MENTAL HEALTH AMONG WOMEN IN ACCRA: THE EFFECTS OF RELIGIOSITY, SOCIAL SUPPORT AND SOCIAL NEGATIVITY

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON

BY

ETHEL AKPENE ATEFOE

(10226600)

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL PSYCHOLOGY DEGREE

JULY, 2013
DECLARATION

This is to certify that this thesis is the result of research undertaken by Ethel Akpene Atefoe towards the award of the Master of Philosophy Degree in the Department of Psychology, University of Ghana.

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

ETHEL AKPENE ATEFOE
(STUDENT)

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

DR. SAMUEL ATINDANBILA
(PRINCIPAL SUPERVISOR)

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

DATE

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

PROF. CHARITY AKOTIA
(CO-SUPERVISOR)

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

DATE

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

DATE
ABSTRACT

The present study seeks to find out the influence of religiosity, social support, social negativity and selected demographic variables on the mental health of women in Accra. A total of two hundred (200) women living in Accra at the time of data collection were used in a cross-sectional survey. Ninety-two (46%) of the participants had a history of various mental illnesses and were reporting for review at the Accra psychiatric and Pantang hospitals. One hundred and eight (54%) had no history of mental illness and reside or work in Adenta, Madina and Legon communities. Data was collected on participants’ demographic characteristics and history of mental illness using Demographic questionnaire and Mental Health Screening Form III (MHSF-III), the Mental Health Inventory (MHI-38) was used to measure their mental health, religiosity, social support and social negativity were also assessed using the Santa Clara Strength of Religious Faith Questionnaire (SCSRFQ), Multidimensional Scale of Perceived Social Support (MSPSS) and Social negativity questionnaire respectively. Results from Pearson Product moment correlation, multiple regression and Multivariate analysis of variance revealed that religiosity had a significant positive relationship with psychological well-being and overall mental health index and a significant negative relationship with psychological distress. Perceived social support did not have a significant relationship with the mental health outcomes, social negativity however had significant negative influence on mental health such that those who reported high social negativity reported poorer mental health than those who reported low social negativity. Perceived stress moderated the relationship between religiosity and mental health. Among the demographic variables, only education predicted mental health significantly. History of mental illness did not make any significant difference in participants’ level of religiosity, social support and social negativity and did not moderate their influence on mental health. It was also found that
religiosity predicted more variance in psychological well-being than social negativity. Findings and limitations are discussed in relation to theories and earlier research. It is suggested that further research is needed to find out the specific mechanisms involved in the relationships between religiosity, social negativity and mental health.
DEDICATION

This thesis is dedicated to my late dad, Mr. Edem Atefoe. You went all out for me to realize my dreams and you were ready to do even more, but the Lord called you into his eternal bosom. Your support and the great faith you had in me brought me this far and I am so grateful. I know you are happy and proud wherever you are that the work you started has been brought to a successful end. God richly bless you! Rest in perfect peace!!
ACKNOWLEDGEMENT

Indeed He who began a good work in us will bring it to an expected end; thanks to God almighty for His faithfulness through it all.

My profound gratitude also goes to my mum (Miss Christine N. Quartey) for her support. She has been there for me; listening to my complaints, supporting, encouraging and praying with me all the way to the end.

I would also like to thank my supervisors; Dr. Samuel Atindanbila and Dr. Charity Akotia for their time, energy, patience and direction from the beginning to the completion of this research; I very much appreciate their efforts.

My special thanks also go to the Chief Psychiatrist, DDNS and all the staff of the Accra Psychiatric hospital and the Medical Director and the ethics committee chairman of Pantang Hospital for their immense support during my data collection.

Finally to all my friends and course mates who helped in one way or the other towards the success of this research, I say a big “thank you”.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECLARATION</td>
<td>i</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>iv</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>v</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>xi</td>
</tr>
<tr>
<td>CHAPTER ONE</td>
<td>1</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Background to the Study</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Statement of the Problem</td>
<td>7</td>
</tr>
<tr>
<td>1.3 Aims and Objectives of the Study</td>
<td>10</td>
</tr>
<tr>
<td>1.4 Relevance of the Study</td>
<td>11</td>
</tr>
<tr>
<td>CHAPTER TWO</td>
<td>12</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>12</td>
</tr>
<tr>
<td>2.1 Introduction</td>
<td>12</td>
</tr>
<tr>
<td>2.2 Theoretical Framework</td>
<td>12</td>
</tr>
<tr>
<td>2.2.1 Stressor Reduction/Prevention Model (Ellison, 1994; Grasmick, Bursik &amp; Cochran, 1991)</td>
<td>13</td>
</tr>
<tr>
<td>2.2.2 Religious Coping Theory (Pargament, 1997)</td>
<td>14</td>
</tr>
<tr>
<td>2.2.3 Stress and Coping Perspective (Lakey &amp; Cohen, 2000)</td>
<td>15</td>
</tr>
<tr>
<td>2.3 Review of Related Studies</td>
<td>18</td>
</tr>
<tr>
<td>2.3.1 Religiosity and Mental Health</td>
<td>18</td>
</tr>
<tr>
<td>2.3.2 Social Relationships/Interactions and Mental Health</td>
<td>26</td>
</tr>
</tbody>
</table>
REFERENCES .................................................................................................................... 80

APPENDIX A ................................................................................................................... 98

DEMOGRAPHIC QUESTIONNAIRE ............................................................................. 98

APPENDIX B ................................................................................................................ 100

MENTAL HEALTH SCREENING FORM III (MHSF-III) ............................................... 100

APPENDIX C ................................................................................................................ 103

SANTA CLARA STRENGTH OF RELIGIOUS FAITH QUESTIONNAIRE ................ 103

APPENDIX D ............................................................................................................... 104

PERCEIVED STRESS SCALE ...................................................................................... 104

APPENDIX E ................................................................................................................ 105

SOCIAL NEGATIVITY QUESTIONNAIRE ................................................................. 105

APPENDIX F ............................................................................................................... 106

MENTAL HEALTH INVENTORY .................................................................................. 106

APPENDIX G .............................................................................................................. 111

CONSENT FORM ...................................................................................................... 111

APPENDIX H .............................................................................................................. 114

ETHICAL APPROVAL ............................................................................................... 114

APPENDIX I ............................................................................................................... 115

SOCIAL SUPPORT SCALE ........................................................................................... 115

APPENDIX J ............................................................................................................... 116

CONFIRMATORY FACTOR ANALYSIS FOR THE COMPONENTS OF THE
SOCIAL NEGATIVITY QUESTIONNAIRE ................................................................. 116

APPENDIX K ............................................................................................................... 117

MULTIPLE REGRESSION ANALYSIS OF THE CONTRIBUTIONS OF
RELIGIOSITY AND SOCIAL NEGATIVITY ON PSYCHOLOGICAL WELL-BEING
........................................................................................................................................... 117
LIST OF FIGURES

Figure 1: Hypothesized relationships among variables................................. 42

Figure 2: Observed relationships among variables after data analysis............ 67
LIST OF TABLES

Table 1: Demographic characteristics of participants……………………………………. 47

Table 2: Means, Standard deviations and Cronbach alpha of Variables………………..56

Table 3: Correlation matrix of the relationship among variables…………………….. 57

Table 4: Summary of means and MANOVA results of the influence of social negativity on mental health outcomes………………………………………………………….59

Table 5: Hierarchical multiple regression analysis of the moderation effect of history of mental illness on the relationship between religiosity, social negativity and mental health…………………………………………………………………….61

Table 6: Hierarchical multiple regression analysis of the moderation effect of stress on the relationship between religiosity and mental health…………… 62

Table 7: Hierarchical multiple regression analysis of the moderation effect of stress on the relationship between social negativity and mental health………………………………………………………………………………………….63

Table 8: Multiple regression analysis of the contribution of levels of education to mental health……………………………………………………………………………….64
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA</td>
<td>Accra Metropolitan Assembly</td>
</tr>
<tr>
<td>APA</td>
<td>American Psychiatric Association</td>
</tr>
<tr>
<td>DSM</td>
<td>Diagnostic and Statistical Manual of mental disorders</td>
</tr>
<tr>
<td>REL</td>
<td>Religiosity</td>
</tr>
<tr>
<td>SN</td>
<td>Social negativity</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>WHO, ICPE</td>
<td>World Health Organization, International Consortium Psychiatric Epidemiology</td>
</tr>
</tbody>
</table>
CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Mental health is clearly an integral part of our daily living and well-being as human beings (WHO, 2003). The World Health Organization defines mental health as “a state of well-being in which every individual reaches his/her potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his/her community” (WHO, 2003 p.7). Mental health goes beyond the absence of mental illness, and can be best understood as a complete state which comprises of the presence and absence of mental illness and symptoms such as subjective well-being, symptoms of positive feelings and positive functioning in life (Keyes, 2002). It is also worthy of note that, mental health and mental illness are not opposite sides of a single measurement scale, but they have been found as negatively and moderately correlated (Ryff & Keyes, 1995). This means that the presence of mental illness does not imply the absence of mental health. However, most researches investigating mental health often neglect this fact and focus on the presence or absence of mental illness as the conceptualization of mental health.

Mental health is found to have various outcomes on the daily living of individuals and communities, thus improving mental health should be the goal of every individual and community (WHO, 2009). These mental health outcomes include; healthier lifestyles, better physical health, higher educational attainment, greater productivity, improved quality of life, among other aspects of well-being (WHO, 2009). Conversely, the consequences of poor mental health consist of poor physical health, reduced quality of life, fewer employment opportunities, lower productivity at the individual level and it can also contribute to violence, drug trafficking, child abuse, paedophilia, suicide, crime and other
social vices (Fournier, 2011; Osei, 2008). Promoting the mental health of populations is as a result becoming a pertinent tool for achieving strategic goals in health, education, sustainable development, employment, culture, sport, crime reduction, community cohesion and other aspects of nation building (WHO, 2009). Many countries are now acknowledging the significance of focusing on mental health activities which are capable of improving the well-being of the whole populace (WHO, 2009). Nonetheless, African countries are yet to wake up to this reality. Mental health issues are still not being treated with the sense of urgency they deserve (Fournier, 2011).

Statistics on the size of the global burden of mental illness shows a major and increasing public health problem (Murray & Lopez, 1996) and in Ghana, nine percent (9%) of the disease burden represents mental illness, with women being affected more by common mental disorders than their male counterparts (de Menil, Osei, Douptcheva, Hill, Yaro & De-Graft Aikins, 2012). Yet women are underrepresented in treatment settings (de Menil et al., 2012). This is because women’s mental health issues in Ghana are given less attention (Ofori-Atta, Cooper, Akpalu, Osei, Doku et al., 2010). Mental illness is linked with a considerable burden of morbidity and disability (WHO, ICPE, 2000). The alarming part is that the World Health Organization estimates that the lifetime prevalence rate for mental, behavioral, and neurological disorders such as schizophrenia, mental retardation, alcohol and drug abuse, dementias, stress-related disorders, and epilepsy is 25%; mostly affecting the poor, and people from developing countries (Asare, 2003; Fournier, 2011; Prince, Patel, Saxena, Maj, Maselko, et al., 2007; WHO, 2002; 2007).

Gender is considered a very important determinant of health, including mental health (WHO, 2000). It is said to control the power and control men and women have over their mental health correlates, which include socioeconomic position, roles, rank and social status, access to resources and treatment in society (WHO, 2000). Therefore, gender is
pertinent in defining vulnerability and exposure to a number of mental health risks (WHO, 2000). Even though women’s sexual and reproductive health needs are generally well known, there are other important health challenges such as mental illness, which seem to be ignored. Usually, women are found to report lower levels of well-being than men (Piccinelli & Wilkinson, 2000) and women are more at risk for common mental disorders such as anxiety, depression and somatoform disorders (de Menil et al., 2012; Ofori-Atta et al., 2010). Focusing on the mental health of women is therefore not out of place, since they seem to be the most vulnerable group to psychological distress. According to the WHO, (2000), it has become crucial for deliberations and investigations concerning the poor mental health of women to go beyond the focus on individual and “lifestyle” risk factors to recognize the wider economic, legal and environmental factors that affect their lives.

Mental health has been attributed to a variety of biological, psychological and socio-economic factors. Contrary to suggestions in the past that mental health is primarily determined by biological and psychological factors, social and demographic factors are increasingly being found to have very potent influences on mental health (Harpham, Snoxell, Grant & Rodriguez, 2005; WHO, 2000). For instance, results from a study done on Ghanaian women in certain selected communities in Accra suggested the correlates of physical and mental health in this population as education, income, number of children and unemployment (de Menil, et al., 2012). In addition, a World Health Organization study of seven other countries found higher depression and anxiety disorder rates in the lowest income and education groups within those societies (WHO, ICPE, 2000). Social factors that influence physical and mental health include; religiosity, social support, marriage, income/financial status, age, education, employment status, and gender (Ellison,
From the above, there is the need for continuous research to investigate these social and demographic factors, in order to discover the various ways in which they influence mental health. Even though studies are being done in this respect, there is still more to be investigated especially in Ghana, where there is a paucity of data in this regard. The present study has therefore joined the quest to investigate the influence of religiosity, social support, and social negativity as well as other demographic variables (such as age, income, educational level) on the mental health of women, with a focus on women in Accra.

Religiosity has been defined as “the awareness of the existence of some ultimate supreme being who is the origin and sustainer of this universe and the establishment of constant ties with this being” (Gyekye, 1996 p.3). The African is considered as living in a religious world since the behaviors and thoughts of Africans mostly have religious influences. The African culture is infused with religion to the extent that one cannot talk about culture in Africa without the mention of religion. According to Gyekye (1996), religious faith among Africans is considered as functional and practical rather than as a means for spiritual growth or the unification of the human soul with God. “The prayers of Africans are mostly requests for material well-being and earthly blessings …Petition for healing and longevity is one of the most important and common subjects of prayer because of the African’s love for life” (Gyekye, 1996 p.16). The question then is how this functional and practical use of religious faith is employed in relation to mental health among Ghanaians.

For several years in the past, the psychological/psychiatric community has been wary of religion. Religion was either openly opposed or treated with indifference (Wulff, 1997). However, the relationship between psychology and religion has become more peaceful in
recent times. The DSM-IV of the American Psychiatric Association (APA, 1994) recognizes “religious and spiritual difficulties as distinct mental disorder deserving treatment” (Sleek, 1994 p.8) which is contrary to the third edition (DSM-III; APA, 1980) whereby experiences common to many religions were treated with contempt and explained in the light of psychopathology (Kilbourne & Richardson, 1984). Even Ellis who once considered religion as irrational, now recognizes that religious beliefs may be helpful to some clients (Ellis, 2000). This implies that according to Ellis, religion and spirituality may serve as possible effective tools in psychotherapy.

Since this turn of events, the psychology of religion has been interested in establishing and discussing the relationship between religiosity and mental health. Several researchers have found positive associations between religion and mental health (Ellison, 1991; Ellison, et al., 2009; Rosmarin, Pargament & Mahoney, 2009). Stronger religious identities have been found to be linked to greater abilities to cope with stressful situations, greater self-esteem and overall happiness in addition to improved physical health. Religious coping has been found to be associated with a sense of control over difficult situations, leading to more positive health outcomes (Pargament, Ensing, Falgout, Olsen, Reilly et al., 1990). It is very clear at this point that the importance of religiosity in mental health research cannot be overemphasized.

Apart from religiosity, Africans like other collectivist cultures place so much emphasis on social relationships. Most African cultural values can be said to revolve around social relationships. For instance humanity, brotherhood and communalism are important African cultural values (Gyekye, 1996) which are reflected in some social structures such as clan, the extended family and other multifaceted networks of social relationships (Belgrave & Allison 2010). Human interaction or exchange targeted towards the well-being of the individual is very important to Africans. This is expressed in maxims such as
“it is the human being that is needed” and “it is the human being that counts; I call upon
gold, it answers not; I call upon cloth, it answers not; it is the human being that counts”
(Gyekye, 1996; p. 25). Despite the fact that Africans hold certain individual values such
as personal will and personal identity, certain communal values like sharing, mutual aid,
caring for others, interdependence, solidarity, reciprocal obligation and social harmony,
are very much emphasized (Gyekye, 1996). Individuals are socialized to think about
themselves in relation to their relatives (both nuclear and extended family members) and
they are responsible to seek the well-being and harmony of the family (Belgrave &
Allison, 2010). This means that each member of the family is expected to provide and
receive some sort of support, and this goes a long way to reiterate the importance of social
relations in the African society.

It is however noteworthy that, social relationships have both positive and negative sides.
The positive side is what has been conceptualized mostly as social support while the
negative aspect has been conceptualized as social negativity (Bertera, 2005). Social
support has been defined as “information from others that one is loved and cared for,
esteeemed and valued, and part of a network of communication and mutual obligations”
(Taylor, 2009 p. 187). It is a multidimensional construct which can be conceptualized in
many ways (Bertera, 2005 p. 34). It can be enacted, that is in situations where what is
measured is actually what people receive, or it can be perceived, and thus in situations
where personal perceptions of availability of support are measured (Bertera, 2005; Buunk
& Hoorens, 1992; Finch, 1998). In the present research, social support is conceptualized as
perceived care and support from family, friends and significant others. Perceived social
support is employed because of its distinct cognitive component, and it has been found to
be more important for mental health than received social support (Turner & Marino, 1994;
Wethington & Kessler, 1986).
Social support is one of the most important constructs that have been found to predict health outcomes and quality of life in an array of diseases (Hogan, Linden & Najarian, 2002; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Barker & Pistrang, (2002) even liken social support to psychotherapy and describes it as an “informal” equivalence of psychotherapy. Researchers however often bemoan the scarcity of convincing evidence on how social support actually influences health outcomes (Hogan, et al., 2002). Moreover, research in the past had focused on the beneficial aspects of social relationships (Finch, 1998). There is recent evidence however that negative socio-emotional interactions and interpersonal stress also affect mental health (Bertera, 2005; Reinhardt, 2001a).

Social negativity in relationships has been linked to physical and mental health indicators, including depression (Finch, Okun, Pool, & Ruehlman, 1999). Social negativity has been conceptualized as non acceptance, debasement, and lack of affection, understanding, and empathy (Rook, 1984). It has also been conceptualized as social conflict, defined by the number of network members that sometimes make one angry or upset (Reinhardt, 2001b). Research in recent times supports the importance of jointly assessing both positive and negative influences of social interactions to enable understanding of the full range of ways in which social relationships can affect mental health (Barbee, Derlega, Sherburne, & Grimshaw, 1998; Wethington, McLeod, & Kessler, 1987).

1.2 Statement of the Problem

Even though women are reported as being vulnerable to common mental disorders (Belle & Doucet, 2003; Patel, Araya, de Lima, Ludermir & Todd, 1999), their mental health issues have not received enough attention in Ghana. Health research on women in Ghana has focused primarily on physical and reproductive health, neglecting mental health (Ofori-Atta, et al., 2010). Major depression is predicted to be the second leading cause of
global disease burden by 2020 (Murray & Lopez, 1996). It is obvious that any significant reduction in the overrepresentation of women who are depressed would make a significant contribution in reducing the global burden of disease and disability. The ability to identify and modify social factors that influence women’s mental health is a possible step towards primary prevention of certain mental disorders as well as enhancing the possibility of recovery from an already existing one (WHO, 2000). There is therefore the need for a paradigm shift in health research among women in Ghana.

Also, the parliament of Ghana in March 2012 passed the mental health bill into law, which was expected to take effect in December 2012. There are however bound to be challenges in implementing this law considering the inadequate human and infrastructural resources that the mental health sector huddles with currently. The only three public Psychiatric hospitals in the country are overburdened with patients, with very few personnel to attend to them (Fournier, 2011). It is not surprising therefore that there is no sign of the implementation of the law till now. Experts and stakeholders in Ghana are increasingly coming to a consensus that the best approach to mental health is community-based intervention, in terms of mental health promotion, prevention and treatment of mental illness (Akpalu, Lund, Doku, Ofori-Atta, Osei, et al., 2010; Bhana, Petersen, Baillie, Fisher & Consortium TMRP, 2010). A community-based approach to mental health requires information on the holistic picture of mental health, including finding out some of the social, cultural, demographic and economic factors affecting mental health at the community level. This is because the effectiveness of any community-based intervention would to a large extent be determined by how these factors are controlled.

There is evidence linking some aspects of religiosity to a variety of positive mental health outcomes which include higher levels of psychological well-being (Ellison, 1991; Levin,
Chatters & Taylor, 1995). In addition, religiosity and spirituality have been considered as very important to individuals who are suffering in one way or the other and/or ill (Mathews, McCullough, Larson, Koenig, Swyers et al., 1998; McCullough, Hoyt, Larson, Koenig & Thoresen, 2000). Despite this, mental health professionals have either neglected religiosity as irrelevant or opposed it as evidence of a different psychopathology (Pargament & Brant, 1998; Sims, 1994). Even though the DSM-IV (APA, 1994) acknowledges religious and spiritual difficulties as a separate disorder, Psychiatry and Psychology still seem to have no formal place for it in the management of mental disorders.

In addition, African culture emphasizes the importance of social support. Individuals in the society are therefore expected to express concern for the well-being of others (Gyekye, 1996). However this culture of communalism may not be extended to people living with mental illness, considering the fact that stigma against these individuals is high. Despite the fact that people’s understanding of mental illness has been improving, stereotypes of dangerousness and the wish for social distance towards the mentally ill has still not changed much (Link & Phelan, 1999). People with mental illness have been reported to perceive less social support compared to people without mental illness (Cecil, Stanley, Carrion & Swann 1995; Kitamura & Takahashi, 1999; Torgrud, Walker, Murray, Cox, Chartier et al., 2004). Further, due to urbanization and the infiltration of western culture, “communal living” previously thought to be characteristic of Africans is losing its grounds, especially in the urban areas; next door neighbours even do not know each other’s names let alone be concerned about their well-being. The question about how the change in social relations is affecting mental health has thus become pertinent. It has also been indicated that women who often report more social resources than men consistently
report more psychological distress than men (Schuster, Kessler & Aseltine, 1990). Is it because they perceive more negative interactions than support? Despite the importance of religiosity and social relationships on mental health, there is a dearth of research with regards to women. Research is needed to find out how these aspects of the African culture and society (religiosity & social relationships) affect the mental health of women.

1.3 Aims and Objectives of the Study

The present study seeks to find out how religiosity, social support, social negativity and selected demographic variables influence the mental health of women in Accra. More specifically, the study is guided by the following objectives:

1. To find out whether religiosity has a significant influence on mental health among women in Accra and the direction and nature of the association.

2. To find out whether social support and social negativity have significant influence on the mental health of women and to ascertain the dynamics of this association.

3. To find out whether religiosity, social support and social negativity have the same or similar effects on women with mental illness as those who do not have any history of mental illness.

4. To find out whether the relationship between religiosity, social support, social negativity and mental health is influenced by perceived stress.

5. To find out how women’s demographic characteristics influence their mental health.
1.4 Relevance of the Study

As acknowledged by Ofori-Atta et al., (2010), women’s mental health issues have been neglected; the focus on women is therefore one thing that sets this study apart from the others, in the sense that it provides empirical information on some determinants of mental health among women in Accra which will go a long way to inform decisions on community-based interventions in the prevention and treatment of mental illness amongst women. The use of both clinical and community-based samples is also a peculiar feature of the present research; which allows for comparisons and enhances the ability to make generalizations in both groups.

In addition, knowledge about the effects of religiosity, and social relationships would help in making predictions about women’s mental health as well as prognosis in treatment and management planning. The study would also set the pace for more research in this area of women’s health in Ghana as well as add to existing literature in the area of mental health.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This study seeks to find out how religiosity, social support, social negativity and selected demographic variables influence the mental health of women in Accra. In this chapter, the researcher discusses relevant theories that seek to explain the relationship between religiosity, social relationships and mental health. This chapter also contains review of related studies, rationale for the study, statement of hypotheses, hypothesized conceptual framework and operational definition of terms.

2.2 Theoretical Framework
Quite a number of empirical studies have been carried out to investigate the relationship between religiosity and various aspects of mental health, including psychological well-being, depression, anxiety, quality of life and subjective well-being. Most of these studies have found statistically significant but low positive relationship between religiosity and various dimensions of mental health (Beit-Hallahmi & Argyle, 1997; Laurencelle, Abell & Schwartz, 2002). How is this relationship explained? Developing or identifying models and theories that explain and interpret findings on religion and mental health is very crucial in understanding this phenomenon. Some authors and researchers have used different theories and models in explaining this relationship, some of which are explained as follows:
2.2.1 Stressor Reduction/Prevention Model (Ellison, 1994; Grasmick, Bursik & Cochran, 1991)

One theory which has been suggested by researchers to explain the relationship between religiosity and mental health is the Stressor reduction or prevention model, which states that religious participation and belief may lead to better mental health by reducing the levels of/exposure to stressors by influencing the individual’s behavior and lifestyle (Ellison, 1994; Grasmick et al., 1991). This may include avoidance of negative health behaviors such as substance abuse, and encouragement of moderation in all things, thereby reducing the likelihood of other forms of risk-taking behaviors such as gambling and irregular sleep patterns. Religion has also been found to be associated with lower rates of certain life stressors such as marital distress, divorce, conflict and other family problems, in so doing reducing their various negative mental health outcomes (Call & Heaton, 1997; Pearce & Axim, 1998). This suggests that, people who are highly religious experience less stressful life events and in turn have better mental health than the less religious.

However, examining this model, one question that comes to mind is whether religion does not influence the mental health of those who are already experiencing major stressful events or conditions such as physical/mental illness, as the model seems to be emphasizing the prophylactic role of religiosity on stress. If stress already exists in the individual’s life, what role does religion play? People with both physical and mental illness experience so much stress associated with their conditions. A critique of this model seems to raise questions about the protective effects of religion on the mental health of people suffering from mental illness.
2.2.2 Religious Coping Theory (Pargament, 1997)

The religious coping theory seems to address the question posed by the stressor reduction/prevention model. The theory states that people draw on religious beliefs and practices to understand and deal with life stressors and this in turn influences their mental health in many ways. Certain religious beliefs such as the belief that “God is directing one’s path” and that “He gives His children strength to overcome challenges” as well as “making all things work together for their good” are also indicated to strengthen an individual’s sense of control over life events and situations (Smith, 2003), this consequently helps reduce psychological distress since sense of control has been found to reduce psychological distress (Keeton, Perry-Jenkins & Sayer, 2008). Religion is also said to provide an optimistic worldview which involves a supernatural force (e.g. God) who is considered as loving and caring about humans and controls all things which also in turn increases a person’s sense of control, provides answers to existential questions such as “where do we come from?” and “where are we going?” (Koenig, 2012, Smith, 2003) hence negative life events become less distressing for religious persons, and this may translate into positive mental health outcomes. Joon Jang and Johnson (2004) in their study found that African Americans who were highly religious had more sense of control and social support and this led to a reduction in psychological distress compared to their less religious and non-religious counterparts.

According to Pargament (1997), religious coping can be positive or negative. The question then is how do women in Accra draw on their religious beliefs and practices to deal with stressors; are they more likely to use positive strategies or negative ones? Does this have beneficial or harmful effects on their mental health?
2.2.3 Stress and Coping Perspective (Lakey & Cohen, 2000)

Stress and coping perspective was developed based on the stress response model postulated by Lazarus, 1966; Lazarus & Folkman, 1984. According to this model, an individual’s response to stress occurs in three stages; a person first of all determines if the event is a threat or not (primary appraisal), followed by an evaluation of the coping resources available (secondary appraisal) and a continuous re-evaluation and changing of primary and secondary appraisals (reappraisal), thus stress only occurs when the person perceives the situation as a threat and/or perceives an unavailability of adequate coping resources which then can lead to negative physiological or health problems (Lakey & Cohen, 2000).

Based on the above premise, the stress and coping perspective suggests that social support is one of the coping resources of stress and therefore reduces the effects of stressful life events on health through either supportive actions of others or the belief that support is available (Lakey & Cohen, 2000). Supportive actions of others are found to enhance an individual’s coping ability while perceptions of available support may lead to evaluating potentially threatening situations as less stressful (Lazarus, 1966; Lazarus & Folkman 1984). This implies that individuals going through major life stressors such as illness, who perceive that social support is available would interpret their situations as less stressful. This enhances the individual’s capacity to cope with the situation and in turn has beneficial effects on both physical and psychological well-being (Kawachi & Berkman, 2001).

Remarkable efforts have been made to establish the beneficial effects of social relationships on health and well-being. Research has established that persons with more types of social relationships live longer and have less cognitive decline with aging, greater resistance to infectious disease and better prognosis in the face of chronic and life-
threatening illness (Cohen & Janicki-Deverts, 2009). Most research that have been conducted on stressful events and coping have also indicated that one of the most effective means by which individuals cope with stressful events is through social support, and social support is indicated to serve as a protective factor against psychological distress that is likely to result from those stressful events (Lowe, Chan & Rhodes, 2010; Pickens, Field, Prodromidis, Pelaez-Nogueras & Hossain, 1995).

2.2.4 Social Exchange Theory and the Expectancy Theory (Bengtson & Dowd, 1980; Olson, Roese, and Zanna 1996)

Most of the theories and models linking social relationships with mental health seem to overlook the fact that social relationships are not always positive and may sometimes in themselves be stressful to the individual. There is a need for theories on social relationships to look at both positive (social support) and negative (social negativity) sides of social relationships (Bertera, 2005). The Social exchange theory provides insights and predictions on how relationships among family, friends and significant others may influence various mental health outcomes (Bertera, 2005; Robbins, Chatterjee, & Canda, 1998).

The social exchange theory suggests that social interaction tends to be motivated by a desire to maximize benefits and reduce costs by seeking rewarding exchanges and avoiding unpleasant ones (Bengtson & Dowd, 1980). This implies that social exchanges that are perceived to be positive would lead to positive mental health outcomes while ones that are perceived to be negative would lead to negative mental health outcomes (Bertera, 2005). This is consistent with the expectancy theory which posits that individuals expect relationships with friends and family to be caring or supportive hence interpersonal unpleasantness violates this expectation (Olson, Roese, and Zanna 1996). Accordingly,
any noticeable negative interaction is likely to be perceived as a behavior which deviates from the norm, so when it arises, it often surprises the recipient and threatens his/her sense of meaning, predictability, and order, which may lead to severe mental health consequences (Zhang, 2012).

To conclude, the theories most pertinent to the present study are the religious coping theory, the social exchange theory and the expectancy theory. Aside other personal and environmental resources that individuals rely on to cope with life events and situations, religion provides additional resources through its beliefs and practices which enhance a religious person’s ability to cope with situations. Consequently, the enhanced mastery over life events and situations translates into one’s mental health. A highly religious person is therefore more likely to draw more on these religious coping resources than a less religious person leading to a better mental health in the highly religious persons compared to the less religious persons.

Even though social relationships have been considered as generally beneficial, the social exchange theory points to the fact that there is also a dark side to social relationships, hence there are both beneficial and deleterious effects. Since individuals expect interactions with relatives/spouse, friends and significant others to be pleasant, the perception of a supportive relationship with them is likely to have positive effects on their mental health while the perception of frequent negative interactions is likely to have negative effects on their mental health (since this defies their expectations of the relationship). Looking at the Ghanaian culture, the effects of negative interactions may even be greater since humanity, brotherhood and communalism are said to be valued so much (Gyekye, 1996).
2.3 Review of Related Studies

Review of related studies has been divided into three main sub-headings, comprising of religiosity and mental health, social relationships and mental health and demographic variables and mental health. These main sub-headings are further divided into other categories.

2.3.1 Religiosity and Mental Health

Interest in the complex relationships between religiosity and mental health has deep roots in the social and behavioral sciences, dating back to the works of Freud, James, Jung, and many other classic thinkers (Ellison, et al., 2009). It is therefore not surprising that there has been a dramatic increase in psychological research in this area. The influence of religiosity on mental health has been studied using variety of mental health outcomes among various populations. Some of these mental health outcomes found in the literature are discussed as follows:

Religiosity, psychopathology and well-being

Studies have consistently demonstrated that religiosity is significantly tied to anxiety, depression, and subjective well-being in various populations. For instance, in a study carried out by Abdel-Khalek (2009) who explored the associations between religiosity and both subjective well-being and depression, among Saudi school children and adolescents, it was found out that females obtained a significantly higher mean score on depression than their male counterparts which confirms the assertion that females are more vulnerable to depression (Belle & Doucet, 2003) and that females report lower levels of well-being than men (Piccinelli & Wilkinson, 2000). All the correlations were significant between religiosity and both subjective well-being rating scales (positive) and depression (negative) irrespective of gender. The researcher concluded that religious persons (in this
sample) were happier, healthier, and less depressed. However, as accepted by the researcher, even though a large sample size has been employed in this study, it is crucial to make conclusions about this research in the light that its findings are limited to this group (11-18 year old Saudi school children). To be able to generalize the findings, there is a need to expand the age range to adulthood in order to ascertain its generalizability to adults.

The researcher, (Abdel-Khalek, 2011) conducted another study in which he explored the association between religiosity, subjective well-being, self-esteem, and anxiety among a sample of 499 Muslim Kuwaiti adolescents. Results suggest that religiosity is associated with high levels of self-rating of subjective well-being, self-esteem and low levels of anxiety.

This provides further evidence that religiosity has positive influence on various aspects of mental health, since positive relationship has been found with positive mental health outcomes (subjective well-being and self-esteem) and negative relationship with negative mental health outcomes (depression and anxiety) in these two studies carried out in a very large sample and a much smaller sample size by the same investigator. The caveat however is that these studies have been carried out on participants with the same religious affiliation (Islam) which brings to mind the question of whether the same results will be obtained when participants belong to diverse religions.

To compare the psychopathology between depressed patients with low religiosity and those with high religiosity and to correlate the level of religiosity with their psychopathology in the psychiatric clinic of a general hospital in Chandigarh (North India), Gupta, Avasthi and Kumar (2011) studied 30 depressed patients with low religiosity and 30 patients with high religiosity. In these patients, hopelessness and
suicidal intent correlated negatively with their level of religiosity, meaning those who were high on religiosity were less hopeless and suicidal which points to the buffering effects of religiosity on negative mental health outcomes/psychopathology. A strong point for this particular research is that it measures religiosity with a scale that is not specific to any religion but measures level of religious faith and belief, and consequently can be used for all religious groups. Nonetheless, replicating the study using a community-based sample would improve its generalizability and contribution to the literature since only clinical samples were used in this study.

Research on the influence of religiosity on mental health is not only restricted to depression and anxiety but also implicated in other forms of psychopathology such as bipolar disorder. An example is a cross-sectional study of follow-up data from a study of patients receiving care for bipolar disorder at an urban Veterans Affairs mental health clinic. This research was conducted by Cruz, Pincus, Welsh, Greenwald, Lasky et al., (2010). The researchers investigated the association between various dimensions of religiosity (frequency of church attendance, frequency of prayer or meditation, as well as influence of beliefs on life) and mixed, manic, depressed, and euthymic states after controlling for demographic variables, anxiety, alcohol abuse, and health indicators. Multivariate analyses found significant associations between higher rates of prayer or meditation and mixed state as well as lower rates of prayer/meditation and euthymia. Contrary to earlier findings, depression and mania had no significant associations with religious attendance. This lends credence to criticisms that the use of organizational religion (such as religious involvement or attendance) in measuring religiosity is not reliable (Flannelly, Ellison, & Strock, 2004; Hall, Meador & Koenig, 2008). There is also an indication from this particular study that certain religious activities such as prayer may actually have positive relationship with certain aspects of psychopathology. Unfortunately,
these researchers failed to control for stress which could have influenced the results of this study since there is some evidence suggesting that people who are going through some form of stress are more likely to be involved in religious activities such as prayer and rituals than those who are not (Ellison & Levin, 1998).

There is also a great body of literature which demonstrates salutary effects of religious beliefs and spirituality on psychological well-being (Joshi, Kumari & Jain, 2008). The majority of studies conducted since the year 2000 as reviewed by Moreira-Almeida, Lotufo Neto and Koenig, (2006) found that higher levels of religious involvement are positively associated with indicators of psychological well-being (life satisfaction, happiness, positive affect, and higher morale) and with less depression, suicidal thoughts and behavior, drug/alcohol use/abuse. Usually the salutary effects of religious involvement on mental health have been found to be stronger among people under stressful circumstances; the elderly, and those with disability and illness, implying that stress moderates the relationship between religious involvement and psychological well-being. This finding partially supports the religious coping theory which posits that religion influences mental health by serving as a coping resource in dealing with stress (Pargament, 1997). Using religious involvement as a measure of religiosity in these studies reviewed, one would have expected the researchers to control for social ties, since it might not be religious involvement in itself that affects psychological well-being but supportive social interactions derived from the involvement in religious activities (Ellison et al., 2009).

Religiosity, coping with stress and mental health

There is also some evidence indicating that religiosity is an effective coping resource not only for people with health related problems but also those who have no such problems (Plakas, Boudioni, Fouka & Taket, 2011; Trevino, Archambault, Schuster, Richardson &
Moye, 2012). In Plakas et al.’s, (2011) study, 25 relatives (mostly first degree relatives) of patients in the intensive care units of three public general district hospitals in Athens (Greece), participated in 19 interviews. Religiosity was found to be the main source of hope, strength and courage for relatives. This was expressed in church/monastery attendance, belief in God, praying, and performing religious rituals which in turn alleviated negative emotions.

Also, in a longitudinal study in which Philips (III) and Stein (2007) examined religious meaning-making coping in a sample of 48 young adults diagnosed with schizophrenia or bipolar disorder over a one-year period. Participants with mental illness generally reported using religious meaning-making coping in levels comparable to non-psychiatric samples. Participants who reported benevolent religious reappraisals had higher perceptions of positive mental health, whereas those who reported punishing God reappraisals and reappraisals of God’s power also reported higher distress and personal loss. Religious coping variables accounted for variation in participants’ reports of psychiatric symptoms and personal loss one year later regardless of demographic and global religious variables. This again supports the religious coping theory and but demonstrates that religious coping may have both positive and negative implications for individuals, depending on its use (Pargament, Smith, Koenig, & Perez, 1998).

In addition, Trevino et al.’s (2012) study on religious coping and psychological distress among military veteran cancer survivors, in which 48 veteran cancer survivors completed measures of psychological distress, posttraumatic growth, and positive and negative religious coping, it was found out that negative religious coping was associated with greater psychological distress and posttraumatic growth. Positive religious coping was also associated with greater growth. The researchers suggested that assessment of religious coping may be particularly important for female, non-White, and Christian cancer
survivor. The researchers suggest that religiosity is a very important coping resource for women and people of non-white decent in dealing with illness. The implication of this finding for the present study is that religiosity will serve as a coping resource for women in Accra, especially those who are dealing with mental illness.

Furthermore, the association between religiousness and depressive symptoms was examined by Smith, McCullough, & Poll (2003) with meta-analytic methods across 147 independent investigations. The relationship between religiosity and depressive symptoms across all the studies that were analyzed revealed that greater religiosity was slightly linked to fewer depressive symptoms. These results were not influenced by demographic variables (such as, gender, age, or ethnicity). However, the relationship between religiosity and depression was stronger in studies relating to individuals undergoing stress due to recent life events. This finding further emphasizes the impetus for researchers to consider the influence of stress in the relationship between religiosity and mental health since it may have the potential of influencing the relationship between religiosity and mental health outcomes.

Despite the fact that most research on religiosity and coping with illness have concentrated on physical illness, religiosity could also serve as a good coping resource for people with mental illness (Taylor, 2001). Moreover, there is a suggestion that religiosity maybe a very important tool for recovering from mental illness. This was confirmed in Webb, Charbonneau, McCann and Gayle’s (2011). study in which eighty-one (81) participants with severe mental illness were sampled, participant’s recovery, religious support, and struggle or endurance with faith were measured through self-report measures. Results reveal that religious support and enduring with faith were positively correlated with recovery while struggle with faith was negatively associated with recovery. This research is however limited in terms of its ability to be generalized to other populations since most
of the participants used were Caucasians (84%). Type of mental illness used in this study was also restricted to schizophrenia, schizoaffective, bipolar disorder and major depression.

Even though a large body of literature has documented salutary relationships between various aspects of religious involvement and mental health outcomes, including depressive symptoms, there is a controversy in the literature with regards to which measures of religiosity are actually related to mental health outcomes. There is an indication that certain dimensions of religiosity may not be strong enough to be able to establish its effects on certain aspects of mental health. This explains why some researchers found no relationship between certain aspects of religiosity and mental health outcomes (Smith et al., 2003).

For example, in Ellison, et al.’s (2009) research in which a number of hypotheses concerning main and contingent effects of religious attendance, salience, and consolation-seeking were tested, using data on a large sample of Mexican-origin adults. There was an initial negative relationship between religious attendance and depressive symptoms. This relationship however disappeared after controlling for supportive social ties. The positive association between religious salience and depression on the other hand persisted despite all statistical controls; this relationship was present among both men and women, but it was significantly stronger for women.

It could therefore be concluded based on this study that religious attendance is not strong enough to influence depressive symptoms and could only have an influence when supportive social ties are present, but religious salience is a stronger measure of religiosity. This demonstrates the importance of using reliable and multidimensional measures of religiosity in conducting mental health research.
In another study carried out by Baker and Cruickshank (2009), the influence of religious affiliation, saliency, and practice on levels of depressive symptoms and treatment preference was investigated in a sample of Christians, Muslims, Atheists, and Agnostics. No significant differences in depressive symptoms were found between affiliations. However, saliency and frequency of practice had a weak negative correlation with depressive symptoms for Christians, but strangely they were not significant for Muslim participants. The researchers attributed the difference between Christians and Muslims to the fact that data was collected during the Ramadan period of the Muslims and this could confound the measure of saliency and frequency of practice. One thing that remains obvious however is the fact that religious affiliation alone is not a strong measure that influences depression since there was no difference even between religious groups (Christian and Muslim) and non-religious groups (Agnostics and Atheists).

Rosmarin, Pargament and Mahoney (2009) also investigated the role of Jewish religiousness in anxiety, depression, and happiness, in a Jewish community sample (565). Several aspects of global Jewish religiousness were examined, as well as a theoretically based Jewish religious variable, “trust in God”. A self-report measure of trust in God was created, and factor analyses yielded two reliable and valid subscales: trust in God and mistrust in God. Contrary to their hypothesis, global Jewish religiousness was on the whole unrelated to mental health functioning. On the other hand, higher levels of trust in God were associated with less anxiety and depression, and greater personal happiness, whereas inverse associations emerged for the mistrust subscale; suggesting global religiousness might not be a strong measure of religiosity.

In addition to the above, a study examining the relationship between religious beliefs, anxiety and depression was carried out by Jansen, Motley and Hovey (2010). No difference was found between Catholic and other Christian denominations in rates and
levels of depression and anxiety. Self-reported religious influence and self-reported religiosity were however significantly related to depression but not anxiety. Religious service attendance was also negatively correlated with both anxiety and depression. From this study, it is clear that religious affiliation had no influence at all on depressive and anxiety symptoms but rather religious influence, self-reported religiosity and religious attendance did. The obvious flaw of this study is the use of organizational religiosity measure (religious attendance) without controlling for religious social support since this has been found to moderate the relationship (Ellison et al., 2009; Nooney & Woodrum, 2002). One can therefore not vouch for the reliability of the finding which claims religious service attendance had a negative relationship with depression and anxiety in this sample.

These studies suggest that certain aspects of religiosity may play a more influential role in the protection against psychopathology, indicating that different dimensions of religion play different roles in individuals’ mental health. The dimension of religiosity used in a particular study is therefore very essential because it has the potential of influencing the findings. It is necessary to use theoretically based and quantifiable measures of religiosity, (such as strength of religious faith or religious saliency) in addition to global measures such as religious attendance (Green & Elliot, 2010; Rosmarin, et al., 2009).

2.3.2 Social Relationships/Interactions and Mental Health

There is a rapidly increasing evidence of the importance of social relationships on physical and mental health (Cohen & Janick-Deverts, 2009; Umberson & Montez, 2010). As mentioned earlier, there are two sides to social relationships; the supportive side and what some researchers term as “the dark side” (Bertera, 2005; Umberson & Montez, 2010). However, research in the past had focused on the beneficial aspects of social relationships
[social support] while very little is known about the negative aspects of social relationships [social negativity] (Finch, 1998).

It has also been established that perceived social support can function as a pain-buffering mechanism, promoting increased self-efficacy and optimism as well as reduced loneliness in the face of stress. This may in turn protect an individual from mood disorders such as depression and anxiety and other forms of mental disorders (Mikulincer & Shaver, 2008; Southwick, Vythilingam, & Charney, 2005). Researchers and theorists from diverse disciplines have studied the ways in which social relationships can influence individuals’ physical and mental health. Despite the fact that most researchers have come to agree that there is an important association between social support and well-being, they continue to define and study social support in different ways (Vangelisti, 2009). Some of the relationships between positive and negative aspects of social relationships and various mental health outcomes found in the literature are discussed as follows:

Positive and negative social exchanges, psychological distress and well-being

Jasinkaja-Lahti, Liebkind, Jaakkola and Reuter’s (2006) study on three different immigrant groups confirms the influence of both positive and negative sides of social relationships on psychological well-being among minority groups in society. These researchers conducted the study among three immigrant groups (Finnish repatriates, Russian Estonian and citizens from other countries of the former Soviet Union). It was found out that Perceived discrimination had a significant influence on psychological well-being such that, the more the immigrants perceived discrimination, the lower their level of psychological well-being. In the total sample, there was a strong evidence of direct and buffering effects of host support networks on well-being. In addition, social support
provided by ethnic networks abroad was generally beneficial for the psychological well-being of the immigrants.

Perceived discrimination in the above study could be likened to perceived social negativity which is being studied presently. It is therefore not out of place to suggest that perceived social negativity would have similar effects as perceived discrimination in women in Accra. However care must be taken in generalizing this finding because as well noted by the researchers, these immigrant groups found themselves in a new culture and so acculturation played much role in the findings of the study which may not be a case among the sample in the present study.

Also in Vogt’s (2007) study of age discrimination and mental health, in which adults 25-74 years were used, results revealed that persons who perceived either age discrimination or discrimination due to another reason had higher psychological distress and lower positive well-being than persons who had not experienced any discrimination. Sense of control and social support were found to buffer the effects of perceived discrimination, thus they both were associated with lower psychological distress and higher positive well-being. Putting social support and perceived discrimination side by side in this study, it will not be out of place to conclude that perceived discrimination has deleterious effects on mental health while social support has salubrious effects on mental health.

Perceived age discrimination was also found in the above study to have more negative influence on women than men, in that women who perceived age discrimination had higher psychological distress and lower positive well-being than men. This indicates that the experience of negative social interactions may have greater influence on women than men, which explains why women who report more social resource than men seems to report more psychological distress than men (Schuster, Kessler & Aseltine, 1990). This is consistent with Flett, Hewitt, Garshowitz and Martin’s (1997) study on personality,
negative social interactions, and depressive symptoms among university students, who found out that the relationship between negative social interactions and depressive symptoms was more robust in women than men.

In a related study, Whisman (2013) in his investigation of the link between relationship discord, prevalence, incidence and treatment of psychopathology found relationship discord to be associated with prevalence of psychiatric disorders and predictive of the incidence of mood, anxiety, and substance use disorders and increases in depressive symptoms. Studies such as this lend credence to the assertion that negative side of social relationships has dire consequences on mental health (Finch, 1998).

Walen and Lachman, (2000) also investigated the association between social support and strain on one hand and psychological well-being and physical health on the other. Both social support and strain were related to psychological well-being and physical health but had more influence on psychological well-being than physical health. Social support was however found to have more influence on psychological well-being than strain. Unfortunately, these researchers focused on only the positive side of mental health (psychological well-being) and not bothering about the negative side (psychological distress). Perhaps strain would have been found to have more influence than social support if psychological distress measures were used. This stresses the importance of measuring both sides of the mental health continuum in order to have a holistic picture of the influence of social relationships on mental health outcomes.

Similarly, Zhang (2012) in his study on negative social exchanges, acculturation-related factors, and mental health among Asian Americans measured both positive and negative social exchanges, family cultural conflict and psychological distress. Positive social exchange was found to be negatively correlated with psychological distress while negative
social exchange was positively correlated with psychological distress. Contrary to Walen and Lachman’s (2000) findings, negative social exchange was found to have more influence on psychological distress than positive social exchange. The obvious reason for these contradictory findings is the fact that the former focused on the positive side of the mental health continuum (psychological well-being) while the latter focused on the negative side (psychological distress). Even though the investigator attributed the fact negative social interactions had more influence on psychological distress than positive interactions to the collective culture of the sample used (Zhang, 2012), such conclusions may not be valid until a holistic measure of mental health is used. This again reiterate the importance of measuring both positive and negative mental health outcomes in order to establish the actual influence of both negative and positive aspects of social relationships.

Again, in Lincoln’s (2000) review of literature, of the twenty-five (25) studies, nineteen (68%) of them reported that negative social interactions had a greater impact on psychological well-being than positive interactions while only one of them reported positive interactions as having a greater impact than negative interactions. Six of them (21%) found both positive and negative interactions reported equal effects. One flaw that was however observed in this review is the fact that only nine (32%) out of the 25 of the studies used comparable items in measuring positive and negative social interactions. This may in part explain the diversity in the findings. The conceptualization and measurement of both positive and negative aspects of social interaction is therefore crucial to the outcome of every research in this area.

The above lends credence to Finch et al.’s (1999) findings. In their literature review, perceived social support was found to be the form of positive social interaction that has the most effect on mental health outcomes while ratings of the frequency with which negative
social behaviors were directed at the target person was the most potent measure of social negativity/negative interactions. This assertion however needs to be investigated through empirical research, which the present study seeks to do.

Using the measures of positive and negative social interactions suggested by Finch et al. (1999), Bertera (2005) investigated positive social support, social negativity, and anxiety and mood disorders in a random sample of adults aged 21–54 years from a National Comorbidity Survey (1990–1992). Positive social support and social negativity from three sources was measured (spouse, relatives and friends). Social negativity from all three sources had positive association with depressive and anxiety symptoms. In line with Zhang’s (2012) finding, positive social support was not found to be as strongly associated with depressive and anxiety symptoms as social negativity in that only positive social support from relatives was associated with lower symptoms but the other two sources (spouse and friends) were not. However, just like the others, this study used negative mental health outcomes only (anxiety and depression). That notwithstanding, the findings confirm that both positive and negative interactions are associated with mental health outcomes. Another interesting indication from this study is that the source of positive interactions is very important and needs to be considered in studying the relationship between social relationship and mental health just as it is important to consider both positive and negative mental health outcomes.

**Social relationships, stress and mental health**

Even though studies have consistently demonstrated that both positive and negative social interactions influence mental health outcomes significantly, it has also been suggested that this relationship is moderated by stressful life events. Unfortunately, many of the studies done on the effects of social relationships on stress and mental health had focused primarily on social support. Most of these studies were also done among subgroups who
are considered to be experiencing some stressful life events such as victims of natural disaster, bereaved and divorced individuals, people living with serious illnesses and their caregivers, pregnant women among others (Israel, Farquhar, Schulz, James & Parker, 2002; Kim, Han, Shaw, Mctavish & Gustafson, 2010; Lowe, Chan & Rhodes, 2010).

One of the few studies which examined the moderating effects of stress on the relationship between both positive and negative social exchanges on mental health is that of Ingersoll-Dayton, Morgan and Antonucci (1997) who studied a probability sample of men and women aged fifty to ninety-five. Participants reported on positive and negative exchanges, positive and negative aspects of well-being (positive and negative affect) and the number of stressful life events experienced within the past five years (including death of spouse, illness or injury, being fired and several other life events) through structured interviews carried out in the homes of the participants. As expected, positive aspects of social exchanges were related to positive aspects of well-being (positive affect), and negative aspects of social exchanges were related to negative aspects of well-being (negative affect). In addition, the relationship between negative exchanges and negative affect was stronger for participants who experienced multiple life events while the influence of positive exchanges on positive affect was stronger for those who experienced few life events.

This suggests that stressful life events play a crucial role in the relationship between social interaction and well-being, in that stress strengthens the negative effects of negative interactions while it weakens the positive effects of positive interactions. One must however be mindful of the fact that this study focused on the aged (50-95 years) who are already saddled with age-related stressors and so might be limited in scope in terms of generalization. There is a need to extend the scope of the study to include younger adults in order to make confident claims or conclusions about the moderating effects of stress.
Lowe *et al.*’s (2010) study focused on the protection of pre-hurricane perceived social support against psychological distress in a longitudinal analysis of low-income mothers. Three hundred and eighty-four low-income mothers with baseline age of between 18 and 34 who were enrolled in an educational intervention study were used for this study. Participants who completed a one year follow-up assessment preceding Hurricane Katrina were reassessed one year after the hurricane. The pre- and post- disaster assessments included perceived social support and psychological distress. The analysis revealed that both pre- and post- perceived social support predicted psychological distress in both instances. Perceived social support during pre-disaster assessment decreased during the post-disaster assessment, consequently, psychological distress also increased during post-disaster assessment.

The above findings suggest that the experience of major stressors can actually reduce a person’s perception of available support. This conclusion can only be reached nonetheless if similar findings emerge in comparative studies and studies that employ other forms of stressors than stressors related to a natural disaster. One important finding in this study however is that, although pre-disaster perceived social support was found to have no direct influence on post-disaster psychological distress, it predicted the number of hurricane-related stressors, perceived support after the hurricane and both pre- and post hurricane psychological distress, that is participants who perceived greater pre-disaster social support had less pre-disaster psychological distress, experienced fewer hurricane-related stressors, and perceived more support in the aftermath of the hurricane which in turn were associated with less post-disaster psychological distress. It would not be out of order then to suggest that perceived social support is preventive of stress and in turn protects a person against the deleterious effects of stress, and indicative of a mediating effect of stress on the relationship between social support and psychological distress. It could further be argued
that those who experienced fewer hurricane-related stressors perceived higher levels of social support and hence had less psychological distress and vice versa, since generally, perceived social support decreased after the disaster.

The above argument is confirmed by Lincoln, Chatters and Taylor’s (2005) study. These researchers investigated the effects of social support, and traumatic events on depressive symptoms among African American men and women aged between 18 and 54 years. Measures employed include; measures of depressive symptoms, financial strain, traumatic events, social support and negative interactions. Findings indicate that participants who reported more financial strain (which is a stressor) reported less social support and more negative interactions and consequently reported more depressive symptoms. As expected, those who reported more traumatic events also reported more depressive symptoms. One interesting result from this finding is that, even though women reported fewer traumatic events as compared to men, they reported more negative interactions and more depressive symptoms. It is suggestive of the fact that women generally perceive more negative interactions than support from their social resources and explains why women who report more social resources than men also report more psychological distress (Schuster et al., 1990). The surprising finding in this study however is that, negative interaction was found to have no significant effects on depressive symptoms whereas social support was found to be associated with less depressive symptoms. This may be due to a flaw in the measurement of negative interaction in relation to depressive symptoms. This study used perceived availability of negative interactions while research suggest that the best measure of negative interaction in relation to mental health outcomes is the frequency with which such interactions are directed towards the target person (Finch et al., 1999).
2.3.3 Demographic Variables

Several demographic variables or factors have been studied in the mental health literature. In some studies, age, employment status, education, gender, marital status among others have been found to be significant predictors of mental and physical health (Brereton, Clinch & Ferreira, 2008; de Menil et al., 2012; Fisher & Baum, 2010; Shields & Price, 2005).

There is evidence that employment status is linked with both physical and mental health with most researchers finding unemployment to be positively related with psychological distress and negatively correlated with psychological well-being (Chandola, Clarke, Morris & Blane, 2006; Winefield, 2002). It is however not clear whether it is the employment that results in better psychological well-being or it is rather people who have better psychological well-being that are more likely to be employed (Winefield, 2002). Some researchers also indicate that it is not the employment that contributes to psychological well-being or distress but the quality of the work experience especially among women (Noor, 2008), thus employment can be a source of distress for some women depending on the work experience. Religiosity and social support have however been found to reduce the risk posed by stressful or negative work experience (Noor, 2008). It is therefore very useful for any research in the area of religiosity, social relationships and mental health to consider employment status as one of the control variables.

Income has also been suggested to have effects on various mental health outcomes. For instance exploring household income as a predictor of psychological well-being among long-term colorectal cancer survivors, Lundy, Coons, Wendel, Hornbrook, Herrinton et al. (2009) found out that income predicted psychological well-being significantly. There was about 0.82 difference between those with the highest income level (>$ 100,000) and those
with the lowest income level (<$15,000) with those with high income level reporting better psychological well-being than those with low income.

Gardner and Oswald (2006) in their longitudinal study of a random sample of British who received lottery wins of between £1000 and £120,000 compared this group to a control group who had no win or small win. Results show that those with medium win had better psychological health compared to the control group. 2 years after winning the lottery, their mental health was found to improve to about 1.4 on the General Health Questionnaire. The above evidences demonstrate the importance of income to an individual’s mental health? This area should hence be a point of interest for mental health researchers.

Marriage is one of the core values of the African culture (Gyekye, 1996) and many people in Ghana these days are eager to go into marriage due to the importance society places on marriage. Many researchers suggest that being married cushions some individuals from certain psychological distresses (Donald & Montgomery, 2009; Kim & McKenry, 2002; Uecker, 2012). That notwithstanding, the findings in this area has not been consistent. Some researchers suggest that the benefits of marriage in married individuals may not be different from that of other romantic relationships (Uecker, 2012) while others suggest that the benefits of marriage in predicting better psychological well-being after controlling for the quality of the relationship outweighs that of even cohabitation; which is the closest romantic relationship to marriage (Kim & McKenry, 2002). Continuous research is therefore needed to further investigate and explain the relationship between marital status and mental health.

Apart from the above demographic variables, age, education and number of children are also indicated as predictors of mental health. Higher levels of education has been found to be associated with better mental health outcomes than lower levels of education, while higher number of children have been found to contribute to psychological distress.
especially in women (de Menil et al., 2012; Ross, Mirowsky & Goldsteen, 1990; WHO, ICPE, 2000). Variables such as employment and income may influence the relationship between education, number of children and mental health such that the educated are more likely to gain employment and earn higher income, while higher number of children results in more expenditure and thus putting more demand on the individual’s income (Kim & Mckenry, 2002). The finding on age and mental health has not been conclusive. While some researchers believe age has a linear negative relationship with mental health, others think age is only significant in some individuals such as young adults and the elderly (de Menil et al., 2012; Noor, 2008; WHO, ICPE, 2000). The present research will therefore investigate the influence of age, education, employment, income, marital status and number of children on mental health among women in Accra in order to compare findings to what the literature asserts.

2.4 Summary

Though no single theory may be self-sufficient in explaining the relationship between religiosity, social relationships and mental health, the most suitable theories for the purposes of the present study are the religious coping theory, the social exchange theory and the expectancy theory. It can be concluded from the theories and related studies reviewed that religiosity and social support have both direct and stress-buffering effects while social negativity has a direct and stress-exacerbating effects on mental health. The importance of considering both sides of social relationships in studying their effects on mental health has been emphasized, as well as studying both positive and negative mental health outcomes concurrently. It has also been made obvious that certain measures of religiosity especially organizational religiosity alone may not be reliable or strong enough in establishing any effect on mental health outcome. In using organizational religiosity,
positive social ties or religious social support will have to be controlled. The importance of considering demographic variables such as age, education, income, employment, marital status and number of children has also been enumerated.

2.5 Rationale of the Study

Despite the fact that Mental health forms a continuum between psychological well-being and psychological distress (Keyes, 2002; WHO, 2003), it is not a very common practice for studies to combine both positive and negative dimensions of mental health. This does not allow for a holistic picture of the relationship between mental health and other variables, consequently rendering the literature incomplete in this regard. Studies often look at one or more dimensions of either positive or negative side of mental health. These include depression, anxiety, subjective well-being, psychological well-being, life satisfaction, coping and other forms of psychopathology. In this “age of positive psychology” in which researchers are becoming more interested in positive mental health and not just psychopathology (Abdel-Khalek, 2011), it is important for studies to measure both positive and negative sides of mental health holistically. The present study therefore measures both psychological distress and psychological well-being in one measure of mental health.

Another important issue to consider is that, even though organizational religion has been the most used measure of religiosity in the literature, its reliability has been criticized (Flannelly, Ellison, & Strock, 2004; Hall, Meador & Koenig, 2008). For instance, according to Flannelly, et al. (2004), “although knowing that a person belongs to a specific religious denomination implies something about the nature of one’s beliefs, it does not provide information about the strength of those beliefs or one’s adherence to the practices of that faith” (p. 1234). Moreover, as Africans are said to be inherently
religious, it may not take affiliation to a religious group or organization to make a person religious (Gyekye, 1996) hence the use of organizational religion in measuring religiosity would not be appropriate in this culture. Perhaps dimensions of religiosity such as strength of religious faith, which measures the centrality of religion in one’s life, regardless of religious affiliation or attendance (Plante & Boccaccini, 1997a) would probably be a better option. It is also clear that religiosity is a multidimensional construct (Green & Elliot, 2010) and while some dimensions have been found to have associations with mental health outcomes, others have been found to have no significant associations with mental health. The present study therefore employs strength of religious faith in measuring religiosity among women in Accra.

The impact of social relationships or interactions on mental health may be best illustrated by comparative studies of negative social interactions and the availability of social support (Flett et al., 1997). Studies however focus mostly on social support and often neglect social negativity even though the few studies done in this area seem to indicate that social negativity had significant negative impact on mental health outcomes and some have even suggested that social negativity had more potent influence on mental health than social support (Bertera, 2005; Finch et al., 1999; Rook, 1997). Moreover the appropriate measure of both social support and social negativity has been an issue of controversy in the literature. Researchers are still at a loss as to which aspect of social support and social negativity is important to mental health outcomes. It has however been demonstrated that the aspect of social support with the highest effect size is perceived availability of support while the aspect of social negativity with the highest effect size is the frequency of negative social interactions directed at the target person (Finch et al., 1999). The present study investigates both sides of social relationship (social support and social negativity) to ascertain their influence on mental health of women. The measures used for social support
and social negativity are; perceived availability of support and frequency of negative socio-emotional interactions respectively.

Furthermore, while there is a suggestion that religiosity and social relationship may have direct effects on mental health, many of the theories explaining the influence of both religiosity and social relationship on mental health have suggested that stress plays an important role in the relationship (Ingersoll-Dayton, et al., 1997; Lowe, et al., 2010; Smith, et al., 2003). Yet not all studies in these areas consider the role of stress in the relationship. The direct effects of religiosity and social relationship on mental health as well as the moderating effects of stress are investigated in the present study.

Finally, the present study uses both clinical and non-clinical sample, which allows for comparisons to be made between the groups, and the focus on the mental health of women is another feature that differentiates this study from the others.

2.6 Statement of Hypotheses

From the theories and related studies reviewed, the following hypotheses were proposed:

1. Religiosity will have a significant positive relationship with psychological well-being, overall mental health index and a significant negative relationship with psychological distress among women.

2. Social support will have a significant positive influence on mental health among women.

3. Women who report high social negativity will report lower psychological well-being, higher psychological distress and lower overall mental health index than those who report low social negativity.
4. History of mental illness will moderate the relationship between religiosity, social support, social negativity and mental health.

5. Stress will moderate the relationship between religiosity and mental health.

6. Stress will moderate the relationship between social support, social negativity and mental health.

7. Age, education, marital status, employment, income and number of children will significantly predict mental health.

Research Variables:

Independent variables: religiosity, social support and social negativity

Dependent variable: Mental health (psychological distress, psychological well-being and mental health index)

Demographic variables: age, income, employment status, marital status, education and number of children

Moderating variables: stress and history of mental illness
2.7 Hypothesized Conceptual Model

The conceptual model in figure 1 shows that, religiosity, social support and social negativity will influence mental health, stress and history of mental illness will moderate the relationship between religiosity, social support, social negativity, and mental health, demographic variables will also influence mental health.

Figure 1 Hypothesized relationships among research variables
2.8 Operational Definition of Terms

**Religiosity**: Strength of religious faith as measured by the Santa Clara Strength of religious faith Scale.

**Mental health**: this includes scores on:
1. Psychological well-being global subscale on the Mental Health Inventory
2. Psychological distress global subscale on the Mental Health Inventory
3. Mental health index on the Mental Health Inventory

**Social support**: perceived care, assistance and empathy from family, friends and significant others as measured by the Multidimensional Scale of Perceived Social Support

**Social negativity**: perceived negative social interactions such as criticism, arguments, disappointment etc. from family, friends and significant others; as measured by the Social negativity questionnaire.

**Stress**: scores on the Perceived Stress Scale
CHAPTER THREE
METHODOLOGY

3.1 Introduction
This chapter provides detailed information on the research design employed in achieving the research objectives in addition to methods used in the collection of empirical data (instruments), characteristics of study population, research design, sample, sampling technique, and procedure for data collection.

3.2 Population
Women living in Accra during the period of the study were the target population for the study. This included women with mental illness attending Accra Psychiatric hospital and Pantang Hospital for review on outpatient basis as well as women without any history of mental illness living or working in Adenta, Madina and Legon. Accra is highly populated and made up of diverse ethnic groups (AMA, 2011); hence it is more representative of the Ghanaian society than other cities and towns of Ghana. It also has two of the three major public psychiatric hospitals in Ghana as well as other private psychiatric facilities that provide treatment for various kinds of mental disorders.

Accra Psychiatric hospital is the oldest public psychiatric hospital in Ghana, located in the heart of Accra (Adabraka) and renders all kinds of psychiatric and psychological services on inpatient and outpatient basis. Pantang Hospital serves as both a general and psychiatric hospital, hence provides general medical services (on outpatient basis) and psychiatric services (on both outpatient and inpatient basis). The most common psychiatric disorders diagnosed and treated on outpatient basis in these two hospitals include; Schizophrenia, Seizure disorder, mood disorders, anxiety disorders, substance abuse disorders, acute
psychotic disorder, dementia, and mental retardation (Records department, Accra Psychiatric Hospital & Pantang Hospital, March 2013).

Adenta, Madina and Legon belong to the Adentan Municipal Assembly, La-Nkwantanang municipal assembly and Ayawaso-west sub-metro (of the Accra Metropolitan Assembly) respectively. These areas were selected because of the diverse nature of their inhabitants as well as its convenience to the researcher. Since the research is interested in participants from diverse socio-economic backgrounds, it was prudent to collect data from a sample that is made up of diverse characteristics in order to allow for maximum variation. Due to the diversity of the population in these communities, there is a high probability of the population being normally distributed.

3.3 Sampling Technique

The Purposive and convenient sampling techniques were used in selecting the target sample for the present study. The purposive sampling technique was employed because the sample was selected first of all from the population of women. The researcher was interested in certain subgroups within the population; women with mental illness and those who have no history of mental illness; hence these subgroups were selected purposively based on their history of mental illness. Also participants were selected based on their availability and willingness to take part in the study.

3.4 Sample

In all two hundred (200) participants were selected for the study. Ninety-two (92) out of the total sample; representing forty-six percent (46%) had a history of various mental illnesses ranging from Schizophrenia, mood disorders, anxiety disorders, acute psychotic disorders among others, who were in remission state and attending psychiatric hospital for
review of earlier treatment (on outpatient basis). These participants were purposively and conveniently selected at 2 different points—Accra Psychiatric Hospital and Pantang Hospital.

One hundred and eight (108) out of the total sample size; representing fifty-four percent (54%) had no history of mental illness. They were randomly selected from Adenta, Madina, and Legon. In addition, some of the women who are caregivers of people living with mental illness (who accompanied them to the hospital or came to take their drugs for them) were also selected as part of the group with no history of mental illness. Women selected from the various communities who have a history of mental illness were excluded from the comparison group (no history of mental illness group).

The sample size selected was deemed appropriate because according to Field (2009), in order to analyze data using multiple regression and obtain a medium effect size (.8), a sample size of 200 is enough for up to 20 predictors and with 6 or less predictors, a sample size of 100 is adequate. The maximum number of predictors used in the present study was 6.

The demographic characteristics of participants are summarized in Table 1.
Table 1

Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>92</td>
<td>46</td>
</tr>
<tr>
<td>30-49</td>
<td>73</td>
<td>36.5</td>
</tr>
<tr>
<td>50-64</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>65 and above</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary/below</td>
<td>33</td>
<td>16.5</td>
</tr>
<tr>
<td>JHS</td>
<td>35</td>
<td>17.5</td>
</tr>
<tr>
<td>Secondary/technical/vocational</td>
<td>39</td>
<td>19.5</td>
</tr>
<tr>
<td>Tertiary</td>
<td>58</td>
<td>29.5</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>35</td>
<td>17.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Monthly income in Gh cedis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 500</td>
<td>130</td>
<td>65.3</td>
</tr>
<tr>
<td>500-2000</td>
<td>55</td>
<td>27.6</td>
</tr>
<tr>
<td>2000-3000</td>
<td>11</td>
<td>5.5</td>
</tr>
<tr>
<td>Above 3000</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal</td>
<td>64</td>
<td>32</td>
</tr>
<tr>
<td>Informal</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>Unemployed</td>
<td>78</td>
<td>39</td>
</tr>
<tr>
<td>Retired</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single/never married</td>
<td>99</td>
<td>49.5</td>
</tr>
<tr>
<td>Married</td>
<td>64</td>
<td>32</td>
</tr>
<tr>
<td>Separated</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Divorced</td>
<td>17</td>
<td>8.5</td>
</tr>
<tr>
<td>Widowed</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>86</td>
<td>43</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>14.5</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>14.5</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
<td>15.5</td>
</tr>
<tr>
<td>4 or more</td>
<td>25</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None/traditional</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Muslim</td>
<td>25</td>
<td>12.5</td>
</tr>
<tr>
<td>Christian</td>
<td>17</td>
<td>86.5</td>
</tr>
</tbody>
</table>
3.5 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria include the following:

- Participants must be women, 18 years and above and residing in Accra at the time of data collection.
- Women in the mental illness group must have a history of mental illness, and must have had prior treatment and reporting for review at either Accra psychiatric hospital or Pantang Hospital.
- Participants must be capable of responding to the questions on the questionnaires.
- Women in the comparison group must have no history of mental illness (either past or present).
- Individuals who answered “yes” on the history of mental illness question on the demographic questionnaire and/or at least one “yes” on items 3, 4, 5, and 9 on the Mental Health Screening Form III were those included in the mentally ill group.

3.6 Measures

Data was collected on the research variables using the following measures/instruments:

**Demographic Variables**

*Demographic questionnaire* was used to collect data on demographic characteristics of participants such as age, education, income, marital status, number of children and history of mental illness.

**Religiosity**

*The Santa Clara Strength of Religious Faith Questionnaire [SCSRFQ]* (Plante & Boccaccini, 1997) was used to assess religiosity. This is a 10-item scale which is used to measure the strength of a person’s religious faith regardless of one’s religious affiliation. Scores on the scale range from 10 to 40 on a 4-point Likert scale (1= strongly disagree, 2=...
disagree, 3= agree and 4= strongly agree) with higher scores indicating stronger religious faith. Plante & Boccaccini, (1997b) report an internal consistency (cronbach alpha) of .95 and a split half reliability of .92. Several studies have also reported cronbach alpha ranging from .94 to .97 (Plante, 2010). The scale is also reported to have been used among different populations including students, psychiatric, medical and substance abuse samples as well as in diverse cultures and languages (Plante, 2010). Even though there are several scales available for assessing religiosity, the SCSRFQ was used in the present study because of its suitability for use with multiple religious affiliations as well as for people without any interest in or affiliation with religious organizations and the availability of empirical studies among several populations (Plante, 2010; Plante & Boccaccini, 1997b).

In the present study, the internal consistency of the SCSRFQ was .95. Sample items include: “my religious faith is extremely important to me” and “I look to my faith as a source of inspiration”.

**Social support**

Social support was assessed using the **Multidimensional Scale of Perceived Social Support [MSPSS]** (Zimet, Dahlem, Zimet & Farley, 1988). It is a 12-item scale that measures an individual’s perception of how much he or she receives outside social support from three sources; family, friends and significant others on a 7-point Likert scale from very strongly disagree to very strongly agree. Scores range from 7 to 84 and higher scores reflect higher levels of perceived social support. It has been widely used in both clinical and non-clinical samples of different ages and cultural background and has been reported to be valid and reliable. Good cronbach alpha has also been reported; ranging from .81 to .98 for non-clinical samples and .92-.94 for clinical samples (Clara, Cox, Enns, Murray & Torgrude, 2003; Zimet et al. 1988; Zimet, Powell, Farley, Werkman & Berkoff, 1990). One peculiar feature of this scale is the fact that it does not only measure perceived social
support but also the source of the support (Zimet et al., 1988). The present study also recorded good internal consistency on the MSPSS; \( r = .92 \). Sample items are: “There is a special person who is around when I need help”, “my family really tries to help me” and “I can count on my friends when things go wrong”.

**Social negativity**

According to Finch et al. (1999), the most potent measure of negative social interactions for mental health is the frequency of negative socio-emotional exchanges. Based on this assertion, the following six (6) questions about the frequency of perceived negative socio-emotional interactions were used to assess social negativity; “how frequently do you argue with your relatives or friends or significant others”, “how often do your relatives or friends or significant others criticize you”, “how often do your relatives or friends or significant others let you down”, “how often do you experience excessive demands put on you by your family or friends or significant others”, “how often does your family or friends or significant others get on your nerves”, “how often does your family or friends or significant others make you feel tense”. These questions were repeated three times to assess social negativity from three sources; family, friends and significant others so that the sources of social negativity corresponds with that of social support. The items were scored on a 4-point Likert scale (1= never 2= rarely 3= sometimes 4= often). Higher scores on the questionnaire indicate higher levels of social negativity and scores range from 18 to 72. Factor analysis confirmed three factors in the present sample; social negativity from friends, significant others and family or relatives. Similar items were used by Bertera (2005) but the sources of social negativity differ slightly. In Bertera’s (2005) study, the sources of social negativity assessed were; spouse, relatives and friends. Reliability coefficient reported ranged from .81 to .89. Walen and Lachman (2000) also
used similar items in their study and reported cronbach alpha ranging from .79 to .86. In the present study, the internal consistency for the entire questionnaire was .87.

**Stress**

The **Perceived Stress Scale-10 (PSS-10)** developed by Cohen and Williamson (1988) was used to assess participants’ level of stress. It measures the degree to which situations in a person’s life are interpreted as stressful. Items were designed to ascertain how unpredictable, uncontrollable, and overloaded respondents find their lives. The questions in the PSS-10 ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. The questions are general in nature and thus are relatively devoid of content that is specific to any subpopulation. Cohen and Williamson (1988) reported a cronbach alpha of .78. Even though there are three versions of the scale (PSS-14, PSS-10; PSS-4), the 10-item version is reported to have superior psychometric properties compared to the other versions (Lee, 2012). In the present study, the internal consistency of the scale was $r = .78$. Each item on the PSS is scored on a 5-point Likert scale; 0= never, 1= almost never, 2= sometimes, 3= fairly often, 4= very often. Scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) on the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. Higher scores on the scale indicate more perceived stress. Sample items include: “In the last month, how often have you felt that you were unable to control the important things in your life” and “In the last month, how often have you felt nervous and stressed”.

**Mental Health**

The **Mental Health Inventory (MHI-38)** which was developed by Veit and Ware (1983) was used to measure mental health. It is a 38-item scale which asks about respondent’s
feelings during the past month (Vilchinsky & Kravetz, 2005). It contains six subscales which measure Anxiety, Depression, Loss of Behavioural/Emotional control, General Positive Affect, Emotional Ties and Life Satisfaction, these subscales can be grouped into two global subscales namely; psychological well-being and psychological distress (psychological well-being- General Positive Affect, Emotional Ties and Life Satisfaction; psychological distress- Anxiety, Depression and Loss of Behavioural/Emotional control ). Items on the scale can also be scored into one mental health index. Each item is scored on a 6-point likert scale in exception of two items; 9 and 28 which are scored on a 5-point likert scale. High scores on each of the subscales indicate high levels of the construct being measured. Due to this, items are sometimes reverse-scored in order to reflect high levels of the construct being measured (Davies, Sherbourne, Peterson & Ware, 1998). Scores on the psychological well-being, psychological distress and mental health index global subscales range from 14-84, 24-142 and 38-226 respectively. The scale is reported to be highly reliable and valid (Veit & Ware, 1983). The MHI-38 subscales are found to correlate significantly with other scales measuring the same constructs (Vilchinsky & Kravetz, 2005). For the psychological well-being, psychological distress and mental health index subscales, Vilchinsky & Kravetz (2005) in their study found the internal consistency to be $r = .92$, $r = .95$ and $r = .96$ respectively, which is similar to Florian & Drory’s (1990) findings ($r = .91$, $r = .95$and $r = .96$) respectively. The present study recorded .86, .89 and .88 for psychological well-being, psychological distress and mental health index subscales respectively. Examples of items on the scale include: “During the past month, how much of the time have you generally enjoyed the things you do”, “Did you feel depressed during the past month” and “How much of the time, during the past month, have you been a very nervous person”.

52
3.7 Research Design

The cross-sectional survey design was used to collect data. This design enabled the researcher to collect information from women with diverse socio-economic backgrounds on certain characteristics, perceptions and attitudes (religiosity, social support, social negativity, mental health, perceived stress and some demographic variables) through the use of questionnaires and self-report measures and data was collected from the respondents only once.

3.8 Procedure

The research began with the researcher obtaining ethical approval from the Internal Review Board of the Noguchi Memorial Institute for Medical Research (NMIMR). Once the approval was granted, introductory letters from the department of Psychology were taken to the Greater Accra Directorate of the Ghana Health Service, Accra Psychiatric Hospital and Pantang Hospital informing them about the research. After access to these institutions was granted, a pilot study was carried out at the Accra Psychiatric Hospital and Adenta Community in which twenty participants were used. This was to test the questionnaires on the sample to ascertain whether they are reliable among the sample and whether the items on the questionnaires are well understood by the participants.

Data collection commenced after the pilot study by the principal investigator and two research assistants. Participants were screened for history of mental illness using the Mental Health Screening Form III (Carroll & McGinley, 2000; 2001). This is a screening test designed to detect whether an individual has a past or present history of mental illness. It has items numbered from 1 to 17 and each item is answered “yes” or “no”. Item 6 is however in two parts, making the total items on the test, 18. The MHSF III reflects history of symptoms of Schizophrenia, depressive disorders, post-traumatic stress...
disorder (PTSD), phobias, delusional disorder, manic episode, eating disorders, intermittent explosive disorder, pathological gambling, learning disorder and mental retardation. Each question refers to a person’s entire life and not just current circumstances, so each question begins; “have you ever…” According to Sacks, Melnick, Coen, Banks, Friedman, et al. (2007), a total score of 3 or above had an overall accuracy of about 73% of identifying mental disorder.

Only four items (3, 4, 5, and 9) on the scale were used in the present study. These items reflect a history of psychiatric treatment (3, 4), symptom of Schizophrenia (5), and intermittent explosive disorder (9). Factor analysis revealed that these items loaded on a single factor with factor coefficients ranging from .7 to .8. From pilot study, it was observed that some of the items were not discriminatory enough to establish whether a person has a history of mental illness or not; they were therefore not used in the grouping of participants. The four items used are: “have you ever been advised to take medication for anxiety, depression, hearing voices, or for any other emotional problem?”; “have you ever been seen in a psychiatric emergency room or been hospitalized for psychiatric reasons?”; “have you ever heard voices no one else could hear or seen objects or things which others could not see?”; and “have you ever given in to aggressive urge or impulse, on more than one occasion that resulted in serious harm to others or led to the destruction of property?”. The internal consistency of the scale in the present study was .79.

Participants were required to complete an informed consent form, indicating their willingness to participate in the study before proceeding to fill the questionnaires. These forms described the topic and methods of the study and the voluntary and confidential nature of participation. Once the forms were signed, each of the participants went on to fill the questionnaires. Data collection in the two hospitals was done while patients who report at the outpatient department for review were waiting in queues for their turn to be attended
to. Data collection was however done as privately as possible; as participants who were willing to take part in the study were isolated from the queue and made to join the queue after completing the questionnaires. Items on the questionnaires were read out to respondents who were unable to read. Throughout the administration of these procedures, the researcher and research assistants were available to answer questions from respondents. Data collection among participants in the comparison group was carried out at their residence and offices.
CHAPTER FOUR

RESULTS

This chapter presents results of the analyses done with the data collected. To test the hypotheses stated, the SPSS version 16.0 was used to analyze the data using Pearson product moment correlation, Multiple Regression, and Multivariate Analysis of Variance (MANOVA).

4.1 Descriptive Statistics

The summary of the means and standard deviations of scores on religiosity, social support, social negativity, perceived stress, and the mental health outcomes (psychological well-being, psychological distress and mental health index) as well as internal consistency of scales are presented in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach alpha (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>34.41</td>
<td>6.95</td>
<td>.95</td>
</tr>
<tr>
<td>Social support</td>
<td>57.26</td>
<td>16.89</td>
<td>.92</td>
</tr>
<tr>
<td>Social negativity</td>
<td>39.32</td>
<td>9.22</td>
<td>.87</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>15.12</td>
<td>6.63</td>
<td>.78</td>
</tr>
<tr>
<td>Psychological well-being</td>
<td>58.88</td>
<td>11.30</td>
<td>.86</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>61.18</td>
<td>18.99</td>
<td>.89</td>
</tr>
<tr>
<td>Mental health index</td>
<td>157.37</td>
<td>21.30</td>
<td>.88</td>
</tr>
</tbody>
</table>
Table 3

**Correlation Matrix representing the Relationship among Variables**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>.12*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>.01</td>
<td>.16*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>-.10</td>
<td>-.13*</td>
<td>-.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI</td>
<td>-.05</td>
<td>-.10</td>
<td>-.07</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Str</td>
<td>-.08</td>
<td>-.12*</td>
<td>-.03</td>
<td>.11</td>
<td>.21**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PW</td>
<td>.08</td>
<td>.26**</td>
<td>.07</td>
<td>-.21**</td>
<td>-.19**</td>
<td>-.66**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td>-.06</td>
<td>-.24**</td>
<td>-.07</td>
<td>.23**</td>
<td>.41**</td>
<td>.76**</td>
<td>-.71**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MH</td>
<td>.06</td>
<td>.22**</td>
<td>.07</td>
<td>-.22**</td>
<td>-.32**</td>
<td>-.74**</td>
<td>.88**</td>
<td>-.92**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.06</td>
<td>.06</td>
<td>.06</td>
<td>-.11</td>
<td>.40**</td>
<td>.08</td>
<td>-.01</td>
<td>.09</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edu</td>
<td>.04</td>
<td>.20</td>
<td>.12*</td>
<td>.08</td>
<td>-.47**</td>
<td>-.20**</td>
<td>.03</td>
<td>-.25*</td>
<td>.18**</td>
<td>-.40**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inc</td>
<td>.02</td>
<td>.06</td>
<td>.10</td>
<td>-.05</td>
<td>-.08</td>
<td>-.01</td>
<td>.07</td>
<td>-.14*</td>
<td>.10</td>
<td>.16*</td>
<td>.31**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chil</td>
<td>.00</td>
<td>.04</td>
<td>.09</td>
<td>-.15*</td>
<td>.30**</td>
<td>.09</td>
<td>.10</td>
<td>.02</td>
<td>.01</td>
<td>.68**</td>
<td>-.41**</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td>-.04</td>
<td>.03</td>
<td>-.024</td>
<td>-.17**</td>
<td>.26**</td>
<td>.08</td>
<td>-.04</td>
<td>.11</td>
<td>-.11</td>
<td>.69**</td>
<td>-.40**</td>
<td>.02</td>
<td>.60**</td>
<td></td>
</tr>
<tr>
<td>Emp</td>
<td>-.06</td>
<td>.25**</td>
<td>-.15*</td>
<td>.00</td>
<td>.17**</td>
<td>.08</td>
<td>.09</td>
<td>.11</td>
<td>-.06</td>
<td>.20**</td>
<td>-.50**</td>
<td>-.25**</td>
<td>.31**</td>
<td>.25**</td>
</tr>
</tbody>
</table>

*Significant at the .05 level of significance (1-tail) **significant at the .01 level of significance (1-tail)

**Variables (VA)**: religious attendance (RA), Religiosity (REL), social support (SS), social negativity (SN), history of mental illness (MI), stress (Str), psychological well-being (PW), psychological distress (PD), mental health index (MH), age, education (Edu), income (Inc), number of children (chil), marital status (MS), employment status (Emp).
4.2 Hypotheses Testing

**Hypothesis 1:** Religiosity will have a significant positive relationship with psychological well-being and overall mental health index and a significant negative relationship with psychological distress among women.

To analyze this hypothesis, Pearson product moment correlation analysis was performed to find out the relationship among the various variables. From results as presented in Table 3, religiosity had a significant positive relationship with psychological well-being \( r(198) = .26, \rho<.01 \), a significant negative relationship with psychological distress \( r(198) = -.24, \rho<.01 \) and a significant positive relationship with overall mental health index \( r(198) = .22, \rho<.01 \). The stated hypothesis was therefore supported.

**Hypothesis 2:** Social support will have a significant positive influence on mental health outcomes among women

Table 3 shows that social support did not have significant relationship with any of the mental health outcomes even though there was a trend of positive relationship with psychological well-being and overall mental health index and a negative relationship with psychological distress \( r(198) = .07, \rho>.05; r(198) = -.07, \rho>.05; r(198) = .07, \rho>.05 \). There was therefore no need for further analysis, which means that the stated hypothesis that “social support will have a significant positive influence on mental health” was not supported.
Hypothesis 3: Women who report high social negativity will report lower psychological well-being, higher psychological distress and lower overall mental health index than those who report low social negativity.

This hypothesis was analyzed using MANOVA after the participants were grouped into two groups based on the overall mean score of the sample (~39) in order to ascertain the difference between the mean scores of women who reported high level of social negativity and those who reported low level of social negativity on the three mental health outcomes. The multivariate test shows that a significant difference exists between the groups \[F(3, 196)= 6.38, \rho< .05; \eta^2 = .089; \text{Wilk’s Lambda} = .91\]. The summary of the results from the means of the groups on the various mental health outcomes and MANOVA are presented in Table 4:

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Low SN</th>
<th>High SN</th>
<th>df</th>
<th>F</th>
<th>(\rho)</th>
<th>(\eta^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological well-being</td>
<td>61.20</td>
<td>56.27</td>
<td>1, 198</td>
<td>9.91</td>
<td>.002</td>
<td>.048</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>56.18</td>
<td>66.83</td>
<td></td>
<td>16.89</td>
<td>.000</td>
<td>.079</td>
</tr>
<tr>
<td>Mental health index</td>
<td>162.29</td>
<td>151.82</td>
<td></td>
<td>12.76</td>
<td>.000</td>
<td>.061</td>
</tr>
</tbody>
</table>

The MANOVA results in Table 4 clearly shows that a significant difference exists between the two groups being compared on all the mental health outcomes at the .05 level of significance \[F (1,198) = 9.909, \rho< .05; \eta^2 = .048\]; \[F (1,198) = 16.888, \rho< .05; \eta^2 = .079\]; \[F (1,198) = 12.760, \rho< .05; \eta^2 = .061\] for psychological well-being, psychological
distress and mental health index respectively. The means of the groups show that, those who reported low social negativity had higher psychological well-being, lower psychological distress and higher overall mental health compared to those who reported high social negativity (61.20> 56.27; 56.18< 66.82; 162.29> 151.82). The findings therefore supported the stated hypothesis that “women who report high social negativity will report lower psychological well-being, higher psychological distress and lower overall mental health index than those who report low social negativity”.

**Hypothesis 4:** *History of mental illness will moderate the relationship between religiosity, social support, social negativity, and mental health.*

To find out whether history of mental illness moderated the relationship between religiosity, social support, social negativity and mental health, the hierarchical multiple regression analysis was used, but social support was not included in the analysis since it had no relationship with mental health. Results from the analyses are summarized in Table 5.
Table 5
Hierarchical multiple regression analysis results of the moderation effects of history of mental illness on the relationship between religiosity, social negativity and mental health

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>ρ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Constant</td>
<td>133.75</td>
<td>7.48</td>
<td></td>
<td>17.88</td>
<td>.000</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.69</td>
<td>.21</td>
<td>.22</td>
<td>3.23</td>
<td>.001</td>
</tr>
<tr>
<td>Social negativity</td>
<td>-.52</td>
<td>.16</td>
<td>-.22</td>
<td>-3.19</td>
<td>.002</td>
</tr>
<tr>
<td>2 constant</td>
<td>142.80</td>
<td>7.42</td>
<td></td>
<td>19.24</td>
<td>.000</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.59</td>
<td>.21</td>
<td>.19</td>
<td>2.91</td>
<td>.004</td>
</tr>
<tr>
<td>Social negativity</td>
<td>-.51</td>
<td>.15</td>
<td>-.22</td>
<td>-3.33</td>
<td>.001</td>
</tr>
<tr>
<td>HMI</td>
<td>-12.76</td>
<td>2.85</td>
<td>-.30</td>
<td>-4.48</td>
<td>.000</td>
</tr>
<tr>
<td>3 constant</td>
<td>143.25</td>
<td>7.45</td>
<td></td>
<td>19.22</td>
<td>.000</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.59</td>
<td>.21</td>
<td>.19</td>
<td>2.85</td>
<td>.005</td>
</tr>
<tr>
<td>Social negativity</td>
<td>-.63</td>
<td>.16</td>
<td>-.27</td>
<td>-3.82</td>
<td>.000</td>
</tr>
<tr>
<td>HMI</td>
<td>-12.74</td>
<td>2.85</td>
<td>-.30</td>
<td>-4.47</td>
<td>.000</td>
</tr>
<tr>
<td>Rel*HMI</td>
<td>1.07</td>
<td>1.42</td>
<td>.05</td>
<td>.75</td>
<td>.454</td>
</tr>
<tr>
<td>SN*HMI</td>
<td>2.82</td>
<td>1.47</td>
<td>.14</td>
<td>1.91</td>
<td>.057</td>
</tr>
</tbody>
</table>

Results from table 5 demonstrate that the interaction between religiosity and history of mental illness was not significant (β = .05; t = .750, ρ > .05) which means that history of mental illness did not moderate the relationship between religiosity and mental health. It also did not moderate the relationship between social negativity and mental health since the interaction between social negativity and history of mental illness was not significant (β = .14; t = 1.912, ρ > .05). Also, table 3 reveals that history of mental illness was not significantly related to religiosity, social support and social negativity (r(198) = -.10, ρ > .05; r(198) = -.07, ρ > .05; r(198) = .01, ρ > .05). It can be inferred from these findings that the effects of religiosity, social support and social negativity is similar in both groups. The hypothesis which stated that “history of mental illness will moderate the relationship
between religiosity, social support and social negativity and mental health” was therefore not supported.

**Hypothesis 5**: *Stress will moderate the relationship between religiosity and mental health*

To test this hypothesis, the Hierarchical Multiple Regression analysis was used. Table 6 represents the summary of findings.

**Table 6**

*Hierarchical Multiple Regression Analysis of the Moderation Effect of Stress on the Relationship between Religiosity and Mental health.*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 constant</td>
<td>133.75</td>
<td>7.48</td>
<td>17.88</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>.69</td>
<td>.21</td>
<td>.22</td>
<td>3.23</td>
<td>.001</td>
</tr>
<tr>
<td>2 constant</td>
<td>177.80</td>
<td>5.84</td>
<td>30.44</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>.43</td>
<td>.15</td>
<td>.14</td>
<td>2.94</td>
<td>.004</td>
</tr>
<tr>
<td>Stress</td>
<td>-2.33</td>
<td>.15</td>
<td>-.72</td>
<td>-15.23</td>
<td>.000</td>
</tr>
<tr>
<td>3 constant</td>
<td>174.83</td>
<td>5.84</td>
<td>29.96</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>.51</td>
<td>.15</td>
<td>.17</td>
<td>3.48</td>
<td>.001</td>
</tr>
<tr>
<td>Stress</td>
<td>-2.33</td>
<td>.15</td>
<td>-.72</td>
<td>-15.54</td>
<td>.000</td>
</tr>
<tr>
<td>Rel*stress</td>
<td>-2.804</td>
<td>.10</td>
<td>-.13</td>
<td>-2.81</td>
<td>.005</td>
</tr>
</tbody>
</table>

1 \( R^2 = .050, \rho = .001 \) 2 \( AR^2 = .515, \rho = .000 \) 3 \( AR^2 = .017, \rho = .005 \)

From Table 6, religiosity and stress individually predicted mental health significantly at the 0.05 level of significance. Religiosity predicted about 17% variance in mental health (\( \beta = .17, \rho < .05 \)); stress predicted about 72% reduction in mental health (\( \beta = -.72, \rho < .05 \)) and the interaction term between them was also significant (\( \beta = -.13, \rho < .05 \)). The finding shows that stress moderates the relationship between religiosity and mental health. The interaction term being negative means that religiosity reduces the negative influence of stress on mental health or vice versa. The hypothesis which states that stress will moderate the relationship between religiosity and mental health was therefore supported.
Hypothesis 6: Stress will moderate the relationship between social support, social negativity and mental health

This hypothesis was analyzed using the Hierarchical Multiple Regression analysis, but social support was not included in the analysis since it had no significant relationship with mental health; only social negativity was used in the analysis. The analysis for the moderation effect of stress on the relationship between social negativity and mental health is contained in Table 7.

Table 7
Hierarchical Multiple Regression Analysis of the Moderation Effect of Stress on the Relationship between Social negativity and Mental health.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 constant</td>
<td>177.67</td>
<td>6.52</td>
<td>27.23</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Social negativity</td>
<td>- .52</td>
<td>.16</td>
<td>-.22</td>
<td>-3.19</td>
<td>.002</td>
</tr>
<tr>
<td>2 constant</td>
<td>205.58</td>
<td>4.76</td>
<td>43.17</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Social negativity</td>
<td>.428</td>
<td>.15</td>
<td>.14</td>
<td>-2.94</td>
<td>.004</td>
</tr>
<tr>
<td>Stress</td>
<td>-2.33</td>
<td>.15</td>
<td>-.73</td>
<td>-15.35</td>
<td>.000</td>
</tr>
<tr>
<td>3 constant</td>
<td>174.83</td>
<td>5.84</td>
<td>42.99</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Social negativity</td>
<td>.51</td>
<td>.15</td>
<td>-.15</td>
<td>-3.02</td>
<td>.003</td>
</tr>
<tr>
<td>Stress</td>
<td>-2.33</td>
<td>.15</td>
<td>-.72</td>
<td>-14.97</td>
<td>.000</td>
</tr>
<tr>
<td>SN*stress</td>
<td>-2.80</td>
<td>.10</td>
<td>.04</td>
<td>.71</td>
<td>.478</td>
</tr>
</tbody>
</table>

1 $R^2 = .049$, $\rho = .002$ 2 $\Delta R^2 = .520$, $\rho = .000$ 3 $\Delta R^2 = .001$, $\rho = .478$

From Table 7, social negativity and stress individually predicted mental health significantly ($\beta = .15$, $\rho < .05$; $\beta = -.72$, $\rho < .05$). The interaction term between them was however not significant ($\beta = .04$, $\rho > .05$). This means that stress did not moderate the relationship between social negativity and mental health. Hypothesis 6 which states that “stress will moderate the relationship between social support, social negativity and mental health” was not supported.
**Hypothesis 7**: Age, education, marital status, employment, income and number of children will predict mental health

From the correlation matrix (Table 3), only income and education had significant relationships with mental health, so only income and education were used in the analysis. To test this hypothesis, the variables were re-coded into dummy variables and the multiple regression analysis was used to analyze the data. For income, those who earned below 500 GH cedis were used as a reference group, and for education, primary level was used as the reference group. Only one significant model emerged; the model with education \( R^2 = .07; F = 3.59, \rho < .05 \) and the model accounted for 7% variance in mental health index. The model for age did not significantly predict mental health \( R^2 = .01; F = .83, \rho > .05 \).

Further analysis was done to ascertain the individual contributions of the various levels of education on mental health. The results of the individual contributions are presented in Table 8.

**Table 8**

*Multiple Regression Analysis of the Contributions of Levels of Education to Mental health*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>ρ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary vs. JHS</td>
<td>-2.57</td>
<td>5.038</td>
<td>-.046</td>
<td>-.511</td>
<td>.610</td>
</tr>
<tr>
<td>Primary vs. secondary</td>
<td>-2.002</td>
<td>4.911</td>
<td>-.037</td>
<td>-.408</td>
<td>.684</td>
</tr>
<tr>
<td>Primary vs. tertiary</td>
<td>1.12</td>
<td>4.527</td>
<td>.024</td>
<td>.248</td>
<td>.804</td>
</tr>
<tr>
<td>Primary vs. postgrad</td>
<td>13.54</td>
<td>5.038</td>
<td>.242</td>
<td>2.688</td>
<td>.008</td>
</tr>
</tbody>
</table>

\( R^2 = .07, \rho = .008 \)

Table 8 shows that a difference between primary education and JHS did not predict a significant variance in mental health at the 0.05 level of significance \( t = -.511, \rho > .05 \), likewise secondary and tertiary levels \( t = -.408, \rho > .05 \); \( t = .248, \rho > .05 \) respectively. The difference between primary and postgraduate education however accounted for a significant variance in mental health; the difference accounted for 24% variance in mental health.
health \[\beta = .24; t = 2.69, \rho < .05\]. The hypothesis which states that “age, education, marital status, employment, income and number of children will predict mental health” was not supported.

4.3 Additional Findings

To find out which of the independent variables (religiosity, social support and social negativity) was the best predictor of psychological well-being among women, multiple regression analysis was done. Since social support did not have significant relationship with psychological well-being, it was not included in the multiple regression analysis, only religiosity and social negativity were used in the analysis. Results reveal that religiosity predicted 24% variance in psychological well-being which was statistically significant at the 0.05 level of significance \((\beta = .24; t = 3.46, \rho < .05)\) while social negativity predicted 18% reduction in psychological well-being and this was also statistically significant at the 0.05 level of significance \((\beta = -.18; t = -2.63, \rho < .05)\)[see appendix k]. This finding indicates that religiosity accounted for more variance in psychological well-being than social negativity. It can therefore be concluded that religiosity is the best predictor of psychological well-being among women in Accra.

4.4 Summary of Findings

1. Religiosity had a significant positive relationship with psychological well-being and overall mental health index and a significant negative relationship with psychological distress.

2. Social support did not have significant influence on mental health outcomes.

3. Women who reported high social negativity reported lower psychological well-being, lower overall mental health index and higher psychological distress compared to those who reported low social negativity.

65
4. Stress predicted mental health significantly and also moderated the relationship between religiosity and mental health but did not moderate the relationship between social negativity and mental health.

5. Among the demographic variables tested, only a difference between primary and postgraduate education significantly predicted mental health.

6. Participants’ history of mental illness did not significantly influence their level of religiosity, social support and social negativity. History of mental illness also did not moderate the relationship between religiosity and mental health as well as social negativity and mental health.

7. Religiosity was found to be the best predictor of psychological well-being compared to social negativity and social support.
4.5 Observed Conceptual Model

The findings of the study are summarized in figure 2

Figure 2 Observed relationships among research variables
CHAPTER FIVE

DISCUSSION

5.1 Introduction

The main aim of the study was to find out how religiosity, social support, social negativity and selected demographic variables influence the mental health of women and to find out if any difference exists between women with mental illness and those with no history of mental illness. The specific objectives were: to find out whether religiosity had a significant influence on mental health among women in Accra and the nature and direction of the relationship, to find out whether social support and social negativity have significant influence on the mental health of women, and to ascertain the dynamics of the association, to find out whether religiosity, social support and social negativity have the same or similar effects on women with mental illness as those who do not have any history of mental illness, to find out whether the relationship between religiosity, social support, social negativity and mental health is influenced by perceived stress, and to find out how women’s demographic characteristics influence their mental health.

To achieve the above aims and objectives, several hypotheses were tested. This chapter presents discussion of findings, limitations, recommendations and conclusions.
5.2 Discussion of Findings

Religiosity and Mental Health Outcomes

One of the objectives of the study was to find out whether religiosity had a significant influence on mental health among women and the nature and direction of the relationship. Findings show that religiosity had a significant influence on mental health outcomes. Religiosity was found to have a significant positive relationship with psychological well-being and overall mental health index while it had a significant negative relationship with psychological distress. According to Dein et al. (2012), in collectivist cultures, individuality and the spirit world are closely interconnected, and in such cultures, mental health and spiritual health strongly reflect each other. From this perspective, it could be said that since the Ghanaian culture emphasizes collectivism, being religious is part of an individual’s self-identity, hence being religious would reflect better mental health. Several other studies also found positive associations between measures of religiosity and various mental health outcomes (Bonelli & Koenig, 2013; Ismail & Desmukh, 2012).

The relationship between religiosity and mental health in the present sample can be explained from a cognitive-behavioral framework, based on the religious coping theory (Pargament, 1997). An individual’s religiosity is likely to provide a framework for forming mental schemas or models which guides his/her appraisals of life events, especially in stressful events and enables the individual to make meaning of his/her life (James & Wells, 2003). This mechanism has the potential of influencing mental health positively or negatively, depending on the content of the schema. The finding from the present study implies that women in Accra are more likely to form positive religious mental schemas which have positive influence on mental health.

It was however found that religious attendance did not have a significant relationship with the mental health outcomes even though it had a trend towards a positive association. One
can therefore conclude that religious attendance is not an appropriate measure of religiosity among the present sample. Consistent with the present finding, Ellison et al. (2009) also found out that religious attendance did not have a significant relationship with mental health (depressive symptoms) after controlling for supportive social ties, but religious salience (which is similar to strength of religious faith) was found to have significant relationship with depressive symptoms after controlling for all other variables. Similarly, Green and Elliot (2010) found that when strength of religious identity and engagement in religious activities were entered together in the regression model, only strength of religious identity was significantly related with health. Ellison, et al., (2001) however found out that religious service attendance had a significant relationship with both psychological well-being and distress.

**Social support, Social negativity and Mental health**

The second objective of the present study was to find out whether social support and social negativity have significant influence on mental health of women and to ascertain the dynamics of the relationship. It was found out that social support did not influence mental health significantly. Even though several studies report positive influence of social support on mental health outcomes (Lowe et al., 2010; Mikulincer & Shaver, 2008; Walen & Lachman, 2000; Zhang, 2012), it has been noted that the positive influence of social support may be influenced by the quality of the relationship, thus the positive influence of perceived availability of support may be reduced by conflict in the relationships that may provide the support (Miller & Ray, 1994; Pierce, Sarason & Sarason, 1992). Vangelisti (2009) also illustrated that even though individuals may perceive the consequences of receiving support as positive, the cost of receiving such supports may sometimes be seen to overshadow the benefits, or perhaps the processes involved in receiving the support may be considered as adverse. In other instances, the available sources of support may be
perceived as incapable of giving the help needed; consequently, the positive influence of perceived support might not be felt by the individual. As Ghana is a collectivist culture whereby communalism and brotherhood are emphasized (Gyekye, 1996, Zhang, 2012), individuals are more likely to perceive the availability of social support from at least one source (no matter how low) hence the influence of perceived social support would largely depend on whether the available support is helpful or not. From this tenet, it could be inferred that women in the present study may not consider the social support available to them as helpful; hence it did not have a significant impact on their mental health or perhaps they perceive or experience unpleasant interactions from the same sources of support which overshadow the benefits of the support.

From the social-cognitive perspective, perceived social support is based on an interplay among mental schemas about self, others and expectancies of the nature of interpersonal interactions (Pierce, Baldwin & Lydon, 1997). Perception of the availability of social support is found to be associated with expectation of positive exchanges from others and a positive self view (Pierce et al., 1991). Perceived social support is therefore considered to be related to more positive thoughts and emotions and less negative thoughts and emotions (Lakey & Drew, 1997). This perspective seems to be suggesting therefore that perceived social support is likely to have a positive influence on mental health, nonetheless whether this positive influence is significant or not is another argument all together. If an individual has expectations of both positive and negative interactions from the available sources of social support, the positive influence of the perceived social support may be neutralized, hence the effects of the support becomes insignificant, which might be the case in the present study.

Social negativity was however found to have significant effects on mental health among women. It was found out that, women who reported high social negativity reported lower
psychological well-being, lower overall mental health and higher psychological distress while those who experienced low social negativity reported the contrary. These findings reveal that the aspect of social relationship most pertinent to the mental health of women in Accra is social negativity rather than social support. In fact several studies in which both positive and negative interactions were investigated concurrently, found positive interactions (social support) to have less impact on mental health compared to negative interactions (Bertera, 2005; Zhang, 2012); the results of the present study therefore confirms these earlier findings.

Due to the emphasis on harmonious living in the Ghanaian culture, individuals’ expectation of social interactions is that of pleasantness, negative interactions therefore deviate from this expectation. Consequently, the effects of these negative interactions will be more deleterious compared to the positive effects of positive interactions (Zhang, 2012). The results of the present study however contradict other studies done in individualistic cultures which found social support to have more potent influence on mental health than social negativity or equal effects as social negativity (Jasinkaja-Lahti, 2006; Lincoln, 2000; Walen & Lachman, 2000).

**Moderating Effect of Stress on the Relationship between Religiosity and Mental Health among Women**

The study also sought to find out whether the relationship between religiosity, social support, social negativity and mental health is influenced by perceived stress. Results revealed that stress significantly predicted a reduction in mental health and moderated the relationship between religiosity and mental health but did not moderate the relationship between social negativity and mental health.
As postulated by theorists, religiosity influences mental health by either reducing exposure to stress or providing coping resources for coping with stress (Ellison, 1994; Grasmick, Bursik & Cochran, 1991; Pargament, 1997), the present study found out that strength of religious faith had a negative relationship with stress. This indicates that those who are more religious are more likely to perceive less stress, which translates into better mental health. The interaction between religiosity and stress was found to be negative, which means that religiosity might be buffering the negative influence of stress on mental health. The finding is consistent with studies which reported an interaction effect between religiosity and stress on mental health outcomes (Smith et al., 2003; Ward, 2010; Wei & Liu, 2013). Some studies however did not find any interaction between religiosity and stress on mental health outcomes (Tabak & Mikelson, 2009).

The finding however contradicts studies which found interaction between stress and social relationships (positive and negative interactions) on mental health outcomes (Ingersoll-Dayton et al., 1997; Lincoln et al., 2005; Lowe et al., 2010). Unlike individualistic cultures where studies found an interaction effect between stress and social relationships, Ghana has a collectivist culture hence social relationships are an integral part of the society, hence social relationships are very important to the individual whether the individual is going through stress or not. The perception of stress therefore does not make any difference in the relationship between social relationships and mental health.

**Demographic variables and Mental health among Women**

One objective of the study was to find out how selected demographic characteristics influence women’s mental health. Contrary to earlier findings (Brereton, Clinch & Ferreira, 2008; Fisher & Baum, 2010; Shields & Price, 2005), age, marital status, employment, income and number of children did not predict mental health significantly. This result may be due to the fact that the participants did not vary significantly in terms of
these demographic variables. Majority of the participants were relatively young; 18-49 years (82.5%) with very few of them above 50 years, most of the participants were single, majority were low income earners (below 500 GH Cedis per month), most of them did not have children and there were more of them employed than those who were not. Smith et al. (2003) in their meta-analytic study on religiousness and depression also found out that demographic variables did not influence depressive symptoms. Some studies also did not find a significant relationship between marital status and mental health (de Menil, et al., 2012; Uecker, 2012).

Education was found to significantly predict mental health, however not all levels of educational attainment contributed significantly to variation in mental health. The regression analysis showed that those with postgraduate education are more likely to have better mental health compared to those with primary or below education, all other levels of education compared to primary education did not significantly predict mental health. An additional finding is that education had a strong negative relationship with mental illness. These findings confirm studies which found education to have a positive relationship with various mental health outcomes (Cooper, McCausland & Theodossiou, 2008; de Menil et al., 2012; Ellison et al., 2001; WHO, ICPE, 2000).

It has been suggested that cognitive ability influences the relationship between educational attainment and health outcomes, in that cognitive ability influences academic performance hence individuals with higher cognitive abilities for learning and problem solving are more likely to attain higher education. Such individuals are also more likely to have the ability to take good care of their health through the ability to better understand health promoting messages and implement them, thereby enhancing their overall health and preventing health problems such as mental illness (Chandola et al., 2006).
Does History of Mental illness make any Difference?

The study also sought to find out whether religiosity, social support and social negativity have the same or similar effects on women with mental illness as those who do not have any history of mental illness. Results reveal that participants with mental illness and those with no history of mental illness did not differ significantly on their levels of religiosity, social support and social negativity. History of mental illness had a direct negative relationship with psychological well-being, a direct positive relationship with psychological distress and predicted a significant reduction in overall mental health; as expected. It however did not moderate the relationship between religiosity, social negativity and mental health. This implies that the influence of religiosity and social negativity on mental health is the same in both groups. The results demonstrate that history of mental illness does not interfere significantly with women’s religiosity and social relationships, hence does not affect their influence on mental health.

The Relative Importance of the Influence of Religiosity over Social Relationships on Psychological Well-Being of Women

Findings from the analyses revealed that social support did not have a significant relationship on psychological well-being, hence did not predict mental health, both religiosity and social negativity were found to predict psychological well-being significantly but religiosity was found to account for more variance in psychological well-being than social negativity. Religiosity was therefore found to be the best predictor of psychological well-being among women in Accra.

This finding may be due to the fact that religiosity can be seen as part of the self-identity or individuality of Ghanaians (Dein, Cook & Koenig, 2012), so individuals are happy/satisfied to be religious or have strong religious faith while social relationships are
external to the individual and part of their social identity (although social relationships are also central to African cultural values) hence religiosity will be more important to the individual’s psychological well-being compared to social relationships. This also confirms Dein et al.’s (2012) assertion that spiritual health among collectivist cultures strongly reflects mental health outcomes. The sample in the present study reported very high levels of religiosity which reflects how much religiosity is considered as part of their self identity. Moreover, it has been indicated that in cultures in which general levels of religiosity is higher at the societal level, the association between religiosity and psychological well-being is greater (Lavric & Flere, 2008).

5.3 Limitations

The use of cross-sectional design does not permit inferences about causal relationships among the variables. Due to stigma against mental illness in the Ghanaian society, many women were reluctant to take part in the study or disclose any history of mental illness; this problem was however mitigated by using a screening test to screen for history of mental illness. The sample used are relatively young and urbanized, it is therefore difficult to generalize findings to older and rural populations. Though religiosity was found to have a significant relationship with mental health in the present study, religiosity is a multidimensional construct (Greene & Elliot, 2010), and therefore the unidimensional nature of the religiosity measure used in this study may not have uncovered the complex nature of religiosity and its influence on mental health. Despite the limitations, the study makes important revelations about the role of religiosity, social relationships, and demographic variables in explaining mental health among women and set the pace for more research in this area.
5.4 Recommendations

The research found out that religiosity influences mental health of women positively and that the quality of women’s social interactions is also very relevant to their mental health, hence mental health professionals should consider encouraging women to improve their religiosity and the quality of their social interactions as part of prevention programs at the community level to promote mental health among women. African cultural values such as, brotherhood, humanity, mutual help and respect should also be strengthened in order to improve the quality of social relationships, since the perception of frequent negative interactions in relationships affect mental health negatively. It was also found out that stress significantly predicted mental health and the relationship between them was negative thus the higher a woman’s level of perceived stress, the poorer her mental health. Stress also moderated the relationship between religiosity and mental health. It is recommended therefore that stress management programs be instituted for women in Accra.

The findings also revealed that religious service attendance did not have significant influence on mental health but strength of religious faith had positive influence on mental health, women should therefore not just focus on religious service attendance, but they should strengthen aspects of their religious faith such as frequency of prayer, relationship with God, and the use of religion as a source of inspiration and comfort in order to improve their mental health.

Since mental health is found to be negatively correlated with mental illness, improving mental health through enhancing religiosity, the quality of social interactions and stress management will therefore improve recovery from mental illness. Mental health professionals should also include aspects of client’s religious faith in developing treatment
regime for women. Interpersonal therapy may also be beneficial for women with mental health problems since it would help reduce the impact of negative interactions in their social relationships.

Another finding which is relevant to policy makers is that, attainment of higher education predicts mental health status among women and has an inverse relationship with mental illness. There is therefore the need for steps to be taken to address the educational needs of women such as sponsoring women to undertake postgraduate programs so as to promote their mental health and reduce the prevalence of mental disorders. Public education about the importance of attainment of higher education is also needed in order to encourage more women to attain higher levels of education.

The influence of religiosity, social interactions and demographic variables found in the present study may not be peculiar to women in Accra. Future research should therefore extend the research to include men; in order to make comparisons between the two groups. Future research should also include rural and older populations in order to generalize findings to these populations.

Finally, even though a relationship was found between religiosity, social negativity and mental health, the mechanisms underlying the relationships are inferred from theories and earlier research. The mechanisms specific to the Ghanaian culture is yet to be unfolded. Future research should therefore explore and clarify the specific mechanisms involved in the relationship between religiosity, social relationships and mental health among Ghanaians through qualitative studies. For instance, qualitative research should try unveiling the specific ways in which religious faith affects the daily living of these women, which may be beneficial to their mental health. The question about whether the use of religious faith among women in Ghana is different from other cultures could also be
addressed through qualitative research. Also through qualitative studies, the peculiar characteristics of social relationship among women in the Ghanaian culture would be unraveled.

5.5 Conclusion

The study sought to find out the influence of religiosity, social support, social negativity and selected demographic variables on mental health. Using two hundred (200) women residing in Accra, several hypotheses were tested. The findings of the study revealed that religiosity (strength of religious faith) had significant relationships with mental health outcomes (psychological well-being, psychological distress and mental health index), social support did not correlate significantly with mental health outcomes but social negativity had significant negative effects on mental health outcomes. Stress predicted mental health significantly and also moderated the relationship between religiosity and mental health. Mental illness did not influence the relationship between religiosity, social negativity and mental health. Among the demographic variables, only education predicted mental health significantly.

The findings therefore imply that the important socio-demographic correlates of mental health among women in Accra in this study are; religiosity, social negativity, perceived stress and education. These factors are therefore important factors to consider when planning interventions in terms of promoting mental health and reducing the prevalence of mental illness among women at the community level. There is also the need for further research into the mechanisms involved in these relationships. In addition, further research should be carried out on different populations in order to generalize findings to a wider population.
REFERENCES


Accra Metropolitan Assembly. (2011). The Composite Budget of the Accra Metropolitan Assembly for the 2012 Fiscal Year. Accra: AMA.


81


Reinhardt, J.P. (2001). Effects of positive and negative support received and provided on adaptation to chronic visual impairment. *Applied Developmental Science, 5*, 76-77.


Wei, D. & Liu, E. Y. (2013). Religious Involvement and Depression: Evidence for
Curvilinear and Stress-Moderating Effects among Young Women in Rural China.

Wethington, E. & Kessler, R. C. (1986). Perceived Social support, received support and
adjustment to stressful life events. *Journal of Health and Social Behavior, 27*, 78-89.

explaining sex differences in Psychological distress. In Barnett, R. C., Baruch, G. K.

Whisman, M. A. (2013). Relationship discord and the prevalence, incidence, and treatment

Winefield, A. H. (2002). Unemployment, Underemployment, Occupational Stress and

Geneva: WHO.

Improvements for Nations Development: Department of Mental Health and
substance Abuse.* Geneva: WHO.


APPENDICES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

Please provide the necessary information about yourself by choosing from the options provided.

1. What is your age?
   a. 18-29
   b. 30-49
   c. 50-64
   d. 65 and above

2. What is the highest level of education you have attained?
   a. Primary
   b. JHS
   c. Secondary/technical/vocational
   d. Tertiary
   e. Postgraduate

3. What is your religion?
   a. None
   b. Muslim
   c. Christian
   d. Traditional
   e. Other (please specify)

4. Apart from funerals, weddings etc how many times did you happen to attend church, synagogue, mosque, shrine or any other religious worship service in the last 30 days?
   a. Once
   b. 2 to 3 times
   c. 4 times
   d. 5 times or more

5. What is your estimated monthly income in Ghana Cedi?
   a. Below 500
   b. 500-2000
   c. 2000-3000
   d. Above 3000

6. What is your employment status?
   a. Formal employment
b. Not employed
c. Retired
d. Informal employment

7. What is your marital status?
a. Single/never been married
b. Married
c. Separated
d. Divorced
e. Widowed

8. How many children do you have?
a. 0
b. 1
c. 2
d. 3
e. 4 or more

9. Do you have a history of mental illness/ have you ever been diagnosed with a mental illness?
a. Yes
b. No

10. If yes, what was the diagnosis?
APPENDIX B

MENTAL HEALTH SCREENING FORM III (MHSF-III)

Instructions

Any information you provide to us on this form will be kept in strict confidence. It will not be released to any outside person or agency without your permission. If you do not know how to answer these questions, ask the staff member giving you this form for guidance. Please note, each item refers to your entire life history, not just your current situation, this is why each question begins – “Have you ever…”

1. Have you ever talked to a psychiatrist, psychologist, therapist, social worker, or counselor about an emotional problem?
   YES _____ NO _____

2. Have you ever felt you needed help with your emotional problems, or have you had people tell you that you should get help for your emotional problems?
   YES _____ NO _____

3. Have you ever been advised to take medication for anxiety, depression, hearing voices, or for any other emotional problem?
   YES _____ NO _____

4. Have you ever been seen in a psychiatric emergency room or been hospitalized for psychiatric reasons?
   YES _____ NO _____

5. Have you ever heard voices no one else could hear or seen objects or things which others could not see?
   YES _____ NO _____

6. a) Have you ever been depressed for weeks at a time, lost interest or pleasure in most activities, had trouble concentrating and making decisions, or had thought about killing yourself?
   YES _____ NO _____

   b) Did you ever attempt to kill yourself?
   YES _____ NO _____
7. Have you ever had nightmares or flashbacks as a result of being involved in some traumatic/terrible event? For example, warfare, gang fights, fire, domestic violence, rape, incest, car accident, being shot or stabbed?
   YES _____ NO _____

8. Have you ever experienced any strong fears? For example, of heights, insects, animals, dirt, attending social events, being in a crowd, being alone, being in places where it may be hard to escape or get help?
   YES _____ NO _____

9. Have you ever given in to an aggressive urge or impulse, on more than one occasion that resulted in serious harm to others or led to the destruction of property?
   YES _____ NO _____

10. Have you ever felt that people had something against you, without them necessarily saying so, or that someone or some group may be trying to influence your thoughts or behavior?
    YES _____ NO _____

11. Have you ever experienced any emotional problems associated with your sexual interests, your sexual activities, or your choice of sexual partner?
    YES _____ NO _____

12. Was there ever a period in your life when you spent a lot of time thinking and worrying about gaining weight, becoming fat, or controlling your eating? For example, by repeatedly dieting or fasting, engaging in a lot of exercise to compensate for binge eating, taking enemas, or forcing yourself to throw up?
    YES _____ NO _____

13. Have you ever had a period of time when you were so full of energy and your ideas came very rapidly, when you talked nearly non-stop, when you moved quickly from one activity to another, when you needed little sleep, and believed you could do almost anything?
    YES _____ NO _____

14. Have you ever had spells or attacks when you suddenly felt anxious, frightened, and uneasy to the extent that you began sweating, your heart began to beat rapidly, you were shaking or trembling, your stomach was upset, you felt dizzy or unsteady, as if you would faint?
    YES _____ NO _____

15. Have you ever had a persistent, lasting thought or impulse to do something over and over that caused you considerable distress and interfered with normal routines, work, or your social relations? Examples would include repeatedly counting things, checking and rechecking on things you had done, washing and rewashing your hands, praying, or maintaining a very rigid schedule of daily activities from which you could not deviate.
    YES _____ NO _____
16. Have you *ever* lost considerable sums of money through gambling or had problems at work, in school, with your family and friends as a result of your gambling?

   YES _____   NO _____

17. Have you *ever* been told by teachers, guidance counselors, or others that you have a special learning problem?

   YES _____   NO _____
APPENDIX C

SANTA CLARA STRENGTH OF RELIGIOUS FAITH QUESTIONNAIRE

Please answer the following questions about religious faith using the scale below. Indicate the level of agreement or disagreement for each statement by circling 1, 2, 3 or 4.

1= strongly disagree 2= disagree 3= agree 4= strongly agree

1. My religious faith is extremely important to me.  1 2 3 4
2. I pray daily.  1 2 3 4
3. I look to my faith as a source of inspiration.  1 2 3 4
4. I look to my faith as providing meaning and purpose in my life.  1 2 3 4
5. I consider myself active in my faith or church.  1 2 3 4
6. My faith is an important part of who I am as a person.  1 2 3 4
7. My relationship with God is extremely important to me.  1 2 3 4
8. I enjoy being around others who share my faith.  1 2 3 4
9. I look to my faith as a source of comfort.  1 2 3 4
10. My faith impacts many of my decisions.  1 2 3 4
APPENDIX D

PERCEIVED STRESS SCALE

Questions in this scale ask you about your feelings and thoughts **during the last month**. In each case, you will be asked to indicate by circling **how often** you felt or thought a certain way.

0 = Never  1 = Almost Never  2 = Sometimes  3 = Fairly Often  4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly?  
   **0 1 2 3 4**

2. In the last month, how often have you felt that you were unable to control the important things in your life?  
   **0 1 2 3 4**

3. In the last month, how often have you felt nervous and “stressed”?  
   **0 1 2 3 4**

4. In the last month, how often have you felt confident about your ability to handle your personal problems?  
   **0 1 2 3 4**

5. In the last month, how often have you felt that things were going your way?  
   **0 1 2 3 4**

6. In the last month, how often have you found that you could not cope with all the things that you had to do?  
   **0 1 2 3 4**

7. In the last month, how often have you been able to control irritations in your life?  
   **0 1 2 3 4**

8. In the last month, how often have you felt that you were on top of things?  
   **0 1 2 3 4**

9. In the last month, how often have you been angered because of things that were outside of your control?  
   **0 1 2 3 4**

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?  
    **0 1 2 3 4**
**APPENDIX E**

**SOCIAL NEGATIVITY QUESTIONNAIRE**

Please answer the following questions about your socio-emotional exchanges with your family, friends and significant others. Indicate the frequency of these exchanges by circling 1, 2, 3 or 4.  **1= never 2= rarely 3= sometimes 4= often**

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How frequently do you argue with your relatives/spouse?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How often does your relatives/spouse criticize you?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. How often does your relatives/spouse let you down?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. How often do you experience excessive demands put on you by your family?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. How often does your family get on your nerves?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. How often does your family make you feel tense?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. How frequently do you argue with your friends?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. How often do your friends criticize you?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. How often do your friends let you down?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. How often do you experience excessive demands put on you by your friends?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. How often do your friends get on your nerves?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. How often do your friends make you feel tense?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. How frequently do you argue with significant others?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. How often do significant others criticize you?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. How often do significant others let you down?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. How often do you experience excessive demands put on you by significant others?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. How often do significant others get on your nerves?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. How often do significant others make you feel tense?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family** = relatives/spouse/children

**Significant others** = people outside your family and friends who play significant roles in your life (example neighbours, employer/employee, teacher/lecturer, colleagues etc.)
APPENDIX G
CONSENT FORM

Title: “Mental Health among Women in Accra: The Effects of Religiosity, Social Support and Social Negativity”

Principal Investigator: Ethel Akpene Atefoe

Principal Supervisor: Dr. Samuel Atindanbila

Department of Psychology, University of Ghana, Legon

General information about the research

The aim of the research is to explore the various ways in which religiosity, positive and negative socio-emotional exchanges/interactions affect the mental health of women in Accra and to find out whether similar effects are found among women with mental illness and those without any history of mental illness. Your task will be to fill out the questionnaires given to you as truthfully as possible. It would take approximately 30 minutes - 1 hour to complete the questionnaires.

Possible Risks and Discomforts

You may experience some level of fatigue. Steps will be taken to allow for intermittent breaks in order to minimize fatigue.

Possible Benefits

Your participation will help to gather information concerning the roles of religiosity, socio-emotional interactions and demographic factors in explaining mental health among women, which will greatly help to better understand the relationship between mental health and these social factors from a Ghanaian perspective.

Confidentiality

Please be assured that the information you will provide would be used only for the purpose of research and there is no wrong or right answer. Your cooperation is fully appreciated. You are not required to provide your name on any of the questionnaires or during interview, and any information you provide will be protected as much as possible.

Compensation

There will be no material compensation, but your participation will be very much appreciated.
Voluntary Participation and Right to Leave the Research

Participation in this research is completely voluntary. You have the right to say no. You may change your mind at any time and withdraw. You may also choose not to answer specific questions or to stop participating at any time.

Contacts for Additional Information

In case of any doubt or/and for additional information concerning the study you may contact the Principal Investigator; Ethel A. Atefoe University of Ghana, Legon Telephone: 0203658392 or email address: eatefoe@gmail.com

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.mimcom.org or HBaidoo@noguchi.mimcom.org.

VOLUNTEER AGREEMENT

The above document describing the benefits and procedures for the research title (Mental Health among Women in Accra: The Effects of Religiosity, Social Support and Social Negativity among Women with Mental Illness) has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_______________________ __________________________________________
Date                                                                             Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_______________________ __________________________________________
Date                                                                             Name and signature of witness
I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_______________________  ______________________________________
Date                                           Name and Signature of Person Who Obtained Consent
APPENDIX J

CONFIRMATORY FACTOR ANALYSIS FOR THE COMPONENTS OF THE SOCIAL NEGATIVITY QUESTIONNAIRE

Rotated Component Matrix

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>how often do your friends get on your nerves</td>
<td>.769</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how often do your friends criticize you</td>
<td>.759</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how frequently do you argue with your friends</td>
<td>.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how often do you experience excessive demands put on you by your friends</td>
<td>.748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how often do your friends make you tense/uneasy or nervous</td>
<td>.732</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how often do your friends let you down</td>
<td>.692</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how often do significant others get on your nerves</td>
<td></td>
<td>.792</td>
<td></td>
</tr>
<tr>
<td>how often do significant others make you feel tense/uneasy of nervous</td>
<td></td>
<td>.781</td>
<td></td>
</tr>
<tr>
<td>how often do you experience excessive demands put on you by significant others</td>
<td></td>
<td>.755</td>
<td></td>
</tr>
<tr>
<td>how often do significant others criticize you</td>
<td></td>
<td>.742</td>
<td></td>
</tr>
<tr>
<td>how often do significant others let you down</td>
<td></td>
<td>.721</td>
<td></td>
</tr>
<tr>
<td>how frequently do you argue with significant others</td>
<td></td>
<td>.698</td>
<td></td>
</tr>
<tr>
<td>how often does your family get on your nerves</td>
<td></td>
<td></td>
<td>.753</td>
</tr>
<tr>
<td>how often do your relatives/spouse let you down</td>
<td></td>
<td></td>
<td>.696</td>
</tr>
<tr>
<td>how often do your relatives/spouse say negative things about you or what you do</td>
<td></td>
<td></td>
<td>.640</td>
</tr>
<tr>
<td>how often do you experience excessive demands put on you by your family</td>
<td></td>
<td></td>
<td>.636</td>
</tr>
<tr>
<td>how frequently do you argue with your relatives or spouse</td>
<td></td>
<td></td>
<td>.554</td>
</tr>
<tr>
<td>how often does your family make you tense/uneasy or nervous</td>
<td></td>
<td></td>
<td>.528</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.
APPENDIX K

MULTIPLE REGRESSION ANALYSIS OF THE CONTRIBUTIONS OF RELIGIOSITY AND SOCIAL NEGATIVITY ON PSYCHOLOGICAL WELL-BEING

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>.39</td>
<td>.11</td>
<td>.24</td>
<td>3.46</td>
<td>.001</td>
</tr>
<tr>
<td>Social negativity</td>
<td>- .22</td>
<td>.08</td>
<td>-.18</td>
<td>-2.63</td>
<td>.009</td>
</tr>
</tbody>
</table>