KENYAN WOMEN WITH DISABILITIES: AN ASSESSMENT OF
SOCIAL SUPPORT AND MENTAL HEALTH STATUS

A thesis submitted to
Kent State University College
of Education, Health, and Human Services
in partial fulfillment of the requirements
for the degree of Master of Health Education and Promotion

By
Evelyn S. Williams

August, 2013
Thesis written by

Evelyn S. Williams

A.A., Stark State College/Kent State University, 2007

B.A., Kent State University, 2011

M.Ed., Kent State University, 2013

Approved by

________________________________________, Co-director, Master Thesis Committee
Kele Ding

________________________________________, Co-director, Master Thesis Committee
Dianne L. Kerr

________________________________________, Member, Master Thesis Committee
Kenneth H. Cushner

Accepted by

__________________________, Director, School of Health Sciences
Lynne E. Rowan

__________________________, Dean, College of Education, Health, and Human Services
Daniel F. Mahony
ABSTRACT

Williams, Evelyn S., M.Ed., August 2013  Health Education and Promotion

KENYAN WOMEN WITH DISABILITIES: AN ASSESSMENT OF SOCIAL SUPPORT AND MENTAL HEALTH STATUS (68 pp.)

Co-director of thesis:  Kele Ding, Ph.D.

The purpose of this study was to examine the relationships between social support and mental health status among a sample of 131 Kenyan women with physical disabilities. Understanding social support from the context of disabled women living in conditions of extreme poverty may be useful in the development of effective interventions to advocate for and improve the mental health status among the population. The current study examined relationships that exist between an individual’s social support and their mental health status and how these variables relate to marital status, availability of income, and disability type (i.e., blindness, deafness, or mobility impairment). A cross-sectional survey research design was used. Descriptive, correlational, and regression analyses supported the study’s overall hypothesis that social support (particularly that offered by friends) is related to mental health status. The social support total score was a significant predictor of mental illness (p<0.001) and perceived wellbeing (p<0.001), indicating that individuals with a high level of social support were less likely to experience mental illness and more likely to report higher levels of life satisfaction. Of the three control variables, only disability type was found to be a significant predictor of perceived wellbeing. Of the three sources of social support (family, friends, and significant other), only that from friends was a significant predictor
for both mental illness (p=.0001) and perceived wellbeing (p=.034). Further research on the roles of friends and the unique support that friendships offer to women with disabilities is needed.
ACKNOWLEDGEMENTS

A special thank you goes Dr. Kele Ding for co-directing this work. He has been an endless source of encouragement, having confidence in my research ability when I did not. Thanks also to the defense committee: to co-director, Dr. Dianne Kerr, for believing in the good of humankind, including me! I so appreciate her professionalism and desire to always take the high road. A special thank you goes to Dr. Kenneth Cushner, for taking time away from his busy schedule to act as an outside reviewer. But he has meant much more to the movement, by working to increase educational opportunities for students in the rural regions of Kenya. His own experiences working among the Kenyan people gave a perspective that other eyes could not. Each committee co-director and member had their unique strengths that came together to accomplish the completion of this work. Their feedback and encouragement was most appreciated. I would like to thank the beautiful Kenyan women who so graciously participated in the project. Special blessings are expressed to Naomy Ruth Esiaba, founder and director of Disability and Women’s Developmental Strategies and to Timothy Machayo, founder and director of Western Mission Outreach International, both local NGO’s of Kenya, Africa. Lastly, I would like to express my love and gratitude to my family, not only for putting up with endless absences along the way, but for attending to my elderly mama when I was busy scurrying about Kenya. I could not have finished without their support and practical assistance!
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ......................................................................................... iii

LIST OF TABLES ......................................................................................................... vii

CHAPTER

I. INTRODUCTION ................................................................................................. 1
   A Study of Kenyan Women and Social Support ................................................. 1
   Background of Study ...................................................................................... 1
   Demographics and Political Climate of Kenya .............................................. 2
   Women of Kenya ............................................................................................ 3
   Statement of the Problem ............................................................................. 5
   Purpose of the Study ..................................................................................... 5
   Research Questions ...................................................................................... 6
   Research Hypotheses .................................................................................... 6

II. REVIEW OF THE LITERATURE ....................................................................... 8
   Disability in the Developing World .............................................................. 8
   Social Support ............................................................................................... 11
   Social Support of Family ............................................................................. 12
   Social Support of Significant other ............................................................ 13
   Social Support of Friends ........................................................................... 13
   Mental Health Status ................................................................................... 14
   Connecting Mental Illness and Social Support ........................................... 15
   Perceived Wellbeing .................................................................................... 17
III. METHODOLOGY ................................................................. 19

Research Questions ............................................................... 20

Research Hypotheses ............................................................ 20

Study Design ................................................................. 21

Study Population and Sample .................................................. 22

Instrumentation ............................................................... 23

Social Support Constructs .................................................. 24

Mental Illness Construct ...................................................... 25

Perceived Wellbeing Construct ............................................ 25

Study Variables and Data Analyses .................................... 26

Mental Status ................................................................. 26

Social Support ................................................................. 27

IV. ANALYSIS OF THE FINDINGS ........................................... 29

Demographic Results .......................................................... 29

Descriptive Result for Study Variables .................................. 31

Results for Hypotheses #1 to #5 ....................................... 33

Results for Hypotheses #6 to #9 ....................................... 36

V. DISCUSSION AND CONCLUSION ..................................... 43

Overall Summary of Findings ............................................. 43

Discussion of Findings ...................................................... 44

Implications ................................................................. 46

Recommendations for Future Study .................................... 48
Conclusion..............................................................................................................49

APPENDIX..........................................................................................................51

APPENDIX A SURVEY QUESTIONNAIRE.........................................................52

REFERENCES.....................................................................................................61
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demographic Characteristics of Study Sample</td>
<td>30</td>
</tr>
<tr>
<td>2. Descriptive Statistics for Study Variables</td>
<td>32</td>
</tr>
<tr>
<td>3. Correlations between Study Variables</td>
<td>35</td>
</tr>
<tr>
<td>4. Regression Model Summary</td>
<td>36</td>
</tr>
<tr>
<td>5. Social Support and Participant Demographics as Predictors of Mental Illness</td>
<td>36</td>
</tr>
<tr>
<td>6. Regression Model Summary</td>
<td>37</td>
</tr>
<tr>
<td>7. Social Support as a Predictor of Perceived Wellbeing</td>
<td>38</td>
</tr>
<tr>
<td>8. Regression Model Summary</td>
<td>39</td>
</tr>
<tr>
<td>9. Social Support of Family, Friends, or Significant Other as a Predictor of Mental Illness</td>
<td>39</td>
</tr>
<tr>
<td>10. Regression Model Summary</td>
<td>40</td>
</tr>
<tr>
<td>11. Social Support of Family, Friends, or Significant Other as a Predictor of Perceived Wellbeing</td>
<td>41</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

A Study of Kenyan Women and Social Support

The purpose of this study is to examine the relationships between social support and mental health status among a sample of Kenyan women with physical disabilities. It also aims to identify whether there is a specific classification of social support that is correlated to mental health and perceived well-being among this at-risk population. Understanding social support from the context of those living in conditions of extreme poverty, coupled with a status of disability, may be useful in the development of effective interventions to advocate for social support and improve the mental health status among the population.

Background of Study

In 2009, a survey based on Maslow’s Hierarchy of Needs (1970), was used with a sample of 55 Kenyan women with disabilities to examine the relationships between need fulfillment, life satisfaction, and physical and mental health/well-being. Williams (2010) found that there were significant positive correlations between this population’s fulfillment self-rating on social support needs and their self-rating on life satisfaction (an indicator of subjective mental well-being). Based on these findings, a second research study was conducted the following year involving 131 Kenyan women participants. The current study analyzed the data collected from these 131 Kenyan women who had
physical disabilities, with a focus on the relationship between social support and mental health status.

**Demographics and Political Climate of Kenya**

The Republic of Kenya is situated on the Eastern Coast of Africa, in a region known as the “Horn of Africa” (Wakabi, 2008). The country is bordered by Tanzania to the south; Somalia, Ethiopia, and Sudan neighboring on the north; Uganda to the west; and the Indian Ocean to the east (Wakabi, 2008). According to their national population census (2009), the country’s size has increased by 35% over the last decade with a total of over 38 million people living in Kenya (Oparanya, 2010; WHO, 2010). There are over 40 identified ethnic groups, with only 10% of Kenyans claiming their tribal status above their identity as a Kenyan, showing a greater pride in unity as compared to the past when tribal association was seen as more important than solidarity as one nation (Dercon, 2008). However, the political climate remains unstable as many in the general population are negatively affected by corruption on both a national and local level (BBC News, 2003; BBC News, 2010). BBC News reported in the year 2003, that an average Kenyan will pay out up to 16 bribes in a one month period. This trend towards corruption has continued to plague the country, as daily pressures of life often force one to pay such bribes in order to obtain basic services, such as accessing health services or police assistance (BBC News, 2003; World Bank, 2009).

Kenya, also known as “the cradle of humanity,” has many challenges, including limited access to such basic needs as food, clean water, and health care for the poor (BBC News, 2010; Wakabi, 2008; Whelan, 2010; World Bank, 2010). Recent drought
conditions have negatively affected agriculture, with growth remaining at only 4.6 percent compared to the manufacturing and the financial sectors, which increased by 7.8 percent and 11.9 percent, respectively (World Bank, 2010). With political unrest, corruption, and decreased access to basic physiological needs, it is difficult for the average Kenyan family to rise out of impoverished conditions (BBC News, 2003; Brown & Kaiser, 2007; WHO, 2010).

One measurement used to assess the inequality of financial distribution is the Gini coefficient. While this coefficient measurement indicates a slight decrease in financial disparities in the rural areas of Kenya, it has shown an increase in urban areas (World Bank, 2010). In other words, the disparities of income are slightly less in the outlying regions, but are widening in the urban centers (World Bank, 2010). This disparity of income contributes to sustained poverty leaving many Kenyans living below the absolute poverty line of less than $1 (USD) a day (World Bank, 2003; WHO, 2010). Recent data shows that 21 percent of the urban population lives below the national poverty line (Whelan, 2010). The rural areas are still hard hit by extreme poverty as Kenya’s Pokot region reached global malnutrition rates in the year 2008, due in part to decreasing prices for maize, making it difficult for farmers to survive (World Bank, 2009; Wakabi, 2008).

**Women of Kenya**

Conditions of poverty are further exacerbated for the women of Kenya (WHO, 2009; WHO, 2010). Among females, the literacy rates lag by approximately 5 million, compared to that of males (WHO, 2009; WHO, 2010). Women have a higher probability of dying between the ages of 15 and 60 years than do men (WHO, 2006; WHO, 2010).
In addition, young women (ages 15-24 years) are nearly 50 percent less likely to engage in condom use when having higher risk sex, leaving them at an increased risk for HIV infection (WHO, 2006; WHO, 2010). In many third-world countries there is gender inequality and Kenya is no exception (Kimuna & Djamba, 2008; WHO, 2006; WHO, 2010). Gender disparities leave many women vulnerable as they are less likely to be educated, are at an increased risk for contracting HIV, and have an increased probability of early death (Kimuna & Djamba, 2008; WHO, 2006; WHO, 2009; WHO, 2010).

In addition to these challenges, Kenyan women earn less money and, due to the patriarchal family structure, often have little say in decision-making regarding marriage and family size (Kimuna & Djamba, 2008). Kimuna and Djamba (2008) reported that it is not only single women that experience gender-based violence. Research among 4,876 married women in Kenya (ages 15-49) found that even those in a state of matrimony are at-risk of becoming a victim of gender violence (Kimuna & Djamba, 2008). At least 40 percent of married women reported either physical or sexual abuse at the hands of her spouse (Kimuna & Djamba, 2008). Inequalities continue to exist for women in Kenya; therefore research should further examine the issues that affect women in high-risk populations. One such population is Kenyan women with disabilities (Cobley, 2012; United Nations, 2011). While there is continued research among the general population with disability; the “women of Kenya” continue to “face more challenges than their male counterparts” (Cobley, 2012, p. 284).
Statement of the Problem

Previous research is limited in that it has not examined the correlations between social support coming from specific sources, such as that of family, friends, or a significant other and mental health status among the Kenyan women with disabilities. Further, while poverty and disability have been researched there is no study that examines marital status, income, and disability type as a predictor for mental health status as measured by both mental illness (K6) and perceived wellbeing (LIFESAT).

Purpose of the Study

This research project was developed for and conducted with an underserved population of women in Kenya, Africa. The purpose of the study is to examine how the social support perceived by Kenyan women with disabilities correlates with their mental health status. The current study measures mental health status using two different types of instruments: one to measure mental illness (K6 Scale) (Kessler, 2002) and the other to measure perceived (or subjective) wellbeing (Satisfaction of Life Scale) (Diener, Emmons, Larsen, & Griffin, 1985). Then using the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) the study specifically examines the connections that exist between an individual’s social support and their mental health status. Further investigated is how social support and mental health status is influenced by marital status, availability of income, and disability type (i.e., blindness, deafness, or mobility impairment).
Research Questions

This study measured mental health status in two ways: 1) scores for mental illness and 2) self-rating of perceived well-being. The two research questions this study intended to answer are:

1. Is there a significant relationship between social support and mental illness? If yes, which source of social support is significant when adjusted for marital status, income, and type of disability?
2. Is there a positive and significant relationship between social support and perceived wellbeing? If yes, which source of social support is significant when adjusted for marital status, income, and type of disability?

Research Hypotheses

The overall hypothesis for this study is that there is a significant correlation between the social support and mental status as measured by the survey instrument developed for this study. Specifically and statistically, this study will test the following hypotheses:

1. There is a statistically significant correlation between mental illness score and perceived wellbeing score.
2. There is a statistically significant correlation between the social support total score and mental illness score.
3. There is a statistically significant correlation between the social support total score and perceived wellbeing score.
4. There are statistically significant correlations between each source score of social support variables and mental illness score.

5. There are statistically significant correlations between each source score of social support variables and perceived wellbeing score.

6. Social support total score is a statistically significant predictor of mental illness score when adjusting for marital status, income, or type of disability.

7. Social support total score is a statistically significant predictor of mental wellbeing score when adjusting for marital status, income, or type of disability.

8. Each source score of social support variables is a statistically significant predictor of mental illness score when adjusting for marital status, income, or type of disability.

9. Each source score of social support variables is a statistically significant predictor of perceived wellbeing score when adjusting for marital status, income, or type of disability.

The following chapter will describe the overall situation for Kenyan women in terms of disability status, social support, and their mental health status. A review of recent literature is the basis of the description presented in Chapter II.
CHAPTER II

REVIEW OF THE LITERATURE

Disability in the Developing World

The United Nations (2011) estimates that worldwide, there are over one billion individuals living with one or more disabilities (i.e., physical, sensory, or mental health impairment). Disability affects one out of four households so its previous lack of inclusion in the Millennium Development Goals shows that those developing the MDGs were not sensitive to the disparities that exist between those with a disability and the non-disabled (United Nations, 2011). Unfortunately, disability and poverty often walk hand-in-hand, especially in the developing world (Cobley, 2012; United Nations, 2011). Previous literature indicates that while individuals with disabilities are a researched population, most of the research is limited to men and women in developed countries (Glover-Graf & Reed, 2006). However, the topic of disabilities in the developing world is beginning to appear at the forefront, as the Millennium Development Goals are now considering the specific needs of those with disabilities (United Nations, 2011). This is a current change because as recently as 2009 the International Labour Organization (ILO) reported “there is no recent data on the situation of people with disabilities in Kenya” (ILO, 2009).

The limited research on disability in the developing world, led the World Health Organization to use a formula of applying ten percent to the current Kenyan population of 36 million to calculate an estimated 3 million Kenyan’s with disabilities (ILO, 2009; Opini, 2010). And while Kenya has passed laws and policies in support of those with disabilities, these supportive gestures rarely make a positive impact on those living with a disability;
particularly those living in extreme poverty (Wally, 2009; Opini, 2010; United Nations, 2011). In a qualitative study, Opini (2010) examined how one individual academic views the gap that exists between the passing of the Persons with Disability Act (2003) and its actual implementation among individuals with a disability seeking employment. While Opini (2010) recognizes the limitations of a one-person interview, the author contends that the narrative is representative of the barriers that exist for many Kenyans with physical disabilities. These barriers include difficulty accessing and completing higher education, securing employment, and the basic issues of limited accessibility in the environment that lead to exclusion (Albert, 2004; Opini, 2010; United Nations, 2011).

Previous models used in relation to those with disabilities included the medical or rehabilitative model that addressed the individual’s disability as a condition that is limited to the physiological issues related to their disability (United Nations, 2011). Another model that has been applied to work among those with disability is the charity model, in which the disabled are seen as a burden on society, as they use up valuable resources without contributing back to society (United Nations, 2011). Both of these models are still being used today, especially among those in the developing world (Wally, 2009; United Nations, 2011). However, as the Disability Rights Movement has grown, a new “social” model of disability has arisen (Albert, 2004; Cobley, 2012; United Nations, 2011; Wally, 2009). According to an editorial in the Lancet (2009), this model is needed in order to ensure fair access to needed health care by those with disabilities, as one common barrier to receiving quality care is the attitude of the health care providers (Wally, 2009).
This new social model addresses disability issues from a broader and more inclusive approach, examining how socioeconomic and cultural barriers have contributed to low levels of health and well-being among those living with a disability (Albert, 2004; Cobley, 2012; United Nations, 2011; Wally, 2009). Framers of the MDG’s have recognized the need for change in the attitudes and beliefs we hold about poverty and disability, as well as the environmental challenges that exist, in order to succeed in narrowing the gaps of disparity (United Nations, 2011). This acceptance of a need for change from a multi-level perspective is the ideal time for global and national organizations to bring attention to the challenges that exist for those with disabilities (United Nations, 2011; Wally, 2009). Efforts among those with disabilities should further include the use of a social model that addresses disability and the many issues surrounding it from a broad, multi-level approach (Cobley, 2012; United Nations, 2011; Wally, 2009). This approach should include the individual as well as the surrounding family, community, and broader infrastructures that are associated with forward movement out of poverty (Albert, 2004; Cobley, 2012; United Nations, 2011).

However, increased attention towards providing economic empowerment for those with a disability will require careful consideration to ensure that the most effective systems are made available (Cobley, 2012). For example, Cobley (2012) examines 10 case studies that were conducted throughout Kenya during the summer of 2010. The purpose of the study was to examine and compare the effectiveness of two types of strategies often used among those working with the disabled: segregation and inclusion (Cobley, 2012). The use of segregation is often associated with the medical model approach; whereas the inclusive
model is more supportive of the concepts used with the newer social model (Cobley, 2012; United Nations, 2011). Cobley (2012) concluded that inclusive strategies had significant advantages over the segregation strategies. For example, using the inclusive approach encourages individuals with a disability to work in the community. This offers them the opportunity to be seen and to work with local community people to provide insights into how the community can more effectively address issue of inclusion, including increased physical access to local venues (Cobley, 2012; United Nations, 2011).

And while segregation strategies are often equated to those of the older charity model of disability, they do offer a collective type of support that may not be felt by those programs that utilize the inclusive concepts (Cobley, 2012). In addition, segregated services are one approach that has worked well for those with severe disability, as these individuals may have a difficult time finding employment outside of such a structured program (Cobley, 2012). However, due to the limited effectiveness of the segregated strategies among higher functioning individuals with a disability, inclusive programs are now attracting more funding streams (Cobley, 2012). Recognizing the importance of including the surrounding family and community for increased inclusion, points to a need for programs that will develop social support networks for those facing the challenges of living with a disability (United Nations, 2011; Wally, 2009).

**Social Support**

Research literature suggests that there are two distinct aspects to social support: structural and functional (Hefner & Eisenburg, 2009; Kawachi & Berkman, 2001). Structural social support is referred to as the presence and quantity of relationships that
one is engaged in; whereas, functional refers to the actual quality of one’s social relationships (Hefner & Eisenburg, 2009). Current research supports that the quality of relationships is an important factor in mental health (Hefner & Eisenberg, 2009; Kawachi & Berkman, 2001).

**Social Support of Family**

Njue and colleagues (2007) found that the quality of family relationships is vital as it offers such benefits as cohesion, flexibility and communication that focuses on the family as a whole (Njue, Rombo, & Ngige, 2007). These benefits are also universal in creating a supportive family network structure that further stabilizes family members (Njue et al., 2007; Maslow, 1971). However, many Kenyan families have difficulty adapting to a child with a disability due to stigmas that still prevail in their culture (Gona, Xiong, Muhit, Newton, & Hartley, 2010; United Nations, 2011). This can lead to distress in the family and contribute to feelings of isolation between the disabled member and the non-disabled family members (United Nations, 2011). Njue and colleagues (2007) discussed the issue of distress over caring for the elderly and the sick, but only briefly addressed the issue of disability within the family. According to the researchers the ratification of the United Nations Convention on the Rights of the Child in 1990 led to the development of special educational programs to target children with disabilities; however, the article did not address the importance of acceptance and perceived social support of a family member with a disability (Njue et al, 2007). Therefore assessment of perceived social support from family should be further examined among high-risk populations, such as Kenyan women with disabilities.
Social Support of Significant Other

Social support from a significant other has also been found to be of importance when considering overall mental health status (Njue et al., 2007; Williams, 2010). In their case study of “strong and durable marriages,” Njue and colleagues (2007) found such qualities as love and mutual respect; valuing children, providing for the family, communication, and time together (as reported in Njue et al., 2007, p. 58). Most of these qualities are considered as part of the social support that is attributed to a significant other. Conversely, if a spouse does not support the woman emotionally or financially this may also bring additional stressors into the relationship. In turn, the woman feels a lack of social support from her partner.

Social Support of Friends

The Multidimensional Scale of Perceived Social Support is a validated research tool that has been used to assess levels of social support among various populations (Canty-Mitchell & Zimet, 2000; Dahlem, Zimet, & Walker, 1991; Hefner & Eisenberg, 2009; Zimet et al., 1988). For example, Hefner and Eisenberg (2009) used this scaled instrument to examine levels of functional support among a sample of 1378 college students. The scale was then compared to mental health constructs to examine for relationships that existed between social support and mental health. The study concluded that students with a low level of social support were more likely to report mental health problems, such as depressive symptoms (Hefner & Eisenberg, 2009). These findings can then be used to identify students at-risk for mental illness and work to create health promotion programs that can address this growing issue in communities. According to
Hefner & Eisenberg (2009) strengthening peer networks in an effort to reduce risk of depression could benefit college populations in which students that are separated from family support.

Using the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) among Kenyan women with disabilities will add to the existing literature by offering researchers an opportunity to examine which types of social support are most predictive of mental health status.

**Mental Health Status**

The literature has made the connection between the inability to meet the basic daily needs of food, safe water, shelter, and medical care and with decreased levels of physical health (Albee, 2005; Burns & Esterhuizen, 2008; Flisher et al., 2007; Jacobsen, 2010). Further, deficits in basic need fulfillment are also linked to reduced mental health status (Albee, 2005; Miranda & Patel, 2005; Skeen, Lund, Kleintjes, Flisher, & the MHaPP Research Programme Consortium, 2010; Williams, 2010). Reductions in mental status can have a negative impact on how one navigates throughout their lifespan (Kawachi & Berkman, 2001; Skeen et al., 2010). Declines in mental status can create an environment that is unfavorable to an individual’s movement out of poverty and further reduce their likelihood of improving their overall health status (Flisher et al., 2007; Jacobsen, 2010; Parker, Fernandes, & Weiss, 2003; Skeen et al., 2010; World Bank, 2009). This interactive relationship between poverty, mental health, and perceived wellbeing implies that there is a need to further examine these issues (Skeen et al., 2010; United Nations, 2011). Current research suggests that a multi-level strategy of both
prevention and intervention must be incorporated in order to break the vicious cycle of poverty, decreased mental health, and lowered perceived wellbeing (Albee, 2005; Flisher et al., 2007; Skeen et al., 2010; United Nations, 2011). Increasing mental health status could be a vital link to assist in breaking this negative cycle among at-risk populations.

**Connecting Mental Illness and Social Support**

Albee (2005) reported that as early as 1993, the World Federation for Mental Health stressed that one of the beginning steps to the eradication of poverty is the incorporation of the primary prevention of mental illness and the social problems that often accompany these conditions. The negative conditions associated with poverty and the environmental conditions linked to it continue to negatively affect emotion and overall mental health status (Jacobsen, 2010; Myer, Stein, Grimsrud, Seedat, & Williams, 2008; Parker et al., 2003). These negative impacts include stress that is commonly linked to living in such adverse circumstances and may increase the risk for developing psychosis (Burns & Esterhuizen, 2008; Jacobsen, 2010; Myer et al., 2008; Parker et al., 2003; Skeen et al., 2010). Research by Patel and colleagues (2008) further validates the importance of addressing “core social and economic inequities which are ultimately the basis of much human suffering in our world” as the “strategies most likely to promote mental health” (Patel et al., 2008, p. 329).

Using the social determinants of mental health, Myer and colleagues (2008) conducted research in low and middle income countries to better understand the connections between mental distress, socioeconomic status, and social support/social bonding. The study took place in South Africa and included a probability sample of over
4,351 adults. The Kessler-10 scale, a previously validated research tool, was used to measure general psychological distress (Myer et al., 2008). This study viewed socioeconomic status through the lens of not only financial income, but also education and employment status, and household and financial assets (Myer et al., 2008). Social support and social bonding were based on selected questions from the World Mental Health survey and the National Survey of American Life, with some adaptations for the South African culture (Myer, et al., 2008). The findings suggested that SES, social bonding, and non-specific psychological distress were negatively correlated (Myer et al., 2008). Further, the analysis supported a direct connection between social support and psychological distress, but the connection was less significant (Myer et al., 2008). Myer and colleagues (2008) suggest that additional research is still needed in order to identify additional connections between wealth, poverty, and the mental health of populations. Future research could assist in identifying vulnerable subpopulations (i.e., children or disabled) (Myer et al., 2008; Skeen et al., 2010).

Current research continues to support that the achievement of the Millennium Developmental Goals in terms of eradicating poverty will depend on the inclusion of advances in addressing mental health issues (Miranda & Patel, 2005; Skeen et al., 2010). Due to the limited progress of the MDG’s in the regions of Sub-Saharan Africa, researchers are now considering how this lack of advancement has negatively affected mental health in poverty-stricken nations of Africa (Miranda & Patel, 2005; Skeen et al, 2010). Further, they are examining how progress can be made by at last addressing the issues of mental illnesses that have previously been avoided, as other physical health
issues were the focus of health care resource distribution (Miranda & Patel, 2005; Skeen et al., 2010). Mukherjee and colleagues (2011) present the view that many issues that affect women in the developing world continue to be neglected or at best minimally addressed due to structural violence (Mukherjee, Barry, Satti, Raymonville, March, & Smith-Fawzi, 2011). Structural violence is the systematic exclusion of a group from the resources needed to develop their full potential (Mukherjee et al., 2011, p. 593). This type of structural violence presents a lack of social support from the broader levels of society; further coupled with a lack of basic needs and insufficient social support systems from family creates stressors often connected with increased levels of chronic stress that lead to mental illness and lowered views of perceived well-being (Burns & Esterhuizen, 2008; Maslow, 1970; Patel et al., 2008; Skeen et al., 2010).

**Perceived Wellbeing**

Using life satisfaction as an indicator for perceived (or subjective) well-being has appeared in recent literature (Bookwalter & Dalenberg, 2004; Makiwane & Kwizera, 2006). Measurements of life satisfaction have been used to look at the association of poverty and its negative effects on both physical and mental health, as life satisfaction is also negatively impacted by adverse living conditions (Bookwalter & Dalenberg, 2004; Makiwane & Kwizera, 2006). According to Bookwalter and Dalenberg (2004), earlier research frequently measured wellbeing by using financial status as an indicator, suggesting that if one has adequate financial status they will also have an adequate level of life satisfaction. However, disability is also strongly linked to increased poverty (Skeen et al., 2010; United Nations, 2011). This means that we must not only examine
the income, but also the type of disability that one is dealing with in order to better understand how these components factor into one’s mental health and perceived wellbeing (Miranda & Patel, 2005; Skeen et al, 2010; United Nations, 2011).

The following chapter describes how mental status, as defined by mental illness and perceived wellbeing, was operationalized for this study and describes in detail the research questions and methodology used. Study design, hypotheses and procedures are delineated and instrumentation descriptions are provided.
CHAPTER III
METHODOLOGY

This research project was developed and conducted among an underserved population in Kenya, Africa. The purpose of the study is to examine how the social support perceived by Kenyan women with disabilities correlates with their mental health status. The current study measures mental health status using two different types of instruments: one to measure mental illness (K6 Scale) (Kessler, 2002) and the other to measure perceived (or subjective) wellbeing (Satisfaction of Life Scale) (Diener et al., 1985). Then using the Multidimensional Scale of Perceived Social Support (Zimet et al, 1988) the study specifically examines the connections that exist between an individual’s social support and their mental health status. Further investigated is how social support and mental health status is influenced by marital status, availability of income, and disability type (i.e., blindness, deafness, or mobility impairment).

Social support was previously identified as a significant indicator for mental health and wellbeing (Williams, 2010). The use of the K6+ Self-Report Measure for Mental Illness adds to the current study by offering a more thorough assessment of mental status. This scale along with the Satisfaction of Life Scale (used in this study as a measure of mental wellbeing) gives a fuller picture of overall mental health status among this sample of Kenyan women with disabilities than focusing on either the mental illness or mental wellbeing alone. This will give us a greater understanding of how mental illness and perceived wellbeing are affected by social support. Further examination of marital status, availability of income, and disability type (i.e., blindness, deafness, or
mobility impairment) enhances our understanding of how these factors play a role in predicting mental illness or perceived wellbeing among this sample.

**Research Questions**

This study measured mental health status in two ways: 1) scores for mental illness and 2) self-rating of perceived wellbeing. The two research questions this study intended to answer are:

1. Is there a significant relationship between social support and mental illness? If yes, which source of social support is significant when adjusted for marital status, income, and type of disability?
2. Is there a significant relationship between social support and perceived wellbeing? If yes, which source of social support is significant when adjusted for marital status, income, and type of disability?

**Research Hypotheses**

The overall hypothesis for this study is that there is a positive correlation between the social support and mental status as measured by the survey instrument developed for this study. Specifically and statistically, this study will test the following hypotheses:

1. There is a statistically significant correlation between mental illness score and perceived wellbeing score.
2. There is a statistically significant correlation between the social support total score and mental illness score.
3. There is a statistically significant correlation between the social support total score and perceived wellbeing score.
4. There are statistically significant correlations between each source score of social support variables and mental illness score.

5. There are statistically significant correlations between each source score of social support variables and perceived wellbeing score.

6. Social support total score is a statistically significant predictor of mental illness score when adjusting for marital status, income, or type of disability.

7. Social support total score is a statistically significant predictor of perceived wellbeing score when adjusting for marital status, income, or type of disability.

8. Each source score of social support variables is a statistically significant predictor of mental illness score when adjusting for marital status, income, or type of disability.

9. Each source score of social support variables is a statistically significant predictor of perceived wellbeing score when adjusting for marital status, income, or type of disability.

**Study Design**

This study used a cross-sectional survey design. The survey instrument was constructed with the questions selected from a variety of existing instruments published by Diener and colleagues (1985), Kessler (2002), and Zimet and colleagues (1988) regarding mental health and social support. For surveying this particular population, there were two challenges with utilizing paper-pencil survey methodology in data collection. One is the issue of physical impairment that hindered the participant from completing the survey on
their own. This was remedied by providing assistants to support those individuals with a visual or mobility impairment. Those with a visual impairment were provided with an assistant who read each question and the list of responses to the participant and documented their response. Those participants with a mobility impairment that prevented them from responding by hand were provided an assistant that manually recorded the participant’s responses on the survey. The second issue was a language barrier, remedied by provision of a translator (when necessary), as well as a sign language interpreter for the hearing impaired. Translation was not required, but was used in the latter group of 65 participants from Bombolulu. This was provided more as a custom than as a requirement. Each of the three sites for data collection had a small group of participants who identified as deaf or hearing impaired. A Kenyan certified American Sign Interpreter who also knew English, Kiswahili, and a local tribal language provided interpretation for instructions and as questions arose during the women’s participation in the data collection process. Each woman that participated received a small gift, including a facial washcloth and several personal hygiene products. Each gift was valued between eight and twelve US dollars.

Study Population and Sample

Participants in this study were a convenience sample of disabled women in Kenya who represented various socioeconomic levels and came from provinces throughout Kenya, ranging from the East Coast Province to the Northwest Province. There were 131 participants in total. The first 46 participants to take part in the survey came from a group of women who had been identified by a Kenyan non-governmental organization
(NGO), *Disability and Women’s Development Strategies*, located in Mbale, Kenya (July, 2010). The second group of 20 participants came from a group recruited by the *Bushiri Health Center* in Bushiri, Kenya in August of the year 2010). The final group of 65 participants was recruited by the *Bombolulu Pentecostal Church* in Mombasa, Kenya (August, 2010). Many of the participants from the latter group also worked for the *Bombolulu Handicraft Workshop*, a local Kenyan NGO that employs those with physical disabilities (Cobley, 2012). Of the 131 participants, two were excluded because they did not have a physical disability. Therefore, the final sample consisted of 129 participants with visual, auditory, or various other physical mobility disabilities.

**Instrumentation**

The survey instrument for this study was a 58-question quantitative survey developed by the researcher. The survey consisted of five sections including the following: demographic information, need fulfillment (i.e., basic physiological, safety, social support, and self-esteem), physical health, mental health, and subjective wellbeing (life satisfaction). For the current analyses questions from the mental health section and the Satisfaction of Life Scale were used to assess for mental health status, an umbrella term used to define both serious mental illness and perceived wellbeing (Kessler et al., 2002). In addition, the current study uses a multidimensional scale to assess for a total social support self-rating and for each of three types of social support (Zimet et al., 1988).

The demographics questions were those related to age, group affiliation, marital status, income, and disability-related information. Group affiliation was confirmed by a sign-in sheet at each collection site. The question for marital status was stated, “I am…”
with the participant choosing which category they best fit into; “1 = single,” “2 = married,” “3 = divorced,” and “4 = other.” “Do you have a regular source of income?” was asked with response selections “0 = no regular income” and “1 = regular source of income,” followed by the question, “If you have a regular income, about how much do you receive in a 30 day time period (in Kenyan Shillings)?” Disability type was identified as one of the following: “1 = visual.” “2 = deaf or hearing impaired,” “3 = mobility impairment,” or “4 = other.” Of the 58 questions comprising the survey, 23 assessed for levels of needs fulfillment (physiological, safety and security, and self-esteem); but were not included in the current analyses. Four questions assessing physical health were also not included in the current analyses.

**Social Support Constructs**

The Multidimensional Scale of Perceived Social Support Scale (Zimet et al., 1988) is a previously validated research survey instrument comprised of 12 statements that were rated from “1 = very strongly agree” to “7 = very strongly disagree.” The instrument was shown to have internal reliability using Cronbach’s alpha of .90 and above, suggesting that even when diverse samples are involved, the instrument yields reliable data (Dahlem, Zimet, & Walker, 1991). The reliability, validity, and utility of this instrument was confirmed in Canty-Mitchell and Zimet (2000), when it was used to investigate the social support needs of a sample of 222 urban, largely African American adolescents. This survey asks participants to rate how they feel about each of twelve statements concerning social support and belongingness, on a scale from “1=very strongly agree” to “7=very strongly disagree.” The survey consists of three sets of four
questions each to assess for social support from the following: family, friends, and a significant other.

**Mental Illness Construct**

The mental illness construct included the six mental health inquiries from Kessler’s (2002) K6+ Self-Report Measure for mental health. Kessler and colleagues (2003) reported that when compared to the Composite International Diagnostic Interview Short-Form and the World Health Organization Disability Assessment Schedule, the K6 is the most effective screening scale for predicting serious mental illness. The K6 had a sensitivity of 0.36 (SE=0.08) and a specificity of 0.96 (SE=0.02) in predicting mental illness (Kessler et al., 2003). This scale has been included in the World Health Organization’s World Mental Health surveys in order to standardize the use of this tool in assessing mental illness worldwide (Kessler et al., 2003; Kessler et al., 2010). The K6+ Self-report Measure asks, “During the last 30 days, about how often did you feel each of the following: nervous, hopeless, restless or fidgety, so depressed that nothing could cheer you up, that everything was an effort, worthless?” The ratings are scored using a scale of “1 = none of the time” to “5 = all the time.”

**Perceived Wellbeing Construct**

The assessment of perceived wellbeing was measured by the “Satisfaction with Life Scale,” a scale developed to measure global life satisfaction. According to Diener and colleagues (1985), this survey research instrument has shown a high level of internal consistency and high temporal reliability (Diener et al., 1985). Pavot and Diener (1993) recommended that the scale be used in conjunction with scales that focus on
psychopathology (i.e., K6+ Self-Report Measure for mental illness). This is done in an effort to balance assessments oriented toward a negative assessment, giving the respondent an opportunity to focus on a positive angle (Pavot & Diener, 1993). This scale emphasizes a personal evaluation, good for the measurement of subjective (or perceived) wellbeing (Diener et al., 1985; Pavot & Diener, 1993). The scale is comprised of five statements that the participant is asked to rate on a scale from “1=strongly agree” to “6=strongly disagree.” The statements include: “In most ways, my life is close to ideal,” “The conditions of my life are excellent,” “I am satisfied with my life,” “So far, I have gotten the important things I want in life,” and “If I could live my life over, I would change almost nothing.” The last statement was not included in the final analyses as preliminary correlations testing and questions from the participants at the time of survey administration revealed that the statement was not understood by the participants.

**Study Variables and Data Analyses**

**Mental Status**

Mental status in this study was represented by two variables: the Mental Illness variable as measured by the K6-Self-Report Measure (Kessler, 2002) and Perceived Wellbeing as measured by the Satisfaction with Life Scale (Diener et al., 1985). The Mental Illness (K6) variable was a composite score of the six questions in K6+ Self-Report Measure with a theoretical variable score ranging from 6-30 when higher score represents higher level of illness. The Perceived Wellbeing variable is also a variable with ratio scale which is a composite score aggregated from the Satisfaction with Life
Scale (Diener et al, 1985). This variable is also a ratio scale variable with a theoretical variable score ranging from 4-28 when higher score represents less satisfaction.

**Social Support**

A total of four variables representing social support in this study were used in data analysis. These variables were created based on the Multidimensional Scale of Perceived Social questionnaire with twelve participating questions. The “SOCSPT” variable is the composite score of all the 12 questions, representing the overall level of social support perceived, and has a score ranging from 12-84 when higher score represents less social support. The 12 questions that represented each of the three social support source categories, family, friends, and significant others, were further split as three new social support source variables. The source variable for social support provided from family members became the SS-FAM variable, and was comprised of four related statements: “My family really tries to help me,” “I get the emotional help and support I need from my family,” “I can talk about my problems with my family,” and “My family is willing to help me make decisions.” The variable for social support provided from friends became the SS-FR variable and was comprised of four related statements: “My friends really try to help me,” “I can count on my friends when things go wrong,” “I have friends with whom I can share my joys and sorrows,” and “I can talk about my problems with my friends.” Lastly, the new variable for social support provided by a significant other was coded SS-SO and was comprised of the following four related statements: “There is a special person who is around when I am in need,” “There is a special person with whom I can share my joys and sorrows,” “I have a special person who is a real source of comfort.
to me,” “There is a special person in my life who cares about my feelings.” Each of the three new variables has a scale ranging from 4-28 when higher score represents less support perceived.

The preliminary statistical analyses performed on the data are descriptive and correlational. These analyses were used in order to identify potential relationships between the variables of social support, mental health, and mental well-being. For this set of data analysis hypotheses #1 to #5 were answered. Multiple Regressions tests were used to compare and analyze which predictive value of social support to mental health and perceived well-being, factoring in marital status, availability of income, and type of disability. The regression analysis answered hypotheses #6 to #10. SPSS statistical analysis software was used in data analysis. Wherever a significant test was requested, significant level was defined as $p \leq 0.005$. 
CHAPTER IV
ANALYSIS OF THE FINDINGS

Demographic Results

Of the 131 women participants, two were excluded from the analyses as they were identified as the “parent” of someone disabled, rather than as having a disability themselves. The sample was equally represented between those identifying their residence as either the East Coast Province or the Western Province. The first two groups of participants came from the Western Province and made up 49.6 percent (n = 64) of the sample. The third group of participants came from the East Coast Province town of Mombasa and made up 50.4 percent (n = 65) of the study sample. A majority at 55.4 percent (n = 72) identified their marital status as single, 38.8 percent (n = 50) reported they were married, 3.1 percent (n = 4) as divorced, and 1.6 percent as other (n = 2). In terms of earnings, only 36.4 percent (n = 47) reported having a regular income with the mean monthly amount at 1434 Kenyan Shillings, equivalent to approximately $17 USD. A staggering 62.8 percent (n = 81) of the women sampled reported no regular income. Of the final sample of 129 participants, 17.1 percent (n = 22) identified themselves as blind, 7.8 percent (n = 10) as deaf or hearing impaired, 59.7 percent (n = 77) as having a mobility impairment, and 14.0 percent (n = 18) as having an “other” disability. Twenty-four percent (n = 31) reported being disabled at birth and 76 percent (n = 98) reported acquiring their disability later in life.
Demographics of the sample including group affiliation, marital status, income status, and disability status are included in Table 1.

Table 1: *Demographic Characteristics of Study Sample (n=129)*

<table>
<thead>
<tr>
<th></th>
<th>Frequency n=</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Affiliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bushiri Health Center</td>
<td>20</td>
<td>15.5</td>
</tr>
<tr>
<td>DWDS*</td>
<td>44</td>
<td>34.1</td>
</tr>
<tr>
<td>Mombasa</td>
<td>65</td>
<td>50.4</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>72</td>
<td>55.8</td>
</tr>
<tr>
<td>Married</td>
<td>50</td>
<td>38.8</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Regular Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>81</td>
<td>62.8</td>
</tr>
<tr>
<td>Yes</td>
<td>47</td>
<td>36.4</td>
</tr>
<tr>
<td><strong>Type of Disability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blindness</td>
<td>21</td>
<td>16.3</td>
</tr>
<tr>
<td>Deaf/Hearing Impaired</td>
<td>9</td>
<td>7.0</td>
</tr>
<tr>
<td>Mobility</td>
<td>78</td>
<td>60.5</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>14.0</td>
</tr>
<tr>
<td><strong>Disabled at Birth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>98</td>
<td>76.0</td>
</tr>
<tr>
<td>Yes</td>
<td>31</td>
<td>24.0</td>
</tr>
</tbody>
</table>
Descriptive Results for Study Variables

The frequencies and descriptive statistics for each study variable: social support (overall and each of three sub-categories indicating support offered from family (SS-FAM), friends (SS-FR), and significant other (SS-SO), mental illness scale (K6), and perceived wellbeing (LIFESAT) are presented in Table 2. Researchers note that the questions pertaining to mental illness were worded such that lower scores reflected less time spent in negative mental states (i.e., nervous, hopeless, etc.). Therefore, the mean of 20.27 on the 30-point scale for mental illness indicates that the majority of participants reported an above average amount of time spent in a negative mental state. However, social support and life satisfaction scales were worded such that lower scores reflected an adequate level of social support and greater feelings towards life satisfaction. Therefore, the mean of 53.89 on the 84-point scale for social support indicates that the majority of participants reported an above average amount of dissatisfaction with the amount of social support they received. In addition, the mean of 21.31 on the 28-point scale for perceived wellbeing (LIFESAT) indicates that the majority of participants reported an above average feeling of dissatisfaction with their life.
<table>
<thead>
<tr>
<th>Variable</th>
<th>n=</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Theoretical Range</th>
<th>Actual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCSPT</td>
<td>121</td>
<td>53.89</td>
<td>14.95</td>
<td>12-84</td>
<td>24-84</td>
</tr>
<tr>
<td>SS-FAM (Family)</td>
<td>126</td>
<td>16.45</td>
<td>6.91</td>
<td>4-28</td>
<td>4-28</td>
</tr>
<tr>
<td>SS-FR (Friends)</td>
<td>126</td>
<td>18.99</td>
<td>6.08</td>
<td>4-28</td>
<td>4-28</td>
</tr>
<tr>
<td>SS-SO(Significant Other)</td>
<td>125</td>
<td>18.14</td>
<td>6.02</td>
<td>4-28</td>
<td>4-28</td>
</tr>
<tr>
<td><strong>Mental Illness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K6</td>
<td>124</td>
<td>20.27</td>
<td>4.95</td>
<td>5-30</td>
<td>7-30</td>
</tr>
<tr>
<td><strong>Perceived Wellbeing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIFESAT</td>
<td>126</td>
<td>21.31</td>
<td>5.53</td>
<td>4-28</td>
<td>7-28</td>
</tr>
</tbody>
</table>
Results for Hypotheses #1 to #5

Bivariate correlations, as displayed in Table 3, show some significant relationships between levels of social support, levels of mental illness, and perceived well-being. Specifically, there is a significant, positive correlation between social support from friends and mental illness (r = .40, p = .001) as well as social support from friends and perceived wellbeing (r = .31, p = .001). As explained in Chapter III the numerical coding for social support, mental illness and perceived wellbeing variables followed how the questions were asked and response categories were setup. Therefore, for social support variables, a higher score actually means less support perceived, for mental illness variable, a higher score actually means more illness experienced, and for perceived wellbeing variable, a higher score actually means less satisfaction was reported. Therefore, the positive correlations found in this study indicated that less social support from friends reported was significantly correlated to a higher level of mental illness, and dissatisfaction with life.

Further, there is a statistically significant, positive correlation between levels of social support from a significant other and mental illness score (r = .21, p = .024) and social support from a significant other and perceived well-being score (r = .27, p = .002). Again, these positive correlations indicate that social support from significant others were significant factor regarding mental illness and perceived wellbeing.

As for the social support from family, there were no significant correlation found between the type of support and mental illness (r= 0.072; p > 0.05), and between the type of support and perceived well-being (r = 0.163; p > 0.05).
Correlational analyses for the controlling variables (marital status, income, and the type of disability) are presented in the table for reference. It can be seen that only disability types had a significant correlation to perceived life satisfaction. Other demographic variables had no significant relationship with social support and mental status.
### Table 3: Correlations between Study Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>SOCSPT (Overall)</th>
<th>SS-FAM (Family)</th>
<th>SS-FR (Friends)</th>
<th>SS-SO (Significant Other)</th>
<th>K6 (Mental Illness)</th>
<th>LIFESAT (Perceived Well-being)</th>
<th>Marital Status</th>
<th>Income</th>
<th>Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCSPT (Overall)</td>
<td>1.00</td>
<td>.85</td>
<td>.71</td>
<td>.80</td>
<td>.35</td>
<td><strong>.36</strong></td>
<td><strong>.24</strong></td>
<td>.15</td>
<td>-.13</td>
</tr>
<tr>
<td>SS-FAM (Family)</td>
<td></td>
<td>1.00</td>
<td><strong>.39</strong></td>
<td><strong>.33</strong></td>
<td><strong>.40</strong></td>
<td><strong>.28</strong></td>
<td><strong>.45</strong></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>SS-FR (Friends)</td>
<td></td>
<td></td>
<td>1.00</td>
<td><strong>.33</strong></td>
<td><strong>.40</strong></td>
<td>.21</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS-SO (Significant Other)</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K6 (Mental Illness)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIFESAT (Perceived Well-being)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>-.12</td>
<td>-.12</td>
<td>-.08</td>
<td>-.09</td>
<td>-.01</td>
<td>-.01</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>.15</td>
<td>.13</td>
<td>.11</td>
<td>.07</td>
<td>-.11</td>
<td>.07</td>
<td>*.18</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td>-.13</td>
<td>.02</td>
<td>-.10</td>
<td>-.13</td>
<td>-.01</td>
<td><strong>-.30</strong></td>
<td>-.04</td>
<td>-.12</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*p ≤ .05, **p ≤ .01
**Results for Hypotheses #6 to #9**

Hypothesis test #6 stated: Social support total score is a statistically significant predictor of mental illness score when adjusting for marital status, income, or type of disability. For this test, Mental Illness score (K6), as introduced in Table 2, was used as the dependent variable, and SOCSPT score was used as the independent variable. In addition, Marital Status, Income, and Disability Type variables were included in the regression model as control variables. The test result is presented in Table 4 and Table 5.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error of the Estimate</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.372^a</td>
<td>.138</td>
<td>.106</td>
<td>4.58904</td>
<td>0.001</td>
</tr>
</tbody>
</table>

*Note: SOCSPT=social support total score. The dependent variable is Mental Illness score (K6).*

As Table 4 shows, the overall model is significant with R=0.372, and R square=0.138, which indicates that 13.8% of the variance of the dependent variable (mental illness) was explained by the model. Table 5 shows significant independent variables in the model.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>SE</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCSPT</td>
<td>0.121</td>
<td>0.030</td>
<td>0.0001</td>
</tr>
<tr>
<td>Marital Status</td>
<td>0.767</td>
<td>0.688</td>
<td>0.267</td>
</tr>
<tr>
<td>Income</td>
<td>-1.254</td>
<td>0.912</td>
<td>0.172</td>
</tr>
<tr>
<td>Disability Type</td>
<td>0.242</td>
<td>0.493</td>
<td>0.624</td>
</tr>
</tbody>
</table>

*Note: SOCSPT=social support total score. The dependent variable is Mental Illness score (K6).*
As shown in Table 5, SOCSPT has a Beta score of 0.121 and is significant at $p < 0.0001$ level, and SOCSPT is the only significant predictor in the model. Thus, SOCSPT is a significant predictor of mental illness, indicating that if individuals have a high level of social support, they will be less likely to experience mental illness. Also noted is that marital status, income, and disability types are not significant predictors of mental illness in the regression model.

Hypothesis test #7 stated: Social support total score is a statistically significant predictor of perceived wellbeing score when adjusting for marital status, income, or type of disability. For this test, Perceived Wellbeing score (LIFESAT), as introduced in Table 2, was used as the dependent variable, and SOCSPT score was used as the independent variable. In addition, Marital Status, Income, and Disability Type variables were included in the regression model as control variables. The test result is presented in Table 6 and Table 7.

### Table 6: Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error of the Estimate</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.523$^a$</td>
<td>0.274</td>
<td>0.247</td>
<td>4.724</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

*Note: SOCSPT=social support total score. The dependent variable is Perceived Wellbeing (LIFESAT).*

As Table 6 shows, the overall model is significant with $R=0.523$, and $R$ square=$0.274$, which indicates that 27.4% of the variance of the dependent variable (perceived
wellbeing) was explained by the model. Table 7 shows significant independent variables in the model (social support and disability type).

Table 7: Social Support as a Predictor of Perceived Wellbeing

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCSPT</td>
<td>0.122</td>
<td>0.030</td>
<td>0.0001</td>
</tr>
<tr>
<td>Marital Status</td>
<td>1.326</td>
<td>0.757</td>
<td>0.083</td>
</tr>
<tr>
<td>Income</td>
<td>0.341</td>
<td>0.935</td>
<td>0.716</td>
</tr>
<tr>
<td>Disability Type</td>
<td>-2.151</td>
<td>0.506</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Note: SOCSPT = social support total score. The dependent variable is Perceived Wellbeing score (LIFESAT).

As shown in Table 7, SOCSPT has a Beta score of 0.122 and is significant at p < 0.0001 level. Thus, SOCSPT is a significant predictor of perceived wellbeing (LIFESAT), indicating that if individuals have a high level of social support, they will be more likely to experience life satisfaction. Also noted is that while marital status and income were not a significant predictor of perceived wellbeing, disability type is a significant predictor of perceived wellbeing in the regression model.

Hypothesis test #8 stated: Each source score of the social support variables is a statistically significant predictor of mental illness score when adjusting for marital status, income, or type of disability. For this test, Mental Illness score (K6), as introduced in Table 2, was used as the dependent variable, and SS-FAM, SS-FR, and SS-SO score were used as the independent variables. In addition, Marital Status, Income, and Disability
Type variables were included in the regression model as control variables. The test result is presented in Table 8 and Table 9.

### Table 8: Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error of the Estimate</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.438</td>
<td>0.192</td>
<td>0.146</td>
<td>4.485</td>
<td>0.001</td>
</tr>
</tbody>
</table>

*Note: SS-FAM, SS-FR, and SS-SO social support each score. The dependent variable is Mental Illness score (K6).*

As Table 8 shows, the overall model is significant with R=0.438, and R square=0.192, which indicates that 19.2% of the variance of the dependent variable was explained by the model. Table 9 shows significant independent variables in the model.

### Table 9: Social Support of Family, Friends, or Significant Other as a Predictor of Mental Illness.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-FAM</td>
<td>-0.021</td>
<td>0.081</td>
<td>0.801</td>
</tr>
<tr>
<td>SS-FR</td>
<td>0.304</td>
<td>0.078</td>
<td>.0001</td>
</tr>
<tr>
<td>SS-SO</td>
<td>0.134</td>
<td>0.091</td>
<td>0.145</td>
</tr>
<tr>
<td>Marital Status</td>
<td>0.727</td>
<td>0.672</td>
<td>0.282</td>
</tr>
<tr>
<td>Income</td>
<td>-1.178</td>
<td>0.897</td>
<td>0.192</td>
</tr>
<tr>
<td>Disability Type</td>
<td>0.415</td>
<td>0.491</td>
<td>0.400</td>
</tr>
</tbody>
</table>

*Note: SS-FAM = social support each (family), SS-FR = social support each (friends), and SS-SO = social support each (significant other). The dependent variable is Mental Illness (K6).*
As shown in Table 9, SS-FAM has a Beta score of -0.021 and has no significance at p = 0.801 level. SS-FR has a Beta score of 0.304 and is a significant predictor of mental illness at p = .0001, indicating that if individuals have a high level of social support from friends, they will be less likely to experience mental illness. SS-SO has a Beta score of 0.134 and is also not a significant predictor of mental illness at p = 0.145. Also noted is that marital status, income, and disability types are not significant predictors of mental illness in the regression model.

Hypothesis test #9 stated: Each source score of the social support variables is a statistically significant predictor of perceived wellbeing score when adjusting for marital status, income, or type of disability. For this test, Perceived Wellbeing score (LIFESAT), as introduced in Table 2, was used as the dependent variable, and SS-FAM, SS-FR, and SS-SO score were used as the independent variables. In addition, Marital Status, Income, and Disability Type variables were included in the regression model as control variables. The test result is presented in Table 10 and Table 11.

Table 10: Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error of the Estimate</th>
<th>p=</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.528a</td>
<td>0.279</td>
<td>0.239</td>
<td>4.7503</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

*Note: SS-FAM, SS-FR, and SS-SO social support each score. The dependent variable is Perceived Wellbeing score (LIFESAT).*
As Table 10 shows, the overall model is significant with R=0.528, and R square=0.279, which indicates that 27.9% of the variance of the dependent variable was explained by the model. Table 11 shows significant independent variables in the model.

Table 11: Social Support of Family, Friends, or Significant Other as a Predictor of Perceived Wellbeing.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-FAM</td>
<td>0.057</td>
<td>0.084</td>
<td>0.498</td>
</tr>
<tr>
<td>SS-FR</td>
<td>0.173</td>
<td>0.081</td>
<td>0.034</td>
</tr>
<tr>
<td>SS-SO</td>
<td>0.157</td>
<td>0.096</td>
<td>0.103</td>
</tr>
<tr>
<td>Marital Status</td>
<td>1.321</td>
<td>0.761</td>
<td>0.085</td>
</tr>
<tr>
<td>Income</td>
<td>0.410</td>
<td>0.949</td>
<td>0.666</td>
</tr>
<tr>
<td>Disability Type</td>
<td>-2.066</td>
<td>0.518</td>
<td>.0001</td>
</tr>
</tbody>
</table>

Note: SS-FAM = social support each (family), SS-FR = social support each (friends), and SS-SO = social support each (significant other). The dependent variable is Perceived Wellbeing (LIFESAT).

As shown in Table 11, SS-FAM has a Beta score of 0.057 and has no significance in predicting perceived wellbeing at p = 0.498 level. SS-FR has a Beta score of 0.173 and is a significant predictor of perceived wellbeing at p = 0.034, indicating that if individuals have a high level of social support from friends, they will be more likely to experience life satisfaction. SS-SO has a Beta score of 0.157 and is not a significant predictor of mental illness at p = 0.103. Also noted is that while marital status and income were not a significant predictor of perceived wellbeing, disability type is a significant predictor of perceived wellbeing in the regression model.
The following chapter will discuss the findings, as well as implications and recommendations for future study. Understanding the situation for Kenyan women with disabilities is critical to the development and implementation of effective health education and promotion efforts among this at-risk population.
CHAPTER V
DISCUSSION AND CONCLUSION

Overall Summary of Findings

Descriptive, correlational, and regression analyses of the current survey data add to the previous research by revealing significance between social support and mental health status. Mental health status was measured by mental illness scores (K6) and perceived wellbeing scores (LIFESAT) within a population of Kenyan women with physical disabilities. The correlational results supported: hypotheses #1-#3, stating that there is a statistically significant correlation between mental illness score (K6) and perceived wellbeing score (LIFESAT); social support total score (SOCSPT) and mental illness score (K6); and social support total score (SOCSPT) and perceived wellbeing score (LIFESAT). Further correlational testing revealed some discrepancies for hypotheses #4-#5, as there was a significant correlation between social support score (SS-FR) and mental illness (K6); a marginally significant correlation between (SS-SO) and mental illness (K6); and no significant correlation between (SS-FAM) and mental illness. There was, however, a significant correlation between each of the three social support scores (SS-FAM, SS-FR, and SS-SO) and perceived well-being (LIFESAT). Regression analyses confirmed hypotheses #6-#7 as total social support score (SOCSPT) was a significant predictor of both mental illness and perceived wellbeing, when adjusting for marital status, income, and type of disability. Further discrepancy was found in hypotheses #8-#9, as only social support from friends (SS-FR) was a significant predictor of both mental illness and perceived wellbeing, with the type of disability as the only
another significant predictor variable on perceived wellbeing. Neither social support of family nor of a significant other predicted mental illness or perceived wellbeing when adjusting for marital status, income, and type of disability in the regression models.

**Discussion of Findings**

Frequency and descriptive analyses of the current survey data add to the previous research by providing demographic information regarding group affiliation, marital status, availability of income, and type of disability. The current sample included an approximately equal split between women living in the East Coast Province (50.4%) and the Western Province (49.6%) of Kenya. The majority of the women (55.8%) identified themselves as single, never married as compared to 31.2% of the general population (Kenya National Bureau of Statistics (KNBS) and ICF Macro, 2010). This higher single status among women with disabilities may be due to the stigma and social isolation experienced by many women with disabilities (Gona et al., 2010; Martz & Daniel, 2010; United Nations, 2011). This may further explain the lack or ineffective (as statistical test results imply) of social support of family and significant others among this sample of Kenyan women with disabilities.

Findings on availability of income revealed that a staggering 62.8% of the sample had no regular source of income. Among the 36.4% reporting a regular income, the mean monthly amount received was 1434 Kenyan Shillings, equivalent to approximately $17 USD. This means that a significant number of those women represented in the sample live on half of the absolute poverty line of less than $1 USD a day (World Bank, 2003; WHO, 2010). And while regression analyses did not find availability of income as a
predictor of mental health status, this could be due to the following two factors. Factor 1 is the income variable used in regression model has only two levels, regular income or not, which may be insensitive to the mental health status; Factor 2 could be that the income level of the study sample was unanimously low or mostly at one end of the spectrum. Therefore, it had no significant correlation to mental health status due to the lack of variation. In either way, current finding on the severe level of poverty does suggest that women with disabilities are at a significant disadvantage financially (Cobley, 2012; United Nations, 2011). This further confirms the need for multi-level assistance in order to raise this at-risk population of women out of poverty (Aitsi-Selmi, 2008; Cobley, 2012; Opini, 2010; United Nations, 2011).

Correlational and regression findings from the data collected from this sample of impoverished, Kenyan women with disabilities supported the overall hypothesis. Correlational analysis revealed that there are significant relationships for both the social support total score (SOCSPT) and for the social support of friends (SS-FR) in relation to both mental illness (K6) and perceived wellbeing (LIFESAT) scores. This can be explained by the fact the Kenyan women with disabilities often live with limited social support from their families (Gona et al., 2010; United Nations, 2011). When they are denied this social support they are prone to mental illness and lower levels of life satisfaction unless they can receive support from an outside source, such as a friend.

When this sample of women has their social support needs met, they also have a healthier mental health status. In other words, they report less time spent in negative mental states (i.e., nervous, hopeless, depressed, etc.), are less prone to mental illness,
and they experience a greater level of life satisfaction. This is important for their overall physical health because of the negative physiological implications of chronic mental distress (Flisher et al., 2007; United Nations, 2011).

The Multiple Regression Tests used in this study weighted independent variables entering each model to examine their importance or predictive value to the dependent variables, on a competitive basis. Only the significant ones were retained in the equation. Common sense as well as literature has suggested that marital status, income levels, and disability types could be important or contributing factors to mental health. However, findings of the regression tests suggested that social support is more important than the demographic cues relative to mental illness and life satisfaction, to this study population at least. When women were under stress, feels more hopeless, and were mentally sick, their status appeared less important than the support, especially from their friends, they could receive, to give hope and/or instrumental help. If interpreted correctly, even the type of physical disability became insignificant to the mental illness variable in this case. The findings fully support the research literature, as social support and mental health status are two important factors to address when considering how to assist the disadvantaged out of poverty (Flisher et al., 2007; Kawachi & Berkman, 2001; Patel et al., 2008; United Nations, 2011).

**Implications**

This study concluded that women with disabilities who more frequently go without their social support needs being met, report significantly lower levels of mental health, putting them at an increased risk for mental illness and lower levels of life
satisfaction. In contrast, women with disabilities who report higher levels of social support, particularly from a friend, experience lower levels of mental illness and greater levels of life satisfaction. The findings indicate that among this sample, those women that felt the support of those around them, tended to have a greater satisfaction with their life despite living in severe conditions of poverty. This might be explained by the fact that each of the three samples had some level of social support from their group affiliation since each sample group was recruited by an organization that worked with or supported the physically disabled.

The first sample was recruited by the Health Officer of the Bushiri Health Centre. These women had common connections through the health clinic or the local church where the data collection took place. However, this sample did not have any formal or structured support system established for the women. The second sample, recruited by Disability and Women’s Developmental Strategies, included a majority of women that were members of this local NGO in Mbale, Kenya. This NGO offers empowerment, health education, and organizational and employment training to key women with a physical disability, who also exhibit leadership abilities. Members of the group meet at various conferences and workshop trainings throughout the year, as funding resources are available (Disability and Women’s Developmental Strategies, 2009). The third sample was comprised of a majority of women living, working, or attending church within the Bombolulu Workshop compound (Cobley, 2012). While not all of the participants from this sample group obtained employment or housing from the workshop, the program uses a structural model of segregation that made it easier for the women in close proximity to
offer social support to one another and to other women with disabilities that frequented the workshop compound or market (Cobley, 2012). Informal interviews with the women supported the idea that because they have limited outside assistance, including that traditionally offered by family members, they often rely on support from one another in order to reduce the level of stress they encounter on a daily basis.

**Recommendations for Future Study**

Future research should continue to explore how marital status and financial situation are related to wellbeing among women with disabilities. In addition, knowing how type of disability contributes to disabled women’s perceived wellbeing may be beneficial for future work with this at-risk population. Identifying whether there are differences between the social support of friends, specifically that offered by another disabled friend versus a non-disabled friend may provide useful information, as each might offer different types of support. For example, a friend with a disability might offer more emotional support and understanding of the challenges of living with a disability; whereas a friend that is non-disabled might offer more practical help with accessibility issues or financial aid. Providing awareness and information that would further strengthen friendships could prove to benefit both parties by offering strategies that can build relationships that have a positive effect on the mental health status of these women. Exploring the benefits that exist in offering friendship to the disabled and encouraging others to do so, may also assist in reducing the cultural stigma that still exists.

Future studies could also examine how the social support of friends can be further utilized to reduce stress and other negative factors related to mental illness and to pilot
test interventions that utilize social support of friends to improve mental health outcomes. The family isolation that many Kenyan women with disabilities have experienced, further suggests the need to identify the relationship between the social support offered by friendships and mental health status. Interventions that increase the social support of family and significant others are needed as well, particularly interventions that decrease the cultural stigma of disability. This type of study would support the Disability and Millennium Development Goals to provide strategies for inclusion of both men and women with disabilities (2011). Using Social Networking Theory (Christakis & Fowler, 2009) could offer insights into how to best promote disability in a positive frame, thus decreasing stigma that is still prevalent in developing nations, such as Kenya, Africa (Christakis & Fowler, 2009; Gona et al., 2010; Martz & Daniel, 2010; Opini, 2010; United Nations, 2011). Theory such as this could also utilize friend relationships to increase awareness, increase knowledge, and change attitudes and behaviors regarding the stigma that continues to prevail regarding disability (Christakis & Fowler, 2009; Martz & Daniel, 2010; United Nations, 2011). But more importantly, Social Networking Theory can also be used to improve health education and promotion efforts to increase knowledge about healthy living and managing chronic stressors that negatively affect the mental health status of those living in poverty (Christakis & Fowler, 2009; Martz & Daniel, 2010; United Nations, 2011).

Conclusion

The present study has built on previous research by further exploring the social support variable to include three sub-groups of support: family, friends, and a significant
other. Although the study is limited in its size and generalizability, significant relationships between social support and both mental illness and perceived wellbeing were found among this sample of Kenyan women with disabilities. Results of this study indicate when these women go without having their social support needs met, they have higher risks for mental illness and for lower life satisfaction. Investigating different social support and social networking theories may help researchers better understand and utilize the role of social support in reducing stress that is often associated with decreased mental health status. Further research on the roles of friends and the unique support that friendships offer could also help this underserved population to better identify and understand their own social support needs. Once needs are identified, the women may be able to strategize together to address them in the context of their complex cultural structure, where gender, disability, poverty, and mental health all intersect.
APPENDIX
APPENDIX A

SURVEY QUESTIONNAIRE
APPENDIX A

SURVEY QUESTIONNAIRE


Please provide answers to the following questions with an “X” or write in an answer as indicated.

1. How old are you? I am ________ years of age.
2. I am _______ single _________ married _______ divorced or separated ______ living with a romantic partner.
3. What province are you currently living in? I am currently living in the __________________________ province.
4. Do you have a regular source of income? ______ yes ______ no
5. If you do have a regular income, about how much do you receive in a 30 day time period (in Kenyan Shillings)? ________________
6. I am ______ blind ______ deaf or hearing impaired ______ have a mobility impairment ______ other
7. Were you born with your physical disability? ______ yes ______ no
8. If you were not born with your disability, at what age did you become disabled? I became disabled at ________ years of age.

Please circle the answer that best describes your physical health

1. In general, I would say my health is….
   - excellent
   - very good
   - good
   - fair
   - poor
2. Compared to other people with a disability similar to mine, I would say
   - my health is….
   - excellent
   - very good
   - good
   - fair
   - poor

During the past 30 days, has your physical health reduced the amount of work you would normally do….

1. …inside of your home?
   - never
   - or twice
   - times
   - always
   0 1 2 3

2. …outside of your home?
   - never
   - or twice
   - times
   - always
   0 1 2 3

Please circle the answer that best describes your situation.

**In the past year, have you or your family:**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>gone without enough food to eat?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
<tr>
<td>2</td>
<td>gone without enough fuel to cook your food?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
<tr>
<td>3</td>
<td>gone without enough clean water for home use?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
<tr>
<td>4</td>
<td>gone without medicine or medical treatment?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
<tr>
<td>5</td>
<td>feared crime in your own home?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
<tr>
<td>6</td>
<td>had something stolen from your house?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
<tr>
<td>7</td>
<td>been physically attacked?</td>
<td>never</td>
<td>just once or twice</td>
<td>several times</td>
<td>many times</td>
</tr>
</tbody>
</table>
Based on your experience, how easy or difficult is it to obtain:

**Help from the police when you need it**

Please circle the answer that best describes your situation.

<table>
<thead>
<tr>
<th></th>
<th>Very strongly agree</th>
<th>Neutral</th>
<th>Very strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There is a special person who is around when I am in need</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td>2</td>
<td>There is a special person with whom I can share my joys and sorrows.</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td>3</td>
<td>My family really tries to help me.</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td>4</td>
<td>I get the emotional help and support I need from my family.</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td>5</td>
<td>I have a special person who is a real source of comfort to me.</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td>6</td>
<td>My friends really try to help me.</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td>7</td>
<td>I can count on my friends when things go wrong.</td>
<td>1, 2, 3</td>
<td>4, 5, 6, 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>8</td>
<td>I can talk about my problems with my family.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>I have friends with whom I can share my joys and sorrows.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>There is a special person in my life who cares about my feelings.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>My family is willing to help me make decisions.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>I can talk about my problems with my friends.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Please circle the answer that best describes your feelings.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the whole, I am satisfied with myself.</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>At times, I think I am no good at all.</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>I feel that I have a number of good qualities.</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>I am able to do things as well as most other people.</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>I feel I do not have much to be proud of.</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>I certainly feel useless at times.</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>I feel that I'm a person of worth, at least on an equal plane with others.</td>
<td>1</td>
</tr>
</tbody>
</table>
8. I wish I could have more respect for myself.

9. All in all, I am inclined to feel that I am a failure.

10. I take a positive attitude toward myself.


Please circle the answer that best describes your feelings.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Neutral</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In most ways, my life is close to ideal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. The conditions of my life are excellent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I am satisfied with my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. So far, I have gotten the important things I want in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. If I could live my life over, I would change almost nothing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
During the past 30 days, about how often did you feel...

<table>
<thead>
<tr>
<th></th>
<th>none of the time</th>
<th>little of the time</th>
<th>some of the time</th>
<th>most of the time</th>
<th>all the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>nervous?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>hopeless?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>restless or fidgety?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>so depressed that nothing could cheer you up</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>that everything was an effort?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>worthless?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

How many days out of the last 30,

8 ...were you totally unable to work because of these feelings? ________

...were you totally unable to carry out your normal activities because of these feelings?

9 ________

During the past 30 days...

10 ...how many times did you see a doctor or other health professional about these feelings? ________

...how often have your physical health problems been the main cause of these feelings?

11 ________
References for Survey Questionnaire


*Inter-University Consortium for Political and Social Research Database.*


REFERENCES


mental health in low and middle income countries. *Journal of Child Psychology and Psychiatry, 49*, 313-34.


