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CHAPTER 1
INTRODUCTION AND LITERATURE REVIEW

The purpose of this body of research is to apply Maslow’s Hierarchy of Needs to examine possible relationships between need fulfillment, physical health, and mental well-being among individuals living in Kenya, Africa. Study One examines these relationships among a sample of the general population, while Study Two examines these relationships among an at-risk population: women with disabilities. Significant relationships that are identified may be helpful in the development of effective interventions that would increase the health and well-being of individuals living in conditions of extreme poverty. While it is a complex approach, our attempt is to present the information in a way that will stimulate the reader to look at the situation of the impoverished at the macro-level. This will allow researchers to connect the three aspects of physical, mental, and social well-being to better understand the challenges faced by individuals living in poverty.

Poverty in Africa

Heightened awareness in human rights and the impact of poverty on health has led to increased research on the developing world, as the impoverished struggle to meet their basic needs. In addition to the struggles associated with meeting their basic needs,
those living in poverty also find it difficult to maintain an adequate level of physical health and well-being (Barrett, Carter, & Little, 2006; Benatar, Daar, & Singer, 2003; Chopra, 2005; Jacobsen, 2010). This continued interest in the connections between poverty and overall health and well-being of those living in poverty stricken regions has encouraged researchers to look at these issues on a worldwide level (Aitsi-Selmi, 2006; Bookwalther & Dalenberg, 2004; Chopra, 2005; Jacobsen, 2010).

The United Nations adopted the Millennium Development Goals in 2000, with one goal in particular aims to significantly reduce world poverty by 2015 (Jacobsen, 2010). Five out of eight of the goals directly or indirectly impact the health of our world population (Jacobsen, 2010). Even nations that are typically considered to be wealthy have recognized the need to address the impact that poverty has among their populace. For example, the 2004 census reported that nearly 20 percent of the population in the United States lived at the poverty-level, making less than $15,219 for a family of three. (Block, Korteweg, Woodward, Schiller, and Mazid, 2006). In contrast, the 2005 World Bank report confirms that the average Sub-Saharan African poverty rate is at 42 percent (Barrett et al., 2006; World Bank, 2009). However, due to differences in economies and costs of living, it is inappropriate to use the same measures of poverty for both developed and developing nations (Jacobsen, 2010; World Bank, 2009). For example, in Africa, the 2009 GDP per capita at $1,127 (USD) compared to $45,989 in the United States (World Bank, 2009). To help conceptualize the differences that exist between the figures, the United Nation states that approximately 51 percent of the population of sub-Saharan Africa lives on less than $1.00 per day (cited in Mattes & Bratton, 2009).
In addition to the difficulties of accessing their basic needs of food and shelter; those living in impoverished conditions are less likely to obtain health care on a regular basis (Jacobsen, 2010; Truong, 2008; World Bank, 2009).

Africans who live in a chronic state of poverty often find it difficult to maintain physical health (Barrett et al., 2006; Jacobsen, 2010; World Bank, 2009). One study of Zimbabwean households indicated that children under two years of age suffered from a permanent loss of stature due to an average 15-20 percent loss of growth velocity caused by malnutrition during times of short term drought (Barrett et al., 2006; Jacobsen, 2010). Poverty is also connected to increased exposure to health risks, including elevated predisposition to microbial or infectious disease through unsafe water supplies and poor sanitary conditions (Barrett et al., 2006; Jacobsen, 2010; World Bank, 2009). In addition, it is common for those who are impoverished to forego accessing preventative or curative care because of their limited financial resources (Barrett et al., 2006; Chopra, 2005; Jacobsen, 2010; World Bank, 2009).

Barbara Stocking, director of Oxfam, a nonprofit organization dedicated to the eradication of poverty, presented at the 2006 Harben Lecture the need for sustainable change in order to adequately address the issues of poverty and the devastating effects that it has on the physical health of populations (Aitsi-Selmi, 2006; Chopra, 2005; Jacobsen, 2010). Sustainable or long-term alleviation of poverty is especially needed for those populations of Sub-Saharan Africa as they are most severely impacted by poverty, poor physical health and well-being (Aitsi-Selmi, 2006; Barrett et al., 2006; Benatar et al., 2003; World Bank, 2009). Research has long indicated that poor physical
health is connected to poverty (Barrett et al., 2006; Jacobsen, 2010). Jacobsen (2010) suggests there is a casual pathway or web leading from poverty to decreased physical health; asserting that an interruption in the casual web could lead to the prevention of disease. Jacobsen (2010) uses this type of a casual web to illustrate how poverty progressively connects to negative physical health outcome. This type of interaction between poverty and physical health is shown in the following figure (Figure 1).
Figure 1: Interactions between Poverty and Physical Health

- **POVERTY**
  - **Decreased Physiological Needs**
    - Limited access to food, water, and sanitary conditions
    - Give health care a lower priority
  - **Decreased Safety**
    - Exposure to harsh environment conditions (i.e., natural disaster, drought, and violence)

- **Low Physiological Health**
Limited community infrastructure and resources lead to increased difficulty accessing basic resources such as food, safe drinking water, and sanitary living conditions (Jacobsen, 2010; World Bank, 2009). In many regions throughout Africa, the impoverished are likely to live with limited or no access to electricity, therefore proper food storage is difficult (Jacobsen, 2010; Mittulah, 2006). Education is often limited, making it difficult for those in poverty to understand the spread of disease (Jacobsen, 2010). With limited foundational structures, individuals living in poverty are likely to suffer higher rates of malnutrition, increased diarrheal disease, and exacerbated rates of infectious disease (Barrett et al., 2006; Jacobsen, 2010; World Bank, 2009). In addition to decreased physical health due to disease, the impoverished often live in unsafe conditions; they are often exposed to high environmental risks, such as increased sun exposure, unsafe traffic conditions, and increased exposure to domestic violence (Barrett et al., 2006). Lastly the impoverished are often so overwhelmed with meeting their basic needs that they do not have funds for adequate health care (Barrett et al., 2006; Chopra, 2005; Jacobsen, 2010; World Bank, 2009). The existing connections between those living with limited resources (i.e., cash, food, shelter) and physical health and well-being indicate that addressing issues surrounding poverty and its eradication offers a strategy for facilitating increased health and well-being among populations in the developing world (Barrett et al., 2006; Jacobsen, 2010; World Bank, 2009).

There are several different approaches to eradicating poverty and increasing the physical health and well-being for those in poverty. These include strategies that vary from addressing economic and political conditions to providing humanitarian relief that
supplies safe drinking water and supplemental foods or medicines (Chopra, 2005; Jacobsen, 2010; World Bank, 2009, World Bank, 2010). One example of economic relief came from the World Bank Group and other international funders, in response to economic, climate change, and food crises (World Bank, 2010). This included donations and increased loans for assistance in promoting the financial growth of the private sector, advocating for education and health care advancement, and support for new areas of innovation in dealing with the impacts of climate change (Jacobsen, 2010; World Bank, 2010). One effective humanitarian relief effort, started by United Nations Children’s Fund (UNICEF) in the 1980s, was Oral Rehydration Therapy (ORT) or Oral Rehydration Solution (ORS), used for rehydration during bouts of diarrhea (Jacobsen, 2010). This effort is extremely effective in areas where children are susceptible to diarrheal disease (Jacobsen, 2010). While the approaches to eliminating poverty are varied, researchers appear to agree that the most effective way to approach its eradication is to use a multi-level approach (Aitsi-Selmi, 2006; Barrett et al., 2006).

Research suggests that in order to adequately address the needs among individuals living in extreme poverty, both the micro and macro level needs must be examined (Barrett et al., 2005; Chopra, 2005; Jacobsen, 2010). To look at the immediate physiological needs of those living in poverty and not address the macro level needs such as the growing inequality of income that exists between the elite and those living in poverty, would not provide a broad understanding of why poverty continues to exist in regions of the developing world, such as Africa (Barrett et al., 2005; Chopra, 2005; World Bank, 2009). For example, in the Congo during the mid-1990s, there was a
devaluation of currency that occurred due to a structural adjustment program that was put into effect (Chopra, 2005, p. 20). This resulted in rising costs of food, which led to negative consequences for the health of children, as their nutritional status declined (Chopra, 2005). In addition, this economic upheaval led to increased risk for victimization of the impoverished, including traffic accidents and domestic violence. Further, increases in violent crimes occur during times of economic and political strife (Chopra, 2005; Wakabi, 2008). Another example that illustrates poverty and physical health consequences occurred during a time of economic shift in South Africa. Specifically, apartheid stripped many South African families of their assets (i.e., land) and distorted the economic markets and social institutions, as racial discrimination resulted in further violence. This increased violence left many in a state of poverty and at increased risk for poor health, environmental degeneration, and social isolation (May, date unknown). An additional example, on a smaller scale occurred in Kenya after the 2007 elections. In this case, violence also impacted the economy as it affected the import and export traffic of the east coastal region of Mombasa (EDC, 2010; Musinguzi, 2008). Tourism in the Kenyan capital of Nairobi fell dramatically leaving many without jobs and unable to meet their households needs (EDC, 2010).

Disagreements in how to identify the problems and create solutions associated with poverty and health may be due to the many complexities involved in addressing these issues (Aitsi-Selmi, 2006; Benatar et al., 2003; World Bank, 2009). For example, there can be conflict between the outside stakeholders that are providing funding for a health clinic in rural Africa and the local governments that are responsible to see that the
monies are used effectively. These types of conflicts can cause problems such that outside agents may not wish to become involved for fear that their donations will not be used properly (Aitsi-Selmi, 2006; Jacobsen, 2010; Otieno, 2009). Aitsi-Selmi (2006) concludes that these types of problems can be avoided by placing policy and governance procedures to track how the donor monies are used. Issues of poverty and health are impacted by foreign and local aid, because these issues must be discussed in order to find solutions that will effectively address the challenges involved in eradicating poverty; thereby improving the physical health and well-being of those that live in these extreme conditions (Aitsi-Selmi, 2006; Benatar et al., 2003; Otieno, 2009; World Bank, 2009). In African countries, such as Kenya, there has been significant growth and development financed by foreign and local aid (Jacobsen, 2010; World Bank, 2009). However, these improvements are not always felt by those living in a state of poverty as their personal financial resources continue to be limited (Jacobsen, 2010; Mittulah et al., 2006; World Bank, 2010). These limited resources are often indirectly contributed to by the continued corruption; making it difficult for those living with low incomes to improve their overall situations (Jacobsen, 2010; World Bank, 2009). The inability of many in the general population of Kenya to improve their overall conditions further perpetuates low levels of physical health and well-being (Jacobsen, 2010; World Bank, 2009).

**Poverty in Kenya**

the population of Kenya is approximately 40 million people, with an annual growth rate of 2.6 percent. As its name suggests, the Kenyan government consists of a republic political system, a multiparty system that is fairly new to the country. The capital city of Nairobi is located in the South Central region of the country and it is here that Mwai Kibaki serves as president. However, there has been much unrest on the political front (Brown & Kaiser, 2007; BBC News, 2011). After the election of 2002, Kibaki’s government reneged on one of their primary campaign promises: to reduce the powers of the presidency (Brown & Kaiser, 2007). This stifled gains made by the democratization of the early 1990s, and it has been suspected that corruption within the government has continued to take place under Kabaki’s leadership (Brown & Kaiser, 2007; EDC, 2010). However, in August of 2010, the voters passed a draft of the constitution reducing the power that the president holds in an attempt to prevent or limit corruption among governmental officials (BBC News, 2011; EDC, 2010). Corruption among governmental officials has been reported for decades, as presented in the research of Edward McMahon (2004) and that of Brown and Kaiser (2007). Both lines of research suggest that the move to a multiparty system has been slowed down by the hesitation of many African leaders to implement political and structural changes. However, change is occurring in response to pressure from key financial donors (Brown & Kaiser, 2007; McMahon, 2004). One advantage of a multiparty system is that it gives the people more involvement in the political system (Brown & Kaiser, 2007; McMahon, 2004; Otieno, 2009). However, corruption continued to exist through the “buying” of votes or through the “buyout” of an entire political party (Dercon, 2008; McMahon, 2004). These forms of corruption cause
mistrust among the people, giving way to government instability, and further hindering political and socioeconomic development (Brown & Kaiser, 2007; McMahon, 2004; Otieno, 2009). When political and economic developments are hindered, the entire country suffers. However, Brown and Kaiser (2007) suggests that while gains have been slow and limited, regular electoral competition has been beneficial because it reinforces that democratization is being promoted in African nations, including Kenya.

The Kenyan gross domestic product (GDP) is nearly 30 billion in US Dollars (USD), with the GDP per capita equivalent to only $738 US dollars (World Bank, 2009, 2010). The World Bank (2010) reported that while the annual economic growth is at 2.6 percent, it is down from the 6.1 percent growth that occurred in 2006; just four years after Kibaki came into office. In addition, with the national unemployment rate at roughly 40 percent, it is increasingly difficult for the average family to purchase a home, food, clean water, and adequate medical care (Shisanya & Khayesi, 2007; World Bank, 2009).

According to the most recent reports available from The World Bank (2009), 46 percent of Kenya’s population was still living in a state of poverty. According to recent assessments of poverty and inequality approximately 17 million Kenyans could not afford to buy the amount of calories needed to meet their recommended daily nutritional requirements (World Bank, 2009). Mittulah and colleagues (2005) conducted a survey to examine social and political concerns among the general population of Kenya (Mitullah, Bratton, Gyimah-Boadi, & Mattes, 2005). A subsequent briefing was written “Kenyans and the Economy: Disillusionment Despite Improved Performance.” This briefing clearly indicates that while the economic conditions in Kenya are showing an upward trend, the
people of Kenya remain cynical about the economic situation in their country (Jopson, 2008; Mittulah et al., 2006). This persistent cynicism may be due to corruption and violence on both the national and local levels (Brown & Kaiser, 2007; Musinguzi, 2008; Otieno, 2009; Strossel & McMenamin, 2006; VonDeepp, 1996). Even as late as 2009, according to the “Transparency International’s 2009 East African Bribery Index, Kenya was still listed as the most corruption-prone country in the region (EDC, 2010; Otieno, 2009; Stossel & McMenamin, 2006). This may be due to the hesitancy and unwillingness of many African leaders to move towards democratization of their government (Brown & Kaiser, 2007; McMahon, 2004). However, there are signs which indicate that the general population of Kenya will no longer tolerate corruption. This was indicated by the passing of the 2010 referendum that places greater restrictions on the president and transfers some of the power to lower level governmental officials (EDC, 2010). This provides the government with more accountability to the people of Kenya. It would also appear that there is more unity among the general population, as the 2010 vote took place with very little violence compared to the election of 2007 (EDC, 2010).

Previous connections have been made to support the fact that poverty stricken areas are often plagued by corruption and violence, as those in power try to manipulate the people to support their political agendas (Brown & Kaiser, 2007; McMahon, 2004). This type of violence makes it difficult for those living in poverty to move about safely (Jacobsen, 2010; World Bank, 2009). Further, the general population has difficulty finding work and unfair wages make it difficult for the impoverished to access their basic needs even if they are employed (World Bank, 2009). The region known as the Horn of
Africa received increased attention as poverty stricken areas such as Karamoga, an area along the borders of Sudan, Uganda, and the Republic of Kenya, faced the devastating convergence of conflict and severe drought conditions (Wakabi, 2008). These conditions further perpetuate inequalities in access to such basic needs as food, water, shelter, and medical care, as economic upheaval and safety concerns make it difficult for those with already limited resources to attend to their day-to-day needs (Wakabi, 2008; World Bank, 2009). In addition to decreased levels of physical health, those living in poverty may also be affected by decreased levels of mental health and well-being (Burns & Esterhuizen, 2008; Flisher et al., 2007; Parker, Fernandes & Weiss, 2003; Patel, Flisher, Nikapota & Malhotra, 2007).

Negative Consequences of Poverty on Mental Health and Well-being

The inability to meet the basic daily needs of food, safe water, shelter, and medical care has been linked to not only lower levels of physical health, but also has devastating effects on mental health and well-being (Albee, 2005; Barrett et al., 2006; Benatar et al., 2003; Burns & Esterhuizen, 2008; Chopra, 2005; Flisher et al., 2007; Jacobsen, 2010). Reductions in either physical or mental health can have a negative impact on how one proceeds through life. In other words, reductions in either or both of these areas can negatively impact one’s ability to move out of poverty and create an environment that is conducive to overall health and well-being (Flisher et al., 2007; Jacobsen, 2010; Parker et al., 2003; World Bank, 2009). This interactive relationship between poverty and mental health/well-being suggests that there is a need to further
examine the issues, as this vicious cycle (see Figure 2) is difficult to break without a multi-level strategy of both prevention and intervention (Albee, 2005; Flisher et al., 2007; Parker et al., 2003).
Figure 2: Interactions between Poverty, Physical and Mental Health

Poverty

Decreased Physiological Needs
- Limited access to food, water, and sanitary conditions
- Give health care a lower priority

Decreased Safety
- Exposure to harsh environment conditions (i.e., natural disaster, drought, and violence)

Low Physical Health

Low Mental Health
As early as 1993, the World Federation for Mental Health stressed the importance of the eradication of poverty as a beginning step to the primary prevention of mental illness and the social problems that often accompany these conditions (Albee, 2005).

More recent research continues to suggest that poverty and the environmental conditions associated have a negative impact on emotion and mental health status (Jacobsen, 2010; Myer, Stein, Grimsrud, Seedate, & 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). Patel and colleagues (2008) encourage 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” (p. 328-29).

Myer and colleagues (2008) researched the social determinants of mental health from low and middle income countries to better understand the connections between psychological distress, socioeconomic status, and social support/social bonding in the nation of South Africa. This research included a probability sample of 4,351 South African adults. General psychological distress was measured using the Kessler-10 scale, a previously validated research tool (Myer et al., 2008). Socioeconomic status included broad measures of financial income, education and employment status, and household and financial assets in order to have a more complete picture of their SES (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 study concluded that there was a negative correlation between levels of SES, social bonding, and non-specific psychological distress (Myer et al., 2008). Evidence for a direct connection between social support and psychological distress was present, but less significant (Myer et al., 2008). Myer and colleagues (2008) suggest that additional research is 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).

Current literature suggests that subjective well-being, or life satisfaction, can be used as an indicator for examining the association of poverty and its negative effects on physical and mental health, as life satisfaction is also negatively impacted by adverse living conditions (Bookwalter & Dalenberg, 2002; Makiwane & Kwizera, 2006). According to Bookwalter and Dalenberg (2004), earlier research frequently measured well-being 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, Sen (1992, 2000), as cited in Bookwalter and Dalenberg (2004), proposes the use of a broader approach of measuring subjective well-being. This broader approach includes not only identifying the resources of an individual or household, but also examining how effectively those individuals or households can utilize the resources that are available, thus giving a clearer picture of how poverty affects subjective well-being (Bookwalter & Dalenberg, 2004).
The current body of research seeks to further examine the connections that exist between the fulfillment of an individual’s needs, physical and mental health, and subjective well-being. One theory that may be useful in examining these relationships is Maslow’s Hierarchy of Needs (1970).

**Psychological Theory: Maslow’s Hierarchy of Needs**

One theory which may be able to explain the detrimental effects of poverty on physical and mental health/well-being is Maslow’s Hierarchy of Needs. Abraham Maslow was credited with bringing the “human back into psychology.” He is recognized for creating a new way to address certain problems in psychology that were encountered by the scientific, behavioralist approaches of the early 1930s (Boeree, 2006; Maslow, 1971). The experimental emphasis of the behavioral psychologists focused on the strict observation of behavior and identification of environmental influences, virtually ignoring the individuality of the person (Coon & Mitterer, 2009). Maslow created new words that he coined to refer to his unique way of explaining the psychology of humans. This new approach emphasized the individual as a whole unit, including body and mind (Maslow, 1971). Maslow created such new terms as “deficient and being needs,” “peak experience,” “self-actualization,” and the popular concept of the “hierarchy of needs” to describe processes that would be essential to his understanding of humanity (Maslow, 1971). These terms are still applied in psychological research, as current studies utilize many of Maslow’s ideas and theories to examine such concepts as need fulfillment, life
satisfaction, and motivations of behavior (Brown & Cullen, 2006; Majercsik, 2004; Maslow, 1970; Oishi et al., 1999).

The pinnacle of Maslow’s hierarchy describes the concept of self-actualization as a “being need” (Maslow, 1970). Being needs represent fourteen being-values that describe an individual that has achieved an adequate level of inner fulfillment (Maslow, 1971). These being values include such concepts as truthfulness, uniqueness, justice, and self-sufficiency (Maslow, 1971, p. 133-35). This concept of “being” may be described as the expression of one’s inner nature, not just a way of coping, striving to control, or dominating a situation (Maslow, 1971). The self-actualized individual has not completed their development at the point that he or she has achieved “self-actualization” (Maslow, 1971). Rather, this individual is more accurately in the process of being “self-actualized,” in other words it is a continuous state. For example, some may view an artist as being self-actualized when he reaches the point at which his paintings are sold at a high profit. However, this is a misunderstanding of the very concept of self-actualization, which, in fact, states that the artist is self-actualized as he creates the art that he was meant to create (Maslow, 1971). This concept of self-actualization is not tied to fame or fortune, but rather it is the feeling of inner fulfillment that is experienced by the individual acting upon his or her strengths and motivations (Maslow, 1970, 1971).

Inspired by two of his earlier teachers that were, as Maslow described, “so different from the run-or-the-mill people in the world?” (Maslow, 1971, p. xvi). Maslow wanted to identify why these two men were exceptional in how they approached life, striving for an excellence that surpassed the usual (Maslow, 1971). The process of
discovering what made these two men so unique led Maslow to study other such individuals that he came to describe as “healthy people” (Maslow, 1971, p. xvii). In the process, he coined the term “self-actualization” to describe the individuals that were living up to their potential (Maslow, 1970, 1971). It was Maslow’s study of these two men that led to years of research and brought him to identify the individual that is self-actualized as one that is doing the very things that bring him or her inner fulfillment (Maslow, 1971). In other words, “musicians must make music, artists must paint, poets must write if they are to be ultimately at peace with themselves” (Maslow, 1970, p. 22).

People that are self-actualized are described as being honest, or centered in reality, they are able to tell the difference between what is truly genuine and what is false or fake (Boeree, 2006; Maslow, 1971). They also tend to be problem-centered; focusing on the solution, not seeing the problem as a direct assault against their person (Boeree, 2006, Maslow, 1971). People that are self-actualized enjoy time alone to reflect, yet they are also happy to be with people to whom they are close (Boeree, 2006, Maslow, 1971). They are viewed as being autonomous with a strong sense of self (Maslow, 1971). These individuals do not seek conformity, but instead are seen as well-adjusted in both their private and social life (Boeree, 2006; Maslow, 1971).

Individuals that are self-actualized tend to accept themselves and others unconditionally (Maslow, 1971). In addition, they will often identify their weaknesses or failings and be motivated to address or correct them on their own (Boeree, 2006; Maslow, 1971). Maslow did not see self-actualized individuals as perfect, but instead identified several flaws that they seem to share, including their tendency to suffer from anxiety,
guilt, absentmindedness, and maybe over generous to a fault (Boeree, 2006; Maslow, 1970). This is not viewed as contrary to their many valuable traits, it is just a reminder that they are human and subject to many of the same flaws as any other human being (Maslow, 1970, 1971). In fact, the above flaws may be due to their increased desire to achieve their state of self-actualization, leaving them susceptible to stress and absentmindedness due to over-commitment to their purposes. Maslow suggested that failure to achieve this highest need level results in flawed personal development and poor psychological health (Maslow, 1954). For example, individuals who fail to achieve self actualization may experience feelings of failure or dissatisfaction with their life, leading to stress, depression, or other mental health conditions (Maslow, 1970).

According to the order of the hierarchy, Maslow (1970) proposes that it is more likely for an individual to become self-actualized if they have their basic needs met. These basic needs are included in the bottom four tiers of Maslow’s Hierarchy of Needs and are referred to as deficient needs. They are identified as such because without fulfillment of these needs an individual will feel a void in their being (Boeree, 2006; Maslow, 1971). This could explain the difficulties that one living in impoverished conditions encounters when trying to move out of their circumstances. Maslow (1971) suggests that when individuals live in poverty they are exposed to less than ideal situations and will choose that which is less than ideal because it is more familiar to them. For example, if a child grows up in unsanitary conditions he is likely to find unsanitary conditions just as appealing as more sanitary conditions (Maslow, 1971). Therefore, the hierarchy may
offer one reason why it is so difficult for impoverished individuals to better their living conditions.

Humans are motivated by these basic needs in an order of priority. In other words, the need levels are arranged in a pyramidal hierarchy with the most basic physiological needs sitting as the foundation and each need level progresses in an order of importance for human survival and emotional stability (Maslow, 1970). The base of this pyramid represents the basic physiological needs, which includes access to adequate food supplies, safe drinking water, and healthy environmental conditions (Maslow, 1970). Maslow proposes that these needs are placed at the foundation of the pyramid because these needs are essential to physical health as they are necessary for basic survival (Jacobsen, 2010; Maslow, 1970; World Bank, 2009). These basic physiological needs are fundamental to physical health and survival, therefore they are quite relevant to the discussion of poverty (Jacobsen, 2010; Maslow, 1970; World Bank, 2009).

The second level represents safety and security needs. In a developed country, such as the United States, this refers to such needs as job security, retirement, and investments for the future (Maslow, 1970). However, in many developing countries it is common for individuals to fear for their safety on a day-to-day basis (Fox et al., 2007; Mittulah et al., 2005). This makes it difficult for impoverished individuals to address such issues as long-term economic security (Chopra, 2005; Fox et al., 2007; Mittulah et al., 2006; Wakbi, 2008). For example, the struggle to obtain basic necessities could lead some Kenyans to resort to crime in an effort to survive. This increase in crime, corruption, and associated violence creates a situation in which individuals may develop
a chronic fear of their unsafe and violent environment (Chopra, 2005; Wakbi, 2008). Chopra (2005) examines the connection between corruption among traffic officials and the effects on the safety of the public matatu (transportation) system. This public transportation is commonly used by lower-income Kenyans who must use this form of travel, rather than risk walking on the unsafe roads as pedestrians (Chopra, 2005). If individuals are constantly struggling to address such issues of safety within their day-to-day living, it is difficult for them to develop such assets as honesty, trust, and confidence (Chopra, 2005; Maslow, 1970).

The third tier of Maslow’s (1970) hierarchy represents the need for love and belongingness. This tier includes such concepts as trust and affiliation (Maslow, 1970). These concepts develop as a result of the social support that is received, because love and belongingness are built upon the trust and support that one establishes with those close to them (Maslow, 1970). The support of family, friends, or a significant other has an impact on an individual’s well-being (Zimlet, Dahlem, Zimlet, & Farley, 1988). Social support was discussed by Coy and Kovacs-Long (2005), as a way to strengthen inner self-acceptance through the support of others. In turn, the acceptance of one’s self helps to encourage individuals try new experiences on their own (Coy & Kovacs-Long, 2005).

The literature indicates that women in developing countries are often lacking in social support, in part because of the gender inequalities that exist (Burn, 2005; Fox et al., 2007; Glasier et al., 2006). African women reported that economic and financial abuses, as well as neglect, have made a negative impact on their lives, including their ability to make rational decisions that encourage independence and personal advancement (Burn, 2005;
Fox et al., 2007). Maslow proposes that if an individual does not meet these needs of love and belongingness fulfilled, both extensions of social support, they will become susceptible to loneliness and other social anxieties (Boeree, 2006; Maslow, 1970).

The fourth tier of the hierarchy represents the need for self-esteem. Maslow (1954) defines self-esteem as having two distinct classifications. The first of these is self-respect which is gained through personal strength, achievement, adequacy, and independence. The second is respect from others, gained through status, recognition, and appreciation. The first classification of self-respect or esteem is vital, as it provides a solid foundation upon which the second may develop (Boeree, 2006; Maslow, 1971). In other words, if an individual has autonomy and strength they find it easier to have a general trust and connection with the outside world (Maslow, 1971). These individuals have an easier time forming relationships with others, as they gain status and recognition by doing things to help others (Maslow, 1971). Whereas, individuals that lack self-esteem have difficulty forming relationships with others because they are preoccupied with fulfilling their own needs for esteem and have no time to consider others (Maslow, 1971).

People will become preoccupied with fulfilling the lower level needs that have been identified by Maslow as instinctoid (Maslow, 1971). This may occur because these needs are what he describes as genetically hardwired; they are necessary for human survival and continued growth, both physically and mentally (Boeree, 2006; Maslow, 1971). If, as a youth, an individual experiences a lack of fulfillment, in any or all of these four tiers of Maslow’s Hierarchy, it can impact them into their adult life (Boeree, 2006; Maslow, 1971). This can occur in the form of lowered physical and mental health
Maslow’s works suggest that an individual will move away from their “being needs” or values if they are exposed to harsh or difficult environmental conditions, such as abandonment, poverty, confinement (e.g., internment camps or prison) (Maslow, 1971). Maslow concluded that while there is validity in that thinking, there are times that individuals can go without lower level needs being fulfilled, but still be concerned and motivated to achieve the higher levels of the hierarchy (Maslow, 1970, 1971). One modern example of an individual that surpassed all odds and went on to achieve this higher level of self-actualization is Victor Frankl, an individual that suffered great atrocities at the hands of concentration camp officials during World War II. Yet Frankl persevered through these challenges and went on to assist others in dealing with their emotional challenges through his work as a psychologist (Boeree, 2006; Frankl, 2000; Maslow, 1971). Maslow proposed that this ability to move beyond the lower need levels to address those higher on the hierarchy may also occur among those living in poverty (1971). However, Maslow was not able to explain exactly why some individuals moved forward to achieve inner fulfillment when they do not have the lower level needs met (Majercsik, 2005; Maslow, 1971). He accepted that his hypotheses would later be tested by future researchers (Majercsik, 2005; Maslow, 1971).

Maslow’s theory remains a valuable tool used in past and current research (Majercsik, 2005; Maslow, 1971). Majercsik (2005) suggests that in the geriatric population Maslow’s hierarchy may need to be reordered as these individuals appear to focus on higher level needs first. This may be explained by the fact that these individuals already have their basic needs fulfilled. Further, as the elderly approach the end of their
When the basic physiological needs (i.e., food, water, clean air, and healthcare), safety needs, love and belongingness, and self-esteem needs are not met, the majority of one’s attention is focused on the fulfillment of these primary needs (Maslow, 1970,
1971). This connection between fulfillment and progression from one tier to the next could be used to explain why those in poverty have a more difficult time progressing to the final tier, self-actualization (Maslow, 1971; Majercsik, 2005). If, as Maslow (1971) states, that failure to satisfy these needs leads to a void in one’s life, perhaps the Hierarchy of Needs offers a conceptual framework for understanding the negative consequences of poverty on physical and mental health documented by prior research.
CHAPTER TWO
STUDY ONE

Study One, a secondary analysis, was designed to examine the impact of need fulfillment, as proposed by Maslow’s (1970) Hierarchy of Needs, on an individual’s physical health and mental well-being. Maslow (1970) suggested that individuals who do not satisfy their lower level needs (e.g., physiological, safety) will have difficulty satisfying their upper level needs and achieving self actualization. Therefore, impoverished individuals are an ideal population in which to examine the applicability of Maslow’s theory in a modern context. The purpose of the present study was to investigate relationships between need fulfillment, health, and well-being among a sample of Kenyans. Secondary analyses were performed using a data set made available through the University of Michigan’s Inter-University Consortium for Political and Social Research (ICPSR) database website. The “Afrobarometer 3: The Quality of Democracy and Governance in Kenya, 2005” survey, conducted by Mitullah, Bratton, Gyimah-Boadi, and Mattes (2005), includes survey responses assessing social and political concerns among the general population of Kenya. Mitullah and colleagues (2005) conducted this survey to investigate the satisfaction levels of the population of Kenya with their living conditions, their access to basic resources and healthcare, and the process of political governance.
For many Kenyans, it is getting increasingly difficult to obtain basic necessities such as food and water. With conditions of corruption and poverty existing throughout Kenya, it is little wonder that over 50 percent of Kenyans surveyed by Mittulah and colleagues (2006) replied that the overall economic conditions of their country were “fairly bad” or “very bad.” When asked how their living conditions compared to those of other Kenyans, 35 percent of participants rated that their conditions were “worse” or “much worse” (Mittulah et al., 2006). Despite the fact that the political elites have promised a rise in economic growth and increased job opportunities, 69 percent of the individuals surveyed indicated that the inequalities within their society are growing larger (Mittulah et al, 2006; World Bank, 2009). According to the “Kenya Poverty and Inequality Assessment, 2009” poor households spend up to 70 percent of their income on food and only about half of the population of Kenya has improved access to water, with sanitation services meeting only the minimal standards of quality (World Bank, 2009). In addition, high inflation has affected regions throughout Kenya, as basic food and energy needs are sharply affected, with price increases impacting both the rural and urban households throughout Kenya (World Bank, 2009, 2010). If living conditions are not improving, how does this affect the basic need fulfillment of Kenyans? Furthermore, if the fulfillment of their basic physiological and psychological needs is inadequate, how does this impact their physical health and mental well-being? The survey findings of Mittulah and colleagues (2006) concur with other researchers; there is an increased lack of hope for future improvement held by a significant proportion of the population (Mittulah et al., 2006; World Bank, 2009).
Maslow’s (1970) Hierarchy of Needs suggests that individuals may need to fulfill the lower level basic needs (i.e., food, water, shelter) in order to progress to higher levels of need fulfillment, including self-esteem and self-actualization. However, Maslow later conceded that there may be situations in which an individual progresses to fulfill higher need levels in spite of lower level need deficits (Majercsik, 2005; Maslow, 1970, 1971). Maslow further proposed that poverty may present a context in which the order of progression of need fulfillment is altered (Maslow, 1970, 1971). Maslow’s Hierarchy of Needs (1970) lends a platform for identifying the relationships that exist between poverty, need fulfillment, and health. Although not originally designed to assess Maslow’s Hierarchy of Needs (1970), The Afrobarometer (2005) poses questions related to the lower level deficit needs of the hierarchy (i.e., physiological, safety, and belongingness). Therefore, Study One used Maslow’s Hierarchy (1970) as a framework for investigating potential relationships between need fulfillment, health, and well-being among participants of the Afrobarometer (Mittulah, et al., 2005).

Hypotheses

The overall hypothesis for Study One is that low levels of needs fulfillment on Maslow’s hierarchy will correspond with lower levels of physical health and mental well-being. Specifically, Study One will examine whether:

1. low levels of physiological needs fulfillment will be related to a low level of physical health and mental well-being,
2. low levels of safety and security needs fulfillment will be related to a low level of physical health and mental well-being.

3. and low levels of social support will be related to physical health and mental well-being.

Maslow (1970) suggests that it is more likely for an individual to become self-actualized if they have satisfied the lower level needs on the hierarchy. These basic needs are included in the bottom four levels of Maslow’s Hierarchy of Needs (see Figure 3) and are referred to as deficient needs.
Figure 3: Maslow’s Hierarchy of Needs

- **SELF-ACTUALIZATION**
  - (LIFE SATISFACTION)
- **SELF-ESTEEM**
- **TRUST AND BELONGINGNESS**
  - (SOCIAL SUPPORT)
- **SAFETY AND SECURITY**
- **BASIC PHYSIOLOGICAL NEEDS**
The Afrobarometer (2005) survey was used to select questions pertaining to each of the deficit needs. However, it was limited in that it did not include questions conducive to assessment of the fourth level of the hierarchy, known as self-esteem (Maslow, 1970; Mittulah et al., 2005). Therefore, Study One examines the bottom three levels of Maslow’s Hierarchy of Needs; physiological, safety, and belongingness needs and their relationships to physical health and mental well-being. Need levels that are examined in Study One are referred to as deficit needs because without fulfillment of these needs an individual may experience a sense of emptiness or void, further they may not become motivated to progress to the higher need levels (Boeree, 2006; Maslow, 1971). In addition, inadequacy in the fulfillment of lower level needs may contribute to increased risk for poor physical health and mental well-being (Maslow, 1970; World Bank, 2009). Identification of the relationships that exist could help explain some of the difficulties that many Kenyans experience when trying to move out of poverty (Maslow, 1971; World Bank, 2009).

**Methodology**

**Primary dataset**

To examine these hypotheses, we used the “Afrobarometer 3: The Quality of Democracy and Governance in Kenya, 2005.” The survey was conducted by Mitullah, Bratton, Gyimah-Boadi, and Mattes (2005) and the dataset is available through the University of Michigan’s Inter-University Consortium for Political and Social Research (ICPSR) database website. The survey includes responses and information collected by
Mittullah and colleagues (2005) to examine the social and political concerns among the
general population of Kenya. Mittulah and colleagues (2005) conducted this survey to
investigate the satisfaction levels of the population of Kenya with their living conditions,
their access to basic needs and healthcare, and the process of political governance. For
many Kenyans, it is getting increasingly difficult to obtain basic necessities such as food
and water. The current research consists of secondary analyses performed on selected
questions from Mittulah and colleagues (2005) dataset that could provide insight into the
hypotheses stated above.

**Subjects**

The Afrobarometer (2005) survey recruited 1,278 randomly sampled individuals
selected to represent a cross-section of the general population of voting age Kenyans. The
sample consisted of a 50/50 male and female ratio, with an average age of 41 years
(range=18-92). The sample was designed as a stratified, probability sample (Mittulah et
al., 2005). The participants were recruited from various districts throughout Kenya to
reflect the general distribution of the population. Participants were selected from urban
and rural areas, as well as various ethnic and socioeconomic backgrounds. The
employment status of participants was reported at 60 percent unemployed and 40 percent
employed, either part or full-time. The percentage of unemployed includes both
participants who were either looking for work and those that were not actively looking
for work. Further details of the recruitment methods and interviewing techniques can be
found in Mittulah and colleagues (2005).
Measures

The present research was conducted with items selected from the Afrobarometer (2005), which could provide insight into the satisfaction of participants’ needs (e.g., physiological, safety, belongingness needs), as well as their physical and mental health/well-being.

Needs Satisfaction: Researchers selected questions from Mittulah and colleagues (2005) survey to address those needs as discussed in Maslow’s Hierarchy of Needs. Questions that addressed the satisfaction of physiological need included: “Over the past year, how often, if ever, have you or your family gone without: 1), enough food to eat?; 2), enough clean water for home use?; 3), medicine or medical treatment?; and 4), enough fuel to cook your food?” Questions that addressed the safety needs included: “Over the past year, how often (if ever) have you or anyone in your family: 1), feared crime in your own home?; 2), had something stolen from your house?; and 3), been physically attacked?” Each of the previous questions were rated on a scale from 0-4, with “0=never” to “4=always.” Mittulah and colleagues (2005) survey did not include questions that directly assessed Maslow’s concept of trust and belongingness. Therefore, the following questions were selected as they were related to social involvement as an estimate of trust and belongingness: “How much do you trust each of the following types of people: 1), your relatives?; 2), your neighbors?; and 3), Excluding weddings and funerals, how often do you attend religious services?” The first two of these questions were rated on a scale from 0-3 (“0=not at all” to “3=a lot’), while the scale for question three was scored using a scale from 1-6 (“1=never” to “6=more than once a week”).
The responses to individual questions used to assess the satisfaction of the first three tiers of Maslow’s hierarchy were summed to create scale scores. This was accomplished by summing the individual responses for each of the questions specified above. Therefore, the possible range of scores for each of the tiers is as follows: basic needs=0-16, safety needs=0-12, belongingness needs=0-12.

*Physical and Mental Health:* Next, selected questions from Mittulah and colleagues’ (2005) survey were chosen that addressed physical and mental health outcomes. Physical health was assessed by a single item, which asked, “In the last month, how much of the time: has your physical health reduced the amount of work you would normally do inside or outside your home?” Mental health was assessed by also be a single item which asked participants, “In the last month, how much of the time have you been so worried or anxious that you have felt tired, worn out, or exhausted?” Both of these questions were scored using a scale of 0-3, “0=never” to “3=often.” As physical and mental health/well-being are considered as separate outcomes in the present study, researchers examined the results of these questions independently.
Results

Table 1 displays the descriptive statistics for original survey questions posed by Mittulah and colleagues (2005).

Table 1: Descriptive Statistics for Original Questions in Study One

<table>
<thead>
<tr>
<th>Type of Need</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physiological Needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often gone without food?</td>
<td>1.17</td>
<td>1.21</td>
<td>0-4</td>
</tr>
<tr>
<td>How often gone without water?</td>
<td>1.26</td>
<td>1.43</td>
<td>0-4</td>
</tr>
<tr>
<td>How often gone without medicine or medical care?</td>
<td>1.44</td>
<td>1.29</td>
<td>0-4</td>
</tr>
<tr>
<td>How often gone without cooking fuel?</td>
<td>1.06</td>
<td>1.26</td>
<td>0-4</td>
</tr>
<tr>
<td><strong>Safety Needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often feared crime in home?</td>
<td>1.26</td>
<td>1.32</td>
<td>0-4</td>
</tr>
<tr>
<td>How often something stolen from house?</td>
<td>.57</td>
<td>.91</td>
<td>0-4</td>
</tr>
<tr>
<td>How often physically attacked?</td>
<td>.30</td>
<td>.74</td>
<td>0-4</td>
</tr>
<tr>
<td><strong>Belongingness Needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often do you trust your relatives?</td>
<td>2.09</td>
<td>.88</td>
<td>0-3</td>
</tr>
<tr>
<td>How much do you trust your neighbors?</td>
<td>1.71</td>
<td>.90</td>
<td>0-3</td>
</tr>
<tr>
<td>How often attend religious services?</td>
<td>4.70</td>
<td>1.21</td>
<td>1-6</td>
</tr>
</tbody>
</table>
The descriptive statistics for the scale scores calculated for each of the first three tiers of Maslow’s hierarchy are presented in Table 2. Researchers note that the questions used to assess basic and safety needs are worded such that higher scores represent participants who more frequently went without necessities or were victimized. Therefore, the means of 4.93 for physiological needs and 2.14 for safety needs (as presented in Table 2) indicate that most participants reported that they seldom went without basic necessities or fell victim to crime. In contrast, the questions pertaining to belongingness needs were worded such that higher scores reflected greater levels of trust and social interaction. The mean of 8.50 on the 12-point scale for belongingness needs indicates that the majority of participants reported moderate to high levels of trust and participation in religious services.
<table>
<thead>
<tr>
<th>Type of Need</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological</td>
<td>4.93</td>
<td>3.98</td>
<td>1-16</td>
</tr>
<tr>
<td>Safety</td>
<td>2.14</td>
<td>2.35</td>
<td>0-12</td>
</tr>
<tr>
<td>Belongingness</td>
<td>8.50</td>
<td>1.98</td>
<td>1-12</td>
</tr>
</tbody>
</table>
The descriptive statistics for each health-related item are presented in Table 3. Researchers note that the question used to assess physical health and well-being is worded such that higher scores represent participants who reported greater reductions in the amount of work they could do inside or outside of their home due to physical health condition. Therefore, the mean of 0.85 for physical health (as presented in the table) indicates that most participants reported that they never or “just once or twice” experienced a reduction in their ability to work due to their physical health. In contrast, the question pertaining to mental health was worded such that lower scores reflected less time spent in states of worry or anxiety. Therefore, the mean of 1.07 on the 4-point scale for mental health indicates that the majority of participants reported low levels of fatigue and exhaustion due to worry or anxiety.
Table 3: Descriptive Statistics for Health Related Questions

<table>
<thead>
<tr>
<th>Type of Health</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Health</td>
<td>.85</td>
<td>.84</td>
<td>0-3</td>
</tr>
<tr>
<td>Mental Health</td>
<td>1.07</td>
<td>.94</td>
<td>0-3</td>
</tr>
</tbody>
</table>
Bivariate correlations between the study variables are displayed in Table 4. While there was a significant positive correlation between basic needs and safety needs ($r = .184, p = .000$), belongingness was not related to either of these need types ($r = -.041, p = .149$; $r = -.051, p = .067$, respectively). Satisfaction of needs was significantly related to physical and mental health outcomes. Specifically, the satisfaction of physiological needs was positively correlated with health outcomes, such that participants who more frequently went without basic necessities, such as food, water, and shelter reported more frequent physical and mental health concerns ($r = .275, p = .000$; $r = .258, p = .000$, respectively). Similarly, the satisfaction of safety needs was positively correlated with both type of health outcomes, such that participants who more frequently feared or fell victim to crime reported greater physical and mental health concerns ($r = .089, p = .002$; $r = .114, p = .000$, respectively). In contrast, belongingness was negatively correlated with mental health ($r = -.065, p = .021$), such that greater levels of trust and social engagement were related to fewer mental health concerns.
Table 4: Correlations between Study Variables for Study One

<table>
<thead>
<tr>
<th></th>
<th>Physiological Needs</th>
<th>Safety Needs</th>
<th>Belongingness Needs</th>
<th>Physical Health</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological Needs</td>
<td>1.000</td>
<td>.184**</td>
<td>-.041</td>
<td>.275**</td>
<td>.258**</td>
</tr>
<tr>
<td>Safety Needs</td>
<td></td>
<td>1.000</td>
<td>-.051</td>
<td>.089**</td>
<td>.114**</td>
</tr>
<tr>
<td>Belongingness Needs</td>
<td></td>
<td></td>
<td>1.000</td>
<td>-.023</td>
<td>-.065*</td>
</tr>
<tr>
<td>Physical Health</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.562**</td>
</tr>
<tr>
<td>Mental Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
To further examine the relationship between need satisfaction and health outcomes, researchers categorized participants on the basis of their levels of satisfaction for each of the three need areas. We conducted a mean split on each of the need areas and recoded participants as being 1=at or below the mean or 2=above the mean. As the items used to assess belongingness were worded in a positive direction (i.e., greater scores indicating more trust and social involvement), we reverse coded the group assignment for belongingness. Therefore, 1 = satisfaction of the need area and 2 = failed satisfaction of each of the need areas, as displayed in Table 5. Based on the mean split, we achieved a nearly equal percentage of participants in each of the groups for basic needs and belongingness needs. However, the mean split resulted in an unequal distribution of the participants based on the satisfaction of safety needs. Approximately 64 percent of participants were classified into Group 1 for safety needs, indicating that they had achieved satisfaction of this need type.
Table 5: Frequencies of Satisfaction Categories for Each Need Type

<table>
<thead>
<tr>
<th>Type of Need</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physiological Needs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1</td>
<td>652</td>
<td>51.4</td>
</tr>
<tr>
<td>Group 2</td>
<td>616</td>
<td>48.6</td>
</tr>
<tr>
<td><strong>Safety Needs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1</td>
<td>816</td>
<td>63.8</td>
</tr>
<tr>
<td>Group 2</td>
<td>462</td>
<td>36.2</td>
</tr>
<tr>
<td><strong>Belongingness Needs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1</td>
<td>655</td>
<td>51.6</td>
</tr>
<tr>
<td>Group 2</td>
<td>614</td>
<td>48.4</td>
</tr>
</tbody>
</table>
We predicted that there would be a significant difference between the two groups (as defined for each need type) on health outcomes. In accordance with Maslow (1970), it was expected that those with unfulfilled needs would experience poorer health and well-being. Independent t-tests were performed to examine this hypothesis. There were significant differences in physical health concerns between the satisfaction groups related to physiological needs ($t(1262) = -8.68, p = .00$). Specifically, participants who indicated that their physiological needs were not satisfied (i.e., Group 2 = more frequently went without basic necessities) reported more physical health concerns ($M = 1.06, SD = .86$), compared to those who had satisfied their physiological needs (Group 1: $M = .66, SD = .77$). There were no significant differences in physical health between satisfaction groups related to either safety needs ($t(1272) = -1.75, p = .08$) or belongingness needs ($t(1263) = -1.37, p = .17$).

Additional t-tests were performed to examine potential differences in satisfaction groups on mental health concerns. Findings revealed significant differences in mental health concerns between the satisfaction groups related to physiological needs ($t(1263) = -7.57, p = .00$). Specifically, participants who indicated that their physiological needs were not satisfied (i.e., Group 2 = more frequently went without basic necessities) reported more mental health concerns ($M = 1.27, SD = .98$), compared to those who had satisfied their physiological needs (Group 1: $M = .88, SD = .87$). In addition, there were significant differences in mental health between satisfaction groups related to safety needs ($t(1273) = -2.57, p = .01$). Specifically, participants who indicated that their safety needs were not satisfied (i.e., Group 2 = more frequently feared and fell victim to crime)
reported more mental health concerns (M = 1.16, SD = .96), compared to those who had satisfied their safety needs (Group 1: M = 1.02, SD = .93). The group differences observed on mental health outcomes between those who did and did not satisfy their needs for belongingness were marginally significant (t(1264) = -1.88, p=.06). Participants who indicated that their belongingness needs were not satisfied (Group 2 = less trust and social involvement) reported greater mental health concerns (M = 1.12, SD = .93), compared to those who had satisfied their belongingness needs (M = 1.02, SD = .95).

Discussion

Using Maslow’s Hierarchy of Needs (1970) as a foundation, secondary analyses were run to examine relationships between need fulfillment, physical health, and mental well-being. In summary, our results support Maslow’s (1970) theory that the failure to satisfy the various tiers of his Hierarchy of Needs is associated with negative outcomes. In the current study, individuals who failed to satisfy their physiological needs reported greater physical health concerns. However, there were no significant differences on physical health outcomes between those who did and did not achieve satisfaction of their safety or belongingness needs. In regards to psychological well-being, the failure to satisfy any of the three need types (i.e., basic, safety, or belongingness needs) was associated with increased levels of fatigue and exhaustion related to worry and anxiety. The present study adds to the existing literature documenting the negative impact of poverty on physical and mental health/well-being. Further, the current results support the
applicability of Maslow’s (1954) Hierarchy of Needs to understanding the challenges faced by populations in the developing world. Future efforts to promote physical and psychological well-being of these populations should take into account their frequent inability to satisfy fundamental needs (i.e., basic, safety, and belongingness), which have negative consequences on physical and mental health/well-being.

There are several limitations of the present study. Because a secondary analysis was performed, the present investigation was limited to the survey questions included by the Afrobarometer (2005). As a result, we did not have the questions necessary to examine satisfaction of every level of Maslow’s Hierarchy of Needs. Specifically, the Afrobarometer (2005) did not include any questions to address the two highest tiers of Maslow’s Hierarchy of Needs: self-esteem and self-actualization. To more thoroughly investigate the relationships between Maslow’s Hierarchy of Needs and its application to physical and mental health/well-being, future studies should include an assessment of all five levels of Maslow’s hierarchy: 1), physiological needs; 2), safety needs; 3), trust and belongingness; 4), self-esteem; and 5), self-actualization (e.g. life satisfaction). In addition, the assessment of physical and mental health/well-being was limited to one question each. While the questions may give an indication of participants’ self-ratings, a broader survey of physical health and mental well-being should be included in future studies.

The Afrobarometer (2005) survey did not identify whether any of the participants in the study were members of specific populations that might increase their chances of encountering lower levels of needs satisfaction. For example, research indicates that
women with disabilities, in third-world countries such as Kenya, are more likely to live in conditions of poverty (Kvam & Braathen, 2008; Smith, Murray, Yousafzai, and Kasonka, 2004; Yoshida, Li, and Odette, 1999). How would poverty among these women affect their basic, safety, and belongingness needs fulfillment? To what degree is this population negatively affected by the limited access to these primary needs, and how would these limitations affect their physical and mental health or well-being? Future research aimed at answering these questions among at-risk populations could add to our understanding of relationships between need fulfillment, physical health, and mental well-being.
CHAPTER THREE

STUDY TWO

Secondary analyses performed on selected data from Mittulah and colleagues’ (2005) found some degree of relationship between the levels of need fulfillment, physical health, and mental well-being. These analyses were limited because Mittulah and colleagues (2005) provided questions relative to only the lower three tiers of Maslow’s Hierarchy of Needs (1970). Further, the physical and mental health/well-being assessment was limited due to the restricted number of questions assessing for the measurements of health (Mittulah et al., 2005). The data collected in Study One included survey responses from the general population of Kenya and did not identify if any of the participants were physically disabled (Mittulah et al., 2005). Therefore, the goal of Study Two was to build upon the findings of Study One, while addressing some of these limitations. The second study employs Maslow’s Hierarchy of Needs and other credible research questionnaires to develop a pilot research study to assess need fulfillment and life satisfaction among a population of Kenyan women with disabilities.

Initial literature reviews indicate that while individuals with disabilities are a researched population, most of the research is limited to men and women in developed countries (e.g. Glover-Graf & Reed, 2006). There is a limited amount of research concerning women with disabilities in various countries in Africa (e.g. Smith et al., 2004);
however, the women of Kenya have not been formally identified for study. As a result of the limited research found on women with disabilities in Kenya regarding their needs fulfillment and life satisfaction, this research project was developed and conducted among an underserved population in Kenya, Africa.

**Hypotheses**

The overall hypothesis for Study Two is that if the levels of needs fulfillment are low, then the individual’s level of life satisfaction will be low. Specifically,

1) low levels of physiological needs fulfillment will be related to a low level of life satisfaction,

2) low levels of safety and security needs fulfillment will be related to a low level of life satisfaction,

3) low levels of social support will be related to a low level of life satisfaction,

4) and low levels of self-esteem will be related to a low level of life satisfaction.

**Methodology**

“Women with Disabilities: An Assessment of Needs Fulfillment and Life Satisfaction” was an undergraduate research project approved by the Kent State University Institutional Review Board. Funding was diversified, including an Undergraduate Research Grant, as well as private and public donations. Implementation of the research project took place during a 35 day stay in Kenya, Africa.
Subjects

All of the women who participated in this study were over 18 years of age and provided written consent. The participants were free to withdraw from the project at anytime, without penalty. However, all participants did elect to complete written surveys and to be involved in discussion groups or one-on-one interviews. The women represented various socioeconomic levels and came from provinces throughout Kenya, ranging from the East Coast Province to the Northwest Province. There were 61 participants. The first 43 participants to take part in the survey came from a group of women who had been identified by a Kenyan non-governmental organization, Disability and Women Development Strategies, located in Mbale, Kenya (May 23, 2009). The second group of 8 participants came from a vocational program for WWD at the Daisy School for the Disabled in Kakamega, Kenya (June 2, 2009). The third and last group of 10 participants came from the Bombululu Workshop in Mombosa, Kenya (June 14, 2009), a workshop that employs those with physical disabilities. Of the 61 participants, six were women that worked directly with WWD. Because these individuals were not afflicted with a disability, their responses are not reported in the subsequent analyses. Therefore, the final sample consisted of 55 participants with visual, auditory, or various physical mobility disabilities. Assistants were provided for those with physical impairments that hindered them from completing the survey on their own. In addition, a translator was provided (when necessary), as well as a sign language interpreter for the hearing impaired. Each woman that participated received a small gift bag of personal hygiene items, a water
bottle and t-shirt, or a book on healthcare for women with disabilities. Each gift was valued between eight and twelve US dollars.

**Measures**

Participants completed a 44 question survey of their level of needs fulfillment (in the following categories: 1) physical needs (availability of food and water); 2) safety and security needs; 3) social support and belongingness; and 4) self-esteem needs) and general life satisfaction. The questions from the physiological needs and safety and security needs assessment were sourced from the “Afrobarometer 3: The quality of democracy and governance in Kenya, 2005” (Mitullah et al., 2005). The physiological needs category included four questions assessing the frequency that the participant or their family went without food, clean water for home use, fuel for cooking, and medicine or medical treatment. Questions that addressed the satisfaction of basic needs included: “Over the past year, how often, if ever, have you or your family gone without: 1) enough food to eat?, 2) enough clean water for home use?, 3) medicine or medical treatment?, and 4) enough fuel to cook you food?”. The safety and security category included four questions about how often the participant or her family feared crime or theft in her home, physical attack, and the ease or difficulty for her to obtain the help of local police. Questions that addressed the safety needs included: “Over the past year, how often (if ever) have you or anyone in your family: 1) feared crime in your own home?, 2) had something stolen from your house?, and 3) been physically attacked?”. Each of the previous questions were rated on a scale from 0-4, with “0=never” to “4=always.” To assess social support, participants completed the “Multidimensional Scale of Perceived
Social Support,” (Zimet, Dahlem, Zimet & Farley, 1988). 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.”

To measure self-esteem needs, participants completed the “Rosenberg Self-Esteem Scale” (Rosenberg, 1965). This survey contains ten statements that participants rate on a scale from “1=strongly agree” to “4=strongly disagree.” Lastly, the assessment of life satisfaction consisted of the “Satisfaction with Life Scale” (Diener, Emmons, Larsen & Griffin, 1985). This survey is comprised of five statements that the participant is asked to rate on a scale from “1=strongly agree” to “6=strongly disagree.”

Scales scores were created for each section of the survey (ie. physiological, safety and security, belongingness, self-esteem needs, and the perceived level of life satisfaction). The preliminary statistical analyses performed on the data are descriptive and correlations. These analyses were used in order to identify potential relationships between the four variable scales that were created according to Maslow’s Hierarchy of Needs and life satisfaction. A means split was then performed on each variable, recoding each one to include a high group, representing those above the mean and a low group, representing those participants below the mean. These groups were re-coded as “high group=1” and “low group=2.” Independent T-tests were run to search for differences between the high and low groups on their level of needs fulfillment verses life satisfaction. Lastly, regressions were run in order to compare and analyze which variables were most important in relationship to high levels of life satisfaction.
Results

Descriptive analysis including the mean, standard deviation, and minimum and maximum scores for each of the variables is presented in Table 6 below:

<table>
<thead>
<tr>
<th>Type of Need</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physiological</strong></td>
<td>8.13</td>
<td>3.091</td>
<td>0-15</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>7.00</td>
<td>3.26</td>
<td>0-13</td>
</tr>
<tr>
<td><strong>Social Support</strong></td>
<td>3.62</td>
<td>1.33</td>
<td>1-6</td>
</tr>
<tr>
<td><strong>Self Esteem</strong></td>
<td>17.27</td>
<td>4.17</td>
<td>8-26</td>
</tr>
<tr>
<td><strong>Life Satisfaction</strong></td>
<td>14.20</td>
<td>5.36</td>
<td>5-24</td>
</tr>
</tbody>
</table>
Bivariate correlations, as displayed in Table 7, show some significant relationships between levels of need fulfillment and levels of life satisfaction. Specifically, there is a significant, negative relationship between physiological needs fulfillment and life satisfaction ($r = -0.378$, $p = 0.004$). Further, there is a significant, positive relationship between levels of social support and life satisfaction ($r = 0.382$, $N = 48$, $p = 0.006$). However, there was no significant relationship between safety and security or self esteem needs fulfillment and life satisfaction ($r = -0.139$, $p = 0.326$).
Table 7: Correlations between Study Variables in Study Two

<table>
<thead>
<tr>
<th></th>
<th>Physiological Needs</th>
<th>Safety Needs</th>
<th>Social Support Needs</th>
<th>Self Esteem</th>
<th>Life Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological Needs</td>
<td>1.000</td>
<td>.296*</td>
<td>-.249</td>
<td>-.227</td>
<td>-.378**</td>
</tr>
<tr>
<td>Safety Needs</td>
<td></td>
<td>1.000</td>
<td>-.064</td>
<td>-.297*</td>
<td>-.139</td>
</tr>
<tr>
<td>Social Support Needs</td>
<td></td>
<td></td>
<td>1.000</td>
<td>.382**</td>
<td></td>
</tr>
<tr>
<td>Self Esteem</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.146</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Table 8 presents the number of participants that were categorized into high and low satisfaction groups on the basis of the mean split.

### Table 8: Mean Split Results for Life Satisfaction compared to Need Groups

<table>
<thead>
<tr>
<th>Need Group</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physiological</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Group</td>
<td>32</td>
<td>58%</td>
</tr>
<tr>
<td>Low Group</td>
<td>23</td>
<td>42%</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Group</td>
<td>29</td>
<td>53%</td>
</tr>
<tr>
<td>Low Group</td>
<td>23</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Social Support</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Group</td>
<td>27</td>
<td>49%</td>
</tr>
<tr>
<td>Low Group</td>
<td>23</td>
<td>42%</td>
</tr>
<tr>
<td><strong>Self-esteem</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Group</td>
<td>23</td>
<td>42%</td>
</tr>
<tr>
<td>Low Group</td>
<td>29</td>
<td>53%</td>
</tr>
</tbody>
</table>
Independent T-tests were conducted to examine potential differences between satisfaction groups (base on each level of the hierarchy) on life satisfaction. Results revealed a significant difference between satisfaction groups on social support. Specifically, individuals who rated their social support as inadequate experienced lower levels of life satisfaction \((t(48) = -2.966, p = .005)\). However, no other significant differences in life satisfaction were detected on the basis of the satisfaction groups. That is, individuals who reported below average levels of satisfaction of physiological, safety, or self esteem needs did not significantly differ in terms of their life satisfaction from those participants with above average levels of fulfillment in each of these areas.

Regression analysis was used to determine which of the levels of Maslow’s Hierarchy would be most important for predicting participants’ life satisfaction. While the overall regression model significantly predicted life satisfaction \((F(4.45) = 3.572, p = .014)\), only two tiers were significant predictors of life satisfaction: physiological needs and social support. Specifically, when the participants went without satisfying their physiological needs on a regular basis they had a lower level of life satisfaction \((\beta = -.316, p = .037)\). In addition, when the participants had a high level of social support they experienced a high level of life satisfaction \((\beta = .347, p = .016)\).

**Discussion**

Descriptive, correlational, and regression analyses of the current survey data add to the previous research by revealing significance between needs fulfillment and life satisfaction within a population of women with disabilities in Kenya. Our results
supported the overall hypothesis that when the level of needs fulfillment is low, then the individual’s level of life satisfaction will be low. Further investigation shows, however, that there is not a relationship between each specific type of need compared to measurement of life satisfaction. While there is a negative, significant relationship between physiological needs fulfillment and life satisfaction, there is no relationship between the safety needs fulfillment and life satisfaction. It should also be recognized that a high score on physiological needs fulfillment means that these women went without food more than 10 times in the last year. This explains the negative relationship with life satisfaction; indicating that the women who go without food most often are not satisfied with their overall life situation. There is a significant, positive relationship between social support and life satisfaction, indicating that if one is low in the amount or frequency of social support they receive, they are also low in their ratings of life satisfaction. However there is no relationship between self-esteem needs fulfillment and life satisfaction. Preliminary analyses show that there are significant relationships for both the physiological and social supports need variables and life satisfaction. This can be explained by the fact that African women with disabilities often live in extreme poverty and, therefore, go without food, water, and medical care on a regular basis (Burns, 2005; Kvam & Braathen, 2008). When they are focused on such basic physiological needs as food and medical care, they have a harder time working on areas that are higher up on Maslow’s Hierarchy of Needs. In addition, social support contributes significantly to their overall level of life satisfaction (Maslow, 1970). Future studies could examine the physiological needs variable by asking more questions and further breaking the variable
down into subgroups to cover each of the three needs: 1) access to food, 2) access to clean water, and 3) availability of medicine and medical care. This would allow more in-depth investigation to examine if it is a lack of one particular aspect of physiological needs, or a combination of all of the aspects representing the variable set that makes an impact on level of life satisfaction. By investigating subgroups of both the physiological and social support variables further examination may reveal whether it is a general lack of access to these needs, or specific areas of physiological or social support needs that could be addressed in order to assist this population of women.

The secondary analyses on Mittulah (2005) undertaken in Study One were limited in that we did not have data pertaining to all five tiers of Maslow’s Hierarchy of Needs. The present study has built on the previous research by expanding the social support variable to include more relevant questions and by adding the self-esteem variable. Although the study is limited in its size, significant relationships between physiological and social support needs fulfillment and levels of life satisfaction were discovered among this population of Kenyan women with disabilities. When these women go without having their physiological needs met, they tend to have a lower life satisfaction. However, when they have a high level of social support they also have a high level of life satisfaction. Using Maslow’s Hierarchy of Needs within the context of a population characterized by their intersecting roles could help researchers better understand their unique challenges and needs. In conclusion, further investigation could also help this underserved population to better understand their own needs and how they might strategize to fulfill them in the context of their unique environment.
There are some limitations of Study Two. For example, this study was based on a limited sample of women with disabilities from Kenya. The data is limited by its small sample size (N=55). Future research should include a larger sample size of Kenyan women with disabilities. In addition, the collection of demographic information including age, tribal affiliation, specific disability, and income would allow further examination of the issues as related to social environment. This information could help in recognizing how the various themes of gender, age, race (or tribal affiliation), disability, and socioeconomic statuses all come together and how the intersection of these roles impact this population’s level of needs fulfillment and life satisfaction.
CHAPTER FOUR
GENERAL DISCUSSION AND CONCLUSION

Overall Summary of Findings

Study One concluded that when need fulfillment is low an individual’s self-ratings on physical health and mental well-being will also be decreased. However, the study was limited because it only addressed the first three of Maslow’s five levels of needs according to the hierarchy. Further, assessment of outcomes was limited as there was one question each pertaining to physical health and mental well-being. In addition, Study One involved the assessment of the general population of Kenya. Research suggests that women with disabilities may be a sub-group that is at higher risk for poverty. Further, because of the challenges for those with disabilities (i.e., accessibility, financial) it is often more difficult for them to move out of an impoverished environment. In developing countries, like Kenya, these difficulties are compounded by the stigmas related to both gender and disability. Therefore, Study Two examined relationships between needs fulfillment and life satisfaction among this at-risk population. The results of Study Two suggest that not all of the levels of Maslow’s Hierarchy are equal in relation to the life satisfaction of women with disabilities. Study Two concluded that women with disabilities who more frequently go without their physiological needs satisfied reported significantly lower levels of life satisfaction. In contrast women with
disabilities who reported higher amounts of social support experienced greater levels of life satisfaction. In summary, the results of Study One and Two support prior literature documenting the increased risk for negative outcomes (i.e., related to physical and mental health/well-being) among the impoverished. Therefore, the present research has implications for strategies aimed at eradicating poverty and for interventions to assist the impoverished.

The Connection of Poverty to Physical Health

Previous research concerning the negative consequences of poverty frequently focuses on physical health outcomes. Therefore, interventions that are derived from this body of literature are directed towards physical health improvements. The connection between poverty and physical health is best illustrated by decreasing life expectancies in the developing world (Aitsi-Selmi, 2006; Benatar et al., 2003; Jacobsen, 2010; World Bank, 2010). Research indicates that those living in poverty have a low life expectancy compared to the world average of 68 years of age (Benatar et al., 2003; World Bank, 2010). For example, in some countries of Africa it is as low as 30-35 years of age (Aitsi-Selmi, 2006; Benatar et al., 2003). This low life expectancy is often used as an indicator of poor physical health. Factors contributing to this low life expectancy include a lack of maternal health care that leads to birth defects, premature birth, and maternal death during childbirth (Black, Morris, Bryce, 2003; Jacobsen, 2010).

In addition to early childhood death, increased birth defects and prematurity are often associated with the staggering under 5-years mortality rate in many developing
nations of Africa (Black et al., 2003; Jacobsen, 2010; World Bank, 2009). This rate indicates how many children die under the age of 5, due to a range of conditions- from poor prenatal care and malnutrition to communicable disease contracted during infancy and early childhood (Black, Allen, Bhutta, Caulfield, Onis, Ezzati, Mathers, & Rivera, 2008; Black et al., 2003; Jacobsen, 2010). If a child makes it past the age of five years, according the World Health Organization, they still have a low life expectancy (Black et al., 2008; Black et al., 2003; Jacobsen, 2010). In addition to higher infant mortality, other factors contribute to the low life expectancy. These include such factors as communicable and chronic disease or increased exposure to harsh environmental conditions (Aitsi-Selmi, 2006; Benatar et al., 2003; Black et al., 2008; Black et al, 2003; Jacobsen, 2010). The hardships involved with living in conditions of scarcity can lead to violence that is often associated with low socioeconomic status. Violent behavior linked to poverty also increases the likelihood of disability or early death (Benatar et al., 2003; Jacobsen, 2010). This type of violence contributes to low life expectancy as those living in poverty are at greater risk for disability and death by violent means. Further, women are at greater risk for domestic violence and men are at greater risk of violence related to economic or political unrest and war (Jacobsen, 2010; World Bank, 2009). In addition to the challenges that communicable and chronic disease and violence brings to the impoverished, there are inequities that exist in the availability of adequate health care services (Benatar et al., 2003; Chopra, 2005). When individuals cannot meet their day-to-day needs such as food, water, and shelter; healthcare becomes a lower priority for them (Benatar et al., 2003; Chopra, 2005; Jacobsen, 2010; World Bank, 2009).
Inequity in accessing care further confounds their ability to utilize services that might otherwise be available to the more affluent (Benetar et al., 2003; Chopra, 2005; Jacobsen, 2010). For example, even though there are many advances in technology, science, and medicine these advances are not as easily accessed by the impoverished. Benatar and colleagues (2003) caution that conflicts of interest may become “increasingly linked to and influenced by market forces,” indicating the ever growing connection between medicine and profit (Benatar et al., 2003, p. 115). Many decisions to help or not help the poor are decided based on whether helping will be an advantage or disadvantage to those providing the assistance (Benatar et al., 2003). In addition, as the Gross National Product spent on health care is compared, there are glaring differences, as the United States spends 14.1 percent and Sub-Saharan Africa spends only 1.6 percent on health care (Benatar et al., 2003). This further supports the idea that developing nations are not investing in their nation’s health. In the developing world the poor often benefit less from government subsidies to health care systems (Chopra, 2005).

In many developing countries with high rates of poverty the problems that result as a lack of investment from their government not only affects the availability of health care services, but also affects the availability of basic needs. Individuals living in poverty have difficulty meeting their most basic day-to-day needs (Chopra, 2005; Jacobsen, 2010; World Bank, 2009). This includes the basic needs of food, water, shelter, and adequate medical care. For example, in the early 2000’s, black children growing up in the rural areas of South Africa were twice as likely to be malnourished as those that grew up in urban, more affluent areas (Chopra, 2005). According to The World Bank (2009),
approximately half of the population of Kenya goes without adequate access to safe drinking water and sanitary sewage disposal. Barrett and colleagues (2005), sought to identify what is necessary for an individual living in a state of poverty to improve their situation. They identified that the large inequalities that exist between the elites and those living in extreme poverty produce challenges when creating interventions to assist those living in a state of poverty out of their current conditions (Barrett et al., 2005; Jacobsen, 2010; World Bank, 2009). These challenges include making sure that the poor have access to the health care that they need.

Research suggests that even in countries that are receiving interventions aimed at assisting the poor (i.e., oral rehydration therapy and immunizations), health services are accessed more often by those in a higher socioeconomic status as opposed to those living in extreme poverty (Chopra, 2005; Jacobsen, 2010; World Bank, 2009). These challenges are exacerbated when working with vulnerable populations such as women and children, or the disabled (Barrett et al., 2005; Chopra, 2005; Gill, Kirschner, & Reis, 1994; Glasier et al., 2006; Jacobsen, 2010).

**Poverty and the Concept of Holistic Health**

In order to understand the connections between poverty, need fulfillment, physical health, and mental well-being, it is important to understand the complexities involved when addressing the challenges encountered by those living in poverty. There are many key players in the discussion for the eradication of poverty and the impact it would have on world health. In order to understand the various approaches to increasing worldwide
health and well-being a consistent definition of health should be employed. The World Health Organization’s (WHO) defines health as, “a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity” (Jacobsen, 2010, pg. 2-3). When looking at the relationships between poverty and health, researchers (and those designing interventions) cannot merely look at the physical health of individuals, but must also examine their mental health and well-being (World Health Organization, 1948). This is similar to Maslow’s explanation of the need for a more holistic approach to psychology.

As early as the 1950s, Maslow recognized the need to see each human as a complete individual, mind and body (Maslow, 1971). His approach was very similar to the biophyschosocial model that is used in the medical, behavioral, and social science fields. This model is defined as a multilevel approach that seeks to integrate the biological, psychological, and social aspects of an individual in order to encourage good health and to accurately diagnosis and treat illness when it occurs (Suls & Rothman, 2004). While there are many modern references to the biopsychosocial model, Danielle Lee (2004) proposes that the model was discussed in earlier works such as those of Aristotle (Lee, 2004). This approach is used to describe the complex interconnections between the biological, psychological, and social aspects of health and well-being. One way to address the issue of poverty and health is to utilize the biopsychosocial approach and to more thoroughly address the issues of poverty and need fulfillment to assist increasing levels of physical and mental health/well-being.
One organization that has worked to address the challenges of poverty from a holistic perspective is Oxfam. Specifically, Oxfam is a non-governmental organization from the UK, which supports five basic human rights, all of which would lead either directly or indirectly to the alleviation of poverty and subsequent health improvements for those in the developing world. These five basic rights are the right to 1) life and sustainability, 2) sustainable livelihood, 3) basic social services, 4) be heard, and 5) equity (Aitsi-Selmi, 2006). These rights all impact physical, mental, and social health as sustainability is necessary in order for those living in poverty to access their daily needs. Basic social services also work with individuals to make sure that their needs are met. For example, a health clinic for the poor might provide vaccinations for a family’s children and then direct them to a school where they can enroll the children for classes. These social services might also provide a social network that will provide the family with the social support that they need. The right to be heard is very important especially in parts of the developing world (Aitsi-Selmi, 2008). For example, Oxfam found that when installing latrines it was vital that they asked the local women where they want them, otherwise the local women will not use them (Aitsi-Selmi, 2008). While the first four rights are more easily comprehended, the last right of equity is often misunderstood as equality. In the current literature, the terms are often defined in their negative tenses, inequality and inequity. These terms are often used interchangeably, but in fact they have independent meanings. Inequality refers to the differences in an individual’s experiences and status; whereas, inequity refers to the state in which there are *avoidable and unjust* differences between the experiences or status of individuals (Jacobsen, 2010).
Oxfam is committed to looking at the inequities or unjust differences that occur among the poor in order to identify a more sustainable approach to alleviating poverty and its negative impacts; including those affecting physical and mental health/well-being (Aitsi-Selmi, 2006). According to Aitsi-Selmi (2006), Oxfam hopes to alleviate and attack poverty by using short-terms strategies that include campaigning, development, and humanitarian response. By alleviating poverty in this holistic manner, the potential for improved health conditions also increases (Aitsi-Selmi, 2006; Chopra, 2005; Jacobsen, 2010). In addition, long-term responses such as helping developing countries improve their own local public services, including health care services; will further assist impoverished communities in improving their health status (Aitsi-Selmi, 2006; Chopra, 2005). However, advances in medical prevention, treatment, and technology must be presented in a way that is beneficial to all humanity.

Strategies and Analysis for Growth and Access (2005), reports that technological advances and improvements have positively impacted measures of human well-being (Barrett et al., 2006). This happens through the development of new economic and trade opportunities that help those in poor rural communities create new businesses (Barrett et al., 2006; Dolan, 2007). These types of economic developments help to improve their general financial situation and gain easier access to basic needs; however, it is not always a sustainable growth that allows for improvement in the physical health and well-being. Benatar and colleagues (2003) suggest that disparity in physical and mental health, and the care that is provided, continues to exist despite increasing advances in technology, science, and medicine. These rapid advances and shifts in how these disciplines are
approached can create additional challenges in addressing poverty and making changes that will bring improvements in health to those currently living in substandard living situations (Benetar et al., 2003; Jacobsen, 2010). In order to create conditions that are equitable to those in poverty we must address broader issues and challenges (Aitsi-Selmi, 2006; Benatar et al., 2003; Chopra, 2005). Benetar and colleagues (2003) suggest that in order to adequately address the concerns of the impoverished in regards to health care advances within the health care systems, we must create a “set of values that combines genuine respect for the dignity of all people with a desire to promote the idea of human development” (Benatar et al., 2003, p. 108). This holistic approach suggests that those in the field of health might find increased success rates in the health of their populations if they use a broader approach when looking at the physical and mental health of those in poverty (Benatar et al., 2003; Chopra, 2005; Ruger, 2006). The traditional individualistic view that has persisted up to this time focused on humanitarian aid that simply provided medical services, such as vaccines or emergency treatments (Benatar et al., 2003). However, this holistic approach encompasses the broader view of the individual and is in keeping with WHO’s definition of health and the approaches of the biopsychosocial model. This expanded view of poverty may be what is needed to promote positive applications of the new advances in technology and scientific, medical knowledge (Benatar et al., 2003). However, Benatar and colleagues (2003) caution that advances in the medical arena also have social implications. For example, if not used properly these advances can create further inequality and inequity in the provision of health care on a global level (Benatar et al., 2003; Ruger, 2006). Again, it is implied that the issues
concerning poverty and its connections with health are best approached from multiple angles, in keeping with the biopsychosocial model.

When addressing poverty and its connections to overall health and well-being, researchers must not only look at the physical health consequences, but also at the fulfillment of Maslow’s Hierarchy of Needs. Our research supports taking a holistic view of the individual, consisting of the complex interactions between need fulfillment, physical health, and mental well-being. Therefore, organizations developing strategies and interventions should adopt a more holistic view of the negative consequences of poverty in order to maximally improve the conditions of the impoverished. Further examination should also include the social and cultural environment to identify factors that may assist in finding effective solutions to help improve the physical, mental, and social well-being of those living in poverty.
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APPENDIX

SURVEY QUESTIONNAIRE

Assessment of Physiological and Safety Needs

Please circle the answer that best describes your situation.

Never   Just once or twice   Several times   Many times   Always

In the past year, have you or your family:

1. Gone without enough food to eat?
2. Gone without enough fuel to cook your food?
3. Gone without enough clean water for home use?
4. Gone without medicine or medical treatment?

In the past year, have you or your family:

5. Feared crime in your own home?
6. Had something stolen from your house?
7. Been physically attacked?

Based on your experience, how easy or difficult is it to obtain:

Never try   Very easy   Easy   Difficult   Very difficult

1. Help from the police when you need it?
Assessment of Social Support

Please circle the answer that best describes your situation.

<table>
<thead>
<tr>
<th>Very strongly agree</th>
<th>Neutral</th>
<th>Very strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.
### Assessment of Self-Esteem

Please circle the answer that best describes your feelings.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Strongly disagree</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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</table>

1. On the whole, I am satisfied with myself.
2. At times, I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I’m a person of worth, at least on an equal plane with others.
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.
Assessment of Life Satisfaction

Please circle the answer that best describes your feelings.

<table>
<thead>
<tr>
<th>Very strongly agree</th>
<th>Neutral</th>
<th>Very strongly disagree</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

1. In most ways, my life is close to ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far, I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.