EFFECTIVENESS OF MENTAL HEALTH CAMPAIGN DELIVERED BY MOBILE TEXT MESSAGING COMPARED WITH HANDBILLS ON THE HELP-SEEKING BEHAVIOUR OF ADOLESCENTS IN SECONDARY SCHOOLS IN IBADAN

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DECLARATION

This dissertation is submitted in partial fulfilment for the award of the Master of Science in Child and Adolescent Mental Health, University of Ibadan. This study has not been presented to any institution for any award.

………………………………………………

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CERTIFICATION

This is to certify that conduct of this study and the preparation of this thesis were carried out by ADEPOJU SAMSON OLADUNJOYE in the CENTRE FOR CHILD AND ADOLESCENCE MENTAL HEALTH, UNIVERSITY OF IBADAN under my supervision.

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ABBREVIATIONS

DALY-	Disability Adjusted Life Years
WHO-	World Health Organization
YLD -	Years Lived with Disability
HIV -	Human Immunodeficiency Virus
NICE -	National Institute for Health and Clinical Excellence
ADHD -	Attention Deficit Hyper –Activity Disorder
NGO -	Non Governmental Organizations
AIHW-	Australian Institute of Health and Welfare

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ABSTRACT

Background

One in every four individuals develops one or more mental health disorders at some stage in life and more than 450 million suffer from mental disorders worldwide (WHO 2002).

Thus, there is an urgent need for the reduction of the burden of mental illness worldwide and bridge the wide mental health gap which is more prominent in sub-Saharan Africa.

Reports indicate that more than 60% of young people that meet the diagnosis for depression and anxiety did not seek professional help because of lack of knowledge of symptoms of mental illness and mental health services (Gulliver et al, 2010).Specifically in Nigeria, the prevalence of mental illnesses across all ages is estimated as 20% (Gureje et al, 2006) with onset either in childhood or adolescent age group (Omigbodun et al 2009).

Information and advocacy are two of the four core strategies proposed by the World Health Organization in closing the mental health treatment gap. The role of education and communication cannot be over emphasized; education in terms of what constitute mental disorder, available treatments and structures as well as reduction of stigma attached to mental health disorders. (WHO 2002).

Provision of evidenced based materials and programs to increase the adolescents mental health literacy was identified as the way forward (Gulliver at al 2010).

Methodology

The study is designed as a quasi-experimental study, carried out in Ibadan capital city of Oyo state in south-western part of Nigeria.3 private secondary schools were randomly selected into two-experimental and one control group.

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Mental health information was reinforced in the intervention groups by the use of text messaging and Hand bills. A focus group discussion was carried out to determine the content of the intervention.

Assessments were done at baseline followed by a mental health related health talk and at sixth weeks.

The sociodemographic characteristics of the three groups were compared using multinomial regression. Between group comparisons of the help seeking behaviour scores was carried out using ANOVA followed by a post hoc test, while the paired t test was used for within-group mean help seeking behaviour scores pre and post intervention for each of the groups.

The ANCOVA was used in order to determine the effect of the intervention. Effect sizes will be statistically determined. All levels of significance were set at 0.05, 95% confidence interval. Data were analysed using the statistical package for the social sciences SPSS (17.0) (Statistical Package for Social Sciences)

Results

There was no significant difference in the sociodemographic characteristics of the three groups. Similarly no difference in the help-seeking behaviour of respondents at baseline, it was noticed that the majority of respondents will rather seek help from informal sources, 118 representing 63% of the participants will rather seek help from parents, friend and relatives.

At six weeks assessment there is a significant difference in the help seeking behaviour of the experimental groups over the control phone >handbills>control.

Conclusions

The study has demonstrated that mobile phone text message is more effective than the use of handbills in improving the help-seeking behaviour of adolescents.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Mental health, according to WHO is a state of wellbeing in which individuals are able to realize their own abilities, can cope with the normal stresses of life, can work productively and fruitfully and are able to make a contribution to their community.

There is an urgent need for the reduction of the burden of mental illness worldwide and bridge the wide mental health gap which is more prominent in sub-Saharan Africa. One in every four people or 25% of individuals develops one or more mental health disorders at some stage in life. More than 450 million suffer from mental disorders worldwide. (WHO 2002)

However, the WHO also identified a wide treatment gap not only in low and middle income countries but also in high income countries where they have facilities and personnel for the management of mental illness.

Prevalence of mental illness is estimated as 20% of the population in Nigeria (Gureje et al, 2006)

Information and advocacy are two of the four core strategies proposed by the World Health Organization in closing the mental health treatment gap.

The role of education and communication cannot be over emphasized; education in terms of what constitute mental disorder, available treatments and structures as well as reduction of stigma attached to mental health disorders. (WHO 2002)

The media, over time have been used on different occasions at different places for the promotion of mental health mainly to address the issue of stigma, promoting recovery, encouraging help seeking behaviour and highlighting issues that could have a negative impact on mental health.

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According to Gulliver et al 2010 in a systematic review on perceived barriers and facilitators of mental health help-seeking behaviour in young people found that more than 60% of young people that meets the diagnosis for depression and anxiety did not seek professional help. The same study also listed lack of knowledge of symptoms of mental illness and mental health services as barriers to help-seeking behaviour and education and awareness amongst main facilitators of help-seeking behaviour.

The treatment gap of mental health disorders among adolescents remains a pervasive an on-going problem in the delivery of mental health care (Ekore et al 2015).

Common mental disorders such as depression, substance use, anxiety and eating disorders have a high incidence at the adolescent stage. (Commonwealth Department of Health and Aged Care & AIHW, 1999). Despite of the forgoing the adolescents are not adequately informed about mental health issues which in turn negatively affect their help-seeking behaviour.

Prevalence of Mental Health disorders is greatest among people aged 16-24, this is also coupled with strong reluctance to seek professional help and poor mental health literacy was listed among the top 3 barriers to Help-Seeking practice. (Rickwood et al 2007).

Provision of evidence based materials and programs to increase the adolescents' mental health literacy was identified as the way forward (Gulliver at al 2010).

Awareness campaigns have resulted in significant improvement in positive help-seeking behaviour. (Northern Ireland Health and Social wellbeing survey 2006).

According to the Project on Mental Health Elucidation, Rehabilitation and Promotion (POMHERAP) Study sponsored by the World Federation for Mental Health and World Health Organization in Bauchi State Northern Nigeria identified Information-Education-Communication

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(IEC) as 3 key elements of mental health promotion and was delivered as Discussion (public lecture, seminar, one-on-one counselling and Faith-based talks);

Written (posters, handbills, bulletins, and pictures);

Acting or viewing (drama, Role play and video clips).The activities resulted in a 70% increase in knowledge of mental health and mental disorders, 75% in help seeking behaviour amongst other favourable outcomes.

1.2 JUSTIFICATION

Awareness campaigns have resulted in significant improvement in positive help-seeking behaviour. (Northern Ireland Health and Social wellbeing survey 2006)

Adolescents in secondary schools are a very suitable population in need of mental health education because they are the leaders of tomorrow, they will also serve as advocates to peers and older ones, and it will also influence their attitude towards mental illness and mentally ill people. Early and accurate information about mental health issues as well as a good help-seeking behaviour will prevent the debilitating effects that usually follow mental illnesses.

1.3 AIM OF THE STUDY

To evaluate, the effect of mental health campaign on help-seeking behaviour of senior secondary with the use of mobile telephone administered text message compared with the use of handbills.

1.4 OBJECTIVES

1. To assess help seeking behaviour by the use of mobile telephone delivered text messages in the target population pre and post intervention.
2. To assess help seeking behaviour by the use of handbills in the target population pre and post intervention.

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3. To compare the effectiveness of the two campaign methods used.
4. To determine the effect size of the interventions.

1.5 NULL HYPOTHESIS

No difference in the effects of intervention delivered by text message and hand bills.

1.6 PRIMARY OUTCOME

1) There will be a positive change in the help-seeking behaviour of participants in the experimental group as against the control.

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CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

According to estimates given by the World Health Organisation (WHO), there are over 450 million people living with mental illness across the globe (World Health Organisation, 2002). It further states that one in four people will be afflicted with some form of mental illness at a certain stage of their lives. In addition, out of the total Disability Adjusted Life Years (DALYs) for all disorders, Neuropsychiatric disorders account for about 12.3%. In addition, Unipolar depression, indiscriminate alcohol consumption, and self-inflicted injuries account for the majority of the top 20 leading causes of disease burden among individuals within the age group of 15-44 years (World Health Organisation, 2002). In fact, 6 of these leading causes of this disease burden are from neuropsychiatric disorders, while, depression has been estimated to be the leading cause of disease burden by the year 2020 (Murray and Lopez, 1996). In view of this unpleasant scenario, it is obvious that promoting mental health is not only of immense benefit to the population, but to policy makers.

The WHO has defined health as a *state of complete physical, social and mental wellbeing, and not just the absence of disease or infirmity.* By this definition, it is obvious that mental stability plays a very important role in the overall health of an individual. Mental-disorders, like other types of ailments, cause emotional suffering and reduce the quality of life of an individual. Mental-disorders also expose the affected individual to stigmatization and discrimination from the society. Its effects extend beyond the individual and community as it has a negative impact on the society at large both in economic and social consequences. For instance, the estimated cost of treating mental illnesses in the United Kingdom was £105 billion (Centre for Mental Health, 2010), while in the United States, mental health costs reached about $193 billion in 1999, and available data

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shows that 90% of suicides occurring in the country are as a result of some form of mental disorder, while it is also responsible for 24% of homelessness in the nation (US Surgeon General's Report, 1999). In addition to these, mental health has been shown to have extended periods of illness, and it has been associated with unemployment, poverty, increased labour turnover and reduced productivity in the population (WHO. 2002).

However, despite these established facts and the observation that mental health underlies all other forms of health; it still continues to take the background in several Public Health policies and intervention programs. The majority of attention has been focused on physical health to the detriment of mental illness and well-being. Thus, giving mental health a central focus will be to the benefit of the health and wellbeing of the nation (Royal College of Physicians, 2010). A mentally healthy population will lead to a healthy lifestyle and reduce the risk of engaging in risky behaviours, thus, preventing both physical and mental illness together. Furthermore, the benefits of an active promotion and preventive mental health campaign cuts across generations promote future equalities and reduce present inequalities (Royal College of Physicians, 2010).

2.2 BURDEN OF MENTAL HEALTH DISORDERS

Among the several types of mental disorders, the most common are depression and anxiety, those which are the result of drug abuse, schizophrenia and bipolar disorder-which are very severe. Suicide is also an extreme and very common outcome for people with untreated mental disorders especially in high income countries, thus, the need for urgent attention. The mental state of children and adolescents are also of present concern due to their high prevalence and accompanying disability (WHO, 2011).

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Due to the barriers to treatment and associated social stigma, untreated mental conditions take up a huge part of the total global burden of the disease, which is estimated at about 13%. Depression accounts for 4.3% of the total global disease burden, making it the third leading cause of disease in the world (WHO, 2011). In low and middle income countries, it is estimated at 3.2% and 5.1% respectively. It has further been predicted that by 2030, depression will be the leading cause of the total global disease, while mental disorders will account for 25.3% and 33.5% of all the years lived with disability in poor and middle income nations respectively (WHO, 2011).

Unfortunately, these statistics have yet to result into major successful campaigns with low prevalence outcome. This is because of the still wide gap between the disease and available treatment and prevention strategies. For instance, in low and middle income nations, about 76% and 85% of people with mental disorders do not have access to care and treatment. Though lower in higher income countries, it is still of immense significance that about 35% to 50% of people with mental disorders to not have access to treatment. Furthermore, untreated mental illness has been established to lead to higher mortality rates. For example, in the United States, about 90% of suicides have been reported to be as a result of mental disorder, this is significant because suicide is the 10th largest cause of death in the America. It has also been reported that the risk of mortality among people living with schizophrenia and major depression is 1.6 and 1.4 times more than the general population (US Surgeon General's Report, 1999). Available statistics show that there are 2.4 million people and 16 million people living with schizophrenia and major depression respectively in the United States (U.S.), while 1 in 5 people have been diagnosed with depression in the UK (Office for National Statistics, 2015).

Mental illness is a common phenomenon in the US. An estimated 57.7 people (i.e. about 26.2%) who are 18 years and older suffer from a diagnosable mental disorder (Kessler et al., 2005; US

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Census Bureau, 2005). This means that one in four Americans will suffer a form of mental illness during their lifetime. Of these, only about 6 % have the major burden of the disease and suffer from a mental disorder of a serious nature. In the US and Canada, mental illness is the major cause of disability, accounting for about 24% (WHO, 2008). Most people in the US also suffer from more than one type of mental illness at the same time. This is because about 45% of patients obtained from the data met the requirements for more than one mental illness with severity related to co-morbidity (Kessler et al., 2005).

In Europe, about 32 million people suffer from mental health problems, the most common of which are depression and anxiety. However, of these, only about 50% will receive medical treatment. The annual suicide rate of the region is estimated at 13%, with this number significantly higher in low income European countries. 9 out of 10 people reported experiencing stigmatization as a result of their condition, with 7 out of 10 reporting that it has stopped them from doing what they wanted to do (WHO, 2011). In the UK, unlike cancer and heart disease which account for just 16%, mental health problems are responsible for the largest burden of the disease (28%) in the country (Ferrari A. et al., 2010). Similar to the US, one in four persons are likely to experience a form of mental disorder during their life time (McManus, 2009). Currently, medical services are overstretched, in some regions they is an absence of specialist services, and long waiting. Yet, public spending is mainly focused on treatment, rather than prevention (Davies, 2013) with less than 5.5% of the total UK health spending is dedicated to mental health research (Balmer, 2015). Furthermore, about 10% of children and adolescents aged between 5-16 years have a clinically diagnosable mental health problem (Green et al., 2004), yet 70% of these have not had any medical intervention at an early age (Children's society, 2008).

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Mental disorder and substance use account for 19% of the total disease burden in Sub-Saharan Africa (SSA), with major depression disorder accounting for 40% of the number of years lived with disability (YLD) (Institute of Health Metrics and Evaluation, 2013; Whiteford et al., 2013). However, due to a lack of resources in the region, there are limited mental health services to address these conditions, in addition to a shortage of staff, as most doctors end up leaving the shores of the region. For example, Kenya has a total number of 500 doctors for a population of 43 million people (Marangu et al., 2014). Mental illness is common in the country and it has a prevalence of 4% (Ndetei eta l., 2009; Kiima et al., 2010; Ndetei et al., 2008) which similar to many high income countries. Poverty, unemployment and HIV have significantly contributed to this burden (Ndetei et al., 2009), however, there are few mental hospital and the ones available are most government funded. The largest hospital is located in the capital (Ndetei et al., 2008).

Anxiety disorders were among the most common forms of mental disorders. Mental illness also accounted for 23% of seriously disabling disorders, while about 40% of these had received professional help. The majority of patients received treatment from a medical professional, while only a few were treated by alternative practitioners. Nigeria also faces a similar problem of a lack of specialist healthcare facilities and a shortage of psychiatrists due to poor funding (Gureje et al., 2006).

2.3 CONSEQENCES OF POOR MENTAL HEALTH

2.3.1 Social and Health Outcomes of Poor Mental Health.

Poor mental health has been associated with a range of outcomes. Among children and adolescents, they include, drug and substance abuse, early pregnancy, greater risk of suicide, antisocial behaviour and poor educational achievement (Fergusson et al., 2005). Among adults, associated

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outcomes include unemployment, risk of suicide, criminal activity, depression, anxiety, schizophrenia among many others (Richards and Abbot, 2009; National Institute for Health and Clinical, 2006).

2.3.2 Reduced Life Expectancy and Increased Physical Illness.

Studies have shown that people with schizophrenia die an average of 25 years earlier than the general population. Furthermore, reports have shown that men in the UK suffering from schizophrenia have a reduced life expectancy of 20 years, while women have a reduced expectancy of 16 years when compared with the general population (Parks et al., 2006; Brown et al., 2010). Also, depression has been associated with 67% increased mortality from cardiovascular diseases, two-fold increased mortality from respiratory diseases and about 49% from cancer (Mykletun et al., 2009; Mykletun et al., 2007). Similar studies conducted in the UK have associated psychological distress with 11% increased risk of stroke, while depression has been reported to have increased the risk of coronary heart disease (Surtees et al., 2008).

2.3.3 Increased Risk of Suicide.

Mental illness has been implicated as a major cause of suicide, and its prevention remains a source of concern among public health practitioners (Royal College of Psychiatrists, 2010; Cooper et al., 2005). For instance, suicide has been shown to increase twelve fold among people with severe mental illness, fivefold among male prisoners with severe mental illness and thirty fold among people with a past history of self-harm (Fazel et al., 2005).

2.3.4 Alcohol Abuse

Adolescent in the UK suffering from conduct disorder have a fourfold risk of alcohol abuse and tend to consume alcohol more than twice a week (Green et al., 2005). Alcohol intoxication has been implicated in a third of suicides among young people while excessive drinking is responsible

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for 65% of suicides among adults in the UK (Cornah, 2006). In addition, alcohol abuse has been reported to be a leading cause of dementia among adults in the UK (Marshall, 2009).

2.3.5 Stigma and Discrimination

Studies have shown that one in nine people have experiences stigmatization and discrimination on account of their mental illness in more than one area of life (ReThink, Institute of Psychiatry, 2008). Reports have also shown that people living with mental illness experience difficulty in getting life or personal insurance (Thornicroft, 2006). This stigma has been further propagated in the media through the depiction of distorted stereotypes of mental illness, thus, creating fear in the public and promoting stigmatization of affected individuals (Sainsbury Centre for Mental Health, 2006).

2.4 RISK FACTORS FOR MENTAL ILLNESS

These can be grouped into child, adult and parental factors. For the child factors, child abuse and negative childhood experiences can increase the risk of mental illness and substance abuse much later in life (Centre for Disease Control and Prevention, 2005). In general, children who are looked after by nannies and house help significantly increase the chances of abuse and subsequent mental disorders, those with intellectual disability and young offenders are particularly at risk. Regarding adult factors, other factors include unemployment, low income, debt, poor housing and other various factors (Melzer et al, 2004; Jenkins et al, 2008; McManus et al, 2009). The outcome, poor mental health is also closely associated with an increase the tendency to participate in risky lifestyles and behaviours. Among these are smoking, which is responsible for a large proportion of people living with mental illness. Parental factors include alcohol abuse, tobacco and

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indiscriminate drug use during pregnancy increase the risk of mental illness such as neurological and cognitive disorders in the child after birth (WHO, 2004).

2.5 MENTAL ILLNESS INTERVENTIONS AND STRATEGIES

2.5.1 Parental Health Interventions

Studies have shown that effective interventions improve mental health of the parents and family as a whole, and increase the chances of early identifications which lead to effective treatment (Dennis, 2005). Interventions such as home visiting, telephone support and peer support programmes have been shown to be very effective in reducing the risks of postnatal depression (Elkan et al, 2000, Shaw et al., 2006, Dennis et al., 2009) and this has also been strengthened by health visitor training programmes (Morrell, 2009).

2.5.2 Prevention of Violence and Abuse

Preventive interventions against violence help to reduce the risk of mental illness and promote resilience among affected individuals. At the family level, interventions such as parental mental promotion activities, training programmes for parents and interventions that reduce and detect childhood behavioural disorders early are necessary for reducing the risk of mental illness. School based programmes target violence and bullying prevention programmes, and social learning programmes can also reduce sexual abuse (Zwi et al., 2009), aggressive behaviour, conduct disorders and attention span problems (Wilson and Lipsey, 2007). At the community level, studies have shown that interventions such as improved street lighting, cohesion and safer spaces have proven effective in reducing the risk of mental illness. Other intervention programmes targeted at alcohol abuse and identification of high-at-risk individuals have also helped to reduce the risk of mental illnesses (Royal College of Psychiatrists, 2010).

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2.5.3 Suicide Prevention

Suicide intervention and prevention strategies are very important in order to reduce the mental illness burden of any region. For instance, the national suicide prevention strategy initiated in 2002 in England was been able to reduce the prevalence of suicide in the country by more than 15% (Royal College of Psychiatrists, 2010). This was achieved by initiating interventions that target:

- The restriction of access to suicide hotspots (Benewith et al., 2007).
- Restricting the sale of over the counter drugs such as acetaminophen (Hawton et al., 2008).
- General public and health professional's education and trainings (Hall et al., 2003).
- Improvement of media reporting on mental disorders (Royal College of Psychiatrists, 2010).

2.5.4 Alcohol and Smoking Prevention

Several studies have established a clear relationship between alcohol abuse and mental illness. Thus this means that uninhibited alcohol consumption increases the risk of acquiring a mental illness. The most vulnerable group to this risk are young people between the ages of 15-24 years (Royal College of Psychiatrists, 2010). Among all the different types of intervention strategies adopted so far, school-based intervention have been the most effective with the most promising results (Stewart-Brown, 2006).

The National Institute for Health and Clinical Excellence (NICE of the UK) has recommended that making alcohol less affordable is the most effective method of reducing its abuse (National Institute for Health and Clinical Excellence, 2010). This is in addition to restricting the number of place where the product is available. Among children and young people, brief motivational interventions are also effective (Kaner et al., 2007; Lundahl and Burke, 2009; Vasilaki et al., 2007).

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Also NICE has recommended that interventions intended for the reduction of smoking should be targeted at children and young people with emotional and behavioural problem as they are the most risk of becoming mentally ill through this channel. This is necessary as a life time of smoking usually begins at adolescence (National Institute for Health and Clinical Excellence, 2008). As at 2005, there were few smoking intervention programs in existence despite the strong relationship between smoking and mental disorder (Royal College of Psychiatrists, 2010).

2.5.5 Strategies to Prevent Stigma and Discrimination.

The reduction of stigmization and discrimination of mentally ill patients will significantly reduce the burden of the disease as it will encourage them to be more open about their condition and seek help as required (Royal College of Psychiatrists, 2010). Thus there is an urgent need for effective intervention programmes that will help to alleviate the social burden on affected individuals. There is a three pronged approach to intervention, which are education, contact and protest (Royal College of Psychiatrists, 2010). Educational method is mostly used for the purpose of enlightening the public through mass media campaigns. However, evidence suggests that when it is combined with other strategies it can be very effective. Some of these mass media channels include educational pamphlets, text messaging, television, radio and the internet (Royal College of Psychiatrists, 2010). In addition, anti-stigma campaigns have also been reported to be very effective in changing the attitude of the public to mental illness. Mentoring, social network facilitation and community organisation are among the effective strategies for intervention among groups at risk of stigma (Thornicroft et al., 2007). It is also important to note that anti-stigma legislation has also helped to alleviate stigmatization and discrimination.

2.6 CHILD AND ADOLESCENT MENTAL HEALTH BURDEN

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The neglect of mental health among children and adolescents has the potential for lifelong consequences leading to risky behavioural and lifestyle practices, conduct disorders and it reduces the capacity to have safe and peaceful societies. Even though the extent of mental disease among children and adolescents have been known by physicians and parents alike, there is still a lot of neglect on the subject. This is more worrisome in light of the current global challenges such as the AIDS pandemic, child labour and prostitution, wars and political unrest taking place. These have the potential to aggravate the occurrence of mental disorders in children, thereby increasing its burden (WHO, 2003).

Recent studies have reported that the mental and behavioural disorders occur in about 20% of the world's adolescent population. Among young people aged between 15-19 years (WHO, 2009), depression is the single largest contributor to the global disease burden, while suicide is among the third largest contributor in groups between 15-35 years old. More the 70,000 adolescents take their life while more than 200, 000 (more than 40 times) make an attempt at suicide (WHO, 2009). Also, a large number of lifetime mental disorders have been reported to take place at about the age of 14, while 70% of these disorders take place before the age of 24. The prevalence of adolescent mental disorders has significantly increased in the last 20-30 years (WHO, 2009).

The potential risk factors associated with mental disorder include unemployment, poor education, substance and alcohol abuse, crime and violent lifestyles, indiscriminate risk taking behaviours, poor sexual and reproductive health, child abuse and poverty. Indirect factors that predispose children and adolescents to risk are substance abuse and psychiatric illness among parents, as well as marital violence. All these lead to premature mortality and increase the risk of mental morbidity (WHO, 2009).

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Unfortunately, only a small number of people have access to effective medical care and preventive treatment. This causes them to suffer needlessly due their inability to access these facilities, lack of understanding of their condition, stigmatization and discrimination. This is also true for wealthier nation where about 100% of needs are unmet (WHO, 2009).

In Australia, the prevalence of mental illness is 13% i.e. on in seven, among children and adolescents aged between 4-17 years of age. This represents about 560, 000 children and adolescents. Over all, attention deficit/hyperactivity disorder (ADHD) had the highest prevalence with over 7.4% of children diagnosed with the problem. This was closely followed by anxiety (6.9%), major depression (2.8%) and conduct disorder (2.1%) within the same group (Lawrence et al., 2015). Furthermore, the prevalence of mental disorders in males was reported to be 16% while that of females stood at 11%, all for the same age group of 4-17 years. Male presented a higher prevalence of ADHD (10.4%) compared to females (4.3%), in addition, depression in females and males was reported at 3.1% and 2.5% respectively, while conduct disorders presented more in males (2.5%) than females (1.6%) (Lawrence et al., 2015).

Among teens, the prevalence of ADHD in males was much higher (9.8%) than that of females (2.7) among young people between the ages of 12-17. Also, the prevalence of depression among females (5.8%) was higher than that of males (4.3%) (Lawrence et al., 2015).

In the US, one in five youth representing 20% of the population have a diagnosable mental disorder (Behrens et al., 2013; Sawyer et al., 2012). Merikagas (2012) observed in a nationwide prevalence of 13% among 12-17 year old, while the prevalence of mood swings stood at 11%. Between these, they are thought to the major cause of suicidal thoughts and behavioural conduct in the Israel. Furthermore, despite the huge mental burden of illness on the country, the US still neglects making available appropriate mental health facilities and services (Kuka, 2014).

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In Nigeria, more than 90% of young people suffering from psychosis, despite the presence of mental health institutions, do not have access to medical care. The major reasons for this include fear of stigmatizing, lack of funds, little understanding of mental illness and discrimination.

2.7 BARRIERS TO CARE

Despite the existence of interventions for the care of children and adolescents with mental disorders, a large proportion of them do not still have access to medical care. The common reasons for this trend include, lack of resources such as facilities, financial and human capital, stigmatization and discrimination, inability to communicate effectively in the patient's language and a lack of public knowledge about mental diseases (WHO, 2003).

This trend of neglect is present in low income countries, as much as it is in developed nations of the world. The economic decline of some high income nations may have also increased competition for its scarce resources, thereby, affecting mental health services across board.

2.7.1 Lack of Resources

This includes financial, human and facilities. It is important to note that this is a common and universal problem. The developed countries face problems such as improper distribution of equipment and resources, shortage of workers at the community level, and a universal lack of trained personnel, including doctors, who will work in the various mental health clinics (WHO, 2003).

Suggestions have been made to engage in the creative training of paediatrician and adult psychiatrists in the management of child and adolescent mental problems. However, there is still

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a need to train a large pool of social and primary workers, school administrators, parents and religious leaders in the role they play in the management of the disease. Improvement of human capacity for support peer counselling and the training of non-specialized nurses in diagnosis and treatment of children and adolescents has been identified as very effective methods of improving the ability to provide care in developed countries (WHO, 2003).

In developing countries, financial capital that is disbursed for the improvement of mental health services and interventions is done without adequate recognition of the impact of such allocation. Thus, due to an obvious lack of resources, many countries are unable to further allocate more financial capital to areas of need in the provision of mental health care and to previously executed projects and services. Interventions for developing nations are mostly dependent on the work of non-governmental organisations (NGOs) (WHO, 2003). However, most NGOs tend to specialize in specific areas of mental health care to the detriment of other areas. Thus, it has been recommended that they consider the sustainability of their projects and also consider paying attention to other areas of mental health care. When the work of NGOs is projected with a long term plan, there tends to a higher degree of efficiency both within the area of specialization and even mental care in general (WHO, 2003).

2.7.2 Stigmatization

Stigmatization occurs in various local, national and international settings. It is well known that stigmatization is a common experience among affected individuals as well as those providing care to them. This trend is present in most countries irrespective of income and at all levels of society (WHO, 2003). There is need to provide additional support to anti-stigma campaign as a way of increasing access to help among affected individuals and groups, thereby building a continuum of care. School based campaigns have been shown to have the most effect (WHO, 2003). A model

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anti-stigma campaign that can be adopted is for instance, the “Stop Exclusion: Dare to Care” campaign carried out as part of the World Health Day Activities in 2001. This program was a school based campaign. It was considered to be very effective as it involved all levels of society, attracted political attention and yielded effective products that focused attention on the problem of stigma (WHO, 2001).

An example of this product was the book “Through Children’s eyes” which was a collection of drawings and stories that presented the perception of young people on the issue of mental disorders. The book also contained brief descriptions and explanations on the most common kinds of mental disorders among children and adolescents and has a guide for instructors such as teacher to help to facilitate classroom discussions on the issue of mental illness and the dangers of stigmatization (WHO, 2001).

2.7.3 Language Barriers

Effective care and treatment of is largely language dependent. A diagnosis cannot be made without effective verbal communication between care givers and patients. Thus, having a grasp of the local idioms and methods of expression plays a very significant role in providing treatment to patients. Thus, it is important for the continued extensive training of child and adolescent mental health clinicians and social worker on the full the extent of verbal and non-verbal methods of communication (WHO, 2003).

2.7.4 Lack of Public Awareness on Mental Health Issues

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Previously, children were not recognised to have feeling of mental disorder such as depression and ADHD. However, in recent time, it is now a well-recognised fact that these disorders do exist. Since this knowledge is now available, it is necessary for the provision and education of parents and care givers on how to recognised symptoms of disorders and how to manage them, through objective information given by trained personnel (WHO, 2003). However, contrary to this, the most frequent source of information arises from the society and the media, wherein there is an abundance of distorted portrayals of mental disorders. This may further limit the effective of treatment to the patients due to inadequate diagnostic evaluations resulting from wrong information (WHO, 2003).

2.8 INTERVENTIONS TO IMPROVE CARE

2.8.1 Improving Communication within the Family

This is important in order to reduce the consequences of isolating the child. This involves improving the capacity of family members to communicate and understand the problems of the child, as this is the first level of care. Furthermore, this will help to integrate the child into family activities which can help to reduce the debilitating effects of mental disorder (WHO, 2003).

2.8.2 Increasing Psychosocial Awareness

Improving the knowledge of the family, religious organisations and the community in general about the psychosocial needs of mental ill children and adolescents is regarded as one of the most primary forms of care. This can help reduce stigmatization and discrimination of affected person within the community, improve acceptance of their special needs or social tendencies such as moodiness and need for autonomy among adolescents, thus aiding their integration into the society and reducing conflicts that can lead to psychopathology with poor adjustment (WHO, 2003).

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2.8.3 Education of Religious Personnel

This is a key form of intervention due to the roles that clerics play in the society. Many religious organisations now accommodate and shelter persons living with mental disorders and thus there is a need to engage in properly educating them on the methods of providing care to affected individuals. Thus, despite the informal nature of their role, enrolling their cooperation can be vital to establishing a relationship with formal care givers resulting in an improved access to appropriate healthcare (WHO, 2003).

2.8.4 Management of Scarce Resources

The role played by NGOs is vital to the provision of mental healthcare due to the lack of resources in such countries. However, there is a need to reduce perceived completion among NGOs, improve co-operation among themselves and encourage long term planning for projects and interventions. This is necessary to build lasting and sustainable care programs that leave the country with the ability to continue to sustain such projects long after they have left. A successful example of such cooperation can be observed in the case of Lebanon where health professionals and parents came together to form an NGO for children with ADHD- Lebanon ADHD Association. The organisation has been able to raise public health awareness about ADHD in schools, other NGOs that care for children and advocate for the rights of children with ADHD to have special needs schools both at the local and national government level (WHO, 2003).

2.9 HELP SEEKING BEHAVIOUR IN ADOLESCENTS

The concept of parents or adolescents to seek the assistance of other people in order to cope with their problems can be described as adolescent help seeking (Cauce and Srebnik, 2003). It is a multi-

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step process that requires that individual have to first recognise that they have a problem, decide to seek assistance and then actually seek the help they require. It has been reported that less than 50% of adolescents living with a form of mental disorder seek help from a professional service or have access to medical care around the globe (Bergeron et al., 2005; Merikangas et al., 2011). For instance, in Canada, the overall of individual with mental illness seeking for help was estimated at 8.3% (Sareen et al., 2005). Young people between the ages of 12-19 represented 13% of those who did not seek for help, and 8% of those who sought for help (Sareen et al., 2005). Similar studies in Canada too have shown that as many as 25% of young Canadians between the ages 15-24 represent those who seek for professional help (Bergeron et al., 2005). This implies that more than 70% of adolescents with mental disorders do not seek for professional help for their conditions (Burns et al., 1995; Gould et al., 2002).

In the United States, studies have shown that African American tend to receive care for mental illnesses at less than 50% the rate of European Americans (US Department of Health and Human Services, 2001). This disparity is supported by studies carried out by Ayalon and Young (2005) and Neighbors (2007). Also, among the groups of African American least likely to seek help are young people between the ages of 18-29 years and older individuals above the age 60 years (Neighbors et al., 2007).

Also, in a cross-sectional study carried out by Adeosun (2005), it was observed that less than 50% of adolescents attending secondary schools in Lagos and living with schizophrenia do not seek professional help for their condition due to barriers such as stigma, financial constraints and preference for spiritual remedies among others. In another study conducted on females presenting symptoms of mental illness arising from rape, it was observed that only about 5% of them have sought professional help, implying that more than 94% had never sought medical assistance.

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Among the reasons for not seeking help, 53% attributed it to the absence of injuries on their bodies, 42% believes that seeking for legal or medical help was a futile exercise, while 21% still professed love for their perpetrators.

Help seeking is a vital coping behaviour to mental illness and it involves the active searching for assistance from both formal and informal sources (such as professionals and friends respectively) (Fallon and Bowles, 2001). However, a common trend among adolescents is the tendency to seek help from mostly informal sources of information and assistance (Sherer, 2000; Sullivan et al., 2002). These sources of help are more actively sought because of the perceived lowered barriers to accessing them, thus, formal sources are most often sought after it has been decided that the informal sources are ill-equipped to provide assistance (Saunders et al., 1994).

2.9.1 Process of Adolescent Help Seeking

The help seeking stages involve recognition of the presence of the problem, making a decision to seek help, and actively seeking assistance to alleviate the problems. This may be from formal or informal sources (Andersen, 1995). Efficient help seeking model seek to identify those factors that may hinder or influence each stage of the process to finding assistance (Bergeron et al., 2005; Cause et al., 2002). A commonly used model is that of Andersen and was first proposed in the late 1960s but later modified to its current use in 1973 (Andersen and Newman, 1973).

The Andersen model is based on the assumption that the medical intervention that an individual receives is based on the demographics and socio-economic characteristics of their families. Thus, the model is primarily focused on the family (Andersen, 1995). However, following model revisions have shifted focus to the individuals due to the difficulty of determining the family characteristics as outlined in the original model; the model presently attaches family characteristics to the individual as the bases for analysis (Andersen, 1995).

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There are three factors that predict the tendency for professional help seeking in an individual, they include, predisposing (example, gender), enabling (example, access to service) and need (example, perceived need for help). Among these, the Andersen model proposed that need was the strongest of them all (Andersen, 1995).

Furthermore, a concept known as mutability is used to determine the possibility of change among the different factors, and thus, possible targets for intervention. Factors such as demographics features are quite resistance to mutability. For instance, variables such as gender and ethnicity are permanent. In addition, variables such as educational status or occupational achievement, though capable of change, cannot be altered within a short period of time as required in the treatment of mental illness. Also, some variable have a moderate level of mutability, they include belief and attitudes, which can be altered and lead to change in behaviour and perception (Andersen, 1995). Some other variables are quite mutable, such as, the provision of transportation, social support and access to information can rapidly improve the ability of affected individual to seek professional help.

2.10 BARRIERS TO HELP SEEKING BEHAVIOUR AMONG ADOLESCENTS

There are several reasons for the current state of mental health seeking behaviours. The most commonly cited include poverty, lack of insurance coverage, fear and guilt, not knowing what support is available or how to access it, access to transportation, stigmatization, access to childcare, cultural mistrust of mental health professional, poor understanding of their conditions, discrimination that is associated with mental illness (Diala et al., 2001; Snowden, 1999, Russell and Jewell, 1992). Also prominent too are barriers arising from religious and the communal nature of African people which emphasizes secrecy of such conditions (Obasi et al., in press). The

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engagement of these community members in developing intervention strategies will be advisable, because by doing, it will help dispel myths about mental illness and improve the confidence of patients to seek help (Obasi and Leong, 2009). Other studies carried out by Wilson (2002) and Rickwood (2005) suggest that other forms of barriers to help seeking by adolescents include their preference to overcome their problems on their own (as discussing one's problems may be perceived as a weakness), social inexperience (shyness and ignorance on how to function properly may hinder the steps to seeking help), lack of insight (the absence of a framework by which the sufferer may use to determine their own state of health may prevent help seeking), ignorance (not realizing that the conditions the sufferer is experiencing are symptoms of mental illness will prevent any form of help seeking) and confidentiality and anonymity (the fear of one's situation being exposed).

2.11 ADOLESCENT HELP SEEKING INTERVENTION STRATEGIES

2.11.1 Text Messaging

One of the major changes of the century is the acceptance of mobile communications by most adolescents. In most developed countries, 99% of adolescents have a mobile phone and a recent survey of incoming calls to Childline (an organisation that caters to the needs of under 16 year olds) show that more than 87% of them come from mobile devices (Joyce et al., 2006). In addition, a survey of the added feature of text messaging has shown that Childline receives more than 10, 000 messages a month (Joyce, 2006). Developing countries, though with also a high acceptance rate, have a lower percentage adolescents who own mobile phone, nevertheless, 90% of them have access to one (Joyce, 2006).

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Presently, mobile phones have become a social and cultural phenomenon among adolescents and even in the society in general (Geser, 2004). Taylor and Harper (2002) observed that due to the general availability of the device in our society, it has become common-place among teenagers and phone executed activities are now routine and are taken for granted. A survey of 1000 Finnish teenager shows that mobile phones have become a cultural phenomenon. Most teenagers believe that everybody carries their devices with them at all times and expect a reply to text messages soon after sending it (Skinner et al., 2002). Furthermore, a study carried out in the UK reported a significant success in improving the learning capacity of teenagers, as well as enabled them to acquire more skills and boost their self-confidence through the use of the mobile phone (Attewell, 2005).

Thus, adolescents are well versed in the use of mobile phone and very conversant with the concept of text messaging. A survey carried out among Irish children between the ages of 11-12 years show that 90% of them own a mobile device and text messaging is the most common type of communication, while voice calls play a secondary role (Joyce et al., 2006).

In view of the barriers to help seeking earlier outline, the relevant aspects between text messaging and the mental health service provider are in the area of:

- *Timeliness*

  The speed of conversation and feedback is greatly improved when using this method. Mental health providers can initiate conversations and receive replies in real time to their request, thereby reducing reluctance and increasing the chances of an honest answer.

- *Anonymity*

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Since the health provider or care giver is not present physically during the period of intervention, participants are able to achieve secrecy of their identities and this has the potential to significantly improve the chances of help seeking.

- *Ubiquitous*

  The wide availability and ease of access to the devices helps to reduce or eliminate sources of concern such as transportation costs and access to a medical center. Even in cases where the participant does not own one directly, chances are that having access to one is usually not a problem.

- *Guise of normal practice*

  The familiarity of adolescence with the concept of texting will improve the chances of engaging in help seeking behaviours. It also enable health professional and care givers to easily reach the targeted audience.

- *Impersonal-machine conversation*

  Unlike physical conversations between the individual and health professional, conversations through text provide an impersonal feeling of talking to a machine and thus, further strengthening the feeling of anonymity. This is a major advantage as studies have shown that shyness can contribute to reluctance to seek help by mentally ill patients (Joyce, 2006).

Studies have already reported the effectiveness of text messaging in improving help-seeking among adolescents. In a study conducted in Germany to explore how text messaging can be used

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in the help-seeking behaviour of bulimic adolescent patients in terms of practicability, acceptance and effectiveness, it was reported that its use was highly successfully among patients in giving support to them after the period of treatment (Bauer, 2003).

Furthermore, in the United States and New Zealand, studies have shown that text messaging can be used effectively to stop smoking among college students (Obermayer et al., 2004 and Rodgers et al., 2005 respectively).

2.11.2 Flyers and Educational Pamphlets

Several studies have reported on the effectiveness of using educational pamphlets and flyers to encourage help seeking behaviour among affected groups and populations 14, 15, 18-22 suffering from different health issues. For instance, a study carried out by O'Connell (2010) showed that educational pamphlets were useful in addressing help-seeking behaviours among patients suffering from incontinence. It reported that two thirds of participants in the study have resolved to seek help concerning their condition, especially with medical professionals.

A study conducted by (Bhugra, 2004) reported that the use of pamphlets were not only effective in encouraging help seeking behaviours among women at risk of suicide, but also was a cost effective option. Reports from the study observed that it positively changed the attitude of women in both primary and community care centres. Furthermore, general practitioners in the study observed that the use of pamphlet significantly improved the patient's willingness to accept anti-depressant medication and to report depression and suicidal tendencies to a professional service. This will thus increase the chances of proper diagnoses, and treatment of mental health conditions when presented. In addition, more women reported their willingness to discuss how they feel by confiding in someone close to them after reading the pamphlet, thus reducing the risk of suicide by preventing isolation.

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It was further observed that there was a dearth of literature about the impact of educational pamphlets and flyers among adolescents who have a mental disorder.

Other methods of intervention include:

- Home visiting

  This involves the use of social workers and caregivers to pay occasional visits to the homes of teenagers in areas at risk of mental illness and providing information on mental illnesses and how to identify symptom, accompanied by encouraging seek help should symptoms present themselves.

- Creation of educational material online

  The availability of internet access is growing rapidly. Access to the internet is readily available and accessed by most teenagers in developed countries. However, even though internet usage is not as ubiquitous in low income countries, many young people are familiar with it and have access to it. This creates a unique opportunity to provide help-seeking intervention programs through interactive websites and online training programs. A disadvantage to this method is the high tendency to be distracted due to the highly engaging nature of the internet and the risk of misinformation is also very abundant.

- Parental training and education

  There is need to ensure that parents are properly informed on mental health issues. Parents who have children with mental disorders can be trained on how to encourage their wards to seek help and confide in them when they encounter any form of distress. Also, adequate

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campaigns have to be carried out and targeted at parent against common mental health myths.

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CHAPTER 3

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METHODOLOGY

3.1 Study Location

The study was carried out in Ibadan the capital of Oyo State located in the south western geopolitical zone of Nigeria.

3.2 Study design

This study was designed to be a quasi-experimental study using three arms, two arms being experimental and the third the control arm.

3.3 Study Population

Adolescents in private, senior secondary schools in Ibadan.

3.4 Sample size estimation

The sample size for the study was calculated using the formula for comparing two independent group (Wade, 1997).

The desire to choose this formula is because the following provisos:

1. There were essentially two experimental groups.
2. Comparisons were pairwise comparisons, between both experimental groups and also between each of the experimental group and the control.
3. There was a difficulty in obtaining sample size formula when there are more than two groups.

Thus, minimum sample size (n) was obtained by:

$n = 2F(\sigma/d)^2$

where

n = The sample for one of the two groups

F = 7.85 based on power of 80% and 0.05% level of significance

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σ = The standard deviation for the outcome measure which is taken as 1

d = The difference expected to be found between the treatment and control groups. Assuming that the intervention will result in the treatment group having a half standard deviation (0.5) better knowledge of the intervention content than the control group then, the sample size will be

$n = 2F(\sigma/d)^2$

$n = 2x\ 7.85(1/0.5)^2$

$n = 62.8 \approx 63$

Thus, a sample of 63 students in each of the intervention and control groups was identified as adequate to identify a post intervention difference of half a standard deviation in the students' help seeking behaviour based on 80% power and 0.05% level of significance.

In this study because of possibility of non-response or attrition, assuming a 10% attrition rate, the minimum sample was increased by 6, therefore, 70 subjects were recruited into each of the study arm.

3.5 Sampling Technique

A multistage random sampling method was used to select three private secondary schools in Ibadan,

Stage One: All the 11 local government areas (LGAs) in Ibadan were listed

Stage Two: Three local government areas were randomly selected by balloting.

Stage Three: The list of all private schools in each of the three LGAs was obtained from the Ministry of Education.

Stage Four: A private school was randomly selected from each of the three LGAs.

Stage Five: Each one of the three schools was blindly block-randomized into either the first experimental group, second experimental group or the control group.

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Stage Six: In each of the selected schools, the total number (n) and the list of all senior secondary class students were obtained from the head teacher. Following this, subjects to be recruited into the study were selected by systematic sampling method of n/ minimum sample size.

All the students that were recruited for the study were given tallies for identification purpose. The first subject that was interviewed was randomly chosen and subsequent ones systematically selected as described above.

Inclusion Criteria

To be eligible for selection, the following criteria were met.

1. Senior class students who were adolescents (10-19 years of age).
2. Possession of a personal mobile telephone.
3. Willingness to participate attested to by voluntary consent from parents of the selected students and accent from the respective students.

3.6 Study Instruments

1. A sociodemographic questionnaire
2. General Help-seeking Qustionnaire-14
3. Actual Help-seeking Questionnaire
4. Barriers to Adolescents Seeking Help Scale
5. A set of pre-tested handbills that were developed, modified and validated for the purpose of the study.
6. A mobile telephone administered test messages, the contents of which were developed following an initial focus group discussion (FGD) involving students, teachers and parents.

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All questionnaires used are self-administered, presented in clear and easy to understand wordings. Questionnaires can be filled within 5 to 10 minutes.

A sociodemographic questionnaire

This 38 item questionnaire developed and validated at the Centre for Child and Adolescent Mental Health of the University of Ibadan. It generates personal, family and school related information.

Assessment of Help-Seeking Behaviour

Help seeking behaviour was determined by the use of the **General Help-Seeking Behaviour Questionnaire**. This instrument probes into help seeking in two major areas of life, personal or emotional problems and suicidal problems. Each of these two areas has 11 item questions rated thus, 1 = Extremely Unlikely. 2 = Unlikely.3= Not Sure. 4 = Likely. 5 = Extremely Likely. All item scores are added and a mean score may be generated.

The **Barriers to Adolescents Help-Seeking Behaviour Scale Brief Version** an instrument that assesses the possible hindrances to adolescents help-seeking behaviour. It is an 11 item self-administered questionnaire rated on a likert scale of 1 to 6 (1=strongly disagree. 2=moderately disagree. 3=disagree. 4=Agree. 5=moderately agree. 6=strongly agree).

The **Actual Help-Seeking Questionnaire** is an 11 item self-administered instrument that assesses the help-seeking behaviours of participants in the past.

Handbills

The handbills contain information on aetiology and presentations of common mental health problems in children and adolescents. The handbills were based on the handbills on mental health promotion adopted for use by Lasebikan (2007). The contents will be modified by an

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expert panel that will consists of 2 child and adolescent psychiatrist, a paediatrician, a child psychologist, a communication specialist and a mental health nurse.

Focus Group Discussion

A focus group discussion will be used to determine the contents of the telephone text messages. The Focus Group comprised of 12 participants. The Focus Group Discussion was held prior to the commencement of the study in a neutral environment and audio recording was analysed the emerging themes and subthemes was used to constitute the core contents of the text messages.

3.7 Ethical Considerations

Ethical approval on the proposed study was obtained from the Oyo State Ministry of Health Ethical Review Committee. Permission was taken from management of selected schools as well as consent and accent from parents and participants respectively.

The consent/accent form is as presented in the Appendix 1, with the following considerations:

1) **CONFIDENTIALITY**: All instruments are self-administered; serial numbers was allocated to participants along with initials of surname, first name and middle name. Serial numbers was preceded by the letters TM, HB and CO acronyms for Text Message, Hand Bills and Control respectively such that for example a participant named Adejumo Salawu Emeka in the text messaging intervention school will have the identification number TM/001/ASE .Information derived from the questionnaires is and will be used strictly by the researcher and for the research.

2) **BENEFICIENCE**: Participants and nonparticipants of selected schools also benefited from the health talks. Secondly the schools were also offered an hour of free consultation for mental Health and related concerns weekly while the study is on and after the study the investigator can still be contacted on phone and email on mental health related issues.

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3) **NON-MALEFICENCE**: The study design attempts to reduce risks to participants to the barest minimum. No extra cost is incurred as to transportation or otherwise. No invasive procedures. Questionnaire response time will not interfere with participants learning time. Maximum time for filling questionnaire is 10 minutes.

4) **JUSTICE**: To ensure equal opportunity for participants random sampling methods was used at all stages of selection up to the selection of school into experimental or control groups.

5) **VOLUNTARINESS:** participation will be voluntary as such participants will give accent in spite of consent from parents and schools.no form of coercion or undue incentives will be introduced. Pen at each time of assessment. Participants also reserve to withdraw from participation at any time during the research.

3.8 Study Procedure

Mental health awareness health talk was delivered in all the selected schools before baseline assessment. The talk included topics such as general introduction to mental health, aetiology of mental illnesses, common mental illnesses, facts and myths about mental disorders and available treatment options.

Once the assessment starts The investigator was visiting the schools once a week to attend to pupils and members of staff in need of mental health assistance, to make assessment and offer necessary intervention on-site otherwise to refer to the Centre for Child and Adolescent Mental Health in the University College Hospital Ibadan.

Assessments:

Baseline

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A baseline assessment was carried out at the commencement of the study where the sociodemographic questionnaire and the help-seeking questionnaire were administered.

This will be followed by distribution of hand bills and text messages to the intervention groups.

Post-test at Six Weeks

At 6 weeks the General help-seeking questionnaire was re-administered to all the groups and the scores generated

Pre-test

All instruments of data collection was pre-tested among 10 students in a private secondary school from a different LGA before the commencement of the study. This is to determine the content validity of all the study instruments and their applicability.

3.9 Data Management and Analysis

The sociodemographic characteristics of the three groups were compared using multinomial regression. Between group comparisons of the help seeking behaviour scores was carried out using ANOVA followed by a post hoc test, while the paired t test was used for within-group mean help seeking behaviour scores pre and post intervention for each of the groups.

The ANCOVA was used in order to determine the effect of the intervention. Effect sizes will be statistically determined. All levels of significance were set at 0.05, 95% confidence interval. Data were analysed using the statistical package for the social sciences SPSS (17.0)(Statistical Package for Social Sciences).

Word count 1558

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AFRICAN DIGITAL HEALTH REPOSITORY PROJECT

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CHAPTER FOUR

RESULTS

Table 4.1: Socio demographic characteristics

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Sociodemographic Characteristics	Intervention group A (Phone) N = 55 n (%)	Intervention group B (Handbills) N =71 n (%)	Control group N = 65 n (%)	Intervention A vs. Control X^2 (*P*)	Intervention B vs. Control X^2 (*P*)	Intervention A vs. Intervention B X^2 (*P*)
Age						
12-14	37 (67.3)	46 (64.8)	39 (60.0)	0.68(0.41)	0.33(0.56)	0.85(0.77)
15-17	18 (32.7)	25 (35.2)	26 (40.0)			
SEX						
Female	30 (28.5)	39 (54.9)	29 (44.6)	1.18(0.28)	1.44(0.23)	0.01(1.0)
Male	25 (71.5)	32 (45.1)	36 (55.4)			
Class						
SS 1	20 (36.4)	26 (36.6)	24 (38.1)	0.00(0.98)	0.00(1.06)	0.00(1.11)
SS 2	35(63.6)	45 (63.4)	41 (61.9)			
Practice any Religion						
Yes	53 (96.4)	69 (97.2)	63 (96.9)	0.03(0.87)	0.01(0.94)	0.01(0.79)
No	2 (4.6)	2 (2.8)	2 (3.1)			
Religion						
Christianity	44 (80.0)	63 (88.7)	45 (69.2)	1.80(0.18)	7.89(0.01)	1.85(0.17)
Others	11 (20.0)	8 (11.3)	20 (20.8)			
Teaching of religion guide behaviour						
Very much	33 (60.0)	47(66.2)	34 (52.3)	2.18(0.54)	5.60(0.13)	5.54(0.14)
Much	14 (25.5)	19 (26.8)	19 (29.2)			
Just a little	8 (14.5)	3 (4.2)	10 (15.4)			
Not at all	-	2 (2.8)	2 (3.1)			
Teaching of religion guide family life						
Very much	41 (74.6)	49 (69.0)	39 (60.0)	4.46(0.22)	4.99(0.17)	1.6 (0.4)
Much	10 (18.2)	19 (26.8)	17 (26.2)			
Just a little	4 (6.2)	3 (4.2)	6 (9.2)			
Not at all	-	-	3 (4.6)			

Table 4.1 shows the sociodemographic characteristic of the respondents. The mean age (SD) of the phone group was 14.47 (0.98), handbills group 13.96 (1.21) and control group 14.24 (1.29). According to the table there except in the area of religion, where a significantly higher proportion of the respondents in the intervention group B (Handbills group) were Christians compared with

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the control group $X^2 = 7.89$, $p = 0.01$, there was no significant differences in the sociodemographic characteristics three groups.

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Table 4. 2: Family Characteristics of Respondents

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Family Characteristics	Intervention group A (Phone)	Intervention group B (Handbills)	Control group	Intervention A vs. Control	Intervention B vs. Control	Intervention A vs. Intervention B
Family type						
Monogamous	50 (90.0)	65 (91.5)	56 (86.2)	0.65(0.42)	1.01(0.32)	0.02(0.90)
Polygamous	5 (10.0)	6 (8.5)	9 (23.8)			
Marital status						
Currently Married	50 (90.0)	64 (90.1)	58 (89.2)	0.09(0.76)	0.03(0.86)	0.02(0.89)
Not currently married*	5 (10.0)	7 (9.9)	7 (10.8)			
Presently live with						
Both parents	49 (89.1)	54 (76.1)	48 (73.8)	4.47(0.03)	0.09(0.77)	3.53(0.06)
Others	6 (10.9)	17 (23.9)	17 (26.2)			
Who brought you up						
Both parents	43 (78.2)	62 (87.3)	48 (73.8)	0.30(0.58)	3.99(0.05)	1.87(0.17)
Others	12 (21.8)	9 (12.7)	17 (26.2)			
People ever lived with						
None	36 (65.5)	40 (56.3)	45 (69.2)	0.24(0.89)	2.43(0.30)	1.23(0.55)
One	7 (12.7)	13 (18.3)	8 (12.3)			
More than one	12 (21.8)	18 (25.4)	12 (18.5)			
Fathers education						
Below tertiary	10 (18.2)	12 (16.9)	19 (29.2)	1.99(0.16)	2.93(0.09)	0.04(0.85)
Tertiary level	45 (81.8)	59 (83.1)	46 (70.8)			
Mothers education						
Below Tertiary	6 (10.9)	10 (14.1)	21 (32.3)	7.82(0.01)	6.40(0.01)	0.28(0.60)
Tertiary level	49 (89.1)	61 (83.9)	44 (67.7)			
Fathers occupation						
Teacher	2 (3.6)	1 (1.5)	1 (1.5)	0.88(0.83)	0.55(0.91)	0.90(0.82)
Civil servant	5 (9.1)	5 (7.0)	5 (7.7)			
Trader/business	11 (20.0)	14 (19.7)	16 (24.6)			
Professional	37 (67.3)	51 (71.8)	43 (66.2)			
Mothers occupation						
Teacher	5 (9.1)	8 (11.3)	3 (4.6)	6.09(0.11)	10.95(0.01)	3.05(0.38)
Civil servant	6 (10.9)	15 (21.0)	10(15.4)			
Trader/business	19 (34.5)	18 (25.4)	34 (52.3)			
Professional	25 (45.5)	30 (42.3)	18(27.7)			
Work to earn money						
Yes	4 (7.3)	8 (11.3)	14 (21.5)	4.76(0.03)	2.64(0.10)	0.57(0.45)
No	51 (92.7)	63 (88.7)	51 (78.5)			
Do you like your family						
Yes	49 (89.1)	69 (97.2)	60(92.3)	0.37(0.54)	1.65(0.20)	3.41(0.06)
No	6 (10.9)	2 (2.8)	5(7.7)			

Table Includes separated, widowed and deceased parents.

Table 4.2 shows the family characteristics of the respondents. According to the table, a significantly higher proportion of the respondents in the intervention group A group (phone group) lived with both parents compared with the control group $X^2 = 4.47$ $p = 0.03$, had mothers with

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tertiary education, $X^2 = 7.82$, $p < 0.01$ and who themselves were not working to earn extra money, $X^2 = 4.76$, $p < 0.03$ when compared with the control group.

Also, a significantly higher proportion of the respondents in the intervention group B group (Hand bill group) lived with both parents compared with the control group $X^2 = 6.40$ $p = 0.01$. Furthermore, a significantly higher proportion of the respondents in the intervention group B group (Hand bill group) had mother who were professional compared with the control group, $X^2 = 10.95$, $p = 0.01$.

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Table 4. 3: School related characteristics

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School related characteristics	Intervention group A (Phone)	Intervention group B (Handbills)	Control group	Intervention A vs. Control	Intervention B vs. Control	Intervention A vs. Intervention B
Do you like your school						
Yes	49(89.1)	57 (80.3)	50(76.9)	3.06(0.08)	0.23(0.63)	1.8(0.18)
No	6 (10.9)	14 (19.7)	15 (23.1)			
Satisfied with academic performance						
Yes	17 (30.9)	15(21.1)	39(60.0)	10.13(< 0.001)	21.42(< 0.001)	1.57(0.21)
No	38(69.1)	56(78.9)	26 (40.0)			
Having difficulty with teachers						
Yes	26 (47.3)	22 (31.0)	18 (27.7)	4.92(0.03)	0.18(0.67)	3.49(0.06)
No	29 (52.7)	49(69.0)	47 (72.3)			
Have guidance & counsellor in school						
Yes	50 (90.9)	68(95.8)	56(86.2)	0.65(0.42)	3.90(0.05)	1.23(0.27)
No	5(9.1)	3 (4.2)	9 (23.8)			
Have you gone to see them						
Yes	18 (32.7)	29 (40.8)	7 (10.8)	8.71(< 0.001)	15.77(< 0.001)	0.87(0.35)
No	37 (67.3)	42 (59.2)	58 (89.2)			
Would you go to your guidance counsellor if you have a problem						
Yes	19 (34.5)	13(18.2)	13 (20.0)	3.22(0.07)	0.06(0.80)	4.31(0.04)
No	36(65.5)	58(81.7)	52 (80.0)			

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Table 4.4: Actual Help-Seeking behaviour of respondents

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Description	N	%
Parents	54	29.2
I have not sought help from anyone for my problem	26	14.1
Sibling	22	11.9
Very Close Friend (e.g., significant boyfriend or girlfriend)	21	11.4
Friend (casual)	21	11.4
Teacher (year advisor, classroom teacher)	16	8.6
Other relative / family member	11	5.9
Family doctor / General Practitioner	6	3.2
Mental health professional (e.g.,school counsellor, psychologist,psychiatrist)	5	2.7
Phone help line(e.g., Lifeline, Kids Help Line)	3	1.6

Table 4.4 shows actual help-seeking behaviour of respondents. According to the table, the largest proportion of respondents 54 (29.2%) sought help from their parents and the lowest proportion 3 (1.6%) via phone help lines.

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Table 4. 5: Barriers to Adolescent Help-Seeking Behaviour

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Description	Strongly Disagree	Mildly Disagree	Disagree	Agree	Mildly Agree	Strongly Agree
I would solve my problem myself.	23 (12.0)	13 (6.8)	28 (14.7)	46 (24.1)	34 (17.8)	38 (19.9)
I think I should work out my own problems.	18 (9.4)	19 (9.9)	16 (8.4)	54 (28.3)	29 (15.2)	41 (21.5)
I'd be too embarrassed to talk to a counsellor.	60 (31.4)	20 (10.5)	28 (14.7)	29 (15.2)	20 (10.5)	26 (13.6)
Adults can't understand adolescent problems.	39 (20.4)	22 (11.5)	32 (16.8)	33 (17.3)	18 (9.4)	36 (18.8)
Even if I wanted to, I wouldn't have time to see a counsellor.	44 (23.0)	22 (11.5)	35 (18.3)	42 (22.0)	13 (6.8)	22 (11.5)
A therapist might make me do what I don't want to.	30 (15.7)	17 (8.9)	34 (17.8)	51 (26.7)	15 (7.9)	31 (16.2)
Wouldn't want my family to know I was seeking a counsellor.	72 (37.7)	26 (13.6)	39 (20.4)	23 (12.0)	10 (5.2)	8 (4.2)
I couldn't afford counselling.	96 (50.3)	20 (10.5)	36 (18.8)	12 (6.3)	2 (1.0)	6 (3.1)
Nothing will change the problems I have.	101 (52.9)	19 (9.9)	33 (17.3)	16 (8.4)	3 (1.6)	5 (2.6)
If I go to counselling, I might find out I'm crazy.	82 (42.9)	11 (5.8)	40 (20.9)	21 (11.0)	7 (3.7)	16 (8.4)
If I went for help, the counsellor would not keep my secret	42 (22.0)	10 (5.2)	29 (15.2)	43 (22.5)	19 (9.9)	35 (18.3)

Table 4. 5 shows various barriers to help-seeking behaviour. The most common barrier reported was "Nothing will change the problems I have", reported by 5 (2.6%) of the respondents.

Table 4.6: General Help-Seeking if Respondents have Emotional Problems at baseline

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If you were having a personal or emotional problem, how likely is it that you would seek help from the following people?	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Intimate partner (e.g., girlfriend, boyfriend)	55 (28.8)	19 (9.9)	28 (14.7)	28 (14.7)	28 (14.7)
Friend (casual)	25 (13.1)	39 (20.4)	28 (14.7)	63 (33.0)	26 (13.6)
Parent	17 (.9)	14 (7.3)	19 (9.9)	52 (27.2)	78 (40.8)
Siblings	26 (13.6)	26 (13.6)	21 (11.0)	52 (27.2)	56 (29.3)
Other relatives	65 (34.0)	38 (19.9)	40 (20.9)	26 (13.6)	9 (4.7)
Mental health professional (e.g. Psychiatrist, psychologist, social worker, counsellor)	63 (33.0)	34 (17.8)	29 (15.2)	27 (14.1)	20 (10.5)
Phone helpline (e.g. Lifeline)	99 (51.8)	42 (22.0)	23 (12.0)	8 (4.2)	8 (4.2)
Doctor/Family Physician	54 (28.3)	33 (17.3)	31 (16.2)	35 (18.3)	30 (15.7)
Minister or religious leader (e.g. Priest, Rabbi, Chaplain, Imam, Pastor)	44 (23.0)	31 (16.2)	30 (15.7)	37 (19.4)	3 (1.3)
I would not seek help from anyone	79 (41.4)	39 (20.4)	29 (15.2)	15 (7.9)	18 (9.4)
I would seek help from another not listed	11 (5.8)	3 (1.6)	5 (2.6)	1 (0.5)	6 (3.1)

Table 4.6 shows from whom the respondents will seek help if they have emotional problems. According to the table, the highest proportion of the respondents 78 (40.8%) will seek help from their parents, at base line for all the groups.

Table 4.7: General Help-Seeking in the Presence of Suicidal Thought at baseline

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How likely is it that you would seek help from the following people when you have suicidal thoughts?	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Intimate partner (e.g., girlfriend, boyfriend)	62 (32.5)	18 (9.4)	25 (13.1)	28 (14.7)	27 (14.1)
Friend (casual)	42 (22.0)	27 (14.1)	40 (20.9)	44 (23.0)	22 (11.5)
Parent	33 (17.3)	15 (7.9)	15 (7.9)	44 (23.0)	69 (36.1)
Siblings	35 (18.3)	17 (8.9)	23 (12.0)	48 (25.1)	53 (27.7)
Other relatives	65 (34.0)	33 (17.3)	40 (20.9)	21 (11.0)	16 (8.4)
Mental health professional (e.g. Psychiatrist, psychologist, social worker, counsellor)	62 (32.5)	24 (12.6)	24 (12.6)	25 (13.1)	30 (15.7)
Phone helpline (e.g. Lifeline)	99 (51.8)	29 (15.2)	23 (12.0)	14 (7.3)	10 (5.2)
Doctor/Family Physician	53 (27.7)	27 (14.1)	23 (12.0)	46 (24.1)	27 (14.1)
Minister or religious leader (e.g. Priest, Rabbi, Chaplain, Imam, Pastor)	49 (25.7)	22 (11.5)	22 (11.5)	30 (15.7)	50 (26.2)
I would not seek help from anyone	78 (40.8)	27 (14.1)	25 (13.1)	19 (9.9)	21 (11.0)
I would seek help from another not listed	17 (8.9)	4 (2.1)	3 (1.6)	3 (1.6)	10 (5.2)

Table 4.7 shows from whom the respondents will seek help if they have suicidal thoughts. According to the table, the highest proportion of the respondents 69 (36.1%) will seek help from their parents.

Table 4. 8: Mean General Health Seeking Behaviour (GHSB) Score for respondents at baseline

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Domain		Mean	SD	F	P
Emotional Problems	Control	25.86	8.93	0.1	0.9
	Phone	26.52	8.62		
	Handbill	26.09	7.16		
Suicidal Ideation	Control	24.64	10.53	0.7	0.5
	Phone	26.70	10.05		
	Handbill	24.80	10.58		
Informal	Control	32.86	12.42	0.2	0.9
	Phone	34.01	11.67		
	Handbill	33.23	10.75		
Formal	Control	12.75	6.65	0.4	0.6
	Phone	13.83	6.66		
	Handbill	13.01	6.30		
Total	Control	50.50	18.22	0.4	0.6
	Phone	53.23	17.17		
	Handbill	50.90	15.82		

Table 4. 8 shows the mean General Health Seeking Behaviour scores of the respondents in the three groups at baseline. According to the table, there was no significant difference in the mean General Health Seeking Behaviour scores across the three groups at baseline.

Table 4. 9: Mean General Health Seeking Behaviour GHSB) Score for respondents at post-intervention

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Domain		Mean	SD	F	P
Emotional Problems	Control	26.27	8.99	15.9	< 0.001
	Phone	33.61	7.28		
	Handbill	26.57	6.80		
Suicidal Ideation	Control	25.70	10.41	4.7	0.01
	Phone	30.41	9.37		
	Handbill	26.29	7.14		
Informal	Control	33.69	12.82	0.9	0.4
	Phone	33.22	6.34		
	Handbill	31.36	10.07		
Formal	Control	13.52	6.65	15.1	< 0.001
	Phone	18.78	4.07		
	Handbill	14.19	5.64		
Total	Control	51.98	18.43	242.6	< 0.001
	Phone	116.03	22.81		
	Handbill	52.87	12.81		

Table 4. 9 shows the General Health Seeking Behaviour scores of the respondents in the three groups post-intervention. According to the table, except for the informal care, there was a significant difference in the mean General Health Seeking Behaviour scores across the three groups post intervention in the four domains as well in all the total items of the domains, $p < 0.001$, $p = 0.01$, $p < 0.001$, $p < 0.001$ respectively.

Post-hoc multiple pairwise comparisons show that the difference was due to significant increase in the mean GHSB scores in the intervention group A (Phone) group compared to the control group and also when compared with the intervention group B (Handbills) group, $p < 0.001$ respectively. On the other hand, there was no significant difference in the mean GHSB scores in the intervention group A (Handbill) group and the control group $p > 0.05$ respectively (Not in any Table)

Table 4. 10: Effect of intervention on Seeking Help for Emotional Problems of Respondents

After Adjusting for Baseline Scores

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Tests of Between-Subjects Effects

Dependent Variable: Post_DOM_1

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4633.164[a]	3	1544.388	33.285	.000	.348
Intercept	4873.191	1	4873.191	105.028	.000	.360
Pre_DOM_1	2608.737	1	2608.737	56.224	.000	.231
Status	1885.111	2	942.555	20.314	.000	.178
Error	8676.584	187	46.399			
Total	168478.000	191				
Corrected Total	13309.749	190				

a. R Squared = .348 (Adjusted R Squared = .338)

Pairwise Comparisons

Dependent Variable: Post_DOM_1

(I) Status of school	(J) Status of school	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Control	Phone	-7.040*	1.249	.000	-10.056	-4.023
	Handbill	-.193	1.169	1.000	-3.018	2.632
Phone	Control	7.040*	1.249	.000	4.023	10.056
	Handbill	6.847*	1.224	.000	3.890	9.803
Handbill	Control	.193	1.169	1.000	-2.632	3.018
	Phone	-6.847*	1.224	.000	-9.803	-3.890

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 4.10 shows the effect of intervention on the 3 groups. According to the table, the ANCOVA was significant, [$F (2, 187) = 20.3$, $p = < 0.0001$. Post-hoc comparisons show that post-intervention, there was a significant increase in the mean GHSB scores in the intervention group

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B (phone) compared with the intervention group B group and the control group p < 0.001 respectively. The ES was 0.178.

Table 4. 11: Effect of intervention on Seeking Help for Suicidal Thoughts of Respondents After Adjusting for Baseline Scores

Tests of Between-Subjects Effects

Dependent Variable: Post_DOM_2

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2946.860[a]	3	982.287	14.033	.000	.184
Intercept	9980.330	1	9980.330	142.578	.000	.433
Pre_DOM_2	2175.743	1	2175.743	31.082	.000	.143
Status	558.218	2	279.109	3.987	.020	.041
Error	13089.873	187	69.999			
Total	158207.000	191				
Corrected Total	16036.733	190				

a. R Squared = .184 (Adjusted R Squared = .171)

Pairwise Comparisons

Dependent Variable: Post_DOM_2

(I) Status of school	(J) Status of school	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
Control	Phone	-4.037*	1.538	.028	-7.751	-.322
	Handbill	-.537	1.436	1.000	-4.007	2.933
Phone	Control	4.037*	1.538	.028	.322	7.751
	Handbill	3.500	1.507	.064	-.141	7.140
Handbill	Control	.537	1.436	1.000	-2.933	4.007
	Phone	-3.500	1.507	.064	-7.140	.141

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 4.11 shows the effect of intervention on the 3 groups. According to the table, the ANCOVA was significant, [F (2, 187) = 3.99, p = 0.02. Post-hoc comparisons show that post-intervention,

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there was a significant increase in the mean GHSB scores in the intervention group A (phone) compared with the control group $p < 0.03$. The ES was 0.041.

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Table 4.12: Effect of intervention on Seeking Help from Informal Sources by the Respondents after Adjusting for Baseline Scores

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Tests of Between-Subjects Effects

Dependent Variable: Post_Informal

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5461.913[a]	3	1820.638	23.395	.000	.273
Intercept	6254.905	1	6254.905	80.374	.000	.301
Pre_Informal	5256.845	1	5256.845	67.549	.000	.265
Status	215.376	2	107.688	1.384	.253	.015
Error	14552.862	187	77.823			
Total	224138.000	191				
Corrected Total	20014.775	190				

a. R Squared = .273 (Adjusted R Squared = .261)

Pairwise Comparisons

Dependent Variable: Post_Informal

(I) Status of school	(J) Status of school	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
Control	Phone	1.001	1.618	1.000	-2.906	4.909
	Handbill	2.498	1.515	.302	-1.160	6.157
Phone	Control	-1.001	1.618	1.000	-4.909	2.906
	Handbill	1.497	1.585	1.000	-2.332	5.327
Handbill	Control	-2.498	1.515	.302	-6.157	1.160
	Phone	-1.497	1.585	1.000	-5.327	2.332

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

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Table 4.12 shows the effect of intervention on the 3 groups. According to the table, the ANCOVA was not significant, [F (2, 187) = 1.38, p = 0.3. Post-hoc comparisons show that post-intervention,

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there was no significant change in the mean GHSQ scores in the intervention group A (phone) compared with the intervention group B group and the control group.

Table 4.13: Effect of intervention on Seeking Help from Formal Sources by the Respondents after Adjusting for Baseline Scores

Tests of Between-Subjects Effects

Dependent Variable: Post_Formal

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1996.670[a]	3	665.557	25.284	.000	.289
Intercept	4278.307	1	4278.307	162.528	.000	.465
Pre_Formal	1038.345	1	1038.345	39.446	.000	.174
Status	824.218	2	412.109	15.656	.000	.143
Error	4922.492	187	26.323			
Total	51560.000	191				
Corrected Total	6919.162	190				

a. R Squared = .289 (Adjusted R Squared = .277)

Pairwise Comparisons

Dependent Variable: Post_Formal

(I) Status of school	(J) Status of school	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Control	Phone	-4.869*	.942	.000	-7.145	-2.594
	Handbill	-.580	.881	1.000	-2.708	1.547
Phone	Control	4.869*	.942	.000	2.594	7.145
	Handbill	4.289*	.923	.000	2.060	6.518
Handbill	Control	.580	.881	1.000	-1.547	2.708
	Phone	-4.289*	.923	.000	-6.518	-2.060

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 4.13 shows the effect of intervention on the 3 groups. According to the table, the ANCOVA was significant, [F (2, 187) = 15.6, p < 0.001. Post-hoc comparisons show that post-intervention, there was a significant reduction in the mean GHSB scores in the intervention group B (phone)

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compared with the intervention group B group and the control group p < 0.001 respectively. ES was 0.143.

Table 4.14: Effect of intervention on Total General Health Seeking Behaviour by the Respondents after Adjusting for Baseline Scores

Tests of Between-Subjects Effects

Dependent Variable: Post_Total

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	170273.884[a]	3	56757.961	214.640	.000	.775
Intercept	45639.283	1	45639.283	172.593	.000	.480
Pre_Total	11897.734	1	11897.734	44.993	.000	.194
Status	151865.090	2	75932.545	287.152	.000	.754
Error	49449.037	187	264.433			
Total	1176033.000	191				
Corrected Total	219722.921	190				

a. R Squared = .775 (Adjusted R Squared = .771)

Pairwise Comparisons

Dependent Variable: Post_Total

(I) Status of school	(J) Status of school	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
Control	Phone	-62.779*	2.985	.000	-69.991	-55.567
	Handbill	-.705	2.792	1.000	-7.449	6.039
Phone	Control	62.779*	2.985	.000	55.567	69.991
	Handbill	62.074*	2.926	.000	55.007	69.141
Handbill	Control	.705	2.792	1.000	-6.039	7.449
	Phone	-62.074*	2.926	.000	-69.141	-55.007

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 4.14 shows the effect of intervention on the 3 groups. According to the table, the ANCOVA was significant, [F (3, 186) = 9.23, p = 0.01. Post-hoc comparisons show that post-intervention,

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there was a significant reduction in the mean GHSB scores in the intervention group B (phone) compared with the intervention group B group and the control group p < 0.001 respectively. ES was 0.754.

4.1 QUALITATIVE ANALYSIS RESULTS

A focus group discussion was conducted among 12 discussants from a secondary school in Ibadan. This school was not part of the school selected as part of the quantitative study. Participants were drawn from senior secondary 2 students enrolled in the school. Topics for the group discussions focused on participants' understanding about mental illness, the various causes of mental illness and the treatment options available for it. The FGD also explored participants' perception of persons with any form of mental illness.

Of particular interest were issues of the aspects of mental health education needed to be focused on and what channels will be most effective in reaching young adolescents.

The focus group audiotape was transcribed by an independent research assistant; from thence, major recurrent themes were generated after thorough reviews. The dominant themes were further reviewed and developed into a system of code categories using both inductive and deductive approaches.

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Main issues / code categories	Themes
Understanding /knowledge	A proper understanding of the meaning of mental illness, and words to describe mental illness

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Causes	The various causes of mental illness and the various forms of mental illness.
Treatment	The different options available for the treatment of mental illness.
Perception	The various ways persons with mental illness are perceived and treated.
Mental health education	What areas of mental health education should focus on, and also the most effective means of disseminating these information to young adolescents.

Table 4.x—*Code categories and text pattern searches used for analysis*

A. Understanding/Knowledge of mental illness

Respondents were asked about what came to mind on hearing the phrase "mental illness". Three of the respondents suggested that it meant madness, mental derailment or psychological problems.

*"**Respondent 1:** mental illness means when someone is mad"*

*"**Respondent 2**: A person that is mentally derailed"*

*"**Respondent 3:** A person who has psychological problems"*

However, when put to vote, participants both equally agreed that mental illness was best described as "when someone is mad" or "when a person is suffering from psychological problems"

B. Causes of mental illness

On the various causes of mental illness, while some participants linked it with depression, or psychological burden;

Respondent 4: *When a person has too many problems bothering you but has no one to discuss/talk with them with.*

Others associated mental illness with problems arising from relationships,

Respondent 2: *Obsession among people in relationships for example, between a girl and a boy. Problems with relationships.*

Respondent 6: *Rejection by a family members and friends; spousal rejection and generally problems with relationship.*

While a few opined mental illness had a spiritual origin/affliction, drug abuse or too much studying.

Respondent 3: *Mental illness can be caused by spiritual Possession*

Respondent 4: *Drug abuse such as Cocaine, marijuana, heroin, can lead to mental illness*

Respondent 7: *I once heard that reading too much can be a cause*

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C. Treatment options for mental illness

The opinions of the respondents differed along three schools of thought: formal rehabilitation centres, seeking help from spiritualists or seeking treatment from a psychiatrist.

Respondent 3: *Normally, the person should visit a psychiatrist because they are the experts.*

These views were suggested based on the type of perceived cause of the mental illness.
For example some of the respondents opined:

Respondent 10: *It depends on the type and cause of mental illness.*

Respondent 2: *When it is spiritual, the person can be taken to an herbal/spiritual homes.*
Interestingly, the views of the respondents were mostly influenced by different sources such as the mass media through local movies and TV shows, and other social media platforms.
A respondent reasoned:
Respondent 11: *The person can visit an herbalist, I know from the films that I have watched.*

However, all the respondents finally agreed that seeking help from a psychiatrist was the best option for any person suffering from any mental illness.

D. Perception of people with mental illness

Most respondents suggested that mentally ill persons should be avoided; this was because they perceived mentally ill persons as very violent and having unpredictable behaviours thus making them dangerous.
Respondent 4: *I will avoid the person because it can get transferred from one individual to another and because the person can be violent*
Respondent 11: *The person will be a dangerous person*
The general opinion of the respondents was that such avoidance could be seen as stigmatization. They however, showed willingness to assist such persons if any such opportunity presented itself. A respondent offered:
Respondent 6: *We should try to help and assist them.*

E. Mental health education among young adolescents

All respondents agreed that people need to know more about mental illness.
The dominant areas the respondents suggested such mental health education must focus on should include the causes, signs & symptoms, preventive measures and how to manage persons with mental illness.

Respondent 1: *mental health education should include the causes, symptoms, prevention and how to manage or cure it.*

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Respondent 6: *The outcomes of mental illness or prognosis should also be included*

Regarding the means of such dissemination channels, respondents were quick to suggest social media platforms and through other media channels

Respondent 7: *Mental health information can be disseminated through public enlightenment through whatsapp chats, Instagram, school health talks, social media.*

Respondent 11: *Billboards, television, posters, radio.*
When asked about short messaging service (SMS or text messages), all respondents also agreed to this channel.

Word count 1748.

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CHAPTER FIVE
DISCUSSIONS, RECOMMENDATION, CONCLUSION

5.1 DISCUSSION

This is a quasi-experimental study that evaluated the effect of mental health campaign on help-seeking behaviour of senior secondary with the use of mobile telephone administered text message

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compared with the use of handbills. Specifically, the study assessed help seeking behaviour by the use of mobile telephone delivered text messages intervention versus handbills delivered intervention, another secondary school served as control. The study demonstrated a statistically significantly reduced help-seeking behaviour among the mobile telephone group compared with the handbills group and the control. These findings are discussed herein based on available local and international literatures.

5.1.1 Socio-demographic characteristics of participants

The sociodemographic characteristics of students are similar to those expected from secondary schools students in Nigeria (Asa & Lasebikan 2016). The participants had a mean age of 14.33 (1.23) years. A similar age distribution was reported among secondary school students in the study reported by Lasisi and colleagues in 2017 (Lasisi, Ani, Lasebikan 2017). Generally speaking, the sociodemographic characteristics of the three groups were similar except in a few areas such religion and some family characteristics. For example, it was found that except in the area of religion, where a significantly higher proportion of the respondents in the intervention group B (Handbills group) were Christians compared with the control group, there was no significant differences in the sociodemographic characteristics three groups. This implies that although, the participants were not matched by age because of differences in the sample sizes of the three groups, they were similar in the essential demographic characteristics and highly comparable.

It was also found that a significantly higher proportion of the respondents in the intervention group A group (phone group) lived with both parents compared with the control group, had mothers with tertiary education, and who themselves were not working to earn extra money when compared with the control group. No reason could be adduced for this and this occurrence could have due to selection bias or by chance. However, it is possible that those in the telephone group had mothers

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who by the virtue of their educational status had a higher income, so were they more likely to afford mobile phones whose lines have not been suspended because of non-use because of inability to purchase telephone credit. The higher socioeconomic status of this group could also have accounted for the less likelihood of their children to be working while schooling to earn extra money.

Also, a significantly higher proportion of the respondents in the intervention group B group (Hand bill group) lived with both parents compared with the control group , furthermore, a significantly higher proportion of the respondents in the intervention group B group (hand bill group) had mother who were professional compared with the control group.

5.1.2 Actual help-seeking behaviour of respondents

In this study, the largest proportion of respondents sought help from their parents and the lowest proportion via phone help lines. This finding is not unexpected given research reports that parents generally consitute the main social network of Nigerians. A similar observation was reported by Lasebikan and Asa (2016) among secondary school students in Nigeria. Generally speaking, the prevalence of help-seeking was low in the currrent study. This is line with reports from developed countries of the world. For example, of those who sought for help in the United States, young people between the ages of 12-19 represented only 13% (Sareen et al., 2005). Similar studies in Canada too have shown that as many as 25% of young Canadians between the ages 15-24 represent those who seek for professional help (Bergeron et al., 2005). By implication, more than 7 of every 10 adolescents with mental disorders do not seek for professional help for their conditions (Burns et al., 1995; Gould et al., 2002).

In the United States, studies have shown that African American tend to receive care for mental illnesses at less than 50% the rate of European Americans (US Department of Health and Human

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Services, 2001). This disparity is supported by studies carried out by Ayalon and Young (2005) and Neighbors (2007). Also, among the groups of African American least likely to seek help are young people between the ages of 18-29 years and older individuals above the age 60 years (Neighbors et al., 2007). In Nigeria, similarly high rate (50%) of failure to seek professional help was reported by Adeosun (2005) among adolescents attending secondary schools in Lagos and living with schizophrenia.

5.1.3 Barriers to Adolescent Help-Seeking Behaviour

Although different barriers to help-seeking were reported by the respondents, the most common barrier reported was “Nothing will change the problems. This is a sort of cognitive dissonance whereby people generally accept their fate when faced with a lot of long term or intractable psychosocial burden (Festinger 1957). This finding may also be a reflection of the ideas and beliefs of their parents. This is likely because the highest proportion of the respondents reported that they will seek help from their parents because of emotional problems or suicidal thoughts. Noting that they are adolescents, this age group of individuals still has attachments to their parents. They are therefore less likely to seek help independently or have personal barriers to help-seeking outside of the barriers of their parents.

In the study by Adeosun (2005), the barriers identified for adolescent help-seeking behaviour when they have mental illnesses were stigma, financial constraints, preference for spiritual remedies among others. In another study conducted on females presenting symptoms of mental illness arising from rape, it was observed that only about 5% of them have sought professional help, implying that more than 94% had never sought medical assistance. Among the reasons for not seeking help, 53% attributed it to the absence of injuries on their bodies, 42% believes that seeking

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for legal or medical help was a futile exercise, while 21% still professed love for their perpetrators (Fallon and Bowles, 2001).

5.1.4 Baseline General Health Seeking Behaviour Pre Intervention

According to the table, there was no significant difference in the mean General Health Seeking Behaviour scores across the three groups at baseline. This is not unexpected given the generalized low level of knowledge about the aetiology of mental illnesses by people across all ages. For example, in a community study of knowledge about aetiology and attitude to mental illnesses in Nigeria, the vast majority believed mental illnesses have spiritiomagical aetiology with only a few ascribing biological factors to the cause (Gureje, Lasebikan, et al 2006). These widespread deeply ingrained beliefs traverse all age groups including adolescents.

5.1.5 General Health Seeking Behaviour Post Intervention

In this study, except in the domain of informal care, there was a significant difference in the mean General Health Seeking Behaviour in the across the three groups post intervention as well in all the items of the four domains. Further analysis showed that the difference was due to significant increase in the mean GHSQ scores in the intervention group A (Phone) group compared to the control group and also when compared with the intervention group B (Handbills) group. One the other hand, there was no significant difference in the mean GHSQ scores in the intervention group B (Handbill) group and the control group.

The question is what could be responsible for this?. In recent years, studies all over the world have demonstrated that mobile telephone administered health care delivery is effective, affordable, personalized and has brought healthcare delivery "into the pockets" of physicians. Mobile telephone text messages have been used as the medium of intervention in smoking cessation (Haug et al 2009), and a wide array of health conditions (Scherr et al 2006, Wangberg et al 2006)

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and to obtain feedback from patients (Klasnja & Pratt 2012). Similar approached have also been used in Nigeria in other clinical settings (Lasebikan & Ola 2016).

5.1.6 Effect of intervention on Seeking Help for Emotional Problems, suicidal thoughts and Total General Health Seeking Behaviour of Respondents

The current study has shown that the intervention was successful because there was a significant increase in the mean GHSB scores in the domains of emotional problems, suicidal thoughts, formal care and total general help seeking behaviour of the respondents. The intervention was most marked in the mobile telephone group compared with the handbills group. The current study

By implication, mobile telephone based intervention has the advantage of a large reach, and a rapid and non- invasive method of giving health information. Research evidences have shown that mobile phone text messaging reminds individuals of healthcare instructions (Gurol-Urganci et al 2013) and very useful in behaviour change intervention (Haug et al 2013, Irvine et al 2012).

The feasibility has demonstrated in the current study could partially be attributed to an increasing number of mobile phone users in Nigeria (Okoro et al 2010).

5.1.7 How effective was the Intervention?

Although, the intervention yielded small effect sizes (ES) in three of the four domains of the General Help Seeking Behaviour of the respondents, it yielded an overall large effect size. Specifically, the ES in the emotional problem domain was 0.178 which is small and much smaller in the suicidal thought domain (0.04). This suggests the tendency of concealment of suicidal symptoms among this sample. This finding is not at paradox to the well-recognized cultural inhibition of divulging suicidal symptoms in Nigeria because of the associated stigma and its criminalization (Leighton et al 1963). The intervention was not significant for the domain of informal care, and yielded an effect size of 0.015. Again this is not surprising as studies have

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shown that unorthodox practitioners still constitute the first choice of those consulted by those seeking access to mental health care in Nigeria (Gureje & Lasebikan 2006) and the pathway to mental healthcare is often characterized by an initial access to alternative practitioners (Lasebikan et al 2012). It should also be recognized that psychosocial interventions that target behavioural change often do not yield large effect sizes, (Wilson & Lipsey 2001). For example, a common trend among adolescents is the tendency to seek help from mostly informal sources of information and assistance (Sherer, 2000; Sullivan et al., 2002). These sources of help are more actively sought because of the perceived lowered barriers to accessing them, thus, formal sources are most often sought after it has been decided that the informal sources are ill-equipped to provide assistance (Saunders et al., 1994). Therefore, interventions that will improve help-seeking behaviour because of the likelihood of adolescents to access informal care should be more consistent and vigorous. Nevertheless, the intervention yielded a large ES (0.754) in the overall help seeking behaviour of the participants. Thus, the current study has highlighted the usefulness of the mobile phone in healthcare delivery in the school setting. It should also be highlighted that it is likely that the handbills intervention was not effective because the materials were easily discarded by these school children because they were trivial in nature and not recognized as of value compared with the mobile telephone.

5.2 FOCUS GROUP DISCUSSION (FGD)

The results of the FGD tended to corroborate well documented evidences about the knowledge and attitude of people to aetiology and treatment of mental illnesses.

As to the knowledge of participants about mental illness the consensus was that mental illness refers to “madness” and a few agreed its psychological problem.

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In considering the causes of mental illness causes identified include problems related to too much stress, substance use, family and relational issues, however most prominent is spiritual causes and someone mentioned "reading too much" as possible causes of mental illness.

Some suggestions as to treatment options include "*It depends on the type and cause of mental illness"* that is if it is spiritual then the treatment is either in a church or herbalist homes. It is also interesting to know that respondents' idea about treatment options is influence by local movies.

As to their perception of a person suffering from mental illness most of the respondents believes they should be avoided because they can be dangerous and they can also infect others through contact.

All respondents agreed that people need to know more about mental illness as to causes, prevention, treatment and even the prognosis of mental illness. Media suggested for the dissemination of such information includes internet based social media (Facebook, whatsapp and instagram) others are Billboards, television, posters and radio. All respondents also agreed that mobile text message will be very useful in influencing people's knowledge and attitude.

5.3 CONCLUSION

Information regarding knowledge, attitude and practices surrounding mental illness is very much needed as a matter of utmost urgency and should be vigorously pursued especially among adolescents. This study has demonstrated that telephone messaging and use of hand bills are effective means of mental health information dissemination although the text message is more effective but the overall large effect size showed that an intervention is better than no intervention.

5.4 RECOMMENDATIONS

Based on findings from the study the following recommendations are made

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1) Stake holders should explore the use of mobile devices in management of mental illness.
2) Such interventions (SMS and Hand bills) can be used to modify the help-seeking behaviour of people with established mental disorders especially in the area of treatment adherence.
3) The Centre for Child and Adolescents Mental Health can develop school oriented mental health campaigns in collaboration with other stake holders.

5.5 LIMITATIONS

1) There was problem with accessing the private schools such that I have to go to several schools before getting approval to proceed.
2) Study was conducted around the time conduct of final year exams such that the most senior classes are not able to participate in the study. This affected the subject population in the control group. (word count 2260)

APPENDIX I

INFORMED CONSENT/ ACCENT FORM

My name is Dr. Samson Oladunjoye ADEPOJU. I am a post-graduate student of the Centre for Child and Adolescent Mental Health, University of Ibadan am in the masters programme studying ; Child and Adolescent Mental Health.

I am carrying a study that will compare which method (text messaging or use of Handbills) of mental health promotion is better at improving the Help-Seeking behavior of Adolescents in private secondary schools in Ibadan. The study will attempt to improve the mental health Help-seeking behaviors of participants. Questions will be ask to assess past, future and barriers to adolescents help-seeking behavior. The questionnaires are self-administered, easy to understand and take a maximum of 10 minutes to fill.

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I am assuring you that the information generated from the study will be kept confidential and no need for names participants will be identified by coded identifications. You are free to refuse to take part in the study without any negative consequences and you also have the right to withdraw from the study at any time. However for the sake of scientific knowledge and evidence, I will greatly appreciate your full participation in the study.

CONSENT: now that the study has been clearly explained to me and I full understand its content I am willing to participate in the study. For parents I am willing to allow my ward to participate in the study.

__________________________ __________________________

Signature of Participant/ Date Signature of Interviewer/ Date

For further information you can contact the investigator on 07069463381 or email: adepojusamson@ymail.com

APPENDIX II

Actual Help-Seeking Questionnaire

Below is a list of people who you might seek help or advice from if you were experiencing a personal or emotional problem.

Tick any of these who you have gone to for advice or help in the past 4 weeks for a personal or emotional problem and briefly describe the type of problem you went to them about.

If Yes Briefly describe the type of problem____

1)Very Close Friend (e.g., significant boyfriend or girlfriend)

2) Friend (casual)

3) Parent

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4) Sibling

5) Other relative / family member

6) Mental health professional (e.g.,school counsellor, psychologist,psychiatrist)

7) Phone help line(e.g., Lifeline, Kids Help Line)

8) Family doctor / General Practitioner

9) Teacher (year advisor, classroom teacher)

10) Someone else not listed above (please describe who this was)________________________

11) I have not sought help from anyone for my problem

APPENDIX III

Barriers to Adolescent Help-Seeking Behaviour Scale Brief Version.

Response to the questions below is from 1- 6

1=strongly disagree. 2=moderately disagree. 3=disagree. 4=Agree. 5=moderately agree.

6=strongly agree

1) I would solve my problem myself.

2) I think I should work out my own problems.

3) I'd be too embarrassed to talk to a counsellor.

4) Adults can't understand adolescent problems.

5) Even if I wanted to, I wouldn't have time to see a counsellor.

6) A therapist might make me do what I don't want to.

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7) Wouldn't want my family to know I was seeking a counsellor.

8) I couldn't afford counselling.

9) Nothing will change the problems I have.

10) If I go to counselling, I might find out I'm crazy.

11) If I went for help, the counsellor would not keep my secret.

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APPENDIX IV

General Help-Seeking Questionnaire

1. If you were having a personal or emotional problem, how likely is it that you would seek help from the following people?

Please indicate your response by putting a line through the number that best describes your intention to seek help from each help source that is listed.

1 = Extremely Unlikely. 2 = Unlikely.3= Not Sure. 4 = Likely. 5 = Extremely Likely

a. Intimate partner (e.g., girlfriend, boyfriend) 1 2 3 4 5

b. Friend (casual) 1 2 3 4 5

c. Parent 1 2 3 4 5

d. Siblings 1 2 3 4 5

e. Other relatives 1 2 3 4 5

f. Mental health professional (e.g. Psychiatrist, psychologist, social worker, counselor) 1 2 3 4 5

g. Phone helpline (e.g. Lifeline) 1 2 3 4 5

h. Doctor/Family Physician 1 2 3 4 5

i. Minister or religious leader (e.g. Priest, Rabbi, Chaplain, Imam, Pastor) 1 2 3 4 5

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j. I would not seek help from anyone 1 2 3 4 5

k. I would seek help from another not listed above (please list in the space provided, (e.g., work colleague. If no, leave blank) ____. 1 2 3 4 5

2. If you were experiencing suicidal thoughts (tired of living or wishing to die), how likely is it that you would seek help from the following people?

Please indicate your response by putting a line through the number that best describes your intention to seek help from each help source that is listed.
1 = Extremely Unlikely 2 = Unlikely 3= Not Sure 4 = Likely 5 = Extremely Likely
a. Intimate partner (e.g., girlfriend, boyfriend) 1 2 3 4 5
b. Friend (casual) 1 2 3 4 5
c. Parent 1 2 3 4 5
d. Siblings 1 2 3 4 5
e. Other relatives 1 2 3 4 5
f. Mental health professional (e.g. Psychiatrist, psychologist, social worker, counselor) 1 2 3 4 5
g. Phone helpline (e.g. Lifeline) 1 2 3 4 5
h. Doctor/Family Physician 1 2 3 4 5
i. Minister or religious leader (e.g. Priest, Rabbi, Chaplain, Imam, Pastor)1 2 3 4 5
j. I would not seek help from anyone 1 2 3 4 5
k. I would seek help from another not listed above (please list in the space provided, (e.g., work colleague. If no, leave blank)____. 1 2 3 4 5

APPENDIX V

Serial Number: __ __ __ __Today's Date: __ __/__ __/__ __

SCHOOL HEALTH QUESTIONNAIRE IN ENGLISH

Please write the answers to the questions or draw a circle where it applies to you. This is not an examination it is only to find out about you and your health.

SECTION I
Personal Information

1. Name of School:
2. Class:
3. Where do you live? (Area not detailed Address):

4. How old are you? ____

5. Gender? Male / Female ---------

6. Do you practise any religion? No Yes

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7. What religion do you practice?

___

(a) Islam (b) Orthodox Christian (c) Pentecostal Christian (d) Traditional religion (e) Other

8. How much does the teaching of your religion guide your behaviour?
(a) Very much (b) much (c) Just a little (d) Not at all

9. How much does the teaching of your religion guide your family life?
(a) Very much (b) much (c) Just a little (d) Not at all

Family Information

10. Family Type:
(a) Monogamous (b) Polygamous

11. Number of Mother's Children:

12. Number of Father's Children:

13. What is your position among your father's children?

14. What is your position among your mother's children?

15. Marital Status of Parents:
(a) Married (b) Separated/Divorced (c) Father is dead (d) Mother is dead (e) Mother & Father are dead

16. How many husbands has your mother had?

17. Who do you live with presently?
(a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother
(f) Grandfather (g) Other [please specify] ___________________

18. Who brought you up from your childhood?
(a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother
(f) Grandfather (g) Other[please specify] ___________________

19. How many different people have you lived with beside your parents from your childhood?____

20. If more than one person, list the people, time spent and whether experience was good or bad?

Person lived with	From which age to which age	Experience (good or bad)

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_______________ ___________ ___________

_______________ ___________ ___________

_______________ ___________ __________

21. Do you do any kind of work to earn money before or after school? Yes No

22. If yes, please describe what you do ____
____

23. Level of Father's Education
(a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School
(e) Post-Secondary (Non-University) (f) University Degree and above (e) I do not know

24. Occupation of Father: [Write the exact occupation] _______________________/ I do not know

25. Level of Mother's Education
(a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School
(e) Post-Secondary (Non-University) (f) University Degree and above (e) I do not know

26. Occupation of Mother: [Write in the exact occupation] _____________________/ I do not know

27. Do you like your family? Yes No

28a.If Yes, Why? ____

28b. If No, Why? ____

School-Related Questions
29. Do you like your school? Yes/ No
30. How many children are there in your class?

31. Are you satisfied with your academic performance? Yes No

32. Are you having difficulties with your teachers? Yes No

33. If yes, what sort of difficulties?
____

34. Do you have guidance counsellors in your school? Yes No

35. Have you ever gone to see them? Yes No

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36. If yes, what did you go to see them for?

____

37. If you have a problem at school would you go to the guidance counsellor for help? Yes No

38a. If yes, why would you go?

____

38b. If no, why not?

APPENDIX VI

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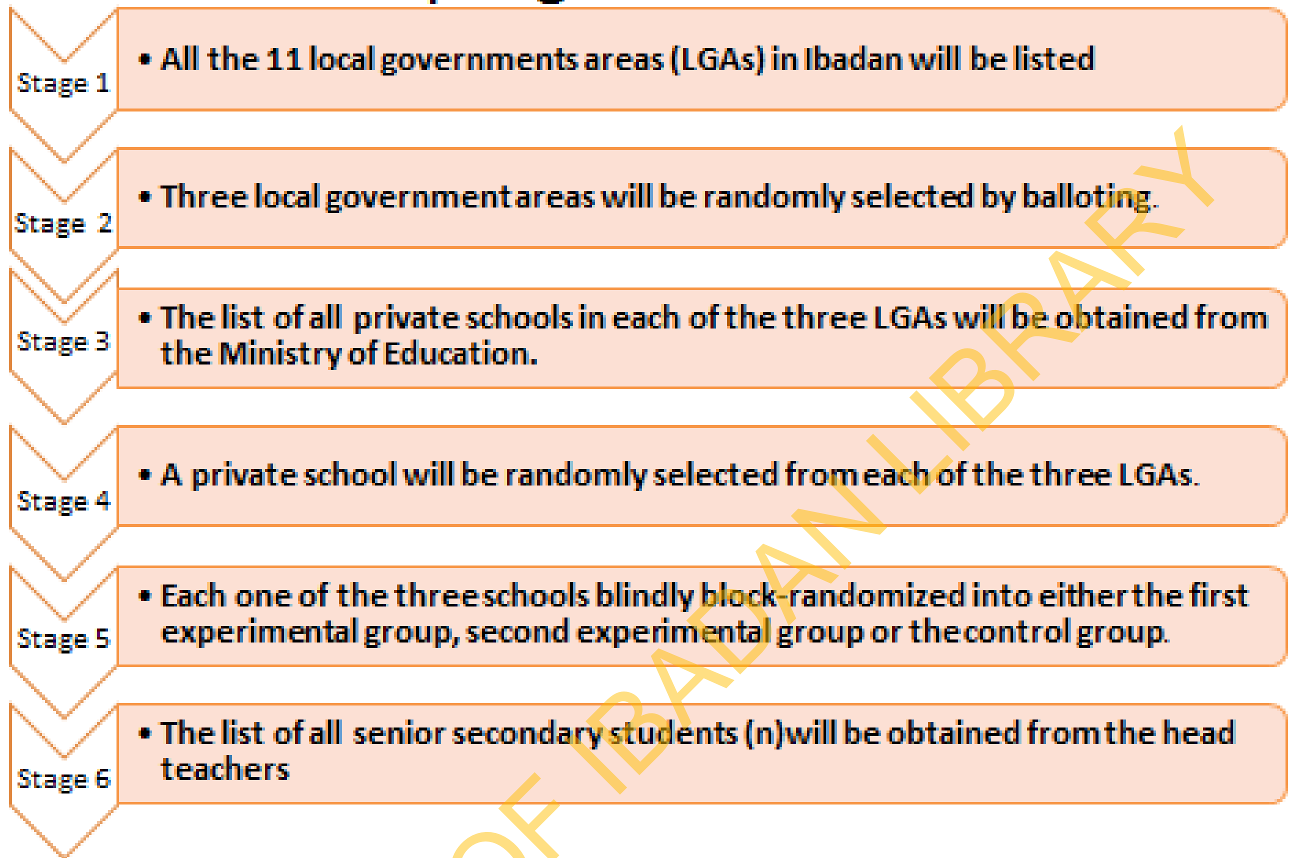

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APPENDIX VII

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FOCUS GROUP DISCUSSION GUIDE

Good day, my name is Dr. Samson Oladunjoye Adepoju, I am a post-graduate student from the Centre for Child and Adolescent Mental Health University of Ibadan. The purpose of this gathering is to find out what your opinions are on issues relating to adolescent mental health. Your opinion matters a lot and it will be used to design mental health campaign materials for a study. I will be moderating this discussion as such questions and other concerns are to be directed to me. Kindly be as honest and as frank as possible.

1) What come to your mind when you hear the phrase mental illness?
2) What are your beliefs as to the cause(s) of mental illness?
3) What treatment options are available for the mentally ill?
4) How do you view a mentally ill person?
5) What information do you think adolescents need about mental illness?
6) What are the means through which this information can be made available for adolescents?

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APPENDIX VIII

HAND BILL

Stress

Brief

HELLO

Anxiety

Depression

HELLO

HELLO

HELLO

Frustrated

FACTS AND MYTHS ABOUT MENTAL HEALTH

- Mental illness affects over 450million people worldwide.
- 1 out of 4 persons will experience mental illness in their life time.
- Mental illness is not caused by spiritual attack, demon possession and witchcraft.
- Mental ilness is not contagious
- Mental ilness can be treated with medications in hospitals
- Beating, sleep deprivation and starvation worsen mental illness
- Persistent change in mood, behaviour and attitude towards others should be investigated
- Mental illness affects all; old & young; male & female; rich & poor
- Treatment is available and affordable for mental illness

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APPENDIX IX

TEXT MESSAGES

1) Mental illness is like other chronic medical conditions like hypertension and diabetes. Mental disorders are not contagious and not all mentally ill people are dangerous.
2) Mental illness is best treated in hospital by a mental health professional. There are medications and other treatment modalities that are effective in treating mental illness.

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APPENDIX X

TELEGRAMS.................. TELEPHONE..................

MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No. ....
All communications should be addressed to the Honorable Commissioner quoting
Our Ref. No. AD 13/ 479/404

30th March, 2017

The Principal Investigator,
Centre for Child and Adolescent Mental Health
University of Ibadan
Ibadan

Attention: Adepoju Samson

ETHICAL APPROVAL FOR THE IMPLEMENTATION OF YOUR RESEARCH PROPOSAL IN OYO STATE

This is to acknowledge that your Research Proposal titled: "Effectiveness of Mental Health Campaign, Delivered by Mobile Text Messaging Compared with Handbills on the Help-Seeking Behaviour of Adolescent in Secondary Schools in Ibadan." has been reviewed by the Oyo State Ethical Review Committee.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.

4. Wishing you all the best.

Dr. Abbas Gbolahan
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethical Review Committee

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