetic and non-judgemental

Participants expressed how the programme helped them to become empathetic and non-judgemental towards people with mental disorders. Two sub-themes were abstracted from the data reflecting their change in attitudes and behaviours: *Developing empathy and Being non-judgemental.*

#### *6.4.3.1 Developing empathy*

Involvement in the programme helped participants to appreciate the difficulties experienced by people with mental disorders. The video presentations referred to earlier, about two individuals sharing their experiences of mental disorder, prompted discussion about the need for empathy. These two individuals shared their difficulties and narrated how the empathetic natures of their partners, friends and family were helpful in their well-being and recovery. The video highlighted the consequences of being empathetic or unsympathetic. Participants shared stories from within their communities about families who had been empathetic or lacked empathy and related these attitudes to the outcomes of the family member with the mental disorder. According to the participants, empathetic families had satisfying outcomes, while those who lacked empathy had less satisfying outcomes with their affected family member. These conclusions fostered in participants a more empathetic view of people with mental disorders. For them, this highlighted that lack of empathy was inappropriate and unhelpful. A better alternative was to appreciate the difficulties and to be accepting of people with these disorders.

> *… we shouldn't neglect them, we shouldn't neglect them. Let them be in the society that we live, so that we talk to them. We (can) discuss their treatment with them, so that they will recover. We shouldn't go and put them somewhere* [e.g., prayer camps, herbal centres and fetish camps[68]] *and think that they are not part of us. We have to bring them closer (to us). Whatever we do we (should) involve them, so that they will know that we are there for them.* (IC2.M6)

One participant commented that the problem-solving Story-bridge exercises had helped him to confront his unfavourable attitude toward people with mental disorders. He noted the importance of being empathetic during the exercises. He explained that, by role-playing as a person in need of help in the exercises, his attitude changed to a more empathetic stance, which allowed him to participate meaningfully in addressing the mental health problem of the person highlighted in the exercise.

> *How we grouped ourselves* [during the Story-bridge exercises]*, and if you put yourself in the shoes of the one who is mentally disturbed, and you consider his situation as part and parcel of you,* [being affected] *you will solve the problem* [mental health problem of the person] *very well.* (IC2.M15)

Another participant recounted how previously he had ostracised and neglected his brother who had a mental disorder. He attributed this behaviour to a lack of understanding and empathy for his brother. He emphasised that, because of participating in the programme,

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[68] A traditional place that deals in spiritualism and is run by a fetish priest who serves as an intermediary between the spiritual world and the living. Fetish priests are consulted about people with mental disorders because of a belief in its spiritual cause, and the linkage of fetish priests with the spiritual world to address these conditions.

he now understood his brother’s condition. He also had become empathetic towards him and was supporting him to make lifestyle changes to aid his recovery.

> *We* [my family] *have stopped stigmatising against him and that* [the] *discrimination that we exhibited had really changed. Now, he sometimes comes to visit me at my present location. Previously, I would never let allow him to visit me …. I have been visiting them* [his brother and mother] *more regularly since the training* [mental health literacy programme], *and when I go, I just sit with him, talk with him. I walk with him. Sometimes we go for some physical training on Saturdays; we go jogging. After the programme, this is what I have been doing with him.* (IC2.M16)

Participants commented favourably about how the training programme helped them to comprehend the difficulties faced by people, which, in turn, had made caring for and supporting a family member easier and less stressful. A participant also recounted her application of the knowledge about the difficulties encountered by people with mental disorders during a travel experience with her niece, after completing the training programme.

> *I have been able to spend some days with her there* [Nigeria] *and she did not act abnormally. But if she is with my mother she acts abnormally and beats my mother and others. She lives with my mother in the same house, but when I went with her, she did not do anything that was annoying. If she did anything that was provocative, as I have already said, I now deal with her patiently and coax her. So, I was able to spend a few days with her without any problem. Therefore, on their part* [carers and family members] *all that they need is patience and tolerance.* (IC2.F11)

#### *6.4.3.2 Being non-judgemental*

Before participation in the programme, participants admitted to being judgmental about people with mental disorders. This entailed the belief that individuals with mental disorders were responsible for their condition. Participants (mis)perceived that mental disorders occurred as result of engaging in culturally unacceptable behaviours, such as substance misuse or because of a spiritual curse placed on individuals.

> *I was having some misconceptions that mental health issues are for the less privileged or those who abuse drugs, and also from spiritual attacks.* (IC2.M16)

Participants used some stereotypical labels that were attributed incorrectly to people with mental disorders. For example, a common stereotypical label used in the Akan[69] language was *abodam anitie*, meaning that people with a mental disorder who had a clear understanding of contemporary events and engaged in rational conversation were not 'genuinely' ill and feigning their condition. This labelling was based on an incorrect belief that people who had a 'genuine' mental disorder lacked awareness of contemporary events and were unable to engage in rational conversation. Participants also (mis)perceived that mental disorder was self-induced, particularly among less privileged people in their community. This (mis)perception was thought to be attributable to people's inability to cope with social and financial hardship prior to the onset of their mental disorder. However, when the participants watched the videos of two individuals narrating their experiences of depression and schizophrenia and engaged in related discussion with their intervention group members, they realised that both stereotypes were incorrect.

> *I have seen that mental illness, irrespective of your status* [in society], *because, look at a law professor* [in one of the videos] *suffering from that kind of situation. So, it has really made me aware that it is not only the less privileged people that have been suffering from mental illness; any person can be affected* (IC2.M16)
>
> *Actually, the videos were so helpful to me. I remember one lady, I forgotten* [sic] *the country she mentioned. She told her story as being someone who is wealthy. She has everything, yet she suffered from mental illness. So, the video made me know that, in fact, it is not about those we perceive to be suffering from such illness; anybody at all can affected.* (IC3.M23)

After taking part in the programme, participants reported a change in their attitude and that they had become non-judgemental about people with mental disorders (depression and schizophrenia). Information about the disorders and sharing individual experiences had been helpful in reinforcing the need for attitudinal change. They realised that nobody

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[69] An ethnic community in the southern half of Ghana.

decides to develop mental illness deliberately and suffer the consequences.

> *At first, I thought mental disorder was self-inflicted but now I realise that, like any other disease, anybody can be affected. Now it has helped me to go closer to them. If I see someone with this problem I am now able to approach him and talk with him.* (IC2.M17)

> *This programme has changed my attitude. At first, I was having some misconception that mental health issues are for the less privileged or those who abuse drugs and also from spiritual attacks, but this programme has changed my life, my attitude towards them* [people with mental disorders]. (IC2.M16)

## 6.5. Enhancing achievement of programme objectives

Several participants suggested ways to enhance achievement of the programme objectives. Their suggestions related to incorporating more videos and with a Ghanaian focus and increasing the duration of the programme.

### 6.5.1 Incorporating more videos and with a Ghanaian focus

Participants agreed that the videos were useful in increasing their knowledge and changing their attitude towards people with mental disorders, particularly depression and schizophrenia. They suggested that more videos should be incorporated into the programme because audio-visual materials were helpful in knowledge acquisition.

> *I think the videos should be used more, because, you know, sometimes when you are looking at something, it usually goes straight to your mind rather than talking* [discussion] *alone. So, as you talk, we will watch the video and then pick up some information from the videos too.* (IC2.M14)

In addition to including more videos in the programme, participants suggested that the videos should be based on real life events about people with mental disorders and situated within a Ghanaian context. This suggestion was made, in part, because the videos shown in the programme focused on two individuals narrating their experiences of mental disorder in a non-Ghanaian context. Therefore, incorporation of real-life videos based in a Ghanaian context would promote better understanding and more meaningful discussion among participants.

> *I wish the videos would be one that could talk, should involve actions* [real life events]*, because after watching the video one would be able to retain the content more ... acted by Ghanaians, so after watching the videos the people will be able to visualise and discuss what they saw and remember it.* (IC2.M17)

### 6.5.2 Increase the duration of the programme

In the quantitative process evaluation, conducted immediately after the programme, participants indicated their satisfaction with the duration of the programme. However, in the qualitative process evaluation, conducted at 12–week follow-up, participants, having had more time to reflect, recommended that the duration of the programme should be extended. Because the programme had been designed to fit within a specific timeframe (a 3-hour period within a scheduled meeting day of assembly members), participants felt that this constrained their opportunity to engage in extensive discussions on some issues. Hence, increasing the duration of the programme would provide greater scope to engage in in-depth discussion of issues.

> *There should have been a repeated course, maybe in a few weeks' time. You know, that day the things* [discussions] *were very interesting but for the time we had at our disposal, I think having it again will help a lot.* (IC3.M19)

## 6.6. Improving mental health literacy in communities

Some participants highlighted the need for additional measures to improve mental health literacy within their communities, to reinforce their own initiatives to deal with stigma and discrimination within their community. They suggested training other community leaders and complementing the programme with community-wide mental health educational programme.

### 6.6.1 Training other community leaders

Participants recommended that, in addition to assembly members, it would be useful if other community leaders were provided with the same training that they had received. They believed that these leaders, such as Unit committee members[70] and sub-chiefs[71] could be equally instrumental in dealing with people with mental disorders if they were empowered with knowledge about, and positive attitudes towards, people with these conditions.

> *I think sub-chiefs and other community leaders should be involved, even we have some people called the unit committee members, they also really work* [as volunteers to help develop the community] *so when that training is given to them it is really going to help* (IC2.M16)

> *I think if you organise such programmes* [training programmes], *maybe on regular basis, to enlighten some of us, like honourable* [respected] *persons or assembly members and leaders of the community, it would help and equip us with skills to solve problems* [mental health problems] *that comes to us.* (IC3.M23)

### 6.6.2 Providing a community-wide mental health education programme

Participants recommended that complementing the programme with the introduction of community-wide mental health education would be beneficial because they recognised that most people in their communities had little or no knowledge about people with mental disorders. They pointed out that most communities had a radio network, often called the ‘information centre’, where community information was broadcast. Participants suggested that this resource could be used to disseminate mental health information throughout their communities. They envisioned that the benefit of this resource was that many people had easy access to it and it would help improve their understanding of, and attitudes towards, people with mental disorders.

> *You have given us, we the assembly members, the training, but to me, I think if the training can extend* [sic] *even to the various localities, it will be better.* (IC2.F7)

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[70] Local community members elected to assist the assembly member fulfil his or her responsibilities.

[71] Respected community members who are installed as subordinate chiefs to assist the chiefs in various responsibilities.

> *I think we should not have been the only people to be given training on things of this nature… If possible, it should have been a programme on a radio network or information centre.* (IC3.M23)

In addition, they emphasised that a community-wide mental health education programme would create awareness about mental disorders and encourage members to provide appropriate support to people with mental disorders.

> *There should be public education to create awareness that mental health problems exist and, therefore, we should treat it* [mental disorders] *as such* [provide appropriate support]. (IC3.M25)

Some participants also believed that a community-wide education programme would be beneficial because people were more receptive to acquiring new knowledge when it was provided by an expert who was external to their community. This approach would also help foster cooperation between assembly members and their respective communities when dealing with people with mental disorders.

> *I suggest that you organise periodic meetings in the communities to share the programme with the people, because there is not much interest in the programme when a familiar individual always does it in their communities. It is much more effective when an unfamiliar person handles the programme in the communities. I'm appealing that, if there is enough time, you will organise outreach meetings in the community for the people to know that what we have been teaching them is authentic as a result of the training we have had with you.* (IC1.M4)

Similarly, participants expressed frustration at the lack of receptiveness of some community members in comprehending the importance of what they, as assembly members, were teaching them about people with mental disorders. They believed that a community-wide mental health education programme would augment their own efforts by reinforcing the knowledge and attitude necessary for dealing with mental disorders.

> *… in future when the assembly members encounter any problem within the community or in their town, you will organise the programme, including film shows, like what you showed to us, for the people in the community or neighbourhood. I think it will help members of these communities to*

> *understand that if any sibling or family member encounters this situation this is how we should handle it. We taught them all these things and it has made our task difficult. They do not understand what we teach them, so if you are able to organise a "video van"* [Outdoor cinema] *and show films to the members of the community, I feel, it will be very beneficial.* (IC1.F10)

Another benefit of a community-wide programme is that it could help address discrimination. Participants indicated that if their communities were provided with knowledge about mental disorders, they would be less likely to be discriminatory towards people with these disorders.

> *I suggest that, from time to time, you go to the communities and deliver this message or programme to them so that they will not discriminate against those people* [with mental disorders] (IC3.M24)

> *I wish that this training will be organised from time to time for community leaders and assembly members, so that they will be able to deal with this canker* [neglect and abuse of people with mental disorders] *and they will be able to help the community with this canker.* (IC3.M25)

> *People with mental problems were left to rot* [disowned and abandoned], *but with your training you have helped a lot. I suggest that you should come to the communities; people will benefit more from the training you gave to us.* (IC2.M18)

## 6.7 Summary

In this chapter, the mixed methods process evaluation of the intervention cluster participants about the usefulness of the mental health literacy programme, was presented. The findings indicated that the programme was valuable and useful to participants. The programme was viewed as very helpful because it re-oriented participants and allowed them to overcome their fear of perceived dangerousness of people with mental disorders and encouraged them to interact with these individuals and to provide them with appropriate assistance.

Participants considered the programme effective in improving their knowledge about people with mental disorders, which, consequently, bolstered their confidence to proactively engage with people with these conditions and to support their families. They commented that their engagement efforts were beneficial as it encouraged help-seeking behaviours in affected families to ensure better outcomes, including creating opportunities to pursue life-goals after recovery. The programme was also regarded as helpful in positively changing participants’ attitudes and behaviours towards people with mental disorders and their families. Developing empathy and being non-judgmental resulted in them being more supportive of people with these disorders. Finally, recommendations were made about strengthening the programme and extending it to others as well as the community in general.

# Chapter Seven

# Discussion and Conclusion

## 7.1 Introduction

This study was the first cluster randomised controlled trial of a mental health literacy programme using a problem-solving Story-bridge[72] approach, underpinned by andragogy, with a group of assembly members in Ghana. The broad aim of the study was to evaluate the effectiveness of the programme on assembly members' knowledge about and attitudes toward people with mental disorders. In addition, the study sought to evaluate the perspectives of the community leaders who took part in the programme about its usefulness in dealing with people with mental disorders and their families. These objectives were achieved by engaging the assembly members in a three-hour mental health literacy programme and a process evaluation to assess its usefulness, impact and methodological appropriateness. It was anticipated that the programme would be valuable and have a positive effect on participants. Overall, the findings of the study indicated that the programme was somewhat effective in improving participants' knowledge about and attitudes toward people with mental disorders. Overall, both clusters demonstrated an increase in their mean scores at follow-up; however, the intervention cluster demonstrated a greater improvement than the control cluster. Apart from the community mental health ideology outcome measure, which had a medium and statistically significant difference between the two groups in changes over the two time-points, all other outcome measures had small differences which were not statistically significant. The process evaluation found that participants commented favourably about the value of the programme and the positive contribution it made to their role as assembly members and adults. In addition, they commended its delivery and recommended that community education activities should be introduced to improve mental health literacy in the community.

In this chapter, a discussion of the findings of the study is presented. The chapter begins with a discussion of the findings related to the socio-demographic characteristics of the participants. The discussion then focuses on the outcomes of the programme under three broad headings: knowledge of helpful interventions, attitudes and social distance. Next,

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[72] See Chapter 4 Section 3.8.2.

the link between the andragogical and Story-bridge approaches is analysed. Then, a discussion of the process evaluation takes place. After this, an overall discussion of the findings is presented, followed by a review of the strengths and limitations of the study. Finally, the recommendations and conclusions of the study are presented.

## 7.2 Socio-demographic characteristics

The majority of participants were male, which is consistent with studies in other countries about male dominance and underrepresentation of females in most political groupings (Paaga, 2016; Paxton & Hughes, 2015). Ghanaian politics are male-dominated (Asuako, 2017); hence, it is unsurprising that most participants in the present study were males. Between 1994 and 2015, more than 85% of elected district assembly members were men. For instance, a study by Fiankor and Akussah (2012) indicated that in a sample of 200 assembly members from 15 district assemblies, 80.7% were male and 19.3% female. Furthermore, 18,938 candidates contested the most recent district assembly elections in 2016, and of these 17,783 (93.9%) were male and 1,155 (6.1%) female (Asuako, 2017). Several factors have contributed to male dominance in national and local politics in Ghana: discouragement of women to participate (Adatuu, 2017), male chauvinism; a patriarchal culture in most community settings; women's lack of self-confidence (Mahamadu, 2010); and a lack of financial, communal, spousal, political party and civil society support for women contemplating entering politics (Afro Barometer, 2017; Boateng, 2017)[73]. Because psychological distress and some mental disorders are more prevalent among women than men (De Menil et al., 2012; Sipsma et al., 2013), and women are generally the primary caregivers of family members with mental disorders (Ayuurebobi et al., 2015), their underrepresentation in the current study was a concern. It would have been valuable to hear more about their experiences and perceptions of mental disorders. While it was impossible to control this gender disparity in the cluster randomised controlled trial because both groups were male dominated, stratified random sampling was undertaken to ensure a proportional increase in female representation during the qualitative process evaluation.

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[73] A non-partisan, pan-African survey that measured citizens' attitudes about socio-political, economic and other topics (www.afrobarometer.org 2018).

The modal age of participants was between 40 and 49 years, and the remainder were distributed equitably amongst the other age groups. The age distribution of participants provided an opportunity to evaluate knowledge and attitudes generally but not within specific age groups. Socio-cultural beliefs, particularly in Ghana, influence people to associate increasing age with the maturity needed to be involved in decision-making (Gyimah & Thompson, 2008).

In the present study, participants had various levels of education and more than half (53.5%) had tertiary education qualifications. This finding is similar to a survey by Fiankor and Akussah (2012), who reported that the majority of their participants had tertiary-level education. In contrast, in an all-female sample of 40 assembly members, Boateng (2017) reported that 40% of her sample had tertiary-level education and another 40% had secondary-level education. Nonetheless, in the current study, the male-dominated sample held higher educational qualifications than in Boateng's (2017) study. This trend signifies the importance of education in local governance where assembly members are expected to acquire and evaluate information, supported by local knowledge (Fiankor & Akussah, 2012). For some people, participation in local governance is driven by a motivation to pursue a career in national politics because there is a preference for persons with tertiary education qualifications during appointments (IEA, 2012).

Most participants in this study were married, which is consistent with community expectations about the marital status of elected assembly members being another measure of their maturity (Jonah, 2003). Limited information is available regarding the influencing factors of marriage and marital status of assembly members in Ghana. However, according to the *Regional Analytical Report* of the Brong Ahafo region in the 2010 Housing and Population Census, more than 60% of those aged between 30 and 64 years were married (Ghana Statistical Service, 2013). Hence, it is unsurprising that over 85% of the participants in the present study were married. Culturally, being married is valued in community relations (Nave, 2017) because it helps connect several families into larger family units and many members of the larger family may be consulted, for example, about a mental health problem within the family unit.

Concerning occupation in the present study, almost half the participants were professionals, followed by another group who were farmers, and none was unemployed.

People do not contest to be assembly members as a form of employment because, apart from transportation and sitting[74] allowances, they are not paid a salary (Adusei-Asante, 2012). The motivation to contest elections for this position is likely due to the perceived social status, community respect and influence, or, for some, as a pathway to entering regional/national politics. Consequently, most assembly members tend to have employment as their source of livelihood before contesting local politics because it is perceived to be an altruistic form of community service. Again, because the study site was an agricultural region and with several participants being from rural communities, it was expected they would likely have farming as an occupation. Participants were fairly evenly spread among the occupational distributions. The occupational background of participants in the present study is similar to Crawford (2009) study, where teaching and farming were the two most common occupations in his sample. In another study, Boateng (2017) reported that some of her participants were unemployed, which is not uncommon. According to the Ghana Statistical Service *2015 Labour Force Report*, in the study region the overall employment-to-population ratio was 72.6%, with 75.5% of males and 70.3% of females being employed (Ghana Statistical Service, 2016). These high rates help explain the employment status of participants in the present study.

## 7.3 Mental health literacy programme outcomes

### 7.3.1 Knowledge

One primary aim of the study was to evaluate if participants had improved knowledge of helpful interventions for depression and recognition of the disorder after participation in the programme (intervention group) or reading a brochure (control group). The main finding was that both groups demonstrated an improvement in knowledge and recognition of the disorder. The intervention group had greater improvement in their knowledge of helpful interventions for depression and recognition of the disorder than the control group, but the size of the difference was small and non-significant.

There are numerous educational interventions designed to improve knowledge about mental disorders, but there are differences in design, methods and content. These differences make a complete comparison of interventions challenging. However, the

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[74] Allowance for attending and participating in a meeting.

important concern is the evaluation of outcomes measures used in the present study. Evaluation of several intervention studies has shown there was significant improvement in knowledge of helpful interventions for depression (Jorm et al., 2004; Kitchener & Jorm, 2002; O'Reilly, Bell, Kelly, & Chen, 2011), but while these studies used the same programme content (Mental Health First Aid) their design, sample size and demographics were different. In contrast to the studies mentioned above, the present study revealed a small and non-significant improvement in knowledge of helpful interventions, similar to that of Svensson and Hansson (2014) and Jensen, Morthorst, Vendsborg, Hjorthøj, and Nordentoft (2016). These improvements may be attributed, in part, to the small (non-significant) differences in mean scores of both groups at baseline and follow-up. However, the intervention group's mean score at follow-up (5.66) was close to the total score (6). This mean score at follow-up indicates that participants had good knowledge of helpful interventions for depression, and this is an important influence in help-seeking attitudes and appropriate responses to people with mental disorders (Thornicroft et al., 2016). A ceiling effect[75] could help explain the small and non-significant improvement in participants' knowledge. That is, participants' good knowledge about helpful interventions at baseline limited the scope for improvement at follow-up (Svensson & Hansson, 2014). In addition, the majority of participants had tertiary level education, and this might have been a factor in the high mean scores at baseline and follow-up. It is noteworthy that a few months prior to the commencement of the intervention, there was an increase in reported suicide cases in Ghana (Hammond, 2017). In response to this situation, the Ghana Psychological Association advised the media on how to report these stories and provided public education about straightforward actions that could be taken to support people who were suicidal and those with mental disorders (www.myjoyonline.com, 2017). Perhaps, because they were community leaders, participants in the present study were already motivated to update their knowledge about helpful interventions for people with mental disorders and demonstrated this knowledge at baseline.

Regarding recognition of the disorder, in the present study both groups showed improvement at follow-up, but the intervention group demonstrated a more significant

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[75] The term ceiling effect is a measurement drawback that happens when the highest or close to the highest score on an outcome is achieved, thereby reducing the chances that the instrument has accurately measured the planned outcome (Salkind, 2010).

improvement than the control group. Various levels of improvement in recognising a disorder following an educational intervention have been reported (Jensen et al., 2016; Reavley et al., 2014b). Accurate recognition of a disorder seems to differ by education (Reavley et al., 2014b), gender (Burns & Rapee, 2006; Cotton et al., 2006), age (Olsson & Kennedy, 2010) and country (Jensen et al., 2016). Although the overall ability to recognise the disorder was low in the current study, 23.7% more participants in the intervention group were able to identify the disorder correctly at follow-up than in the control group, a percentage increase similar to that of Jensen et al. (2016) and Reavley et al. (2014a). A possible explanation for the low recognition rate in the current study may be because the cultural presentation of depression by Ghanaians differs slightly from the presentation in the vignette (Ohene & Addom, 2015)[76].

### 7.3.2 Attitudes

Another aim of the study was to evaluate if participation in the programme would improve participants' attitude towards people with mental disorders. The attitudes assessed were personal stigma, perceived stigma and community attitude toward people with mental illness. Overall, both groups demonstrated an improvement in attitudes at follow-up; however, the intervention group had greater improvement than the control group, but the size of the difference was small and non-significant.

#### *7.3.2.1 Personal stigma*

The main finding was that there was a reduction in personal stigma in both groups of participants at follow-up, with a slightly greater reduction in personal stigma among the intervention group than the control group. The finding that the reduction in personal stigma was only small might be due to the greater proportion of males in the study. Cook and Wang (2010) and Oliffe et al. (2016) found a higher proportion of their male participants approved stigmatising attitudes than their female counterparts and attributed the gender differences in stigmatising attitudes to mental health literacy. Although increased knowledge about mental disorders has an impact on stigma, a deep-rooted social phenomenon is difficult to change (Massey, Brooks, & Burrow, 2014). In the present study, the three-hour session for participants may have been insufficient to

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[76] See Chapter 2 Section .4.1.4.

achieve a significant reduction in personal stigma in the intervention group. This is consistent with participants' recommendation to extend the duration of the programme. Additional time may have allowed the participants to brainstorm, reflect on, and discuss possible ways of changing their attitudes to have beneficial change in their attitude towards people with mental disorders. The results might have been significant if a refresher or a booster session was incorporated into the programme to allow for a post-programme follow-up discussion among participants (Corrigan et al., 2014b). This additional interaction might have improved their attitudes and prolonged the positive impact of the programme (Knaak, Modgill, & Patten, 2014; Rubio-Valera et al., 2018). However, in this instance, the limited timeframe in which to conduct Ph.D. fieldwork, coupled with the limited logistical and financial resources, constrained the possibility of organising a booster session for participants.

Similar to the results of the present study, Jensen et al. (2016) reported that following their interventions, personal stigma among their participants did not reduce significantly. In contrast to the current study, Li et al. (2015) found that after engaging a group of community mental health staff in an 85-hour training programme, personal stigma was reduced among the trained staff. The authors attributed their findings to the content and duration of the programme, which aimed to make the staff appreciate mental disorder from a public health perspective, have more favourable attitudes, and be willing to initiate contact with people with mental disorders. Thus, it could be inferred that adequate knowledge about mental disorders and positive exposure to people with mental disorders may be a good learning experience for community leaders. This experience may provide a valuable resource to counteract negative attitudes in themselves and among community members (Eksteen, Becker, & Lippi, 2017) and promote favourable attitudes toward people with mental disorders.

#### *7.3.2.2 Perceived stigma (by others)*

In the current study, after the programme the intervention group perceived higher stigmatising attitudes by others in the community at follow-up than the control group. This perception could be explained by their participation in the training programme, which may have heightened their awareness of public stigma. This finding is consistent with a study by Roberts, Wiskin, and Roalfe (2008), who evaluated whether a role-play teaching method with undergraduate students focusing on mental disorders experienced by students would affect the development of favourable attitudes toward people with these conditions. The authors reported that, at follow-up, the students had lower personal stigma and high perceived stigma. A possible explanation for this finding was that the students might have demonstrated social desirability bias[77] or overrated the perceived stigma in the society.

Perceived stigma is a major barrier to seeking treatment and may affect the initiation and continuation of treatment (Pedersen & Paves, 2014). In their study, Pedersen and Paves (2014) noted that most students who had less favourable attitudes toward mental health treatment reported greater perceived stigma. The authors assumed that the reported perceived stigma could actually be a representation of participants' personal stigma, an assumption also shared by Griffiths et al. (2014). Griffiths et al. (2014) conducted a meta-analysis of 33 RCTs to evaluate the effectiveness of interventions in reducing various types of stigma, including perceived stigma, for different types of mental disorders. The authors concluded that while education and contact interventions could minimise personal stigma, they failed to decrease perceived stigma. The authors argued that, participants in those studies might have reported high levels of perceived stigma in the community, and as result it was difficult to detect a reduction in the estimated level of perceived stigma. Nevertheless, a successful reduction in perceived stigma in people with mental disorders has been reported by Villotti, Zaniboni, Corbière, Guay, and Fraccaroli (2018). In that research, participants with mental disorders were offered employment, and it was anticipated that their work and related social experience would influence them to reduce their perceived stigma. Following the intervention, the researchers claimed that improvement in participants' work and social skills resulted in them having better self-perception, which might have influenced them to report a reduction in their perceived stigma (Villotti et al., 2018). It can be inferred from this outcome in the study by Villotti et al. (2018) that people with mental disorders should be encouraged and provided with opportunities to pursue life goals.

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[77] Social desirability bias refers to the likelihood of research participants selecting responses they assume are more socially desirable or acceptable instead of opting for responses that are indicative of their true feelings or thoughts (Grimm, 2011).

### *7.3.2.3. Community Mental Health Ideology*

The impact of the programme on the CAMI sub-scales analysed (benevolence, social restrictiveness, and CMHI) was positive. Scores on the CMHI showed a significant medium effect, but the two other sub-scales had non-significant small effects. Following the programme, in the case of benevolence, the intervention group demonstrated a slightly higher level of empathy and willingness to help people with mental disorders than the control group. For social restrictiveness, the intervention group reported slightly higher beliefs than the control group, that people with mental disorders were not as dangerous as perceived, should be granted some level of autonomy in their lives, and be included in community activities. The overall findings of these two sub-scales may be attributed to the positive impact of the open discussions about participants' experiences with people with mental disorders and the problem-solving activity within the Story-bridge approach, where possession of favourable attitudes was critical in addressing the problem.

The main finding of the CMHI outcome measure was that, at follow-up, the intervention group exhibited a significantly more positive attitude towards the provision of community mental health facilities and services than the control group. Generally, satisfaction with and provision of mental health facilities and services is lacking in Ghana (Hagan, 2017; Roberts et al., 2014). Hence, an inference can be made to support participants' marked approval for the provision of these facilities and services. Recent initiatives in the country have included establishing mental health units at some regional and district hospitals, in addition to training a new category of mental health professional to provide support and service in rural communities (Kintampo, 2011)[78]. However, these initiatives have been beset by organisational and financial challenges, undermining their stated objectives (Boye, 2017). Similar challenges have contributed to the low quality of service in the three main psychiatric hospitals, two in the Greater Accra region and one in the central region (Ofori-Atta et al., 2014; Osei, 2018a). Because these hospitals serve all ten regions of Ghana, families have to travel long distances to gain access to these services, and frequently end up feeling frustrated and disappointed about the lack of essential amenities provided by these facilities, including medication for their relatives (Ofori-Atta et al.,

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[78] See Chapter 2, Section .4.1.3.

2014; Osei, 2018a). This frustration and disappointment could contribute indirectly to public stigma towards people with mental disorders (Opare-Henaku & Utsey, 2017). Likewise, for participants in the present study, post-programme experiences with people with mental disorders may have made them more aware of the need for these facilities and services in their communities. They may also have envisaged the benefits of these community facilities, saving them time and money from having to travel long distances, and not resorting to the use of traditional and spiritualist 'healing' approaches, where some human rights abuses have been reported (Mfoafo-M'Carthy & Grishow, 2017; Osei, 2018a). Local facilities would also allow family members to see their relative frequently and may play a useful role in their care, support and reintegration into the community. Therefore, it may be inferred that the programme may have prompted participants to change their attitude to wanting such facilities and services within their communities. The presence of these local facilities might encourage them to access these services without worrying about public stigma of receiving treatment for a mental disorder from a psychiatric facility (Kyei et al., 2014).

The need for community mental health facilities as an essential feature of mental health services is an important finding that fits with practice. First, it would integrate well with primary health care where the provision of general and mental health services can be offered at one local facility. Second, it would encourage people with mental health problems to seek help or treatment and reduce the high treatment gap (De Menil et al., 2012; Roberts et al., 2014). Third, it would help to decrease the stigma of mental disorders and related challenges of re-integration of people recovering from mental disorders back into the community. However, government and policymakers need to commit resources to establish more community mental health facilities to reap the associated benefits. These benefits would, in turn, contribute to reducing the burden of mental disorders which is currently equivalent to a 7% reduction in gross domestic product in Ghana (Osei, 2018b).

In contrast to the findings of the CAMI scale in the present study, Sibeko et al. (2018) conducted a mental health training programme for community health workers in South Africa, in eight three-hour sessions. Using the CAMI scale, the authors reported an overall significant improvement in attitudes except for authoritarianism. The authors explained that the improvement in attitudes might be a result of the approach they used in their programme. The researchers reported they initially examined the concept of local cultural beliefs about the causes of mental disorders with the participants. Then, they introduced the biopsychosocial causes of mental illness. They assumed this approach might have improved participants' attitudes. According to the authors, a plausible explanation for why there was no change in authoritarianism was attributed to the difficulty in changing the perception of unpredictability and violent natures of people with mental disorders (Casados, 2017).

### 7.3.3 Social distance

In the present study, there was a positive effect on social distance with the intervention and control groups demonstrating a reduction in desire for social distance. This reduction was more pronounced in the intervention group at follow-up and although it was small, it could be considered encouraging and vital considering that social distance is a deep-rooted behaviour that is still advocated by Ghanaian culture and some media (Abdullah & Brown, 2011). Historically, ethno-psychiatric work by Field (1958) in Ghana suggested that people perceived the onset of schizophrenia was associated with marriage of cousins within a family, a cultural practice among Akans. This practice has significantly decreased in frequency because urbanisation and globalisation have widened the social network for prospective marriage partners for young people; hence, they are now considerably less likely to marry close relatives (Kallinen, 2004).

Historically, there is also a belief that a generational curse on a family could be a possible explanation for public stigma of people with mental illness (Opare-Henaku & Utsey, 2017). As a consequence, it became common practice to inquire about the presence of mental illness and hereditary disease, in addition to good moral character, in a family before granting permission for marriage (Mensah, 2013). While uncommon now, this belief and practice, coupled with other negative stereotypes, has contributed primarily to social distance towards people with mental disorder. Because the Social Distance Scale refers to close or intimate social relationships, Giannakopoulos et al. (2012) argue that a short educational intervention may be ineffective in changing deep-rooted stereotypes that prevent people from engaging with individuals with mental disorder. Therefore, in the present study, the alteration in behavioural intentions of the intervention group, as indicated by lower social distance scores following participation in the programme, is encouraging and might be a result of the discussions and indirect contact (from the videos shown) with people with mental disorders. Furthermore, the open discussion and sharing of experiences of interacting with people with these disorders who may be friends, community, and family members, may also have contributed to these intentions. These findings support studies reporting that exposure to people with mental disorders, plus some level of knowledge about these disorders, leads to a broader understanding of these individuals and plays a decisive role in stigma change (Corrigan et al., 2012; Eksteen et al., 2017). Future studies should consider including direct and indirect contact with individuals with mental disorders and their families to enhance a broader understanding of people with mental disorders and consequently reduce or eliminate social distance.

In contrast to the finding of the present study, significant improvement in social distance has been reported in some studies, although the duration of the interventions differed (Kitchener & Jorm, 2002; Kitchener & Jorm, 2004). The programme in the current study was conducted over three hours, whereas the programme in the Kitchener and Jorm (2002) study took place over nine hours, and that in the Kitchener and Jorm (2004) study lasted 12 hours. Furthermore, the follow-up outcome assessment in the present study was at 12 weeks, while the follow-up was at six months in the Kitchener and Jorm (2002) study and five months in the Kitchener and Jorm (2004) study. The longer follow-up periods in these studies might have provided participants with enough experience about mental disorders and time to reflect on their attitudes and behavioural intentions to opt for less social distance from those with mental health issues.

Overall, in the current study, it could be inferred that participants' high levels of stigmatising attitudes at baseline may have been due to their poor mental health literacy and attitudes toward people with mental disorders. At follow-up, improvements in the intervention group's knowledge about mental disorders and harmful behaviours may have led to a reduction in stigmatising attitudes. Similarly, a reduction in the stigmatising attitudes of the control group at follow-up could be explained by a social desirability bias, which led to small and non-significant differences between the two groups. Morgan, Reavley, Ross, Too, and Jorm (2018) conducted a systematic review and meta-analysis of 62 RCTs to assess the evidence about which interventions were effective in decreasing public stigma towards people with mental disorders. The authors concluded that educational programmes generally led to small-to-medium improvements in stigmatising attitudes and less desire for social distance. They also found that reductions in stigmatising attitudes and social distance persisted for up to six months and beyond after an intervention. In addition, the authors pointed out that lengthy educational programmes in group or web-based formats were more effective than short text-based educational interventions (Morgan et al., 2018). Consequently, educational interventions may require clear and concise messages, more intervention activities and programme sustainability to improve knowledge and reduce the desire for social distance (Giannakopoulos et al., 2012). Even though improvements in knowledge and attitudinal outcomes in the present study were statistically non-significant and most effect sizes were small, except for CMHI, which was significant and had a medium effect size, some clinical significance can be attributed to these outcomes. Clinical significance can be related to behavioural intentions and policy[79]. With regards to behavioural intentions, improvement in knowledge about mental disorders may increase confidence in engaging with people with mental disorders and their families. Engagement may also increase help-seeking and improve attitudes and daily care and support for individuals with these disorders. These experiences may, in turn, also inculcate a more empathetic and less judgemental attitude towards people with mental disorders and their families, which are associated with reduced public stigma and social distance.

## 7.4 Andragogy within a problem-solving Story-bridge approach

Andragogy[80] guided the delivery of the programme based on a problem-solving Story-bridge approach, to help adults to acquire knowledge about and develop favourable attitudes toward people with mental disorders and their families. Andragogy fitted well with the Story-bridge approach because it encouraged active learner involvement (Bennetts, Elliston, & Maconachie, 2012). Assembly members stated they felt motivated to devote their time and energy to learn about people with mental disorders and this was necessary for the learning process to be effective. Assembly members were also ready to learn when they realised they could immediately apply new knowledge to their current roles. Hence, the learning process was linked to how the acquisition of new knowledge about and attitudes toward people with mental disorders would enhance these roles and

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[79] See Chapter 7 Section 8.3 about clinical significance of policy.

[80] See Chapter 4 Section .1.

experiences (Knowles, 1984b). Furthermore, assembly members preferred to be self-directing in learning and dealing with people with mental disorders. They also had numerous experiences to share, which were considered and incorporated into the learning process. For the programme to be life-oriented, the researcher, as a facilitator of learning (Knowles, 1990, p. 57), considered these andragogical assumptions in the Story-bridge approach. In the first instance, with probing questions, assembly members were able to justify for themselves why there was a need to devote their time and energy to the programme. When participants were encouraged to share their ideas in response to these questions, they commented about their lack of knowledge about people with mental disorders and their inability to deal with these individuals. Hence, assembly members satisfied themselves that they needed to acquire more knowledge about people with these conditions and their families, and how to deal with them in their communities.

The need to acquire new knowledge created a receptive environment for learning. A range of techniques was used to enhance this approach, including PowerPoint presentation, videos, printed material, discussion of real-life situations and the problem-solving Story-bridge approach. For example, open discussion was a way of encouraging the sharing of diverse perspectives on an issue. The discussion was facilitated in such a way that participants could seek clarification about their knowledge and attitudes and have a better understanding of people with mental disorders (Birzer, 2003). The mix of techniques was used to facilitate a high level of interaction among participants and to reinforce knowledge and ideas that were being shared (Birzer, 2003).

One feature of the andragogical approach involves tapping into the numerous and diverse experiences of adults in the learning process, (Knowles, 1968). In the present study, the combined experiences of the assembly members about engaging with and supporting people with mental disorders served as an essential learning resource in the problem-solving Story-bridge exercises. Participants were encouraged to share these experiences with the larger group after the issue of confidentiality had again been addressed. Subsequently, experiences were shared openly in a free and receptive environment without any sense of holding back information. While this process helped to develop participants’ communication skills and empathy, it also provided them with real-life stories or problems that they could relate to in their communities. They drew on these shared experiences because they felt there was a distinct possibility of them encountering similar situations in their communities and the ideas learnt would be useful in such circumstances.

The problem-solving Story-bridge exercises provided the adult participants with the opportunity to address the mental health problems of two families; one with a member with depression, the other with schizophrenia. This strategy connects well with andragogy, a principle of which indicates that adults are oriented toward immediate application of learned knowledge (Knowles, 1980). Following the presentation of ideas, knowledge, and attitudes about supporting people with mental disorders, there was a need to ensure that participants could effectively apply the knowledge in solving real-life problems. Hence, they were guided to link the scenes in the vignettes to form a story of a mental health problem and, subsequently, they were asked to use their acquired knowledge to address the problem. This strategy is consistent with the Knowles (1968) principle that adults have a self-concept of being self-directing and autonomous, and they should be encouraged to take responsibility and direct their learning process by connecting acquired knowledge and attitude to problem-solving. Hence, participants were placed in groups of no more than five members to address a particular mental health problem (Knowles, 1975). The critical lesson here was to enable participants to develop self-confidence in using the acquired knowledge and attitude in their routine daily life to support people with mental disorders.

Ghanaians are generally collectivist in decision-making (LeFebvre & Franke, 2013); however, the case is often different in a mental health crisis. In this situation, because of public stigma and lack of knowledge about people with mental disorders, neglect, social distance, ridicule and inappropriate care and support may ensue (Barke et al., 2011; Gyamfi et al., 2018). Participants stated they had exhibited similar reactions to people with mental disorders, including their family members, prior to taking part in the programme. These reactions were attributed to lack of knowledge about mental disorders and stigma. With the acquisition of new knowledge and more positive attitudes, participants became more confident and less anxious about participating in the problem-solving Story-bridge exercises. The exercises highlighted to them the importance of getting adequate and credible information about mental disorders before engaging with an individual with a disorder and their family.

Overall, the andragogical approach was a good fit for the problem-solving Story-bridge approach because it helped facilitate the adoption of interactive strategies that promoted open discussion and sharing of experiences about people with mental disorders. A drawback in the programme was it lacked the inclusion and sharing of the lived experience by a person with a mental disorder[81]. However, the sensitivity of the subject matter was maintained by some participants and the researcher sharing their own personal experiences of a family member with a mental disorder. This act prompted other participants to share their experiences, and those of others, about people with mental disorders.

## 7.5 Process evaluation

In the present study, a mixed method process evaluation was undertaken to examine the intervention group participants' perspectives on the usefulness, impact and methodological appropriateness of the programme.

### 7.5.1 Quantitative

A quantitative process evaluation was undertaken immediately after the treatment to assess the methodological appropriateness of the programme. Most participants were satisfied with the three-hour duration of the programme and the amount of time apportioned to each activity. The activities were tailored to be clear and concise without overwhelming them with too much information in the three-hour timeframe, and these activities helped sustain their interest and attention. Most participants commended highly the ways[82] in which they were provided with information. They found the discussion to be an effective method that changed their attitudes favourably. The majority indicated that the problem-solving Story-bridge exercises was very helpful in improving their understanding of people with depression and schizophrenia. These shared perspectives may be a consequence of different activities in the programmes. Because each activity involved interaction between the participants and the learning environment, it encouraged critical reflection on their assumptions and experiences that promoted active exchange of ideas to result in real learning (Clapper, 2010). These experiences might have influenced

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[81] See Chapter 7 Section 5.2 for a consideration of other strategies for an anti-stigma programme.

[82] See Chapter 6 Section.3.2

almost all the participants to express their willingness to recommend the programme to others.

Participants reported a strong intent to apply their acquired knowledge and attitude to engage with and support people with mental disorders and their families. Most reported having acquired useful information they could use in their routine role as assembly members. In the problem-solving Story-bridge exercises, participants in small groups were presented with an opportunity to reinforce knowledge and clarify ideas to problem-solve a mental health problem (Ozuah, 2005). In the process, they proposed and discussed a range of strategies before choosing the best strategies to address the problem. This exercise may have had a positive effect on participants and prompted most of them to report feeling more knowledgeable and confident to assist people with mental disorders and their families.

### 7.5.2 Qualitative

A qualitative process evaluation was also undertaken to obtain participants' perspectives of the usefulness of the programme in dealing with people with mental disorders and their families. Participants reported that before taking part in the programme they had an overwhelming fear of people with mental disorders because of perceived dangerousness. Fear of people with mental illness has been reported elsewhere. In a systematic review and meta-analysis of 16 studies to examine the development of public attitudes about mental illness, Schomerus et al. (2012) noted that perceived dangerousness was a common mental illness stereotype. Furthermore, Brockington, Hall, Levings, and Murphy (1993), as cited in Wood, Birtel, Alsawy, Pyle, and Morrison (2014), in a survey of 2,000 members of the general public in England, reported that 'fear and exclusion' was one of three leading stigmatising attitudes towards people with mental disorders. Similarly, fear also resulted in a range of consequences for people with mental disorders, including employers refusing to hire, denial of housing, and primary care providers delivering a lower standard of care (Corrigan, Druss, & Perlick, 2014a; Wong, Collins, Cerully, Yu, & Seelam, 2017).

Participants in the present study perceived the programme as useful because it helped dispel their fear of and change their attitudes toward people with mental disorders. Several studies have suggested that educational interventions, particularly face-to-face interactions, have beneficial effects on attitudinal change (Bingham & O'brien, 2018; Giannakopoulos et al., 2012; Jorm, Christensen, & Griffiths, 2005; Kitchener & Jorm, 2002). In the present study, a video presentation on myths about mental disorders revealed that people with these conditions were more likely to be victims than perpetrators of violence. Wehring and Carpenter (2011) highlight that individuals with schizophrenia living in community settings are 14 times more likely to be a victim than being arrested as a perpetrator of violence. On the other hand, an increased risk of violence has been linked to some people with schizophrenia. A systematic review and meta-regression analysis of 110 studies reporting on risk factors associated with violence in psychosis, including schizophrenia, concluded that hostile behaviour, recent substance misuse, non-adherence to psychological therapies, higher levels of poor impulse control, and non-adherence to medication were risk factors for violence. The strongest risk factor was a history of criminal behaviour (Witt, van Dorn, & Fazel, 2013). The video presentation in the present study about this myth was reinforced with contributions from participants who shared their experiences with the larger group. Participants could relate to this new knowledge and were encouraged to interact with people with mental disorders after the programme. This action changed their perception of fear and, consequently, attitudes toward people with mental disorders. This finding accords with that of a study by Kosyluk et al. (2016), who reported that contact intervention had a positive effect on reducing stigma.

Participants also regarded the programme as valuable because it had helped them improve their knowledge about people with depression and schizophrenia specifically, and mental disorders in general. This new knowledge, in turn, made them feel more confident and willing to engage with and support individuals with these conditions and their families. The aim of engaging was to provide support, encourage help-seeking and ensure a better quality of life for those affected by the disorder. These findings are consistent with those of studies by Patalay et al. (2017) and Li et al. (2015), who found that improvement in participants’ knowledge of mental disorders was associated with confidence in communicating with their colleague students about mental disorders and willingness to communicate with people with these disorders. In the present study, the improvement shown by participants in willingness to engage with people with mental disorders and their families seems to suggest that family education and support programmes should be incorporated and emphasised in the management of people with these disorders to promote better outcomes for them.

Participants also perceived the programme to be valuable in making them more empathetic and less judgemental towards people with mental disorders and their families. Lack of empathy and judgemental attitudes resulted from a belief that people with mental disorders were responsible for their condition (Mfoafo-M'Carthy & Grishow, 2017). This belief was compounded by a lack of understanding or appreciation of the difficulties being encountered by people with mental disorders (Mfoafo-M'Carthy & Grishow, 2017). These perceptions contributed to negative and distancing behaviours by people who otherwise might have been a source of vital support (Scrutton, 2015). Being empathetic and non-judgemental is associated with good mental health literacy (Goldney, Dunn, Dal Grande, Crabb, & Taylor, 2009) and may produce favourable attitudes toward people with mental disorders (Furnham & Sjokvist, 2017; Pascucci et al., 2017). In the present study, it could be inferred that following the programme, participants could enhance the quality of experiences for people with mental disorders. These experiences might help to improve their understanding of people with mental disorders, leading to a reported increase in empathy and non-judgemental attitudes in the survey and process evaluation.

In the evaluation, some participants made recommendations about the videos and the duration of the programme to enhance the achievement of the programme objectives. While participants agreed about the usefulness of the videos used in the programme, they recommended that videos situated within a Ghanaian context should be included in future. Such an initiative would assist in enhancing the provision of a culturally appropriate resource for improving knowledge and attitudes (Dalky, 2012). Based on their cultural orientations, participants would then be able to relate better with the conceptual background and cultural context of the videos to enhance their understanding of the issues being potrayed. In so doing, they would likely to be more willing to accept and practise the acquired knowledge and attitudes as active leaders in their communities (Chen, 2014). Similarly, participants also suggested extending the duration of the programme. Their suggestion was based on the impact of the large group discussions facilitated in the programme. While lessons were learnt from shared experiences, misperceptions were clarified, and ideas shared during these discussion sessions, participants felt that time constraints precluded a fuller discussion of issues.

Participants also recommended new strategies for improving mental health literacy in their communities, including training other community leaders and introducing community-wide mental health education. Training other non-assembly member community leaders presents another effective means of community empowerment (Theall et al., 2015) in dealing with and supporting people with mental disorders. These leaders, who are already dedicated and motivated to develop their community, would be a resource for providing support to assembly members in assisting people with mental disorders and their families. The participants also recommended that community-wide mental health education programmes should be introduced to improve community knowledge about and attitudes toward people with these disorders, which, in turn, would help reduce public stigma and discrimination.

## 7.6 Discussion of the overall findings

The findings of the current study indicate that the mental health literacy programme, centred on a problem-solving Story-bridge[83] approach, underpinned by andragogy, was effective in improving participants' knowledge about and attitudes toward people with mental disorders and their families. The brochure might have had a modest influence on participants in the control group. Nonetheless, participants who took part in the programme demonstrated higher level of knowledge about and favourable attitudes toward people with mental disorders. There is limited research available on the outcome of studies that have used the problem-solving Story-bridge approach in a mental health literacy program. Lubman et al. (2014) used the Story-bridge approach as an educational intervention but not in a cluster randomised trial or a RCT. Their approach, backed by a strengths-based problem-solving framework, focused on increasing knowledge about mental disorders and encouraging free and open discussion about mental disorders to reduce the stigma. A qualitative evaluation by the authors reported that participants had improved awareness of signs and symptoms of mental disorders and substance use problems, stigma related to help-seeking, and an increased willingness to seek help for mental health and substance use problems (Lubman et al., 2014).

In the present programme, various strategies were used to provide participants with knowledge and develop positive attitudes toward people with mental disorders. These

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[83] See Chapter 4. Section 3.8.2.

strategies helped sustain interest, reinforce available knowledge, and promote involvement and interaction among the participants. This is the first cluster randomised controlled trial to use a problem-solving Story-bridge approach with a group of community leaders (assembly members) to improve their knowledge about and attitudes toward people with mental disorders. The findings demonstrate that this culturally-sensitive approach could be an important strategy for educational interventions to improve mental health literacy in Ghana. Furthermore, except for cases of mental health crisis and disorders, the exercise was consistent with participants' way of dealing with issues in their homes. Participants were also provided with background information for use in the Story-bridge exercises. This information was provided in the context of real-life situations to enhance their understanding. Hence, participants were enthusiastic about taking an active part in the exercises, because they could relate to the issues being addressed in them.

The experiences from the Story-bridge exercises were apparent in the results of the qualitative process evaluation. Participants reported overcoming their fear of people with mental disorders, and, in turn, encouraging interaction with them. Again, because of the small and larger group interaction, participants developed empathy and non-judgemental attitudes towards people with these conditions. Furthermore, participants expressed that they felt confident about their knowledge of depression and schizophrenia, which encouraged them to engage willingly with, offer assistance to, and help foster better outcomes for, people with mental disorders and their families.

In summary, the quantitative results, which indicated an increase in mean scores of the outcome measures at follow-up, also reflected the value and usefulness of the programme as indicated by the qualitative findings of the study. These findings are consistent with the expectations of the problem-solving Story-bridge approach, underpinned by andragogy, which helps enhance better learning outcomes in adults. The positive results of the quantitative findings (improvement in knowledge and attitudes) are consistent with the qualitative findings (perceived value and usefulness of the programme), as reported by participants. Even though the quantitative findings of the study indicated statistically non-significant increases in almost all outcome measures, these improvements were also reflected in the qualitative findings, where participants expressed confidence to engage, encouraged help-seeking, and were more empathetic and less judgemental in their attitudes and behaviours towards people with mental disorders and their families.

## 7.7 Strengths and Limitations

### 7.7.1 Strengths

There were two strengths to the present study. The first strength is the use of a cluster randomised controlled trial as the study design. The design strengthened the methodological base of the study in several ways. Randomisation of participants into intervention and control clusters was conducted by the Principal Supervisor of the study without the involvement of the student researcher, preventing the introduction of bias in the randomisation process by the student. Again, because randomisation took place at the district rather than the individual level, it allowed us to physically separate the intervention and control groups, thus maintaining the integrity of the study. Furthermore, physical separation of the groups was beneficial because it prevented the contamination effect that could occur if participants from the intervention group communicated with the control group about the training programme, which had the potential to affect the outcomes of the study.

The second strength was the use of andragogy as the theoretical underpinning of the study. As an educational intervention for adults, andragogy was a suitable match for the intervention because it provided guiding principles to enhance the learning process of assembly members. It provided a guide to conduct activities at every stage; before the commencement of the learning process, during the learning process, and closure of the learning process. Andragogy provided a straightforward approach to facilitating the programme that yielded improvement in knowledge about and attitudes toward people with mental disorders. In addition, incorporation of a culturally-sensitive, problem-solving Story-bridge approach in the programme aligned well with the guiding principles of andragogy. The Story-bridge approach encouraged open and healthy discussion among participants, including drawing on their own life experiences, all of which is consistent with dealing with important issues in a Ghanaian community and family context. The discussions brought forth different perspectives on issues addressed, enhancing the learning process of participants.

### 7.7.2 Limitations

The present study has six limitations. The first and most important was the high rate of attrition at follow-up. Overall 19% of participants had withdrawn at follow-up, the majority from the control group. The attrition resulted in a reduced sample size and missing data at follow-up. This limitation may have made it harder to detect significant differences in study outcomes. The attrition rate may be reduced in a future study by providing reimbursement to participants to compensate for their time and inconvenience in taking part in the study (Polacsek, Boardman, & McCann, 2016). However, reimbursement should be appropriate to the study setting, nature and level of participation in order not to be considered excessive inducement or coercion and, hence, unethical (Polacsek et al., 2016).

The second limitation was the duration of the training programme. The three-hour duration of the intervention curtailed a fuller discussion of some issues that were raised. Although discussions were facilitated to ensure various views were heard, the inability of some participants to express their perspectives was noted, and as a consequence, some important perspectives may inadvertently have been missed. Two strategies are feasible to extend the duration of the programme in a future study; a session encompassing an entire day or, alternatively, two half-day sessions completed on separate days. In light of the geographical spread of participants, an entire day's programme may be more feasible, where participants could be provided with overnight accommodation; thus, avoiding the inconvenience of travelling on separate days.

The third limitation of the study was methodological shortcomings. Ideally, in conducting a cluster randomised controlled trial and process evaluation, including assessing treatment fidelity, different personnel should handle various aspects of the design to avoid bias in the entire process. However, as this study was conducted within a Ph.D. project timeframe, it was constrained by time, personnel and financial resources. Consequently, I recruited the participants, collected data at both time-points, delivered the programme and conducted the process evaluation. These activities allowed me to know which allocation group participants belonged to, and this might have had an influence on participants’ responses and could be interpreted as introducing bias into the process. That notwithstanding, several strategies were implemented to minimise this limitation. Randomisation of the districts was done solely by the Principal Supervisor of the study to avoid the influence of the student researcher. Research protocols were adhered to maintain the treatment fidelity of the study. Participants were also assured of their anonymity to encourage them to be comfortable with and freely share their responses. Regular Skype meetings and emails exchanges with the supervisors of the study was done to ensure that research protocols were being followed and unexpected methodological issues were addressed. In a future similar research, additional researchers should be involved to take up different roles in the study.

Another methodological shortcoming was the use of telephone calls to collect data at follow-up. At baseline, questionnaires were handed out to the participants to complete. However, at follow-up, the process took longer than expected mainly because it was difficult to meet face-to-face with all participants. In addition, travel time between communities and unanticipated difficulties, such as bad road surfaces, faulty vehicles and participants’ inability to keep appointments, limited the number of questionnaires handed out daily. These factors adversely affected the timelines for follow-up data collection. Hence, telephone calls were used, with items in the questionnaire being read aloud and responded to by telephone. This method of data collection might have affected participants’ responses to the questionnaire. However, the anonymity of the calls may have helped overcome any feeling of uneasiness in directly responding to the questionnaire. To minimise adverse effects of this process, participants were encouraged to put their telephone on speaker, or if they preferred, have earpieces connected to their telephones. They were encouraged to ask for items to be repeated as often as they wanted. Finally, I did my best to read the items slowly, loudly and clearly to avoid any misinterpretation and repeated questions where necessary.

A final methodological shortcoming was the two-stage approach to data collection in the process evaluation. Quantitative data were collected immediately after the training programme, while qualitative data were collected at 12-week follow-up. Even though it was more practicable to collect quantitative data at that time, this may not have given participants sufficient time to reflect on the programme. In contrast, the qualitative data collection time-point gave participants more time to review the programme. The process evaluation was comprehensive, and because of the mixed methods approach to this evaluation, this gave participants ample opportunity to comment about issues relating to the conduct and content of the intervention. In a future study, consideration should be given to collecting process evaluation data at the follow-up data collection time-point, thus allowing participants more time to reflect on the programme.

The fourth limitation was, by focusing on the assembly member population, which is largely male-dominated, this resulted in fewer female participants in the study. The fifth limitation was the voluntariness of participation in the qualitative interviews of the process evaluation and its findings, as participants may have felt compelled to provide favourable comments about the programme. The final limitation was the lack of involvement of a person with a mental disorder and his/her family representative. It was explained earlier that sharing of personal experiences of family members with mental disorders by the participants and I might have positively influenced participants' attitudes. Involvement of a person with a mental disorder and a family representative to share their personal experiences would also have been valuable in contributing this unique perspective to the discussion. The interaction of a person with a mental disorder, his/her family representative and the participants might have provided a compelling reason for participants to positively change their attitudes towards people with mental disorders and their family members.

## 7.8 Recommendations

There are four main recommendations of the study: improving the content and outcomes of the mental health literacy programme, improve community mental health literacy, mental health education in district assemblies, and research for change in the mental health system.

### 7.8.1 Improving the content and outcomes of the programme

In future intervention research to improve mental health literacy and reduce stigma towards people with mental disorders, researchers may consider a combination of education and contact components as part of the intervention. There are suggestions that a combination of education and contact elements in an intervention would be effective in improving mental health literacy and reducing stigma and social distance (Morgan et al., 2018). It is important to improve people’s knowledge about mental disorders so that they can recognise a person with a mental disorder and mental health crisis and arrange timely and appropriate responses. However, public stigma hinders timely and appropriate responses. Therefore, it would be useful to engage people in a programme that not only improves their knowledge but also helps them to deal with and decrease stigma for better outcomes. In this instance, the programme could include direct social interaction with a trained speaker with lived experience of mental disorder supported by an enthusiastic facilitator to guide the content and delivery of the programme (Corrigan et al., 2014b; Knaak et al., 2014).

Another recommendation to improve the content and outcomes of the programme is to extend its duration and to allow a longer follow-up period. Extending the duration would have two distinct benefits. First, there would be enough time to allow most participants to share their perspectives on issues, which may, in turn, influence and strengthen the positive attitudes created. Second, extending the duration of the programme would create an opportunity to include more discussion/activities. For example, activities that would help participants such as assembly members to develop proactive strategies for dealing with people with mental health issues, such as supporting community mental health literacy programmes or addressing human rights abuses of people with mental disorders in traditional and spiritual centres.

A final recommendation is the need to modify the vignette to suit the Ghanaian context. The Delphi technique[84] is a valuable method that could be adopted to help improve the cultural appropriateness of the vignette. It is also recommended that the videos used in the programme should be situated within a Ghanaian context so that participants can relate better to them and have a wider understanding of the issues being portrayed.

### 7.8.2 Improve community mental health literacy

The mental health literacy programme, based on a problem-solving Story-bridge approach, underpinned by andragogy, is recommended for use as an effective approach to improve community mental health literacy. There are other community leaders such as Unit committee members, sub-chiefs and some respected individuals who could be

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[84] “The Delphi method provides expert consensus on what constitutes best practice in scenarios that cannot be feasibly or ethically subject to a randomised controlled trial” (Hart, Jorm, Kanowski, Kelly, & Langlands, 2009, p. 3).

trained on knowledge about, and attitude towards people with mental disorders through this approach. In addition, specific target groups identifiable within the community, such as people with lived experience of mental disorder and their families, teachers, social workers, primary health care workers, students and media personnel, could also be involved in such programmes (Corrigan et al., 2014b; Dalky, 2012). A community resource such as the 'information centre' could also be used to disseminate mental health information in the communities. Furthermore, community-wide mental health education programmes could be introduced using mental health professionals assisted by mobile video vans[85] to improve community mental health literacy. Overall, the impact of such initiatives could, in the long-term, result in a reduced desire for social distance and discrimination, increase positive attitudes and better outcomes for people with mental disorders and their families.

### 7.8.3 Mental health education policy in district assemblies

All district assembly members in Ghana have a responsibility and commitment to manage and improve their local environments and this includes responsibilities related to mental health. However, lack of knowledge and stigma have meant that mental health issues may be relegated to the background in favour of physical health responsibilities. As evidenced in the present study, the programme has benefits that could be sustained by district assemblies. By instituting a mental health education policy that requires all assembly members to undertake training at the commencement of their term in office, their knowledge of mental health and disorders would be greatly improved. In effect, mental health issues would be given the necessary attention by assembly members, who would now have a better understanding of the issues and actions needed to deal with them. Furthermore, over time, mental health literacy among other community leaders would improve, and they could encourage positive and help-seeking attitudes for people with mental disorders and their families.

### 7.8.4 Research for change in the mental health system

Finally, recommendations are made for future research that may have the potential to bring change to the mental health system in Ghana. Although the programme had positive

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[85] A mobile outdoor cinema currently used at community functions.

effects on assembly members’ knowledge about and attitudes toward people with mental disorders, further research is needed. More research is required to assess the effectiveness of the programme with a larger group, over a wider geographical area, and with a longer follow-up period than the present study. A larger group should increase the statistical power of the analyses and make it easier to detect the effects of the programme. In addition, because most current assembly members are male, future research should consider providing equal opportunities for female community leaders, such as sub-chiefs, unit committee members or female leaders from churches, to participate. This is very important considering the effects mental disorders have on females and in light of their crucial role as primary caregivers in supporting family members with mental disorder. In addition, a booster session or refresher course with an extra timepoint for follow-up data collection could also be incorporated into the programme. The booster session would allow participants to examine their understanding and application of acquired knowledge and help reinforce positive attitudes toward people with mental disorder and their families. The additional data collection time-point would also help strengthen the overall rigour of the study. Furthermore, future research should consider the possibility of including individuals with mental disorders and their family representatives in the programme. This would address the limitation mentioned earlier and provide unique perspectives of the lived experience of mental disorder.

## 7.9 Conclusion

I developed an educational intervention for a mental health literacy programme based on a problem-solving Story-bridge approach. The activities and delivery of the programme were underpinned by the principles of andragogy. The effectiveness of the programme was evaluated in a cluster randomised controlled trial. The findings of the study suggest that the programme was somewhat effective in improving assembly members’ knowledge about and attitudes toward people with mental disorders, to the extent that some participants took effective steps to support these individuals with mental disorders and their families. The results provide preliminary findings about a mental health literacy programme and are, therefore, representative of only one study region. Confounding factors, such as number of regions, districts, sample size and methodological considerations, may affect generalisations and, therefore, the results should be interpreted accordingly.

In sub-Saharan Africa, the study contributes to the number of educational intervention studies in mental health literacy evaluated in cluster randomised controlled trials. The findings of the study suggest and add to knowledge about low mental health literacy and prevalence of stigma in this region and lend support to increased advocacy to intensify mental health education to address the situation. However, consistent with the Atilola (2015) recommendation, mental health education in sub-Saharan Africa should use validated instruments and materials that suit the multi-ethnic and multi-cultural context of the sub-region for optimal outcomes and valid conclusions. The present study adds to the body of knowledge and research into the use of the programme in improving knowledge about and attitudes toward people with mental disorders and their families, particularly in a Ghanaian context. The study contributes to knowledge about the link between improved mental health literacy and outcomes for people with these disorders and demonstrates the need to intensify mental health education in the country. This is especially significant because, in the present study, poor mental health literacy, public stigma and social distance towards people with these disorders were identified.

Successive governments in Ghana have given low priority to addressing mental health issues (Canavan et al., 2013; Roberts et al., 2014), but the usefulness of the programme suggests that the situation could be well improved. Pragmatic strategies could be taken to enhance mental health literacy and reduce stigma. Educational interventions, such as the present programme, offer a unique discussion and problem-based approach suited to the Ghanaian culture to educate people that could transform their knowledge, attitudes and behaviour. This change could also encourage government and lawmakers to take proactive measures, such as passing the legislative instrument of the *Mental Health Act*, 2012 (Act 849), and allocating sufficient resources and funds to the mental health sector. Taken together, these measures might improve mental health literacy and reduce stigma, and, in turn, enhance the quality of mental service delivery, decrease the treatment gap and the burden of mental disorders in Ghana.

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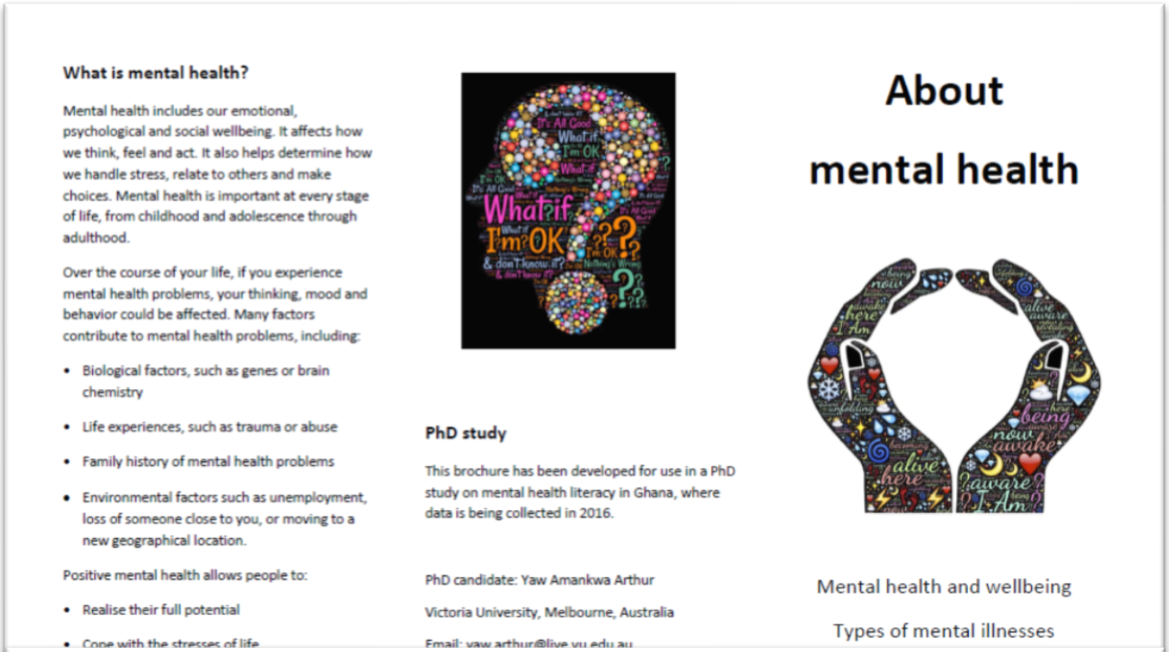
# Appendices

## Appendix 1

## Brochure for control group



### What is mental health?

Mental health includes our emotional, psychological and social wellbeing. It affects how we think, feel and act. It also helps determine how we handle stress, relate to others and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood.

Over the course of your life, if you experience mental health problems, your thinking, mood and behavior could be affected. Many factors contribute to mental health problems, including:

- Biological factors, such as genes or brain chemistry
- Life experiences, such as trauma or abuse
- Family history of mental health problems
- Environmental factors such as unemployment, loss of someone close to you, or moving to a new geographical location.

Positive mental health allows people to:

- Realise their full potential
- Cope with the stresses of life

### PhD study

This brochure has been developed for use in a PhD study on mental health literacy in Ghana, where data is being collected in 2016.

PhD candidate: Yaw Amankwa Arthur

Victoria University, Melbourne, Australia

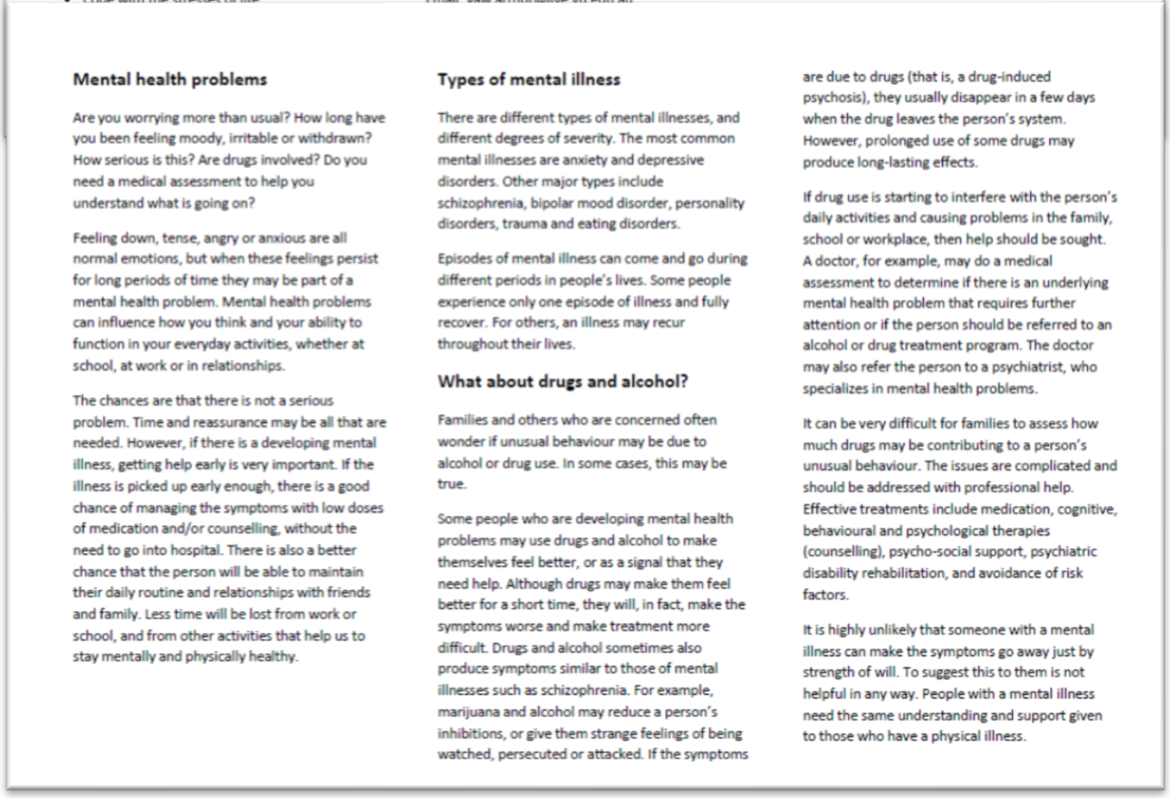
Email: yaw.arthur@live.vu.edu.au

# About

# mental health

Mental health and wellbeing

Types of mental illnesses



### Mental health problems

Are you worrying more than usual? How long have you been feeling moody, irritable or withdrawn? How serious is this? Are drugs involved? Do you need a medical assessment to help you understand what is going on?

Feeling down, tense, angry or anxious are all normal emotions, but when these feelings persist for long periods of time they may be part of a mental health problem. Mental health problems can influence how you think and your ability to function in your everyday activities, whether at school, at work or in relationships.

The chances are that there is not a serious problem. Time and reassurance may be all that are needed. However, if there is a developing mental illness, getting help early is very important. If the illness is picked up early enough, there is a good chance of managing the symptoms with low doses of medication and/or counselling, without the need to go into hospital. There is also a better chance that the person will be able to maintain their daily routine and relationships with friends and family. Less time will be lost from work or school, and from other activities that help us to stay mentally and physically healthy.

### Types of mental illness

There are different types of mental illnesses, and different degrees of severity. The most common mental illnesses are anxiety and depressive disorders. Other major types include schizophrenia, bipolar mood disorder, personality disorders, trauma and eating disorders.

Episodes of mental illness can come and go during different periods in people's lives. Some people experience only one episode of illness and fully recover. For others, an illness may recur throughout their lives.

### What about drugs and alcohol?

Families and others who are concerned often wonder if unusual behaviour may be due to alcohol or drug use. In some cases, this may be true.

Some people who are developing mental health problems may use drugs and alcohol to make themselves feel better, or as a signal that they need help. Although drugs may make them feel better for a short time, they will, in fact, make the symptoms worse and make treatment more difficult. Drugs and alcohol sometimes also produce symptoms similar to those of mental illnesses such as schizophrenia. For example, marijuana and alcohol may reduce a person's inhibitions, or give them strange feelings of being watched, persecuted or attacked. If the symptoms are due to drugs (that is, a drug-induced psychosis), they usually disappear in a few days when the drug leaves the person's system. However, prolonged use of some drugs may produce long-lasting effects.

If drug use is starting to interfere with the person's daily activities and causing problems in the family, school or workplace, then help should be sought. A doctor, for example, may do a medical assessment to determine if there is an underlying mental health problem that requires further attention or if the person should be referred to an alcohol or drug treatment program. The doctor may also refer the person to a psychiatrist, who specializes in mental health problems.

It can be very difficult for families to assess how much drugs may be contributing to a person's unusual behaviour. The issues are complicated and should be addressed with professional help. Effective treatments include medication, cognitive, behavioural and psychological therapies (counselling), psycho-social support, psychiatric disability rehabilitation, and avoidance of risk factors.

It is highly unlikely that someone with a mental illness can make the symptoms go away just by strength of will. To suggest this to them is not helpful in any way. People with a mental illness need the same understanding and support given to those who have a physical illness.

# Appendix 2

## Diagnostic criteria for Major Depressive Disorder

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure. (**Note:** Do not include symptoms that are clearly attributable to another medical condition).

1. Depressed mood most of the day, nearly every day, as indicated by either, subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (**Note:** In children and adolescents, can be irritable mood.)
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).
3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month) or decrease or increase in appetite nearly every day. **(Note:** In children, consider failure to make expected weight gain).
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
9. Recurrent thoughts of death (not just of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a plan for committing suicide.

**B.** The symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning.

**C**. The episode is not attributable to the physiological effects of a substance or to another medical condition.

**Note:** Criteria A-C represent a major depressive episode.

**Note.** Responses to a significant loss (e.g., bereavement, financial ruin, losses from a natural disaster, a serious medical illness or disability) may include the feelings of intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss noted in criterion A, which may resemble a depressive disorder. Although such symptoms may be understandable or considered appropriate to the loss, the presence of a major depressive episode in addition to the normal response to a significant loss should be carefully considered. This decision inevitably requires the exercise of clinical judgement based on the individual’s history and the cultural norms of the expression of distress in the context of the loss.

**D**. The occurrence of a major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.

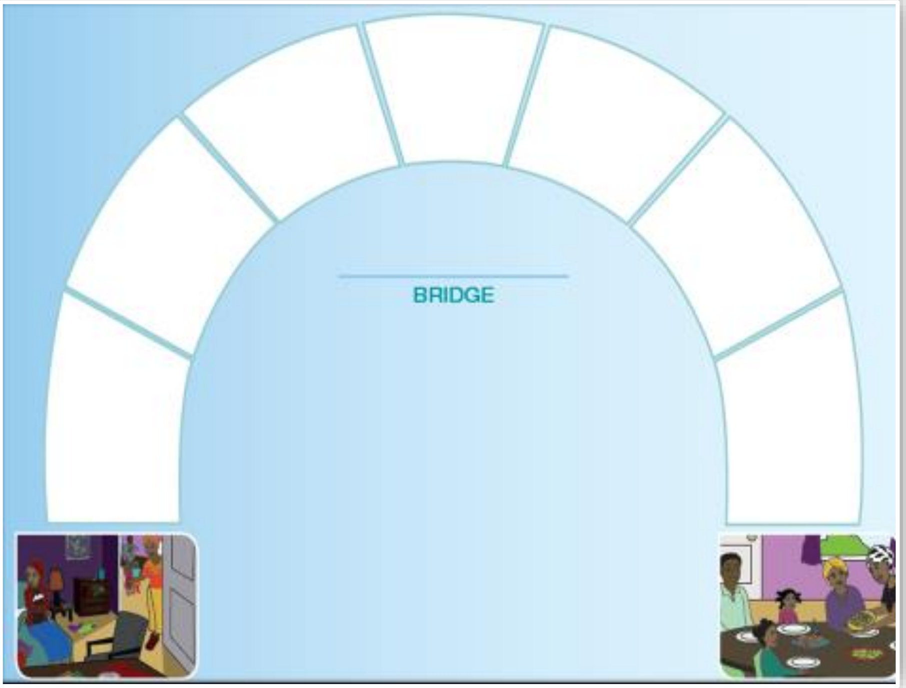
**E.** There has never been a manic episode or a hypomanic episode. Note: This exclusion does not apply if all of the manic-like or hypomanic-like episodes are substance induced or are attributable to the physiological effects of another medical condition.

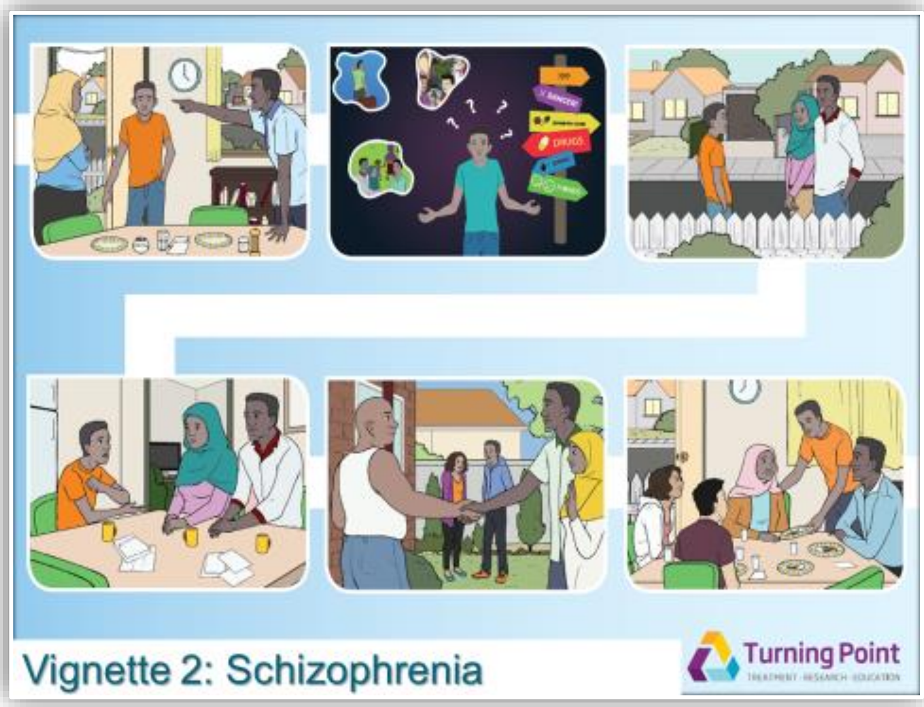
Source: American Psychiatric Association, (2013). Diagnostic and statistical manual of mental disorders (DSM-5®) (pp 160-161) Arlington, United States: American Psychiatric Publishing.

# Appendix 3

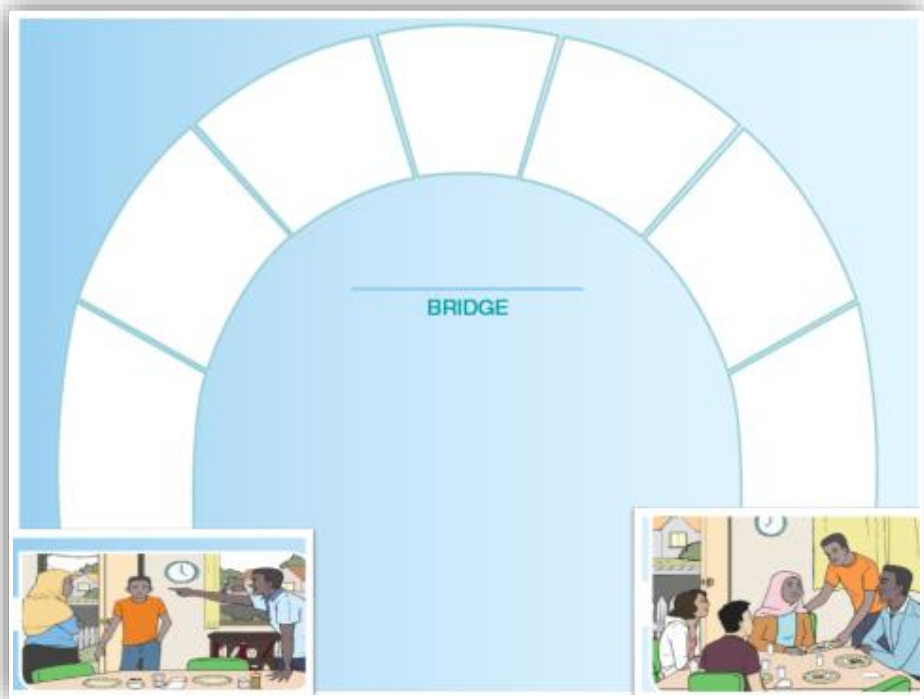
## Story-bridge vignettes

Vignette 1: Depression





Vignette 2: Schizophrenia



## Appendix 4

## Mental Health Literacy programme guide

1. Introduction (5 minutes)

- Self-introduction
- Housekeeping
  - Although this is an education course, because of the nature of the topic, participants may share some personal information. This information should remain within the group and not be disclosed elsewhere.
  - Mental health issues can be difficult so we need to be gentle with ourselves and others.
  - If you need leave the room during a session, just let the person next to you know if you are okay or not.
  - Information about resources to seek mental health assistance; psychiatrist, regional hospital, mental health units in district hospitals will be available in…...

Session 1 (20 minutes)

2. Ask participants, how they would explain 'mental disorders to a child / young person?

- Activity: Introduce the exercise about beliefs and myths about mental disorder: https://www.youtube.com/watch?v=fPJgkSkUN7g
- Encourage discussion with probing questions.
- Show global, Ghana and regional statistics of mental health disorders.

Session 2 (25 minutes)

3. **Activity:** Show the video about depression

- https://www.youtube.com/watch?v=HDmxsv8XwlY ----
- Is depression 'un-African'? Mildred Apenyo
- Encourage participants to share their thoughts about the topic.
- Invite participants to express what they know about signs, symptoms and treatment options for depression.
- Introduce participants to signs, symptoms and treatment options for depression using PPT

Session 3 (30 minutes)

**4**. Activity: Show the video about schizophrenia:

- https://www.youtube.com/watch?v=f6CILJA110Y
- A tale of mental disorder | Elyn Saks | TED Tal
- Encourage participants to share their thoughts about the topic.
- Invite participants to express what they know about signs, symptoms and treatment options for schizophrenia.
- Introduce participants to signs, symptoms and treatment options for schizophrenia using PPT.

Break (15 minutes)

Final session (90 minutes)

**5**. Activity: Problem-solving Story-bridge approach: A vignette of a mental health problem (Lubman et al 2014)

Depression: 50 minutes

- Explain the problem-solving Story-bridge approach to participants.
- Show each scene in the vignette to participants and lead them to discuss the story behind each scene.
- Present the scenes in the vignette in the chronological order in which they appear.
- Group participants for the exercise.
- Instruction: Ask participants to discuss how the scenes worked together as a story and identify strategies or ideas that were used in each scene of the vignette.
- Presentation and discussion: Allow each group to present their strategy for each scene for discussion before moving on the next scene.

Compare strategies and note common themes on a white board.

***Schizophrenia: 40 minutes***

- Show each scene in the vignette to participants and lead them to discuss the story behind each scene.
- Present the scenes in the vignette in the chronological order in which they appear.
- Group participants for the exercise.

- Instruction: Ask participants to discuss how the scenes worked together as a story and identify strategies or ideas that were used in each scene of the vignette.
- Presentation and discussion: Allow each group to present their strategy for each scene for discussion before moving on the next scene.
- Compare strategies and note common themes on a white-board.

6. Conclusion (10 minutes)

Encourage participants to identify and summarise the knowledge, skills and attitudes they have acquired from the programme.

- Take-home message: Early and appropriate interventions result in better outcomes for people experiencing mental health problems.
- Take-home message: Knowledge about mental disorders facilitates helpful interventions and attitudes towards persons with these disorders.

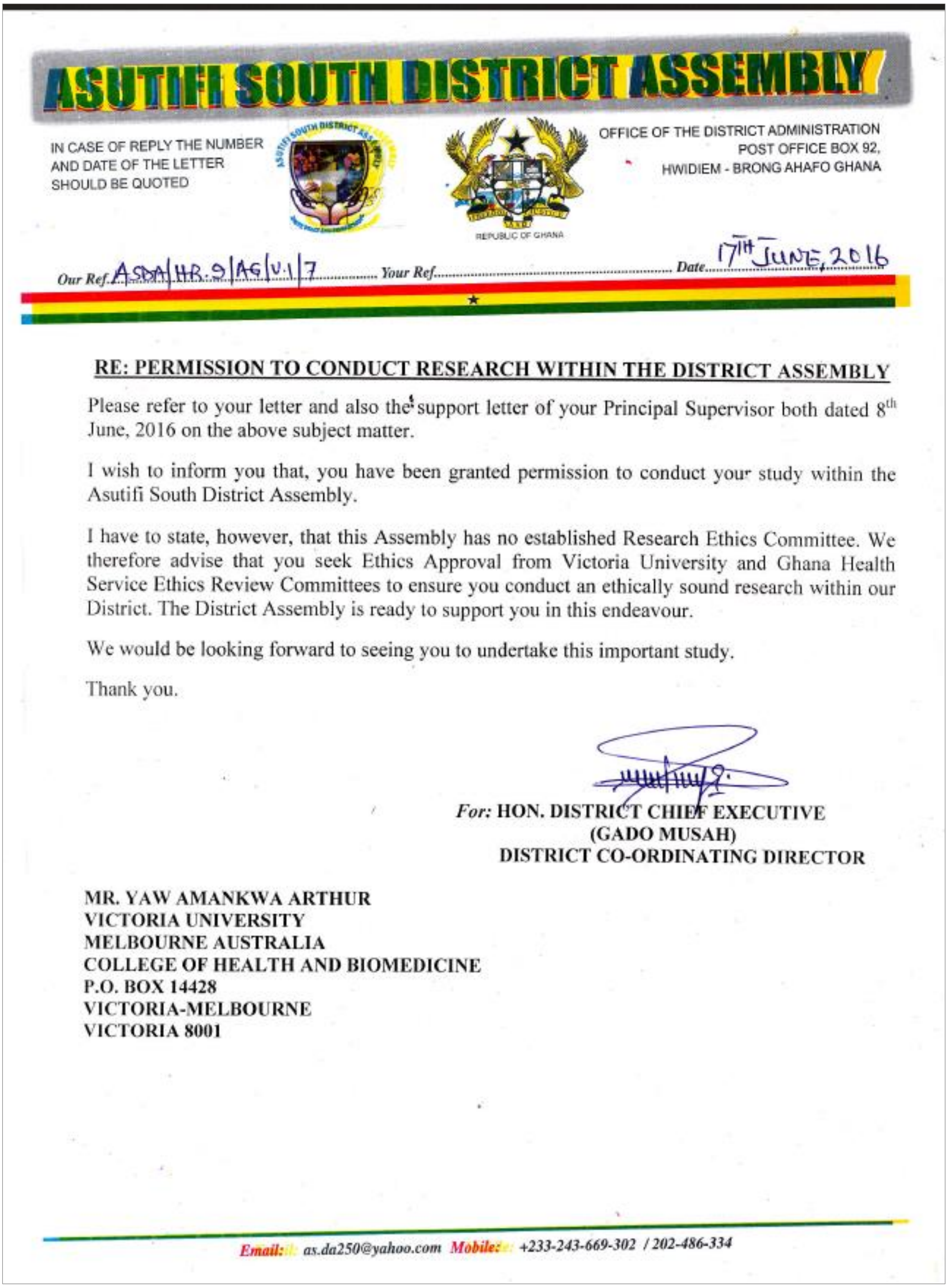
7. Appreciation: Thank participants for their time.

- Remind them about the follow-up survey and process evaluation interviews in 12 weeks.

**8. Refreshment**

## Appendix 5

## Approval letters from district assemblies



ASUTIFI SOUTH DISTRICT ASSEMBLY

IN CASE OF REPLY THE NUMBER
AND DATE OF THE LETTER
SHOULD BE QUOTED

REPUBLIC OF GHANA

OFFICE OF THE DISTRICT ADMINISTRATION
POST OFFICE BOX 92,
HWIDIEM - BRONG AHAFO GHANA

*Our Ref.* ASDA/HR.9/AG/V.1/7 *Your Ref.*............ *Date* 17TH JUNE, 2016

**RE: PERMISSION TO CONDUCT RESEARCH WITHIN THE DISTRICT ASSEMBLY**

Please refer to your letter and also the support letter of your Principal Supervisor both dated 8th June, 2016 on the above subject matter.

I wish to inform you that, you have been granted permission to conduct your study within the Asutifi South District Assembly.

I have to state, however, that this Assembly has no established Research Ethics Committee. We therefore advise that you seek Ethics Approval from Victoria University and Ghana Health Service Ethics Review Committees to ensure you conduct an ethically sound research within our District. The District Assembly is ready to support you in this endeavour.

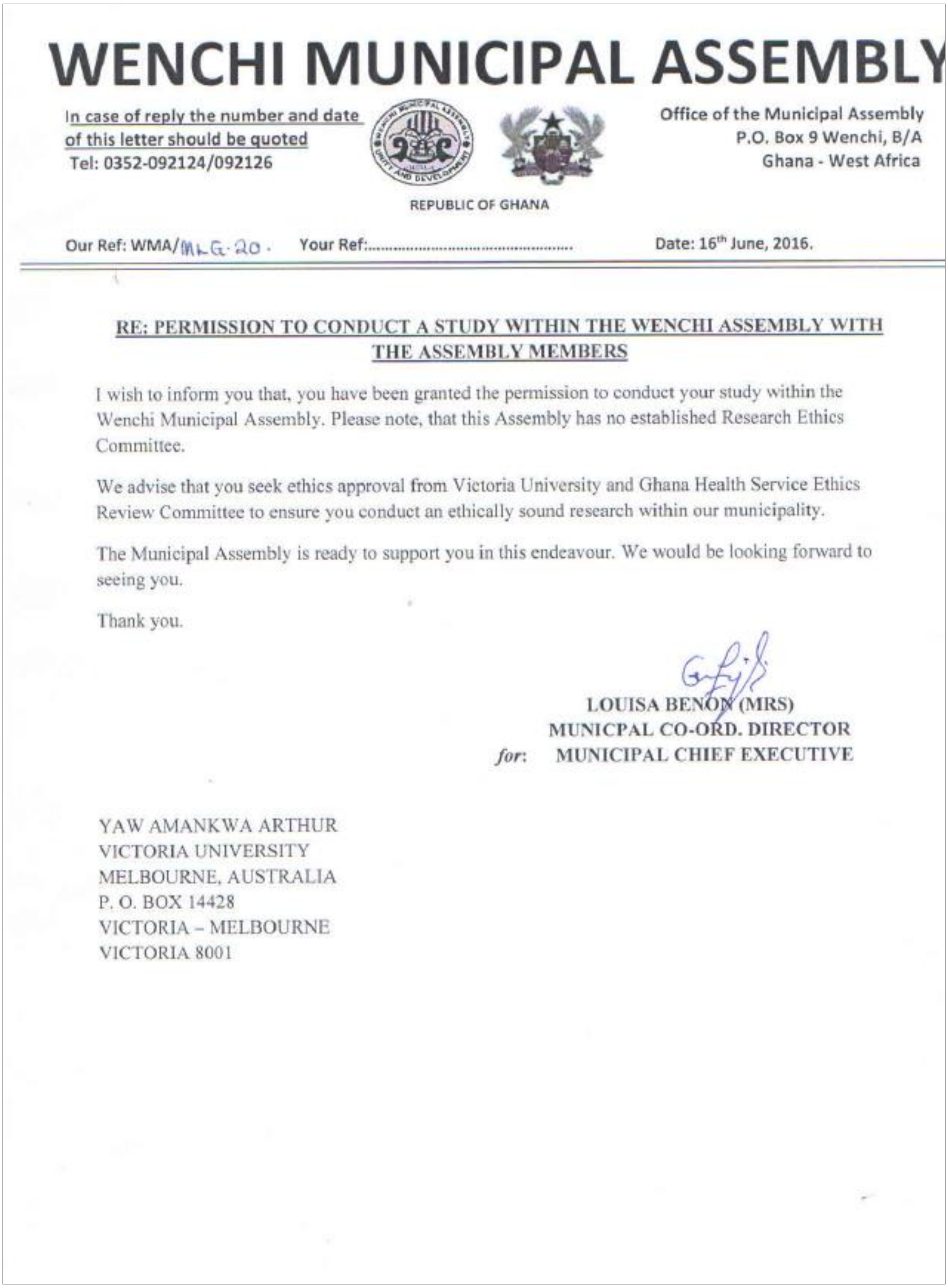
We would be looking forward to seeing you to undertake this important study.

Thank you.

*For:* **HON. DISTRICT CHIEF EXECUTIVE**
**(GADO MUSAH)**
**DISTRICT CO-ORDINATING DIRECTOR**

**MR. YAW AMANKWA ARTHUR**
**VICTORIA UNIVERSITY**
**MELBOURNE AUSTRALIA**
**COLLEGE OF HEALTH AND BIOMEDICINE**
**P.O. BOX 14428**
**VICTORIA-MELBOURNE**
**VICTORIA 8001**

*Email:* *as.da250@yahoo.com* *Mobile:* *+233-243-669-302 / 202-486-334*



# WENCHI MUNICIPAL ASSEMBLY

In case of reply the number and date
of this letter should be quoted
Tel: 0352-092124/092126

Office of the Municipal Assembly
P.O. Box 9 Wenchi, B/A
Ghana - West Africa

REPUBLIC OF GHANA

Our Ref: WMA/MLG.20. Your Ref:........................................... Date: 16th June, 2016.

## RE: PERMISSION TO CONDUCT A STUDY WITHIN THE WENCHI ASSEMBLY WITH THE ASSEMBLY MEMBERS

I wish to inform you that, you have been granted the permission to conduct your study within the Wenchi Municipal Assembly. Please note, that this Assembly has no established Research Ethics Committee.

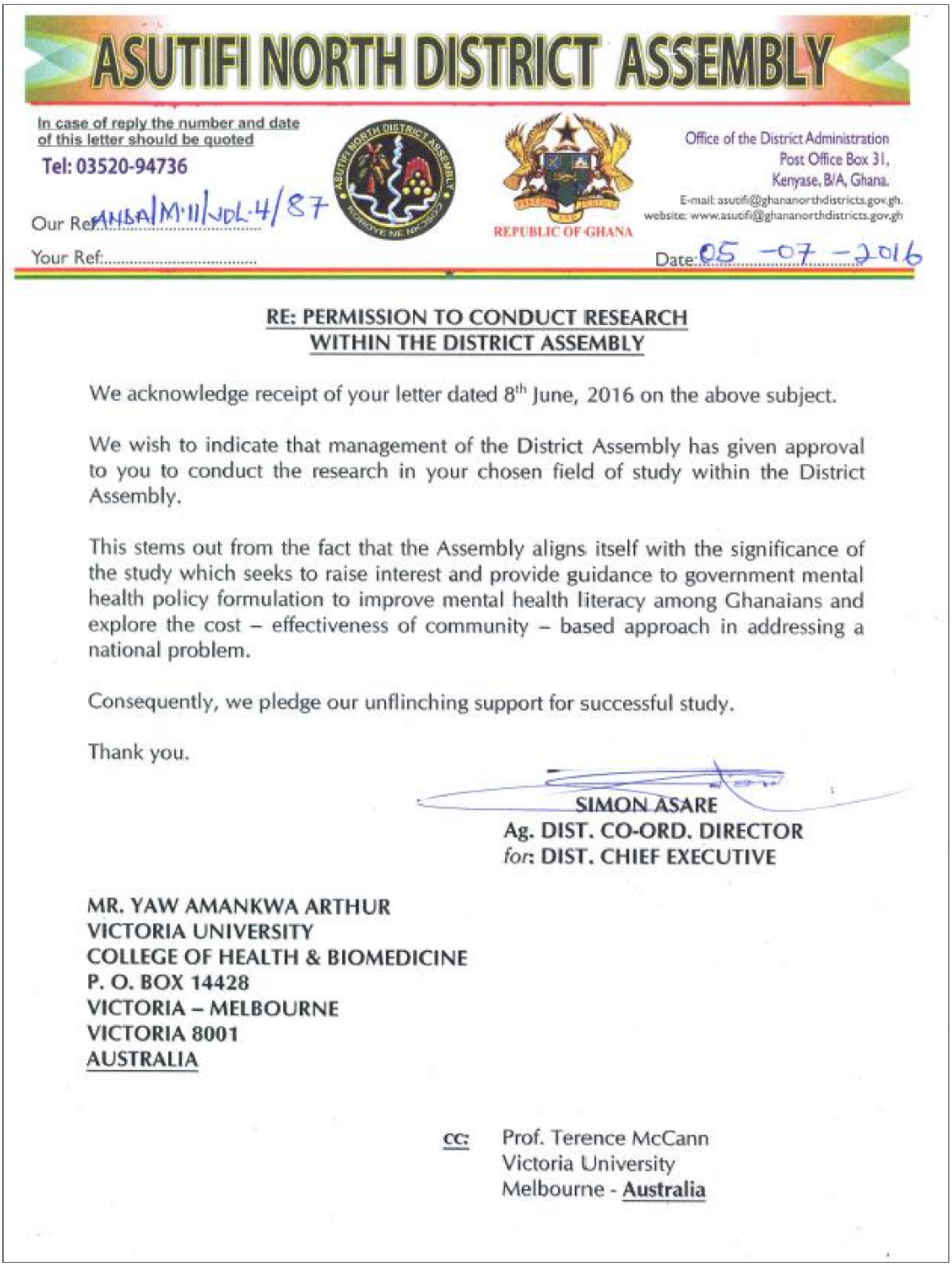
We advise that you seek ethics approval from Victoria University and Ghana Health Service Ethics Review Committee to ensure you conduct an ethically sound research within our municipality.

The Municipal Assembly is ready to support you in this endeavour. We would be looking forward to seeing you.

Thank you.

**LOUISA BENON (MRS)**
**MUNICPAL CO-ORD. DIRECTOR**
*for:* **MUNICIPAL CHIEF EXECUTIVE**

YAW AMANKWA ARTHUR
VICTORIA UNIVERSITY
MELBOURNE, AUSTRALIA
P. O. BOX 14428
VICTORIA – MELBOURNE
VICTORIA 8001



ASUTIFI NORTH DISTRICT ASSEMBLY

In case of reply the number and date
of this letter should be quoted
Tel: 03520-94736

REPUBLIC OF GHANA

Office of the District Administration
Post Office Box 31,
Kenyase, B/A, Ghana.
E-mail: asutifi@ghananorthdistricts.gov.gh.
website: www.asutifi@ghananorthdistricts.gov.gh

Our Ref: ANDA/M.11/VOL.4/87
Your Ref:.................................
Date: 05-07-2016

**RE: PERMISSION TO CONDUCT RESEARCH WITHIN THE DISTRICT ASSEMBLY**

We acknowledge receipt of your letter dated 8th June, 2016 on the above subject.

We wish to indicate that management of the District Assembly has given approval to you to conduct the research in your chosen field of study within the District Assembly.

This stems out from the fact that the Assembly aligns itself with the significance of the study which seeks to raise interest and provide guidance to government mental health policy formulation to improve mental health literacy among Ghanaians and explore the cost – effectiveness of community – based approach in addressing a national problem.

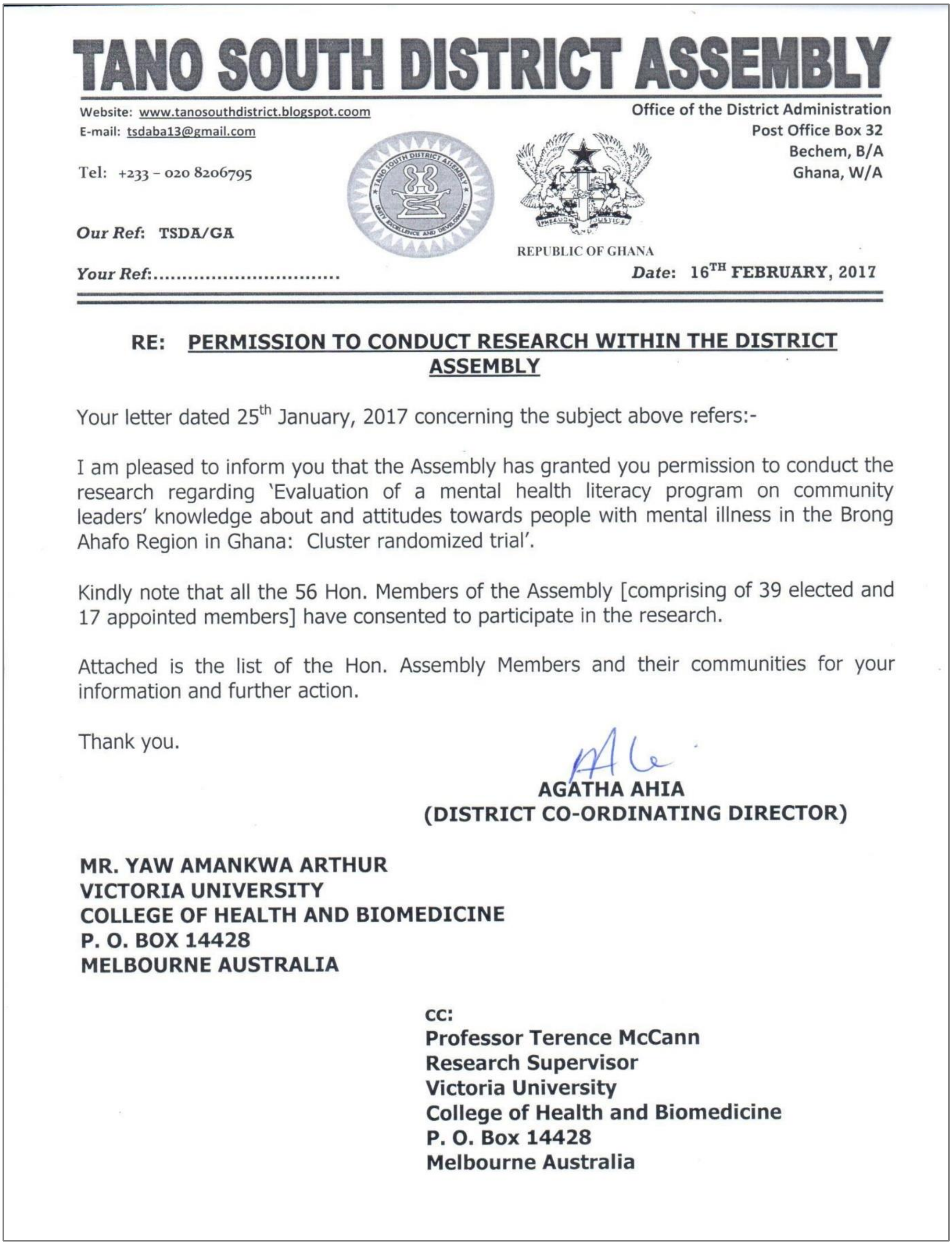
Consequently, we pledge our unflinching support for successful study.

Thank you.

**SIMON ASARE**
**Ag. DIST. CO-ORD. DIRECTOR**
*for*: **DIST. CHIEF EXECUTIVE**

**MR. YAW AMANKWA ARTHUR**
**VICTORIA UNIVERSITY**
**COLLEGE OF HEALTH & BIOMEDICINE**
**P. O. BOX 14428**
**VICTORIA – MELBOURNE**
**VICTORIA 8001**
**AUSTRALIA**

**cc:** Prof. Terence McCann
Victoria University
Melbourne - **Australia**



**TANO SOUTH DISTRICT ASSEMBLY**

Website: www.tanosouthdistrict.blogspot.coom
E-mail: tsdaba13@gmail.com

Tel: +233 – 020 8206795

Office of the District Administration
Post Office Box 32
Bechem, B/A
Ghana, W/A

REPUBLIC OF GHANA

***Our Ref:*** **TSDA/GA**

***Your Ref:*................................**

***Date:*** **16TH FEBRUARY, 2017**

**RE: PERMISSION TO CONDUCT RESEARCH WITHIN THE DISTRICT ASSEMBLY**

Your letter dated 25th January, 2017 concerning the subject above refers:-

I am pleased to inform you that the Assembly has granted you permission to conduct the research regarding 'Evaluation of a mental health literacy program on community leaders' knowledge about and attitudes towards people with mental illness in the Brong Ahafo Region in Ghana: Cluster randomized trial'.

Kindly note that all the 56 Hon. Members of the Assembly [comprising of 39 elected and 17 appointed members] have consented to participate in the research.

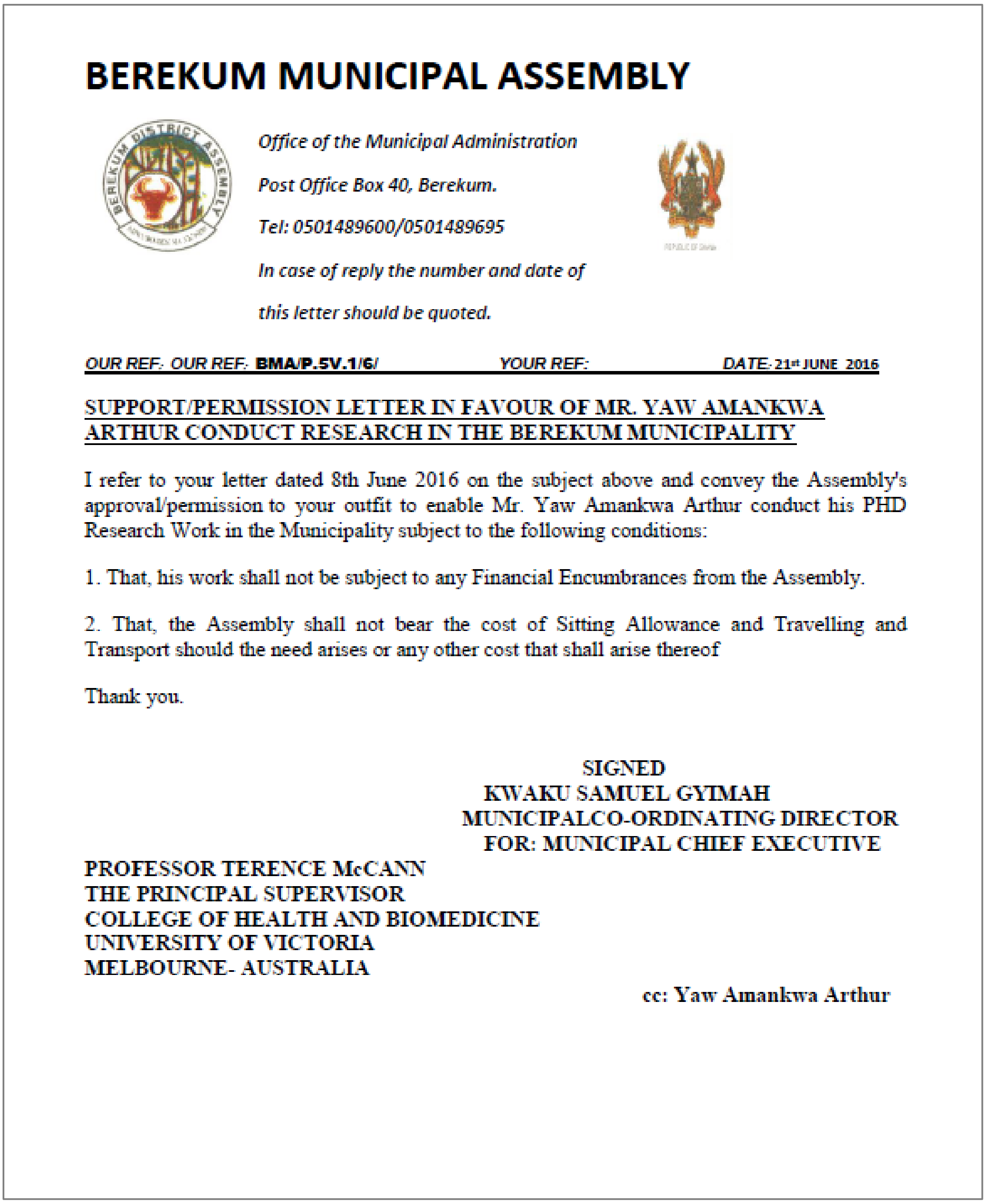
Attached is the list of the Hon. Assembly Members and their communities for your information and further action.

Thank you.

**AGATHA AHIA**
**(DISTRICT CO-ORDINATING DIRECTOR)**

**MR. YAW AMANKWA ARTHUR**
**VICTORIA UNIVERSITY**
**COLLEGE OF HEALTH AND BIOMEDICINE**
**P. O. BOX 14428**
**MELBOURNE AUSTRALIA**

**CC:**
**Professor Terence McCann**
**Research Supervisor**
**Victoria University**
**College of Health and Biomedicine**
**P. O. Box 14428**
**Melbourne Australia**



**BEREKUM MUNICIPAL ASSEMBLY**

*Office of the Municipal Administration*

*Post Office Box 40, Berekum.*

*Tel: 0501489600/0501489695*

*In case of reply the number and date of*

*this letter should be quoted.*

*OUR REF: OUR REF:* **BMA/P.5V.1/6/** *YOUR REF:* *DATE:* 21st JUNE 2016

**SUPPORT/PERMISSION LETTER IN FAVOUR OF MR. YAW AMANKWA ARTHUR CONDUCT RESEARCH IN THE BEREKUM MUNICIPALITY**

I refer to your letter dated 8th June 2016 on the subject above and convey the Assembly's approval/permission to your outfit to enable Mr. Yaw Amankwa Arthur conduct his PHD Research Work in the Municipality subject to the following conditions:

1. That, his work shall not be subject to any Financial Encumbrances from the Assembly.

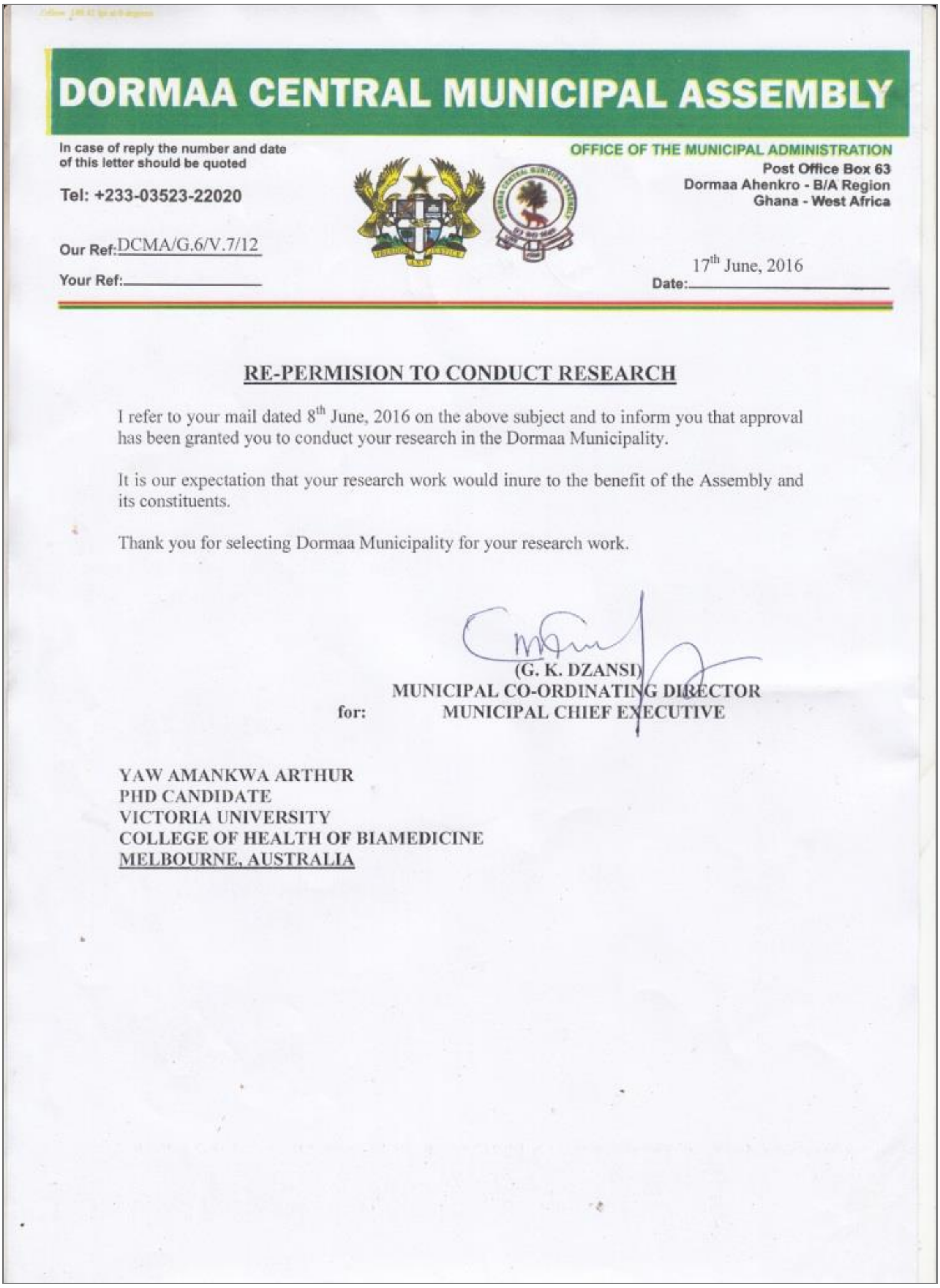
2. That, the Assembly shall not bear the cost of Sitting Allowance and Travelling and Transport should the need arises or any other cost that shall arise thereof

Thank you.

**SIGNED**
**KWAKU SAMUEL GYIMAH**
**MUNICIPALCO-ORDINATING DIRECTOR**
**FOR: MUNICIPAL CHIEF EXECUTIVE**

**PROFESSOR TERENCE McCANN**
**THE PRINCIPAL SUPERVISOR**
**COLLEGE OF HEALTH AND BIOMEDICINE**
**UNIVERSITY OF VICTORIA**
**MELBOURNE- AUSTRALIA**

**cc: Yaw Amankwa Arthur**



**DORMAA CENTRAL MUNICIPAL ASSEMBLY**

In case of reply the number and date
of this letter should be quoted

Tel: +233-03523-22020

OFFICE OF THE MUNICIPAL ADMINISTRATION
Post Office Box 63
Dormaa Ahenkro - B/A Region
Ghana - West Africa

Our Ref: DCMA/G.6/V.7/12

Your Ref:

Date: 17th June, 2016

## RE-PERMISION TO CONDUCT RESEARCH

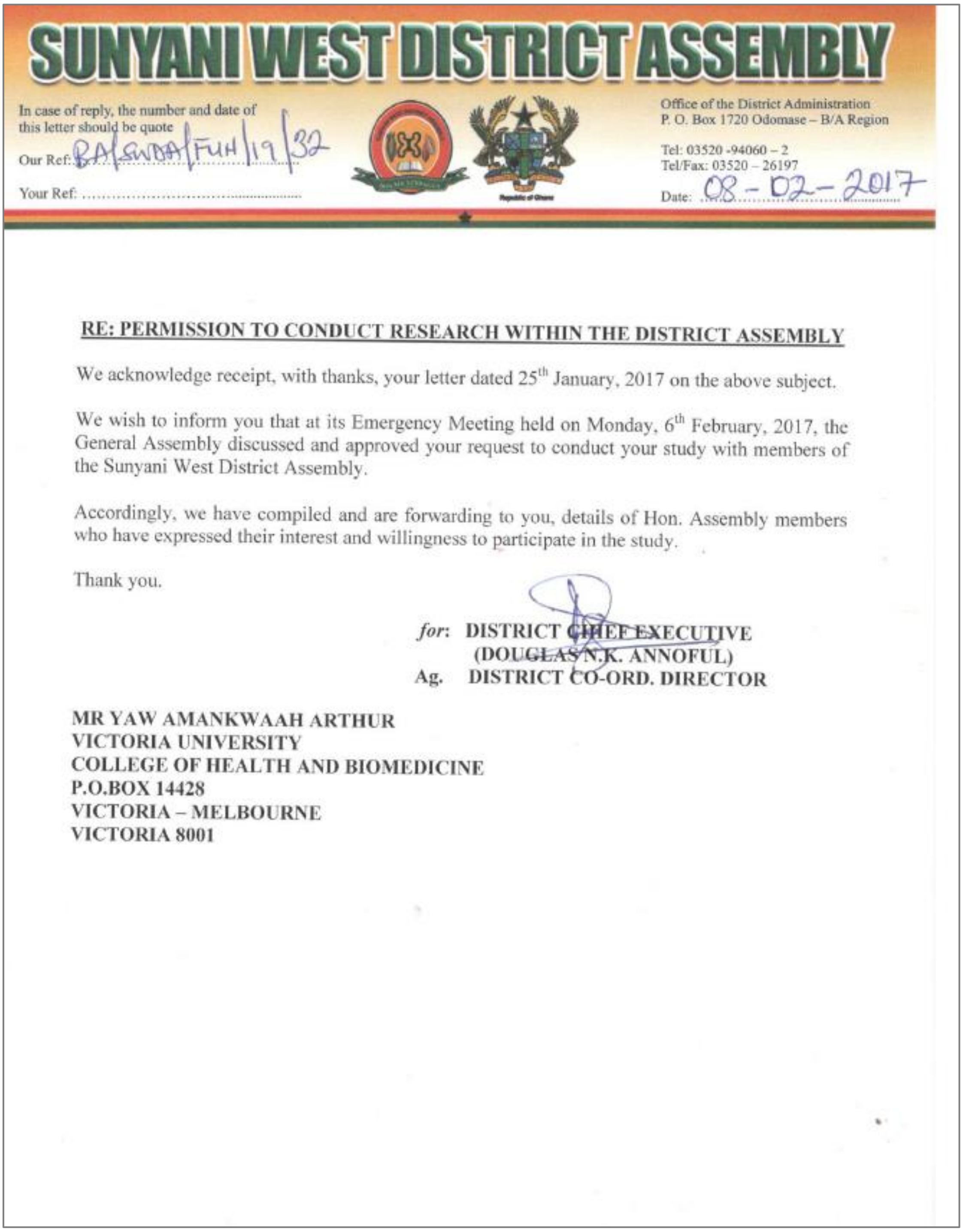
I refer to your mail dated 8th June, 2016 on the above subject and to inform you that approval has been granted you to conduct your research in the Dormaa Municipality.

It is our expectation that your research work would inure to the benefit of the Assembly and its constituents.

Thank you for selecting Dormaa Municipality for your research work.

(G. K. DZANSI)
MUNICIPAL CO-ORDINATING DIRECTOR
for: MUNICIPAL CHIEF EXECUTIVE

YAW AMANKWA ARTHUR
PHD CANDIDATE
VICTORIA UNIVERSITY
COLLEGE OF HEALTH OF BIAMEDICINE
MELBOURNE, AUSTRALIA



SUNYANI WEST DISTRICT ASSEMBLY

In case of reply, the number and date of
this letter should be quote
Our Ref: BA/SWDA/FUH/19/32
Your Ref: ……………………………………

Office of the District Administration
P. O. Box 1720 Odomase – B/A Region

Tel: 03520 -94060 – 2
Tel/Fax: 03520 – 26197
Date: 08 - 02 - 2017

**RE: PERMISSION TO CONDUCT RESEARCH WITHIN THE DISTRICT ASSEMBLY**

We acknowledge receipt, with thanks, your letter dated 25th January, 2017 on the above subject.

We wish to inform you that at its Emergency Meeting held on Monday, 6th February, 2017, the General Assembly discussed and approved your request to conduct your study with members of the Sunyani West District Assembly.

Accordingly, we have compiled and are forwarding to you, details of Hon. Assembly members who have expressed their interest and willingness to participate in the study.

Thank you.

*for*: **DISTRICT CHIEF EXECUTIVE**
**(DOUGLAS N.K. ANNOFUL)**
Ag. **DISTRICT CO-ORD. DIRECTOR**

**MR YAW AMANKWAAH ARTHUR**
**VICTORIA UNIVERSITY**
**COLLEGE OF HEALTH AND BIOMEDICINE**
**P.O.BOX 14428**
**VICTORIA – MELBOURNE**
**VICTORIA 8001**

**TANO NORTH DISTRICT ASSEMBLY**

In case of reply the number an date
of this letter should be quoted
Tel: 03520-97842
Email: tanonorthdistass@yahoo.com

REPUBLIC OF GHANA

Office of the District Administration
Post Office Box 88
Duayaw - Nkwanta B/A
Ghana - West Africa

Our Ref: TNDA/ Your Ref: ........ Date: 28TH JUNE, 2016

**RE-PERMISSION TO CONDUCT A STUDY WITHIN THE TANO NORTH DISTRICT WITH THE ASSEMBLY MEMBERS**

I wish to inform you that, permission has been granted per this letter to conduct your study within the Tano North District.

However since the Assembly has no established Research and Ethics Committee I will crave your indulgence to seek approval from the Ghana Health Service Ethics Review Committee to ensure that you are guided by the ethics of the service to conduct an ethically sound research within our jurisdiction.

The District Assembly will endeavour to support you in this your undertaking.

Looking forward to hear favourably from you in this regard.

**KWESI MINTAH-BENYIN**
**DISTRICT CO-ORDINATING DIRECTOR/TNDA)**

**MR. YAW AMANKWA ARTHER**
**VICTORIA UNIVERSITY**
**MELBOURNE, AUSTRALIA**
**P.O. BOX 14428**
**VICTORIA-MELBOURNE**
**VICTORIA 8001**

# TECHIMAN NORTH DISTRICT ASSEMBLY

*In case of reply, the number and date of this letter should be quoted*

Our Ref. No:..............................

Your Ref. No: ..............................

Email: [illegible]

REPUBLIC OF GHANA

TECHIMAN NORTH DISTRICT ASSEMBLY
OFFICE OF THE ADMINISTRATION
P. O. BOX 3
TUOBODOM, B/A

***Date:*** *21st June, 2016*

## PERMISSION TO CONDUCT RESEARCH WITHIN THE DISTRICT ASSEMBLY

Please refer to your letter dated 8th June, 2016 on the above subject, we wish to inform you that your request has been accepted.

We look forward to receiving you to the District.

Thank you.

*For:* **DISTRICT CHIEF EXECUTIVE**
**(FATI SAAKA)**
**DISTRICT CO-ORD DIRECTOR**

YAW AMANKWAH ARTHUR
VICTORIA UNIVERSITY
COLLEGE OF HEALTH AND BIOMEDICINE
VICTORIA-MELBOURNE

## Appendix 6

## Consent form

# CONSENT FORM

## FOR PARTICIPANTS INVOLVED IN RESEARCH

### INFORMATION TO PARTICIPANTS

We would like to invite you to take part in a study entitled: **Evaluation of a mental health literacy program on community leaders' knowledge about and attitudes towards people with mental illness in Ghana: Cluster randomised trial**

In this study, we wish to evaluate if participation in a mental health literacy program will increase your knowledge about, and attitudes toward, people with mental illness. The findings from this study can be used to inform and guide improvements in programs and policies relating to mental health literacy and mental health services in Ghana.

You will be placed in one of the two groups.

- In the first group, each participant in the study will answer a questionnaire. You will then take part in a three-hour training program about mental health literacy. You will again be asked to answer a questionnaire twelve weeks after completing the training program and invited to take part in a twenty minute (approximately) interview either face-to-face or by telephone. The interview will take about 20 minutes and will be audio-recorded. Interview questions will relate to your experience of, and about the usefulness of, the training program. You will also be asked how you have used knowledge acquired during the training program in your routine dealings about people with mental illness.
- In the second group, each participant will answer a questionnaire and will be given a booklet to read about mental health issues. After twelve weeks, each participant will answer the same questionnaire. Participants will then be offered more learning materials about mental illness.

All information will be treated as confidential.

### CERTIFICATION BY PARTICIPANTS

I, ..........................................................................................................................

Of..........................................................................................................................

certify that I am at least 18 years old and that I am voluntarily giving my consent to participate in the study; Evaluation of a mental health literacy program on community leaders' knowledge about and attitudes towards people with mental illness in Ghana: Cluster randomised trial, which is being conducted at Victoria University by Professor

Terence McCann and Dr Gayelene Boardman. I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by the student investigator, Yaw Amankwa Arthur, and that I freely consent to participation involving the below mentioned procedures:

- Completing a questionnaire
- Participating in an interview (For group 1participants).
- Participating in the training program (For group 1 participants)

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way. I have been informed that the information I provide will be kept confidential.

Signed: .......................................................................... Date:................................

Any queries about your participation in this project may be directed to:

The student investigator, Mr. Yaw Amankwa Arthur, on 0244 727268 / +61411211271

The associate investigator, Dr Gayelene Boardman, on +61 9919 2396

The chief investigator, Professor Terence McCann, on +61 9919 2325

The field supervisor (Ghana), Dr. Kofi Amo- Kodieh, on +233 208194063

**Role of Dr Amo-Kodieh:**

1. In the event of an unresolved adverse event, facilitate a participant’s access to professional support.
2. Participants can contact Dr Amo-Kodieh directly to discuss any concerns about the conduct of the study.
3. Dr Amo-Kodieh will provide field supervision to the student researcher, but will not have access to the raw data from the study.

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone +61 3 9919 4781 or 4461.

## Appendix 7

## Participant information

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

# INFORMATION

## FOR PARTICIPANTS INVOLVED IN RESEARCH

We would like to invite you to participate in a research project entitled: Evaluation of a mental health literacy program on community leaders' knowledge about and attitudes towards people with mental illness in Ghana: Cluster randomised trial.

This project is being conducted by Yaw Amankwa Arthur, as part of his PhD study, under the supervision of Professor Terence McCann and Dr Gayelene Boardman from the College of Health and Biomedicine at Victoria University.

### Project explanation

Through this study, we wish to evaluate if participation in a mental health literacy program will increase your knowledge about, and attitudes towards, people with mental illness. The findings from this study can be used to inform and guide improvements in programs and policies relating to mental health literacy and mental health services in Ghana.

### What will I be asked to do?

You will be placed in one of the two groups.

- In the first group, each participant in the study will answer a questionnaire and will be offered a training program on mental illness. The training program is an interactive session on depression and schizophrenia with the aid of PowerPoint presentation and teaching and learning materials. Twelve weeks after the training, participants will be asked to answer the same questionnaire. Participants will also be invited to participate in a face-to-face or a telephone interview. The interview will take about 20 minutes and will be audio-recorded. A numerical code will be used to identify you. Questions will relate to your experience of the training program and about the usefulness of the program. Participants will also be asked how you have used knowledge acquired during the training in your routine dealings about people with a mental illness.
- In the second group, each participant in the study will answer a questionnaire and will be given a booklet on mental health issues to read. After twelve weeks, each participant will answer the same questionnaire. Participants will then be offered more learning materials about mental illness.

All information will be treated as confidential and individual participants will not be identified in the Ph.D. thesis, conference presentations or in any publications.

Participation in this study is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are **free to withdraw** from the study at any stage. If you decide to take part, you will be given this participant information and asked to sign a consent form. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your work as an assembly member.

## What will I gain from participating?

Your participation in this study will contribute to a deeper understanding of using mental health literacy programs to improve knowledge about and attitudes towards mental illness in Ghana. It will provide you with an opportunity to improve your knowledge about, and attitudes towards, people with mental illness. Furthermore, it will keep you well informed of mental health issues to assist you in your role as an assembly member your district.

## How will the information I give be used?

The information we get from questionnaires and interviews will form the basis of the student investigator's Ph.D. thesis. Information gathered will also be used for publications and conference presentations and you will not be identified in any of these.

## What are the potential risks of participating in this project?

We do not anticipate any risks to participants in this project. However, you may feel a range of emotions when sharing your experiences of mental health problem or crises situation. In the unlikely event that you become too upset, the student investigator will break the training program or interview and offer basic emotional support before continuing. If needed, the student investigator will arrange for you to access professional support.

## How will this project be conducted?

After confirmation of your participation, that is signing the consent form, you will be asked to complete a questionnaire. You will then take part in a three-hour mental health literacy program or you will be given a booklet on mental health issues to read. You will again be asked to answer a questionnaire twelve (12) weeks after the training program and invited to participate in a twenty-minute (approximately) interview either face-to-face or by telephone.

## Who is conducting the study?

**Chief investigator**
Professor Terence McCann
Tel: +61 9919 2325
Email: terence.mccann@vu.edu.au

**Field Supervisor (Ghana)**
Dr. Kofi Amo- Kodieh
Tel: +233 208194063
Email: dramokodieh@gmail.com

**Student investigator**
Yaw Amankwa Arthur
Tel:+233 24727268 /+61411211271
Email: yaw.arthur@live.vu.edu.au

**Associate investigator**
Dr Gayelene Boardman
Tel: +61 9919 2396
Email: gayelene.boardman@vu.edu.au

## Role of Dr Amo-Kodieh:

In the event of an unresolved adverse event, facilitate a participant's access to professional support. Participants can contact Dr Amo-Kodieh directly to discuss any concerns about the conduct of the study. Dr Amo-Kodieh will provide field supervision to the student researcher, but will not have access to the raw data from the study.

Any queries about your participation in this project may be directed to the chief or associate investigator listed above. If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (0061) 9919 4781 or 4461.

**Appendix 8**

# Attitudes and beliefs about mental health problems: Professional and public views questionnaire

Thank you for agreeing to take part in this study. You do not have to answer to all the questions, but it will be much appreciated if you do. You should not take much time to consider your response to each question. Your first reaction is usually the best answer. All answers will be treated with complete confidentiality**.**

## Section 1: Demographics

1. Gender Male ☐ 1
Female ☐ 2

2. What age are you (to nearest year)? Under 30 ☐
30-39 ☐
40-49 ☐
50-59 ☐
60 or over ☐

3. What is your <u>highest</u> level of completed professional education?

SHS ☐ 1
HND ☐ 2
Teacher's Certificate ☐ 3
Diploma ☐ 4
Degree ☐ 5
Master's Degree ☐ 6
PhD ☐ 7

4. What is your marital status? Married…… Single……

5. What is your occupation? ………………………………………………………..

**Section 2: Hypothetical scenario**

This vignette concerns a hypothetical person called Yaw. The box below describes how he has been recently.

> *Yaw is 30 y ears old. He has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. Yaw doesn't feel like eating and has lost weight. He can't keep his mind on his work and puts off making any decisions. Even day-to-day tasks seem too much for him. This has come to the attention of Yaw's boss who is concerned about his lowered productivity. Yaw feels he will never be happy again and believes his family would be better off without him. Yaw has been so desperate, he has been thinking of ways to end his life.*

6. From the information given, what, if anything, is wrong with Yaw?

.......................................................................................................................

.......................................................................................................................

.......................................................................................................................

7. Do you think Yaw needs professional help? Yes ☐ No ☐

8. If Yaw were to seek help from any of the following people, is it likely to be helpful, harmful or neither for him? *(Tick one response for each line)*

| | *Helpful* | *Neither* | *Harmful* |
|---|---|---|---|
| a. A typical GP or family doctor | ☐1 | ☐2 | ☐3 |
| b. A typical pharmacist | ☐1 | ☐2 | ☐3 |
| c. A counsellor | ☐1 | ☐2 | ☐3 |
| d. A mental health nurse | ☐1 | ☐2 | ☐3 |
| e. Telephone counselling service, e.g. Lifeline | ☐1 | ☐2 | ☐3 |
| f. A psychiatrist | ☐1 | ☐2 | ☐3 |
| g. A clinical psychologist | ☐1 | ☐2 | ☐3 |
| h. Help from him close family | ☐1 | ☐2 | ☐3 |
| i. Help from some close friends | ☐1 | ☐2 | ☐3 |
| j. A naturopath or a herbalist | ☐1 | ☐2 | ☐3 |
| k. The clergy, a minister or a priest | ☐1 | ☐2 | ☐3 |
| l. Yaw tries to deal with him problems on him own | ☐1 | ☐2 | ☐3 |
| m. A social worker | ☐1 | ☐2 | ☐3 |

9. If Yaw were to take one of the following medications, is it likely to be helpful, harmful or neither for him? *(Tick one response for each line)*

| | | *Helpful* | *Neither* | *Harmful* |
|---|---|---|---|---|
| a. | Vitamins and minerals, tonics or herbal medicines | ☐1 | ☐2 | ☐3 |
| b. | Analgesics | ☐1 | ☐2 | ☐3 |
| c. | Antidepressants | ☐1 | ☐2 | ☐3 |
| d. | Antibiotics | ☐1 | ☐2 | ☐3 |
| e. | Sedatives / hypnotics | ☐1 | ☐2 | ☐3 |
| f. | Antipsychotic agents | ☐1 | ☐2 | ☐3 |
| g. | Anti-anxiety agents | ☐1 | ☐2 | ☐3 |

10. If Yaw were to undertake any of the following, is it likely to be helpful, harmful or neither for him? *(Tick one response for each line)*

| | | *Helpful* | *Neither* | *Harmful* |
|---|---|---|---|---|
| a. | Becoming more physically active | ☐1 | ☐2 | ☐3 |
| b. | Reading self-help books | ☐1 | ☐2 | ☐3 |
| c. | Getting out and about more | ☐1 | ☐2 | ☐3 |
| d. | Courses on relaxation, stress management, meditation or yoga | ☐1 | ☐2 | ☐3 |
| e. | Cutting out alcohol altogether | ☐1 | ☐2 | ☐3 |
| f. | Counselling | ☐1 | ☐2 | ☐3 |
| g. | Cognitive-behavioural therapy | ☐1 | ☐2 | ☐3 |
| h. | Psychodynamic psychotherapy | ☐1 | ☐2 | ☐3 |
| i. | Hypnosis | ☐1 | ☐2 | ☐3 |
| j. | Admission to a psychiatric ward of a hospital | ☐1 | ☐2 | ☐3 |
| k. | Electroconvulsive therapy (ECT) | ☐1 | ☐2 | ☐3 |
| l. | Having an occasional alcoholic drink to relax | ☐1 | ☐2 | ☐3 |
| m. | A special diet or avoiding certain foods | ☐1 | ☐2 | ☐3 |

11. What would be the likely result if Yaw had the sort of **professional** help you think is most appropriate? *(Tick one box only)*

☐ Full recovery with no further problems

☐ Full recovery, but problems would probably re-occur

☐ Partial recovery

☐ Partial recovery, but problems would probably re-occur

☐ No improvement

☐ Get worse

12. What would be the likely result if Yaw did **not** have any professional help? (*Tick one box only*)

- ☐ Full recovery with no further problems
- ☐ Full recovery, but problems would probably re-occur
- ☐ Partial recovery
- ☐ Partial recovery, but problems would probably re-occur
- ☐ No improvement
- ☐ Get worse

13. Suppose that Yaw had the sort of help you think is most appropriate for his health problems. How do you think he would be **in the long term** compared to other people in the community? (*Tick one response for each line)*

| How likely is he: | *More likely* | *Just as likely* | *Less likely* |
|---|---|---|---|
| a. To be violent | ☐1 | ☐2 | ☐3 |
| b. To drink too much | ☐1 | ☐2 | ☐3 |
| c. To take illegal drugs | ☐1 | ☐2 | ☐3 |
| d. To have poor friendships | ☐1 | ☐2 | ☐3 |
| e. To attempt suicide | ☐1 | ☐2 | ☐3 |
| f. To be understanding of other people's feelings | ☐1 | ☐2 | ☐3 |
| g. To have a good marriage | ☐1 | ☐2 | ☐3 |
| h. To be a caring parent | ☐1 | ☐2 | ☐3 |
| i. To be a productive worker | ☐1 | ☐2 | ☐3 |
| j. To be creative or artistic | ☐1 | ☐2 | ☐3 |

14. Do you think that Yaw would be discriminated against by others in the community if they knew about the problems he has had?

Yes ☐ No ☐

15. On average, how often do you deal with problems like Yaw’s?

Daily ☐ Weekly ☐ Monthly ☐ Less than monthly ☐

16. Please indicate how strongly you **personally** agree or disagree with each statement *(Circle one response for each item)*

| | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| People with a problem like Yaw's could snap out of it if they wanted. | 1 | 2 | 3 | 4 | 5 |
| A problem like Yaw's is a sign of personal weakness. | 1 | 2 | 3 | 4 | 5 |
| Yaw's problem is not a real medical illness. | 1 | 2 | 3 | 4 | 5 |
| People with a problem like Yaw's are dangerous. | 1 | 2 | 3 | 4 | 5 |
| It is best to avoid people with a problem like Yaw's so that you don't develop this problem. | 1 | 2 | 3 | 4 | 5 |
| People with a problem like Yaw's are unpredictable. | 1 | 2 | 3 | 4 | 5 |
| If I had a problem like Yaw's I would not tell anyone. | 1 | 2 | 3 | 4 | 5 |
| I would not employ someone if I knew they had a problem like Yaw's. | 1 | 2 | 3 | 4 | 5 |
| I would not vote for a politician if I knew they had suffered a problem like Yaw's. | 1 | 2 | 3 | 4 | 5 |

17. Please indicate how strongly you agree or disagree with each statement *(Circle one response for each item)*

| | **Strongly Agree** | **Agree** | **Neither Agree nor Disagree** | **Disagree** | **Strongly Disagree** |
|---|---|---|---|---|---|
| 1. Most other people believe that people with a problem like Yaw's could snap out of it if they wanted. | 1 | 2 | 3 | 4 | 5 |
| 2. Most people believe that a problem like Yaw's is a sign of personal weakness. | 1 | 2 | 3 | 4 | 5 |
| 3. Most people believe that Yaw's problem is not a real medical illness. | 1 | 2 | 3 | 4 | 5 |
| 4. Most people believe that people with a problem like Yaw's are dangerous. | 1 | 2 | 3 | 4 | 5 |
| 5. Most people believe that it is best to avoid people with a problem like Yaw's so that you don't develop this problem. | 1 | 2 | 3 | 4 | 5 |
| 6. Most people believe that people with a problem like Yaw's are unpredictable. | 1 | 2 | 3 | 4 | 5 |
| 7. If they had a problem like Yaw's most people would not tell anyone. | 1 | 2 | 3 | 4 | 5 |
| 8. Most people would not employ someone they knew had a problem like Yaw's. | 1 | 2 | 3 | 4 | 5 |
| 9. Most people would not vote for a politician they knew had suffered a problem like Yaw's. | 1 | 2 | 3 | 4 | 5 |

*18.* Please indicate how willing you would be to: *(Circle one response for each item)*

| | **Definitely willing** | **Probably willing** | **Probably unwilling** | **Definitely unwilling** | **Don't know** |
|---|---|---|---|---|---|
| 1. Move next door to Yaw. | 1 | 2 | 3 | 4 | 5 |
| 2. Spend an evening socialising with Yaw. | 1 | 2 | 3 | 4 | 5 |
| 3. Make friends with Yaw. | 1 | 2 | 3 | 4 | 5 |
| 4. Have Yaw start working closely with you on a job. | 1 | 2 | 3 | 4 | 5 |
| 5. Have Yaw marry into your family. | 1 | 2 | 3 | 4 | 5 |

## Community Attitudes towards the Mentally Ill (CAMI) questionnaire

These questions concern how you feel / think about mental illness. Tick a box beside each question that best represents how you feel / think.

| Question | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| 1. One of the main causes of mental illness is a lack of self-discipline and will power | | | | | |
| 2. The best way to handle the mentally ill is to keep them behind locked doors | | | | | |
| 3. There is something about the mentally ill that makes it easy to tell them from normal people | | | | | |
| 4. As soon as a person shows signs of mental disturbance, he should be hospitalized | | | | | |
| 5. Mental patients need the same kind of control and discipline as a young child | | | | | |
| 6. Mental illness is an illness like any other illness | | | | | |
| 7. The mentally ill should not be treated as outcasts of society | | | | | |
| 8. Less emphasis should be placed on protecting the public from the mentally ill | | | | | |
| 9. Mental hospitals are an outdated means of treating the mentally ill | | | | | |
| 10. Virtually anyone can become mentally ill | | | | | |
| 11. The mentally ill have for too long been the subject of ridicule | | | | | |
| 12. More tax money should be spent on the care and treatment of the mentally ill | | | | | |
| 13. We need to adopt a far more tolerant attitude toward the mentally ill in our society | | | | | |
| 14. Our mental hospitals seem more like prisons that like places where the mentally ill can be cared for | | | | | |

| Question | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| 15. We have a responsibility to provide the best possible care for the mentally ill | | | | | |
| 16. The mentally ill don’t deserve our sympathy | | | | | |
| 17. The mentally ill are a burden on society | | | | | |
| 18. Increased spending on mental health services is a waste of tax dollars | | | | | |
| 19. There are sufficient existing services for the mentally ill | | | | | |
| 20. It is best to avoid anyone who has mental problems | | | | | |
| 21. The mentally ill should not be given any responsibility | | | | | |
| 22. The mentally ill should be isolated from the rest of the community | | | | | |
| 23. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered | | | | | |
| 24. I would not want to live next door to someone who has been mentally ill | | | | | |
| 25. Anyone with a history of mental problems should be excluded from taking public office | | | | | |
| 26. The mentally ill should not be denied their individual rights | | | | | |
| 27. Mental patients should be encouraged to assume the responsibilities of normal life | | | | | |
| 28. No one has the right to exclude the mentally ill from their neighbourhood | | | | | |
| 29. The mentally ill are far less of a danger than most people suppose | | | | | |
| 30. Most women who were once patients in a mental hospital can be trusted as babysitters | | | | | |

| Question | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| 31. Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community | | | | | |
| 32. The best therapy for many mental patients is to be part of a normal community | | | | | |
| 33. As far as possible, mental health services should be provided through community-based facilities | | | | | |
| 34. Locating mental health services in residential neighbourhoods does not endanger local residents | | | | | |
| 35. Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services | | | | | |
| 36. Mental health facilities should be kept out of residential neighbourhoods | | | | | |
| 37. Local residents have good reason to resist the location of mental health services in their neighbourhood | | | | | |
| 38. Having mental patients living within residential neighbourhoods might be good therapy but the risks to residents are too great | | | | | |
| 39. It is frightening to think of people with mental problems living in residential neighbourhoods | | | | | |
| 40. Locating mental health facilities in a residential area downgrades the neighbourhood | | | | | |

**Thank you for answering the questionnaire**.

# Appendix 9

## Intervention Evaluation Questionnaire for the Mental Health Literacy Program

Thank you for consenting to participate in this part of the study. I would like to ask you questions about your views about the mental health literacy program in which you participated. You will not be asked to give your name or address and all answers will be treated with total confidentiality. If you wish to have a question repeated, or if you would like to take a break during questioning, please feel free to stop me.

This part of the study contains 2 sections: Section 1 is a questionnaire containing * questions. Section 2 contains open-response questions.

Section 1: For each of the following questions, please choose a number that corresponds to your preferred response to the question:

1 = Strongly Agree

2 = Agree

3 = Neutral

4 = Disagree

5 = Strongly Disagree

| The following questions are about the method of delivery of the training program | Strongly Agree 1 | Agree 2 | Neutral 3 | Disagree 4 | Strongly Disagree 5 |
|---|---|---|---|---|---|
| Overall, the length of the training program was about right. | 1 | 2 | 3 | 4 | 5 |
| Overall, the amount of time allocated to each activity was about right. | 1 | 2 | 3 | 4 | 5 |
| The following questions are about the receipt of the information in the training program. | | | | | |
| The printed material was an effective way to provide information about mental disorders | 1 | 2 | 3 | 4 | 5 |
| The videos were an effective way to provide information about depression and schizophrenia | 1 | 2 | 3 | 4 | 5 |
| Discussion was an effective way to increase my understanding of people with depression and schizophrenia | 1 | 2 | 3 | 4 | 5 |
| The PowerPoint presentations were an effective way to provide information about depression and schizophrenia | 1 | 2 | 3 | 4 | 5 |
| The exercises in the Story-bridge helped increase my understanding of people with | 1 | 2 | 3 | 4 | 5 |

| The following questions are about the method of delivery of the training program | Strongly Agree 1 | Agree 2 | Neutral 3 | Disagree 4 | Strongly Disagree 5 |
|---|---|---|---|---|---|
| depression and schizophrenia | | | | | |
| Discussion was an effective way to help me develop positive attitudes toward people with depression and schizophrenia | 1 | 2 | 3 | 4 | 5 |
| I would recommend this mental health literacy program to others | 1 | 2 | 3 | 4 | 5 |
| The following questions are about the enactment of information obtained in the training program | 1 | 2 | 3 | 4 | 5 |
| Overall, the mental health literacy program contained useful information that I can make use of in my role as an assembly member and as an adult | 1 | 2 | 3 | 4 | 5 |
| I intend to promote favourable attitudes towards people with mental health problems in my community | 1 | 2 | 3 | 4 | 5 |
| I plan to use the strategies I acquired during the Story-bridge exercises to deal with people with mental health problems | 1 | 2 | 3 | 4 | 5 |
| I plan to use the strategies I acquired during the Story-bridge exercises to deal with people with mental health problems | 1 | 2 | 3 | 4 | 5 |
| As a result of participating in the training program, I feel more knowledgeable about providing assistance in situations associated with people with mental health problems | 1 | 2 | 3 | 4 | 5 |
| As a result of participating in the training program, I feel more confident to provide assistance in situations associated with people with mental health problems. | 1 | 2 | 3 | 4 | 5 |
| I plan to refer to the “Guidelines for Carers of Someone with a Mental Disorder” in dealing with people with mental health problems | 1 | 2 | 3 | 4 | 5 |
| I would recommend the “Guidelines for Carers of Someone with a Mental Disorder” to other people in my communities when dealing with people with mental health problems | 1 | 2 | 3 | 4 | 5 |

## Appendix 10

## Intervention Evaluation Questionnaire for the Mental Health Literacy Program

### *Interview*

1. Have you dealt with a person with a mental disorder or mental health issue in the past three years?
   a. If Yes, how did you deal with the person? What was the outcome?
   b. Having completed the mental health literacy program, would you deal with the person differently now?
2. Have you dealt with a person with a mental disorder or mental health issue in the past 12 weeks?
   a. If Yes, how did you deal with the person? How helpful was the mental health literacy program in dealing with this situation?
3. If No, how helpful has the mental health literacy program been to you in your work as an assembly member and in your personal life?
   a. What suggestions, if any, have you about improving the method of delivering the program?
   b. What additional information, if any, should be included in the program?
   c. What information, if any, should not be included in the program?
4. As a result of participating in the program, in what ways, if at all, has your understanding of dealing with people with mental disorder changed?
5. How helpful were the videos that were used in the program?
6. How helpful were the Story-bridge vignettes in assisting you to discuss and identify strategies for dealing with people with mental health problems?

## Appendix 11

## Sample of permission letter to district assemblies

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA
College of Health and Biomedicine
P. O. Box 14428
Victoria- Melbourne
Victoria 8001
8th June, 2016.

The District Coordinating Director
Asutifi North District Assembly
Kenyase
Brong-Ahafo Region

Dear Sir,

**PERMISSION TO CONDUCT RESEARCH WITHIN THE DISTRICT ASSEMBLY**

I am currently undertaking a research project for my doctoral studies at the Victoria University, Australia. The research is entitled 'Evaluation of a mental health literacy program on community leaders' knowledge about and attitudes towards people with mental illness in the Brong-Ahafo region in Ghana: Cluster randomised trial'. In this study, I intend to evaluate if participation in a mental health literacy program will increase Assembly members knowledge about, and attitudes toward, people with mental illness. Assembly members will be placed in an intervention group and offered a 3-hour training program about mental illness or in a control group and given a brochure about mental health. All participants will complete a questionnaire on two occasions and, in addition, some will be interviewed after the training program.

The study will be significant because its findings will raise interest and may provide guidance to government mental health policy formulation to improve the mental health literacy of the Ghanaian populace. Additionally, policy makers, such as assembly members, may view it as a cost-effective, community-based approach to help address a national problem in Ghana.

I would be very grateful if you would give me permission to conduct the study in your district assembly. Your contribution will be of immense value to the study.

If you need further details on this study, feel free to contact me at yaw.arthur@live.edu.vu.au or the research supervisor Professor Terence McCann at terence.mccann@vu.edu.au.

I look forward to hearing from you.

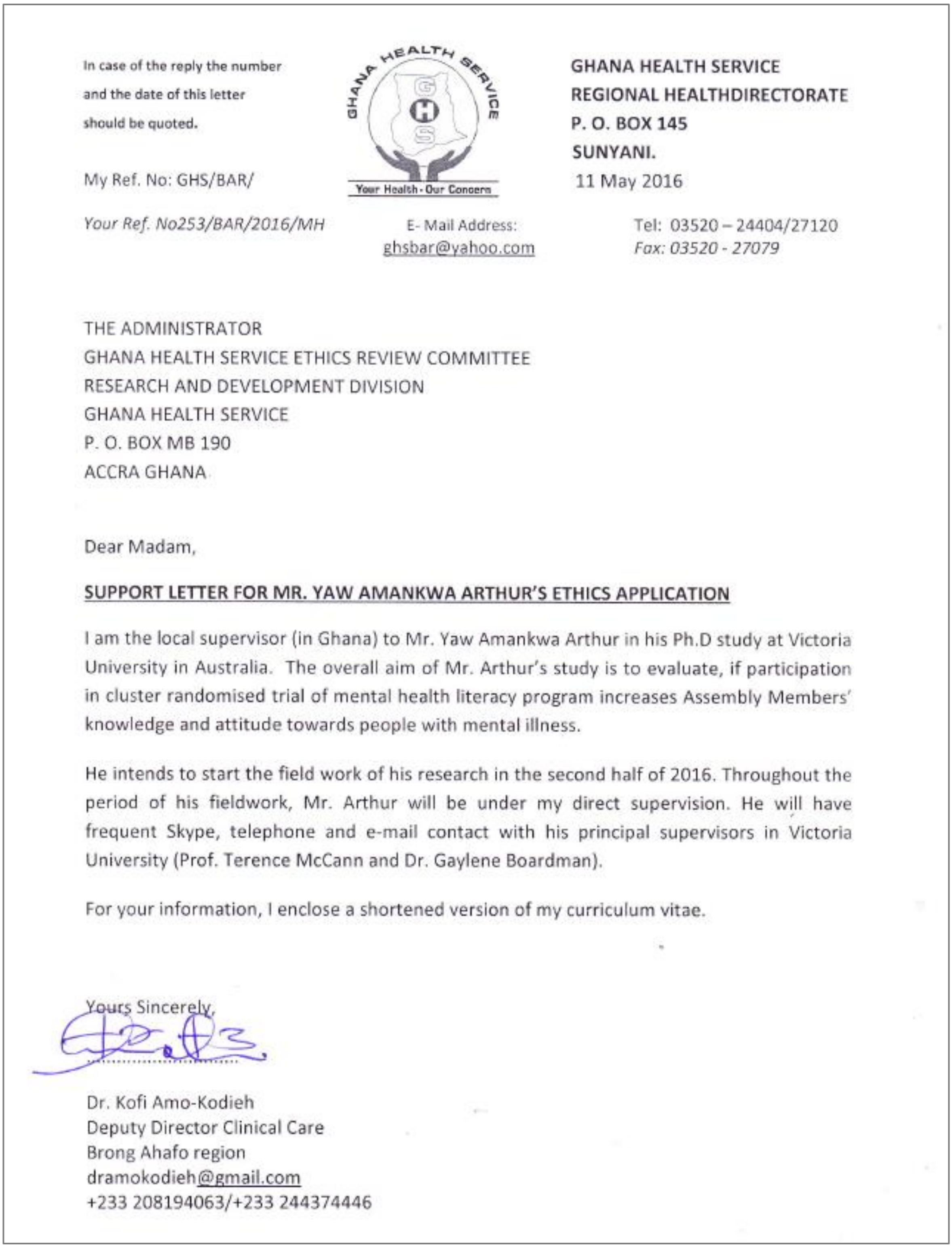
Yours sincerely,

[redacted]

Yaw Amankwa Arthur.
yaw.arthur@live.edu.vu.au

## Appendix 12

## Support letter: Dr Amo-Kodieh



In case of the reply the number
and the date of this letter
should be quoted.

My Ref. No: GHS/BAR/

*Your Ref. No253/BAR/2016/MH*

Your Health - Our Concern

E- Mail Address:
ghsbar@yahoo.com

**GHANA HEALTH SERVICE**
**REGIONAL HEALTHDIRECTORATE**
**P. O. BOX 145**
**SUNYANI.**

11 May 2016

Tel: 03520 – 24404/27120
*Fax: 03520 - 27079*

THE ADMINISTRATOR
GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE
RESEARCH AND DEVELOPMENT DIVISION
GHANA HEALTH SERVICE
P. O. BOX MB 190
ACCRA GHANA

Dear Madam,

**SUPPORT LETTER FOR MR. YAW AMANKWA ARTHUR'S ETHICS APPLICATION**

I am the local supervisor (in Ghana) to Mr. Yaw Amankwa Arthur in his Ph.D study at Victoria University in Australia. The overall aim of Mr. Arthur's study is to evaluate, if participation in cluster randomised trial of mental health literacy program increases Assembly Members' knowledge and attitude towards people with mental illness.

He intends to start the field work of his research in the second half of 2016. Throughout the period of his fieldwork, Mr. Arthur will be under my direct supervision. He will have frequent Skype, telephone and e-mail contact with his principal supervisors in Victoria University (Prof. Terence McCann and Dr. Gaylene Boardman).

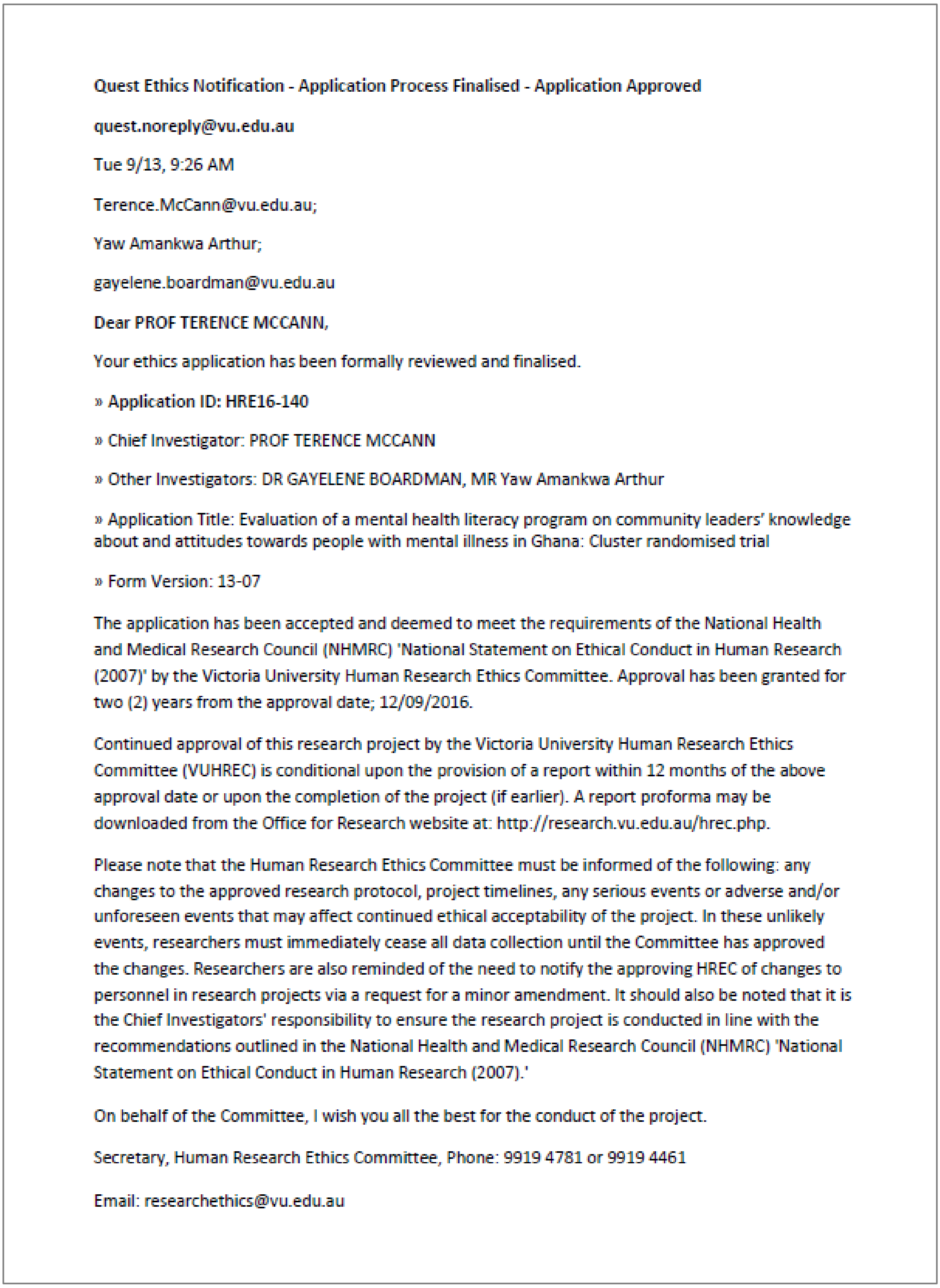
For your information, I enclose a shortened version of my curriculum vitae.

Yours Sincerely,

Dr. Kofi Amo-Kodieh
Deputy Director Clinical Care
Brong Ahafo region
dramokodieh@gmail.com
+233 208194063/+233 244374446

## Appendix 13

## Victoria University ethics approval



**Quest Ethics Notification - Application Process Finalised - Application Approved**

**quest.noreply@vu.edu.au**

Tue 9/13, 9:26 AM

Terence.McCann@vu.edu.au;

Yaw Amankwa Arthur;

gayelene.boardman@vu.edu.au

**Dear PROF TERENCE MCCANN,**

Your ethics application has been formally reviewed and finalised.

**» Application ID: HRE16-140**

» Chief Investigator: PROF TERENCE MCCANN

» Other Investigators: DR GAYELENE BOARDMAN, MR Yaw Amankwa Arthur

» Application Title: Evaluation of a mental health literacy program on community leaders' knowledge about and attitudes towards people with mental illness in Ghana: Cluster randomised trial

» Form Version: 13-07

The application has been accepted and deemed to meet the requirements of the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007)' by the Victoria University Human Research Ethics Committee. Approval has been granted for two (2) years from the approval date; 12/09/2016.

Continued approval of this research project by the Victoria University Human Research Ethics Committee (VUHREC) is conditional upon the provision of a report within 12 months of the above approval date or upon the completion of the project (if earlier). A report proforma may be downloaded from the Office for Research website at: http://research.vu.edu.au/hrec.php.

Please note that the Human Research Ethics Committee must be informed of the following: any changes to the approved research protocol, project timelines, any serious events or adverse and/or unforeseen events that may affect continued ethical acceptability of the project. In these unlikely events, researchers must immediately cease all data collection until the Committee has approved the changes. Researchers are also reminded of the need to notify the approving HREC of changes to personnel in research projects via a request for a minor amendment. It should also be noted that it is the Chief Investigators' responsibility to ensure the research project is conducted in line with the recommendations outlined in the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007).'

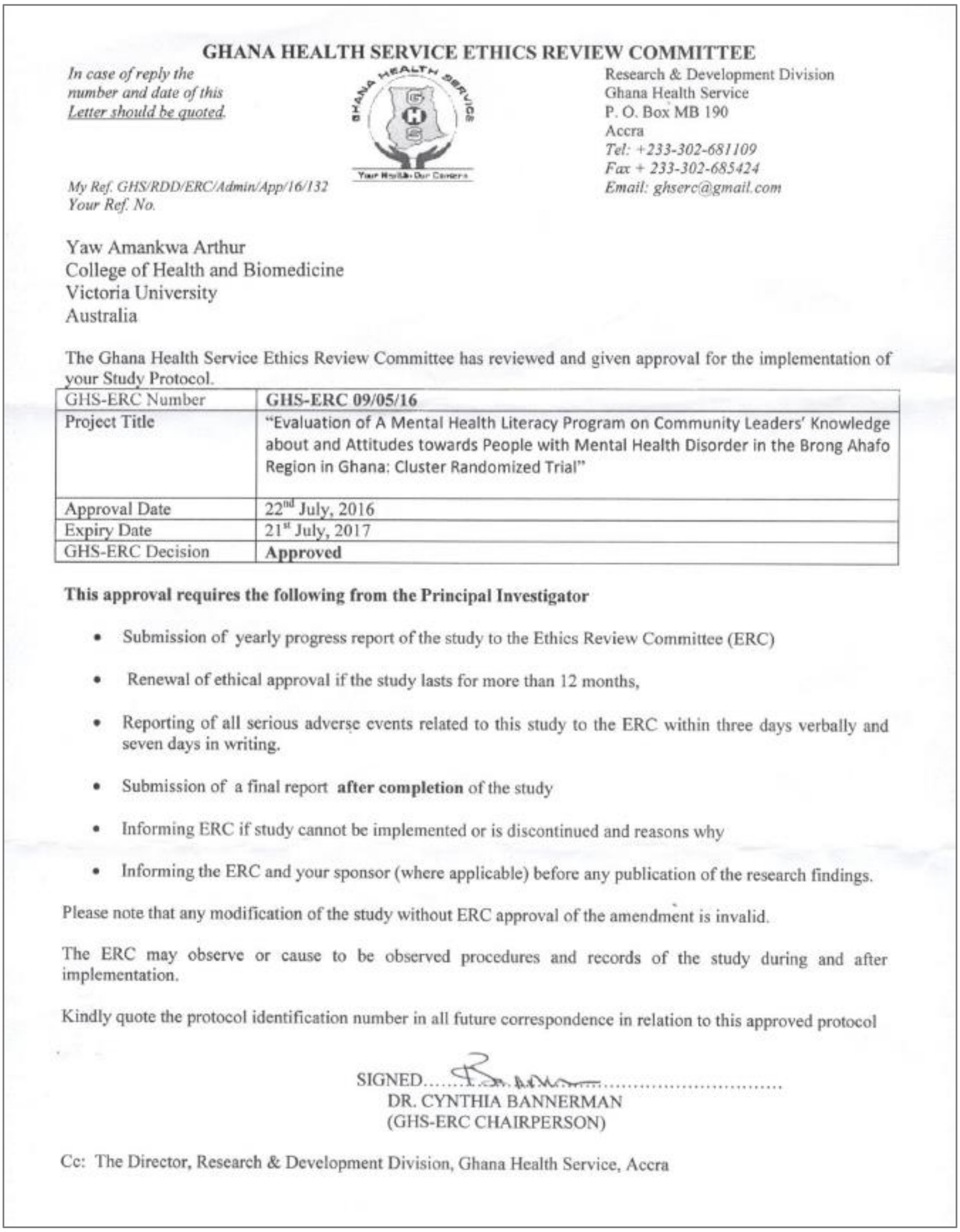
On behalf of the Committee, I wish you all the best for the conduct of the project.

Secretary, Human Research Ethics Committee, Phone: 9919 4781 or 9919 4461

Email: researchethics@vu.edu.au

# Appendix 14

## Ghana Health Service ethics approval



**GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE**

*In case of reply the*
*number and date of this*
*Letter should be quoted.*

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
*Tel: +233-302-681109*
*Fax + 233-302-685424*
*Email: ghserc@gmail.com*

*My Ref. GHS/RDD/ERC/Admin/App/16/132*
*Your Ref. No.*

Yaw Amankwa Arthur
College of Health and Biomedicine
Victoria University
Australia

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

| | |
|---|---|
| GHS-ERC Number | **GHS-ERC 09/05/16** |
| Project Title | "Evaluation of A Mental Health Literacy Program on Community Leaders' Knowledge about and Attitudes towards People with Mental Health Disorder in the Brong Ahafo Region in Ghana: Cluster Randomized Trial" |
| Approval Date | 22nd July, 2016 |
| Expiry Date | 21st July, 2017 |
| GHS-ERC Decision | **Approved** |

**This approval requires the following from the Principal Investigator**

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report **after completion** of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.......................................................
DR. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra