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Factors Affecting the Psychosocial Well-Being of Orphan and Separated Children in Five Low- and Middle-Income Countries: Which is More Important, Quality or Form of Care?

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FACTORS AFFECTING THE PSYCHOSOCIAL WELL-BEING OF ORPHAN AND
SEPARATED CHILDREN IN FIVE LOW- AND MIDDLE-INCOME COUNTRIES:
WHICH IS MORE IMPORTANT, QUALITY OR FORM OF CARE?

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
International Family and Community Studies

by
Hy V. Huynh
May 2017

Accepted by:
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ABSTRACT

This study employed a correlational design and examined the extent to which four components of quality of care (including food security, quality of shelter, quality of caregiving, and access to health care services) predicted psychosocial well-being of orphaned and separated children (OSC), as well as the extent to which these components of quality of care and key demographic factors, such as age, gender, and orphan status moderated the associations between care settings and psychosocial well-being of OSC. This study was an extension of Whetten et al.'s 2009 study that found psychosocial well-being was no worse for institution- than community-based OSC and, after adjusting for sites, age, and gender, institution- vs. community-based care setting explained only 0.3-7% of the variability in child outcomes. This study drew from the latest data from the ongoing Positive Outcomes for Orphans (POFO) Study and used a sample population of 2,013 (923 institution- and 1,090 community-based) OSC among six diverse study sites across five low and middle income countries (LMICs): Cambodia, India (Hyderabad and Nagaland), Kenya, Tanzania, and Ethiopia. A series of hierarchical linear and moderated multiple regression analyses revealed that all four components of quality of care significantly predicted child psychosocial well-being. Moreover, three of the four components of quality of care (food security, quality of caregiving, and access to health care services) and two of the three key demographic factors (gender and orphan status) significantly moderated the associations between care settings and child psychosocial well-being. Practical and policy implications and future research are discussed.

DEDICATION

To my blood family, my chosen family, and my Hué family,
specifically:

My first-generation, refugee parents, for all their love, support, and endless amounts of sacrifices, so that I could both live a life without any unmet needs (Maslow, 1943) and choose a life dedicated to discovering where my greatest strengths and gifts align with the world's greatest needs.

My siblings, for trail-blazing the path ahead of me as community organizers, counselors, and educators, and for being some of my greatest allies.

My (North and South) Carolina family, for providing me with restorative and “soul-nourishing” relationships for the duration of my studies and for giving me a space (i.e. The Gnome Home) where I could put community development theory into practice.

My kids in Hué, for inspiring me to be the best social justice ally that I can be.

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To both my parents (Bố Mẹ): thank you for all the love, support, and sacrifices you've made to get me this far. I may never be able to repay you, but I hope I can continue to make you and our ancestors proud. Mom (Mẹ), thank you for being the most nurturing caregiver and for teaching me what it means to be courageous and resilient. Thank you for being my original storytelling and inspiring me to stay true to myself and my story. Dad (Bố), thank you for being the first example of a community organizer to me. You were the first person to teach me this simple but vital lesson: "Take care of your community, and they'll take care of you." Con yêu bố mẹ nhiều lắm.

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CHAPTER I

INTRODUCTION TO THE STUDY

This study explored the extent to which components of quality of care, including food security, quality of shelter, quality of caregiving, and access to health care services, predicted psychosocial well-being of orphaned and separated children (OSC), as well as the extent to which these components of quality of care and demographic factors, such as age, gender, and orphan status (i.e. double orphan, maternal orphan, paternal orphan, or separated or abandoned) moderated the associations between care settings (i.e. institution- or community-based care settings) and psychosocial well-being of orphaned and separated children (OSC). This chapter presents the background of the study, the statement of the problem, the significance of the study, definitions of terms, and the research questions and hypotheses.

Background of the Study

Global, national, and local leaders are struggling to find care solutions for the estimated 153,000,000 children worldwide who have lost one or both parents or have been separated by both parents (hereafter defined as orphaned and separated children [OSC]) (Whetten, Ostermann, Whetten, Pence, O'Donnell, Messer, & Thielman, 2009). High mortality among young adults from conditions such as malaria, tuberculosis, HIV/AIDS, pregnancy complications, and natural disasters are responsible for the increasing number of orphans (Thielman, Ostermann, Whetten, Whetten, & O'Donnell,

2012). Millions more children are separated and in need of supportive living environments because their biological parents are: (a) unable to provide food, shelter, and safety, (b) forced to leave their children and seek employment elsewhere, or (c) physically or mentally unable to care for their children (Thielman et al., 2012).

The majority of OSC live in sub-Saharan Africa and Southern and Southeastern Asia, in countries with rankings of low and medium on the 2009 Human Development Index (HDI) (UNICEF, 2012), a summary measure that goes beyond economic growth and focuses on people and their capabilities as the ultimate criteria for assessing a country's development (United Nations Development Program, 2015). Southern and Southeastern Asia have the largest number of orphans (more than 82 million) (UNICEF, 2012), while estimates for sub-Saharan Africa indicate that over 14 million children have lost one or both parents to AIDS (UNICEF, 2012). In other words, the countries with the highest rates of OSC are also among the economically poorest and most under-resourced (Thielman et al., 2012). These countries are poorly equipped to meet the social, educational, and health care needs of orphans, which include adequate shelter, education, nutritional and psychosocial support, and health care.

There are numerous negative effects of being an OSC in a resource-poor country, including traumatic grief, compromised cognitive and emotional development, less access to education, and a greater probability of being exploited for child labor (Whetten et al., 2009). Poverty extends into all areas of children's lives and keeps children from having the security and structures required to grow, thrive, and develop. Meeting the needs of OSC is becoming more difficult as the number of potential caregivers in

resource-poor countries shrinks due to increasing age-adjusted mortality (Foster, 2000; Foster & Williamson, 2000; HelpAge International & International HIV/AIDS Alliance, 2003; UNICEF, 2004; Yambedha, Wandibba, & Aagard-Hansen, 2003). OSC are in need of living environments that promote their well-being.

Given the high rates of OSC and the extensive evidence on the negative effects of being an OSC in resource-poor countries, the international community has largely responded to this challenge by putting in place various alternative care institutions (e.g., residential shelters, group homes, “orphanages”) in support of the affected children and their households. For children without adequate parental care, the international consensus is that there is a public responsibility to ensure alternative care is provided (UN General Assembly, 1989). This group of children is considered particularly vulnerable and in need of support. Indeed, Article 20 of the Convention of the Rights of the Child (CRC) highlights the States Parties’ obligations toward all children that see themselves denied (“deprived of”) the fundamental right to live in a family environment (UN General Assembly, 1989):

1. A child temporarily or permanently deprived of his or her family environment, or in whose own best interests cannot be allowed to remain in that environment, shall be entitled to special protection and assistance provided by the State.
2. States Parties shall in accordance with their national laws ensure alternative care for such a child.

3. Such care could include, inter alia, foster placement, kafalah of Islamic law, adoption or if necessary placement in suitable institutions for the care of children. When considering solutions, due regard shall be paid to the desirability of continuity in a child's upbringing and to the child's ethnic, religious, cultural and linguistic background. (p.5-6)

Article 20 of the CRC (UN General Assembly, 1989) applies to situations where the parents', family's or State's obligations regarding children have already failed to produce a suitable environment for the child's well-being and development. Government obligations under Article 20 to ensure alternative care for a child come into effect when it is fundamentally impossible for that child to be cared for by his or her parents – because of parents' death, absence, or incapacity, or the government's own failure to provide adequate and appropriate support to enable the family to remain together (Cantwell & Holzscheiter, 2008).

Although other articles in the CRC serve to protect family privacy and the rights of the parents in bringing up their children, Article 20 (UN General Assembly, 1989) clearly contains the obligations of States to protect children from a potentially harmful family environment (“cannot be allowed to remain in that environment”) and to ensure that there are suitable alternative care options for children that guarantee a minimal disruption in their emotional, physical, and personal development (Cantwell & Holzscheiter, 2008).

The extent to which alternative care institutions negatively affect children's physical, cognitive, and psychosocial well-being has become a central debate for

international aid policy affecting low and middle income countries (LMICs) with large numbers of OSC. Several influential studies of infant children who lived in deprived institutions in Europe (Nelson, Zeanah, Fox, Marshall, Smyke, & Guthrie, 2007; Smyke, Dumitrescu, & Zeanah, 2002; Smyke, Koga, Johnson, Fox, Marshall, Nelson, & Zeanah, 2007; Tizard & Hodges, 1978; Tizard & Rees, 1975; Van Ijzendoorn, Luijk, & Juffer, 2008; Zeanah, Smyke, Koga, & Carlson, 2005) have concluded that institutional care is damaging to the development of young children relative to community-based foster care. Indeed, some studies demonstrated powerful negative effects of institutions on infant development, and positive development when the infants were moved to live with foster parents (Nelson et al., 2007; Zeanah et al., 2005). Alternative care institutions across countries and continents have generally been characterized by high child-to-caregiver ratios, low compensation for caregivers, regimented and non-individualized care, and a lack of psychological investment in the children (Juffer & Series, 2008).

Accordingly, there is widespread belief, a plausible logic, and some empirical evidence to support the premise that adequate care for OSC can be most effectively provided in community-based “family environments,” that is, settings that appear on their face to be similar to biological families (primary kin) and that may be especially well suited to meet the psychological needs associated with child development. Currently, global policies (Better Care Network, 2014; Save the Children, 2009; United Nations General Assembly, 2009; UNICEF, 2011) recommend community-based care settings be considered first and “institutional care should only be used as a last resort” (Save the Children, 2009; p. iv).

Certainly, when searching for the best alternative care option for orphaned or vulnerable children, few would deny that opportunities within the extended family or in other community-based settings should be seriously considered. However, there is a difference between examining care options for OSC based on a priority scale, and carefully evaluating all options equally to determine the best fit for a child and his/her current needs. The wide variety of reasons for which children find themselves living outside their family environment and in alternative institutional care as well as the numerous shapes and structures of alternative care institutions available provide several reasons for concern with Article 20 of the CRC (UN General Assembly, 1989) and the consequent global policies to deinstitutionalize children, particularly in under-resourced LMICs. As Macarov (2008) argues, an almost universal emphasis and focus on deinstitutionalizing children when there is an urgent need for large-scale measures to care for the rising population of OSC puts millions of them at risk. Deinstitutionalizing children in under-resourced countries without systems in place could leave many children behind.

One issue of concern is that Article 20(3) of the CRC (UN General Assembly, 1989) neglects to explain what constitutes an “institution.” Institutions are the only nonfamily-based form of care listed, and no mention is made of any of the numerous intermediate care options that lie between the drafters’ conception of institutions and family-based settings that were operating at the time the CRC was developed. These forms of alternative care include small residential units, such as family-type homes or group homes. Whetten and colleagues (2009) argue that most of the studies available

during the CRC's drafting that compared children living in institutions to children in community-based settings had explored a variety of community-based settings, but neglected to consider the variability in institutional care.

In a recent follow-up study, Whetten, Ostermann, Pence, Whetten, Messer, Ariely, O'Donnell, Wasonga, Vann, Itemba, & Eticha (2014) found that residential care institutions represent a wide range of child care models with diverse resources, cultural traditions, and risk/resilience features that can serve as protective environments in the face of extreme hardship. Residential care institutions vary across many other dimensions too, including the number and age of children, and the gender distribution of the children they house, including all female, all male, and mixed institutions. They vary by the length of time that they have been in operation, and by the characteristics of the caregivers. They also vary in space and funding, and consequently, have different levels of quality and meet different standards of care (Whetten et al., 2014).

In addition, Whetten et al. (2009) found that, on average, modern-day institutions look very different from institutions included in most of the early studies that compared the outcomes of children in institutions versus those in community settings. For example, in some institutions, caregivers live on site, work long hours, and may only be paid in room and board (Whetten et al., 2009). The researchers explain that many institutions grew out of the community to meet the need of caring for the increasing population of orphaned children and are a part of the community in a way that perhaps institutions in early studies were not. These modern-day institutions cited by Whetten et al. (2009) are not family-style community care and they are not foster care, but they also do not look

like the institutions described in the early studies. The authors argue that if these modern-day institutions represent a new kind of care structure that minimizes the harm demonstrated in early studies, then policymakers need to protect organic care structures from blanket policies on institutions (Whetten et al., 2009). Without providing a more nuanced explanation of what constitutes an institution, policymakers may be shutting down some of the most important care structures for children in under-resourced countries (Huynh, 2014).

Another issue of concern with Article 20(3) of the CRC and its implied “last resort” language is that empirical studies from a broader array of cultural and situational contexts have shown more nuanced results than the oft-cited influential studies based in Europe (Nelson et al., 2007; Smyke et al., 2002; Smyke et al., 2007; Tizard & Hodges, 1978; Tizard & Rees, 1975; Van Ijzendoorn et al., 2008; Zeanah et al., 2005). In several studies, children in institutional settings were found to fare as well as or better than those in community-based settings (Aboud, Samuel, Hadera, & Addus, 1991; Braitstein, Ayaya, Nyandiko, Kamanda, Koech, et al., 2013; Embleton, Ayuku, Kamanda, Atwoli, Ayaya et al., 2014; Hong, Li, Fang, Zhao, Zhao et al., 2011; Merz, McCall, & Groza, 2013; Otieno, Nduati, Musoke, & Wasunna, 1999; Wolff, Tesfai, Egasso, & Aradom, 1995). Whetten et al. (2009) found that children in institution-based settings across five LMICs (Cambodia, India, Kenya, Tanzania, and Ethiopia) fared better than those in community settings on several outcomes, including physical health, behavioral and emotional health, intellectual functioning, and memory. They also reported great variability between individuals within care settings (larger than variability between sites

or variability between care settings within a site), and after adjusting for sites, age, and gender, discovered that institution- vs. community-based care settings explained only 0.3–7% of the variability in child outcomes (Whetten et al., 2009).

Moreover, it is also widely recognized that, in some cases, a family- or community- based setting is either not an option or possibly a worse option than living in a residential care institution, therefore rendering some community-based options as unsuitable (Whetten et al., 2009). For example, in some cases, family placement is neither available nor the best option for some children because of previous abuse, mental health concerns, or other special needs. In addition, many extended family support systems that are taking care of orphaned children are becoming overburdened to the point of near rupture. According to Director and Simon (2010), 90% of orphaned children in developing countries are living under the care of the extended family. These extended family support systems have become overwhelmed, increasingly impoverished, and rendered unable to provide adequate care for children (Director & Simon, 2010). This pressure is manifested as reduced per capita income, reduced household investments, and negative impacts on both the orphans taken in and the caretaker's biological children (Director & Simon, 2010).

From a practical standpoint, the transition in an under-resourced country from an institution-based to a community-based or adoption/foster care alternative is also likely to meet a multitude of challenges. These may include cultural aversions to adoption or foster care, inadequate numbers of households with the financial means to adopt children even with government support, insufficient professional support for potential foster

families, and the greater willingness of parents to adopt or foster young children rather than older children or those with special needs (McCall et al., 2010). Indeed, even high-resource countries like the United States took nearly forty years to develop its current foster care system, so it is likely that residential care institutions will exist in many countries for several decades in the future.

Finally, it is reasonable to suggest that adoption and foster care should be held to similar standards of assessment as to their suitability and necessity for the child. Certainly, “ongoing breakdowns in foster placements are but one indication that it is not suitable for some children” (Cantwell & Holzscheiter, 2008). Other obstacles to developing effective domestic foster and adoption care systems in LMICs include lack of birth registration, lack of policy and legislation, ineffective or absent judicial and social service structures, social norms, and other related issues (Leiden, 2012).

A theoretical framework that may explain the special circumstances and needs of OSC in under-resourced countries is Maslow’s (1943) hierarchy of needs. Maslow’s (1943) theory provides a conceptual framework of the progressively complex needs which must be met to develop and live well beyond basic survival. Maslow’s theory supports the notion that in under-resourced areas of the world most affected by the “orphan crisis,” such as sub-Saharan Africa and Southern and Southeast Asia, the principal functions of families for children may be more focused on their most basic and essential needs. Meeting these needs helps children move toward more complex needs and develop positive child outcomes such as psychosocial well-being. Thus, the development of positive child outcomes (such as psychosocial well-being) may not be

heavily dependent on membership in a community-based setting like a Western-style nuclear family. It may instead be heavily dependent on the availability of certain components of quality of care rather than solely the structure or nature of the living environment where OSC receive care.

As Whetten and colleagues (2009) stated, “Some researchers argue for a move beyond the dichotomized choice set of community- vs. institution-based care towards an analysis of the specific characteristics of these care settings which are associated with improved child outcomes” (p.10). Different types of care settings will most likely have different standards of and quality of care. Given the fact that most OSC in resource-poor countries are being forced to move to a variety of care settings, it is important for policymakers and practitioners to understand the specific characteristics within these different care settings, and the extent to which they moderate the associations between care settings and child psychosocial well-being.

Thus, this study is designed, first, to test the validity of this alternative view that specifically in under-resourced societies in LMICs, the psychosocial well-being of OSC may depend on the availability of certain components of quality of care rather than solely the nature of their care setting (i.e. institution- or community-based setting). This study is designed, second, to identify the relative significance of certain components of quality of care that promote a child’s psychosocial well-being within a specific care setting, as well as the demographic factors that moderate these associations. There are no studies to date that have looked at the extent to which components of quality of care, such as food security, quality of shelter, quality of caregiving, and access to health care services,

predict child psychosocial well-being, as well as the extent to which these components of quality of care and other key demographic factors moderate the associations between care settings and child psychosocial well-being.

Statement of the Problem

As discussed earlier, research has documented the devastating and complex psychosocial effects of orphanhood. For children without adequate parental care, the international consensus is that there is a public responsibility to ensure that suitable alternative care is provided. Currently, there is widespread belief, a plausible logic, and some empirical evidence that supports the premise that adequate care for OSC can be most effectively provided in “family environments.” Consequently, global policies (UNICEF, 2011; Save the Children, 2009; Better Care Network, 2014) recommend alternative care institutions only be used as a last resort after all community-based care options have been exhausted.

When searching for the best alternative care option for orphaned or separated children, few would deny that opportunities within the extended family or in other community-based settings should be seriously considered. However, there is an important distinction between examining care options for OSC based on a priority scale, and carefully evaluating all options equally to determine the best fit for a child and his/her current needs. In practice, there has been movement from institution- to family- and community-based care without careful consideration of whether community-based care settings better meet the needs of all children. The wide variety of reasons for which

children find themselves living outside their family environment and in alternative institutional care, as well as the numerous shapes and structures of alternative care institutions available, provide several reasons for concern with current global policies to deinstitutionalize children, especially in under-resourced parts of the world.

Thus, it is reasonable to believe that in under-resourced countries with high and increasing rates of OSC, the principal functions of families for children may be more focused on the most basic needs. Meeting these needs help children move toward more complex needs and develop positive child outcomes such as psychosocial well-being. Thus, the development of positive child outcomes (such as psychosocial well-being) may not be heavily dependent on membership in a community-based setting like a Western-style nuclear family. It may instead be dependent primarily on the availability of certain components of quality of care rather than the structure or nature of the living environment where OSC receive care.

While a small body of research suggests there may be certain components of quality of care and demographic factors that are linked to positive child outcomes, the current body of applicable research is limited in both quantity and scope, with no research that explores components of quality of care, such as food security, quality of shelter, quality of caregiving, and access to health care services within different OSC care settings, and whether they moderate the associations between care settings and child psychosocial well-being. Currently, these gaps in knowledge undermine our ability to understand the specific needs and effectiveness of current OSC care settings and intervention programs.

The Convention on the Rights of the Child (CRC) (UN General Assembly, 1989) provides special protections for OSC. Article 20.1 reads, “A child temporarily or permanently deprived of his or her family environment, or in whose own best interests cannot be allowed to remain in that environment, shall be entitled to special protection and assistance provided by the State” (UN General Assembly, 1989, p.6). Given this responsibility to protect OSC, research on characteristics that moderate the associations between OSC care settings and child psychosocial well-being is essential. In other words, to protect OSC’s rights to an adequate living environment and to promote their psychosocial well-being, it is crucial to understand which components of quality of care and demographic factors significantly moderate the associations between different OSC care settings and child psychosocial well-being. These insights will allow stakeholders to create new policies and practices that effectively support OSC across all care settings.

Significance of the Study

Orphaned and separated children need policies and practices that improve their living environments and promote their psychosocial well-being. This study informed policy and practice in a few key ways:

First, understanding the extent to which components of quality of care predicted child psychosocial well-being as well as the extent to which they moderated the relationships between OSC care settings and child psychosocial well-being can help inform more targeted psychosocial interventions for OSC. Specifically, findings may help identify the relative significance of certain components of quality of care and the

circumstances under which they matter most to inform targeted interventions for OSC. In addition, understanding the extent to which key demographic factors moderated the relationships between OSC care settings and child psychosocial well-being may also help identify the relative significance of certain demographic factors and the circumstances under which they matter most to inform targeted interventions for OSC. It is unclear what components of quality of care and key demographic factors within different OSC care settings contributed to more positive psychosocial well-being of children.

Second, understanding the extent to which components of quality of care predicted child psychosocial well-being and the extent to which they moderated the relationship between care setting and psychosocial well-being can potentially inform the institution- vs. community-based care setting debate. Specifically, findings may support the alternative view that particularly in under-resourced societies in LMICs, the psychosocial well-being of OSC may heavily depend on the availability of certain components of quality of care rather than solely the nature of their care setting.

Overall knowledge gained from this study can provide stakeholders with insights into effectively supporting OSC across a variety of care settings. Applicable research on the psychosocial well-being of OSC across both institution- and community-based care settings is scarce. Since it is reasonable to suggest that all care settings should be held to similar standards of assessment as to their suitability and necessity for OSC, more research needs to focus on the inclusion of all types of care settings.

The rigorous research design and study sample used for this dissertation were also significant in several key ways:

First, the study was conducted in six culturally, religiously, politically, historically, and geographically distinct sites in five medium HDI nations with rising OSC populations. This is important because a multi-country design like this could significantly reduce confounding between outcomes and culture. For example, extended families in one culture may traditionally care for the children of deceased siblings, while in another culture such children may be isolated and shunned by extended families. The quality of interaction and acceptable treatment for OSC is influenced by cultural beliefs and the economic resources of families, which may be less than those families caring for OSC in wealthier nations (Whetten et al., 2009). Additionally, the structure of the average institution in places such as Cambodia or Tanzania may be very different from each other due to policy, economic, religious, and cultural differences. Although there is not enough country- and region-specific information about OSC to inform any hypotheses about the moderating effects of each study site, this cross-cultural research design does contribute to a greater generalizability of the results than most previous studies.

Second, this study attempted to draw a locally representative sample of institutions at each site, resulting in one of the largest samples of care institutions ever examined in any single study of OSC and perhaps the most representative of institutions at the sites. While studies that compared institution-based children to community-based children explored a variety of community-based settings, they failed to consider the variability in institutional care (Whetten et al., 2009).

Finally, this study focused on children who are aged 6 to 12, a relatively wide age group that provides insight into the longer-term effects of orphanhood as well as the effects of orphanhood on children at older ages. Countries with emerging OSC epidemics have many children who were orphaned at older ages (Whetten et al., 2009). Thus, sustainable care options and strategies need to be identified quickly and methodically for these older groups of children.

Definitions of Terms

For the purposes of this study, *orphaned and separated children (OSC)* were defined as children under the age of 18 who were single orphans (having lost one parent) or double orphans (having lost both parents), or who were separated from their biological parents with no expectation of either parent returning and no contact information for either parent. Researchers at Duke University previously used the term “orphaned and abandoned children” (Whetten et al., 2009) but have since switched to “orphaned and separated children” (Whetten et al., 2014) because the term “abandoned” had a negative connotation and may not be accurate for every child.

An *OSC care setting* was used to broadly refer to an orphaned or separated child’s current type of living arrangement/environment. Most OSC are forced to move to a variety of alternative care options that are usually grouped into two categories: (a) institution-based care settings (i.e. residential shelters, group homes, “orphanages”, etc.) or (b) family- and community-based care settings (i.e. extended family member’s homes, adoption, foster care, etc.). OSC care settings vary across many dimensions, such as

cultural traditions, risk/resilience features, number and age of children, gender distribution of children, caregiver characteristics, length of operation, funding, and space (Whetten et al., 2014). Thus, different types of OSC care settings indeed have different standards and quality of care.

The term *components of quality of care* was used to describe a set of care quality-related factors of an OSC care setting, such as food security, quality of shelter, quality of caregiving, and access to health care services, that are related to an orphaned or separated child's holistic needs and well-being. The term and chosen factors for analysis were derived from a tool called the Child Status Index (CSI) (O'Donnell, Nyangara, Murphy, & Nyberg, 2013). The CSI gave researchers the opportunity to better understand some of the different characteristics unique to every OSC care setting that are associated with child outcomes.

Generally, *psychosocial well-being* was defined as mental health, social adaptation, or a combination of the two. For the purposes of this study, however, psychosocial well-being was operationalized by the Strengths and Difficulties Questionnaire (SDQ) Total Difficulties score as the overall behavioral and emotional difficulties of a child (Goodman, 1997). The SDQ Total Difficulties scale divides psychosocial well-being into four different scales: emotional symptoms, conduct problems, hyperactivity/inattention, and peer relationship (Goodman, 1997).

Research Questions and Hypotheses

Gaps in the relevant literature suggest the following research questions, which are represented in Figure 1.1:

1. To what extent do certain components of quality of care, including food security, quality of shelter, quality of caregiving, and access to health care services, predict psychosocial well-being after controlling for care setting?

H1A: After controlling for care setting and demographic factors, greater food security will significantly predict more positive child psychosocial well-being.

H1B: After controlling for care setting and demographic factors, better quality of shelter will significantly predict more positive child psychosocial well-being.

H1C: After controlling for care setting and demographic factors, better quality of caregiving will significantly predict more positive child psychosocial well-being.

H1D: After controlling for care setting and demographic factors, greater access to health care services will significantly predict more positive child psychosocial well-being.

2. To what extent do certain components of quality of care (i.e., food security, quality of shelter, quality of caregiving, and access to health care services) moderate the associations between different OSC care settings (institution- or community-based care settings) and child psychosocial well-being?

H2A: Food security will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors. Specifically, when food security is scarce, it will decrease the effect of care setting on OSC psychosocial well-being.

H2B. Quality of shelter will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors. Specifically, when quality of shelter is low, it will decrease the effect of care setting on OSC psychosocial well-being.

H2C. Quality of caregiving will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors. Specifically, when quality of caregiving is low, it will decrease the effect of care setting on OSC psychosocial well-being.

H2D. Access to health services will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors. Specifically, when access to health services is scarce, it will decrease the effect of care setting on OSC psychosocial well-being.

3. To what extent do certain demographic factors such as age, gender, and orphan status moderate the associations between different OSC care settings (community- or institution- based settings) and child psychosocial well-being?

H3A: Age will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors. Specifically, when a child is older, the effect of care setting on OSC psychosocial well-being will be decreased.

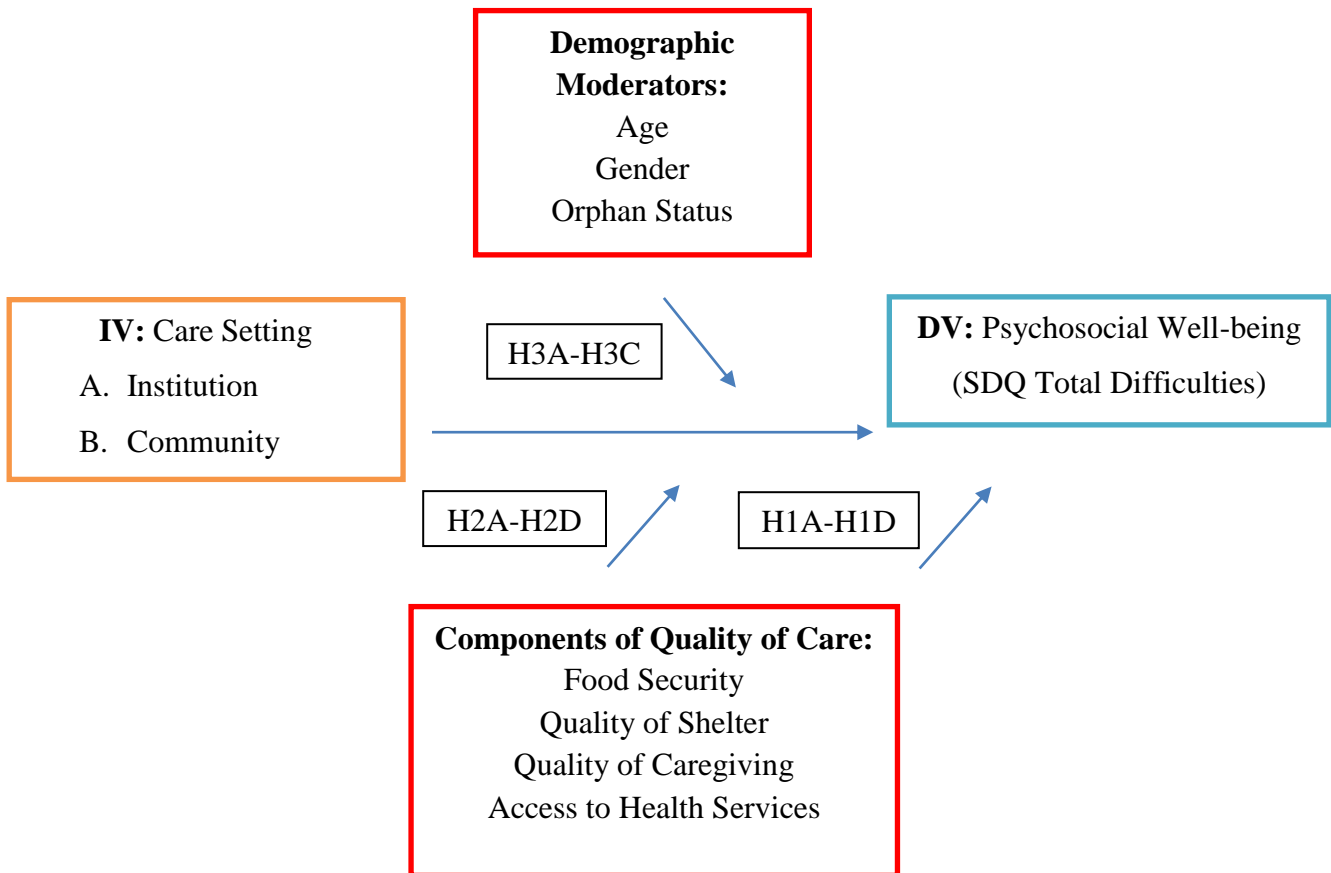
H3B. Gender will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors.

Specifically, when a child is male, the effect of care setting on OSC psychosocial well-being will be decreased.

H3C: Orphan status will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for available demographic factors. Specifically, when a child is a paternal orphan, the effect of care setting on OSC psychosocial well-being will be decreased.

This study was an extension of Whetten et al.'s 2009 study, which found psychosocial well-being was no worse for institution-based than community-based OSC and after adjusting for sites, age, and gender, institution- vs. community-based care setting explained only 0.3-7% of the variability in child outcomes. It added to the body of literature by attempting to fill the gap in understanding the relationships between components of quality of care, care setting, and child psychosocial well-being. As discussed previously, filling this gap in the literature was particularly important for furthering knowledge to adequately support OSC by allowing stakeholders to more effectively design and implement policy and practice strategies that promote OSC care settings and psychosocial well-being. This study was innovative in its attempt to identify new characteristics of OSC care settings that may both predict psychosocial well-being as well as moderate the association between different OSC care settings and child psychosocial well-being (see Figure 1.1), while also using a study sample inclusive to a variety of OSC care settings.

Figure 1.1. Overall model depicting the hypothesized relationships among OSC care settings and psychosocial well-being with key moderators, such as components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) and demographic factors (age, gender, orphan status).



CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents a detailed review of the literature relevant to the proposed research questions. It begins with an examination of the psychosocial well-being of OSC. Next, it covers research on OSC outcomes among institution- vs. community-based care settings. It then explores the gaps in research on OSC psychosocial predictors and moderators. The chapter continues with an overview of potential moderators of OSC psychosocial well-being. Next, the current realities of the OSC deinstitutionalization policies are discussed. It ends with a summary of the key concepts used to frame the proposed research questions.

Psychosocial Well-Being of OSC

The special circumstances of OSC predispose them to serious psychosocial issues (Atwine, Cantor-Graae, & Bajunirwe, 2005). Not only do OSC have to cope with personal grief and the loss of care, guidance, socialization, and skills transfer by their parents, but they also have to endure additional stressors that arise after the death of parents, exacerbating the situation even further. Children may have to move to a new home or area, causing interruption or termination of schooling. They may also be separated from friends and siblings, which contribute to a loss of social support. Moreover, OSC may endure stigmatization and isolation, especially those whom are orphaned by HIV/AIDS. In the presence of these stressors, the experience of orphanhood

is likely to have profound effects on both child psychosocial development and later mental health functioning outcomes (Atwine et al., 2005; Field, Miguel, & Sanders, 2001; Klein, Dougherty, & Olino, 2005; Reinherz, Giaconia, Carmola-Huff; Ssewamala & Ismayilova, 2009; Wasserman, & Silverman, 1999).

There have been relatively few published empirical studies that have documented the presence of emotional distress and negative psychosocial outcomes for OSC in resource-poor countries. In Zambia, Poulter (1996) used the Rutter Scales (Rutter, Tizard, & Whitmore, 1970) to interview caregivers, who reported that orphans were significantly more likely to be unhappy or worried than children with HIV-positive parents, and both groups were significantly more likely to be unhappy, worried, fearful, solitary, and fearful of new situations than children in non-affected families. Sengendo and Nambi (1997) interviewed 169 orphans in Uganda using a non-standardized 25-item depression scale and found that orphans had significantly higher depression scores and lower optimism about the future than non-orphans. In another study, Makame, Ani, and McGregor (2002) used a non-standardized internalizing problems scale based on the Rand Mental Health Inventory (Veilt-Wilson, 1998) and items from the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) to interview 41 orphans and 41 non-orphans in urban Tanzania. They found that orphans had greater internalizing problems compared with non-orphans, and 34% reported that they had contemplated suicide in the past year, compared to only 12% of non-orphans.

In rural Uganda, Atwine et al. (2005) interviewed 123 orphaned children and 110 matched non-orphaned controls aged 11-15 and found that orphans were more likely to

be anxious, depressed, and to display anger, and showed significantly higher scores for feelings of hopelessness and suicidal ideation. In Zimbabwe, a national survey by Nyamukapa, Gregson, Lopman, Saito, Watts, Monasch, & Jukes (2008) applied factor analysis to compare orphans and non-orphaned children aged 12-17 ($n = 5,321$). Psychosocial disorders were measured using a 16-item scale, with items from the Child Behaviour Checklist (Achenbach, 1991), Rand Mental Health (Hays, Sherbourne, & Mazel, 1993) and Beck Depression Inventories (Beck et al., 1961). Results showed more psychosocial disorders amongst orphans, which remained when controlling for poverty, gender, age of household head, school enrollment, and adult support. Also in Zimbabwe, researchers Gilborn, Apicella, Brakarsh, Dube, Jemison, Kluckow, Smith, & Snider (2006) interviewed 1,258 orphans and vulnerable children and used an unstandardized instrument with six items suggestive of depression and two items suggestive of poor psychosocial well-being. Orphans reported higher stress and more psychosocial distress than their non-orphan counterparts.

In another study, Wild, Flisher, Laas, & Robertson (2006) compared 81 AIDS-orphaned children, 78 orphaned because of deaths not related to AIDS, and 43 non-orphans (10-19 years old) in the Eastern Cape of South Africa. The researchers used the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978), the 10-item Child Depression Inventory (Kovacs, 1992), items from the Child Behavior Checklist (Achenbach, 1991), and items from the Self-Esteem Questionnaire (DuBois et al., 1996). Findings showed that adolescents orphaned because of deaths unrelated to AIDS reported more depression, anxiety, and lower self-esteem than non-orphans, with AIDS orphan

scores falling somewhere between the two groups. Moreover, in Uganda and South Africa, Onuoha, Munakata, Serumaga-Zake, Nyonyintono, & Bogere (2009) used a set of standardized psychosocial measures to compare the mental health of HIV orphans with that of “other-cause” orphans and “non-orphaned” children, finding that HIV orphans show the highest negative and lowest positive mental health factors out of the three groups. Certainly, caregivers and children need more support for managing emotional health and distress.

OSC Outcomes in Institution- and Community-Based Care Settings

The extent to which care institutions negatively impact children’s physical, cognitive, and psychosocial well-being has become a central debate for international aid policy affecting lower-middle income countries (LMICs) with large numbers of OSC. Currently, global policies recommend that residential care institutions be used as a last resort and that children in such care be moved to an alternative form of care as quickly as possible (Csaky, 2009). Policy documents and legislation frequently cite studies of children who as infants lived in deprived institutions in Romania and Russia (Merz et al., 2013; McCall et al., 2013; Zeanah et al., 2003). Other studies showed that living in an inadequate institution from an early age can result in severe developmental delays, physical stunting, and psychological damage (Goldfarb, 1945; Bowlby, 1951; Provence & Lipton, 1962; Spitz, 1965). In addition, one study on orphanages in Europe established that children (under the age of three) placed in orphanages were at risk of harm in terms of attachment disorder, developmental delay (i.e. reaching developmental milestones and

fine motor skills), and neural atrophy in the developing brain (Browne, Hamilton-Giachritsis, Johnson, Agothonos, Anut, Herczog, Keller-Hamela, Klimakova, Leth, Ostergren, & Stan, 2005).

Other research suggested that children raised in inadequate orphanages often suffer from severe behavior and emotional problems, such as antisocial development and aggressive behavior, and can potentially become adults with psychiatric impairments (Wolkind, 1974). Additionally, research suggested that children living in inadequate orphanages are more likely to have health problems and are at increased risk of infectious diseases (Johnson, Miller, Iverson, Thomas, Franchino, Dole, Kiernan, Georgieff, & Hostetter, 1992).

However, studies that included data from a wider range of cultural and situational contexts have found more nuanced results. For example, in a meta-analysis of studies examining children in institutional and community care, although intelligence quotient values trended toward being lower among infants in institutions (Merz et al., 2013), this relationship was not seen in lower income countries like Ethiopia (Aboud, Samuel, Hadera, Addus, 1991), Kenya (Otieno, Nduati, Musoke, Wasunna, 1999), and Eritrea (Wolff, Tesfai, Egasso, Aradom, 1995), and was not observed among children over age five (Merz et al., 2013). Recent studies of children's nutritional status in Kenya (Braitstein, Ayaya, Nyandiko, Kamanda, Koech, et al., 2013) and psychosocial status in China (Hong, Li, Fang, Zhao, Zhao, et al., 2011) found children in group homes fared somewhat better than their community-based comparisons. Another recent study of approximately 1,400 community children and 1,500 group home children in Kenya

showed that children in group homes were significantly more likely to have their basic material needs met compared to those in community-based care (Embleton, Ayuku, Kamanda, Atwoli, Ayaya, et al., 2014). Finally, Whetten et al.'s (2009) baseline study conducted in six sites across five LMICs (Cambodia, India [Hyderabad and Nagaland], Kenya, Tanzania, and Ethiopia) also found that children in institutional settings scored as well as or better than those in community-based settings across several outcomes including health, emotional and cognitive functioning, and physical growth.

One possible explanation as to why children in institutional settings may fare as well or better than those in community-based settings lies in the varying definition of “institution.” As previously mentioned, Whetten et al. (2009) found that, on average, modern-day institutions look very different from institutions from early studies that compared child outcomes in institutions versus community settings. Whetten et al. (2014) found that residential care institutions, particularly in LMICs, represent a wide range of child care models with diverse resources, cultural traditions, and risk/resilience features that serve as protective environments in the face of extreme hardship. The researchers explain that many institutions grew out of the community to meet the need of caring for the growing orphan population and are a part of the community in a way that perhaps institutions in early studies were not. These modern-day institutions cited by Whetten et al. (2009) are not family-style community care and they are not foster care, but they also do not look like the institutions described in the early studies.

Another possible explanation as to why children in institutional settings may experience positive outcomes could be related to the protective functioning of positive

peer relationships for at-risk children (Criss, Pettit, Bates, Dodge, & Lapp, 2002; Lansford, Criss, Pettit, Dodge, & Bates, 2003). Several studies have examined at-risk children's peer relationships and their role in attenuating the negative effects of family adversity and indexes of child adjustment (Bolger, Patterson, & Kupersmidt, 1998; Criss et al., 2002; Lansford et al., 2003; Schwartz, Dodge, Pettit, Bates, and the Conduct Problems Prevention Research Group, 2000). Bolger et al. (1998) showed the possible protective function of friendship among children who had experienced maltreatment. Among children who had reciprocal best friends or had high-quality friendships, the association between maltreatment and poor child self-esteem was attenuated. Schwartz et al. (2000) found that the relation between negative family experiences and victimization was positive and significant among those children who had few or no friends. However, this association was nonsignificant among children with an extensive friendship network. Additionally, Criss, Pettit, Bates, Dodge, & Lapp (2002) found that peer group acceptance and the number of reciprocal friendships of children in kindergarten and first grade attenuated the link between family adversity and externalizing behavior problems in second grade. Collectively, these studies suggest that aspects of positive peer relationships (both quality friendships and the broader peer group) can serve ameliorative functions and offset the risks for at-risk children. Thus, institution-based OSC, who are typically surrounded by more peers than their community-based counterparts, may be afforded more opportunities to form buffering positive peer relationships and peer group affiliations.

Findings from these studies should not be interpreted to mean that institutions are the preferred care setting for children, but rather that community-based or adoption/foster care settings are not guaranteed to be a better place for a child to live. Instead, it is reasonable to consider that some options may be more appropriate than others for specific OSC populations and contexts. It is also likely that the quality of care provided within a setting, whether that setting is institution-based, community-based, or something in-between, makes a significant difference in child well-being outcomes. As Fluke and colleagues note, “children experiencing abuse, severe neglect, violence, or severe malnutrition in family or kinship contexts will not necessarily experience better developmental outcomes compared to children in established and operated institutions providing high-quality services in the community” (Fluke et al., 2012, p. 726).

Research on Moderators of OSC and Well-Being

Currently, there is a lack of research on moderating factors of the relationship between OSC care settings and psychosocial well-being. However, related fields of research on individual-level psychosocial predictors may provide direction for such research. Previous studies showed mixed or inconsistent findings regarding the significance of certain individual-level factors, such as age, gender, and orphan status.

Age

Some studies have found that older OSC have higher levels of psychosocial distress and PTSD symptoms than younger OSC (Cluver et al., 2009; Neugebauer et al., 2009). Cluver et al. (2009) found that as age increased by 2.4 years, PTSD score

increased significantly by 2.87 units for AIDS-orphaned children in South Africa. In Neugebauer et al.'s 2009 Rwanda study, the rate of "probable PTSD" is highest among the 17-19-year-old age group, while rates in the 8-13 and 14-16-year-old age group did not differ. However, a study by Nyamukapa et al. (2008) found no differences in psychosocial distress between younger (aged 12-14 years) and older (aged 15-17 years) Zimbabwean children. It is unclear whether the importance of age in predicting psychosocial well-being is greater for children in institution- or community-based care settings.

Gender

While some studies found no differences in psychological well-being among male and female OSC (Cluver et al., 2009; Onuoha & Munakata, 2010), other studies found that girls were more vulnerable to psychosocial distress than boys (Makame et al., 2002; Neugebauer, Fisher, Turner, Yamabe, Sarsfield, & Stehling-Ariza, 2009; Nyamukapa et al., 2008). Makame et al. (2002) reported more internalizing problems among affected girls than boys and suggested that boys in Tanzania were more likely to be supported by relatives to succeed, so that they can continue the family lineage (Makame et al., 2002). In a sample of 5321 children aged 12-15 years in Zimbabwe, Nyamukapa et al. (2008) reported that overall, girls were found to have more psychosocial distress than did boys. In yet another study, Neugebauer et al. (2009) used The National Trauma Survey NTS) of Rwandans aged 8-19 (n = 1547) and found that the rate of PTSD vulnerability was higher among females than males. Currently, there is no research that examines whether the

importance of gender in predicting psychosocial well-being is greater for children in institution- or community-based care settings.

Orphan Status

With regards to orphan status, some studies have indicated little difference in the psychosocial well-being of paternal, maternal, and double orphans (Baaroy & Webb, 2008; Cluver, Fincham, & Seedat, 2009; Fang, Li, Stanton, Hong, Zhang, Zhao, Zhao, Lin, & Lin, 2009). Conversely, other studies have reported that maternal and double orphans are more likely to have higher levels of psychosocial distress than their paternal orphan counterparts (Ruiz-Casares, Thombs, & Rousseau, 2009; Wood, Chase, & Aggleton, 2006; Yurcelen, 2007) and are also more likely to experience behavioral and emotional difficulties, suffer, abuse, and report lower rates of trusting relationships with caregivers (Baaroy & Webb, 2008; Kang, Dunbar, Laver, & Padian, 2008; Zhao, Li, Fang, Zhao, Zhao, Lin, & Stanton, 2010). A study conducted in Kenya also supported these findings and found that, because Kenyan fathers are likely to re-marry after being widowed, maternal orphans' situations worsened over time, as their new step-mother often favored her own biological children (Nyambedha, Wandibba, & Aagaard-Hansen, 2003). Interestingly, few studies have included a fourth and potentially vulnerable category of orphan: separated or abandoned children with no dead parent (a.k.a. a "social orphan"). It is currently unknown whether the importance of orphan status in predicting psychosocial well-being is greater for children in institution- or community-based care settings.

Potential Moderating Roles of Components of Quality of Care on OSC and Psychosocial Well-Being

As mentioned earlier, it is reasonable to believe that positive psychosocial well-being of OSC may, in part, depend on the availability of certain components of quality of care rather than solely the structure or nature of the living environment where OSC receive care. While a small body of research suggested there may be certain components of quality of care that are linked to positive psychosocial outcomes of OSC (Sarker, Neckermann, & Müller, 2005; Whole Child International, 2015; Juffer & Series, 2008), no research has been extended to the context of different OSC care settings. Some potential components of quality of care that may moderate the association between OSC care setting and child psychosocial well-being include: food security, quality of shelter, quality of care, and access to health care services.

Food Security

“Food Security” was defined as: “the ability of the household or institution to obtain and provide enough food for the child. This food should be obtained through socially acceptable ways, without resorting to emergency food supplies, scavenging, begging, stealing, or other coping strategies” (O’Donnell et al., 2013, p.11). In previous studies, poverty and malnutrition have been documented as major factors affecting general child well-being (Panpanich, Brabin, Gonani, & Graham, 1999; Vozoris & Tarasuk, 2003). Severe child hunger has also been reported to be associated with higher levels of psychosocial distress among school-aged children (Weinreb, Wehler, Perloff, Scott, Hosmer, Sagor, & Gundersen, 2002). In Worcester, Massachusetts, Weinreb et al.

(2002) collected data from homeless and low-income housed mothers and their children (180 preschool-aged children and 228 school-aged children). Compared with those with no hunger, school-aged children with severe hunger were more likely to have stressful life events when compared with those with no hunger. School-aged children with severe hunger scores also had parent-reported anxiety scores that were more than double the scores for children with no hunger and significantly higher internalizing behavior problems when compared with children with no hunger (Weinreb et al., 2002).

Improving the nutritional status of infants and children is also associated with improved motor development, mental development, and cognitive ability (Berkman, Lscano, Gilman, Lopez, & Black, 2002; Grantham-McGregor, Powell, Walker, & Himes, 1991; Husaini, Karyadi, Kusaini, Sandjaja, Karadi, Pollitt, 1991; Pollitt et al., 1993; Pollitt & Schurch, 2000; Waber, Vuor-Christiansen, Ortiz, Clement, Christiansen, Mora, Reed, & Herrera, 1981). Randomized trials that provided food supplements to improve children's nutritional status have shown benefits to behavior including reduced apathy (Mora, Clement, Christiansen, Ortiz, Vuor, Wagner, 1979) and less fussiness (Pollitt et al., 1993).

For children orphaned or affected by HIV/AIDS, food security and nutrition is an area of significant vulnerability that may result in poorer health and behavioral and learning difficulties (Sarker et al., 2005). However, the research on the relationship between orphan status and malnutrition is still lacking, especially for children in resource-poor countries, where poverty is not exclusive to OSC (Sarker et al., 2005).

Research on the differences in food security across OSC care settings is scant. In a study in Malawi among orphaned children aged 6-18 (n=50), Zimmerman (2005) found that 90% of orphans within orphanages reported having three meals a day, and the remaining 10% reported having two meals a day. Alternatively, for orphans within foster homes, only 10% of orphans reported having three meals a day, 40% reported having two, and 50% reported only having one. Portion size at meals was also different across the two OSC care setting groups. At the orphanages, the caregivers stated that the children could have unlimited portions at each meal, while in foster homes, only 40% of the children stated they could eat as much as they want. The remaining 60% were limited by their caregivers, who served their food portions for them. At present, there are no studies that examine food security as a moderator of the associations between care setting and child psychosocial well-being.

Quality of Shelter

“Shelter” describes “the physical place or structure of the home or institution where the child lives and the extent to which the structure provides security, comfort and protection from weather. Stability is defined in terms of living in the same place for at least the past six months” (O’Donnell et al., 2013, p.15). Many vulnerable children, especially OSC, face unique obstacles in this regard and tend to live in less adequate dwellings (Nyamukapa, Foster, & Gregson, 2003). Atwine et al. (2005) interviewed 123 orphaned children and 110 non-orphaned children aged 11-15 years in rural Uganda. The standardized interview included measures of psychological distress using the Beck Youth Inventory (Beck et al., 1961) as well as questions concerning current and past living

conditions. Atwine et al. (2005) found that orphans described themselves as less frequently content with their living conditions than non-orphans in the same community.

Another study based in Kenya examined the quality of life among fostered orphans and found that only 11% of the foster care providers reported that they had adequate shelter for the members of the household, while the majority (89%) of them did not have adequate shelter (Sala, 2009). Foster care providers had reported that shelter was not only inadequate in terms of space and comfort but was also of poor structural quality (Sala, 2009). Some researchers (Howard, Matinhure, McCurdy, & Johnson, 2006; Richter et al., 2006) note that a focus on environment-related interventions may be especially effective in certain resource-poor settings where psychosocial well-being is often dependent on the physical environment.

Whole Child International (WCI) (2016), an organization that focuses on research-based training to improve early childhood care in limited resource settings, focuses much of their research on the importance of shelter quality. WCI (2016) argues that the general environment for OSC institutional care should be “home-like” and provide feelings of security and comfort. Certain materials can also help recreate a family-like environment where a child can develop a greater sense of belonging and stability and encourage relationship building. Indeed, the quality of the environment can impact the behavior of its occupants – both children and the adults who spend their lives in that space. When children are not appropriately engaged or the environment is not engaging to them, aggressive behavior has been shown to increase (WCI, 2016). Thus, a well-designed group care environment can prevent challenging behavioral issues,

promote children's individual and social development and, ultimately, create a landscape conducive to providing high quality care (WCI, 2016). Presently, there is no evidence whether the importance of quality of shelter in predicting psychosocial well-being is greater for children in institution- or community-based care settings.

Quality of Caregiving

Quality of caregiving was defined as good when “there is an identified adult (parent or guardian) who provides the child with a stable, nurturing, and emotionally secure environment. The relationship between the child and the caregiver should provide physical and psychological security for the child” (O'Donnell et al., 2013, p.17).

Certainly, it is widely acknowledged that one of the most important aspects of childhood is the physical safety and psychological security provided by the adult(s) involved in a child's life (Bowlby, 1958). Unfortunately, many parents with young children, especially in under-resourced countries, are dying because of terminable diseases such as HIV/AIDS. As of 2015, an estimated 13.4 million children worldwide had lost one or both parents to HIV/AIDS (UNICEF, 2016). Consequently, extended family support systems that may already be overwhelmed and impoverished have taken in these children affected by the disease (Director & Simon, 2010). Some children in these situations are well loved, while others are without the consistent and loving care they need to thrive.

Most developmental theories such as social-cultural theory (Vygotsky, 1978), social-learning theory (Bandura, 1977), and attachment theory (Bowlby, 1958), emphasize the importance of early opportunities to experience human relationships for

typical social and mental development. In particular, attachment theory focuses specifically on early experience with a few warm and socially-emotionally responsive adults who are relatively stable in the child's life as the foundation of appropriate social-emotional development and long-term mental health (Bowlby, 1958). Theoretically, an infant with a warm, responsive caregiver develops an internal working model of expectations for nurturing reactions from that caregiver. The infant comes to trust this model of expectations and uses it as a secure base from which to explore the physical and social world. Such experiences tend to promote the development of a sense of worth and self-esteem and appropriate long-term social-emotional development and health, and without the early experience of such an adult, long-term development may be compromised. Thus, attachment theory emphasizes the important role of early caregiver-child social-emotional experience (Bowlby, 1958).

In one study, The St. Petersburg-USA Orphanage Research Team found that very limited caregiver-child social-emotional interactions and the lack of opportunity to develop this caregiver-child relationship can be responsible for delays in most major domains of development in institutionalized children (Juffer & Series, 2008). In the study, a caregiver training intervention was introduced in orphanages for children birth to 48 months in St. Petersburg, Russia. The orphanages were primarily deficient in providing healthy social-emotional experiences between adults and children. Thus, the caregiver training provided new information about child development and encouraged behaviors more typical of Russian birth parents (Juffer & Series, 2008).

The results showed substantial improvement post-intervention in children's physical, mental, and social-emotional development for typical children and for those with a variety of disabilities, who improved the most (35%-63%) across all domains (Groark, McCall, Muhamedrahimov, Nikofova, Palmov, & Home, 2005). In addition, there the more positive the social-emotional experience provided to children and the longer they spent in the interventions, the greater the developmental gains. These results validate the potential importance of early social-emotional experience and adult-child relationships for the positive development of children in institutions.

Quality of care has not received adequate attention in studies of children who have been orphaned, especially in under-resourced countries with high- prevalence HIV/AIDS areas. There are also no studies to date that have examined how quality of caregiving is different for children across institution- vs. community-based care settings. Nonetheless, there is little doubt that the presence or absence of consistent loving care is a critical element in the health and well-being of these children.

Access to Health Care Services

Adequate "health care services" was defined as "a child's access to basic health care services that are age-appropriate, including immunizations (for children under five), bed nets, health education (e.g., HIV prevention for youth), other preventive measures, and appropriate medical care and medicines when sick" (O'Donnell et al., 2013, p.26).

Currently, there is little research that specifically focuses on how inadequate access to health care services may be related to poorer psychosocial well-being of children. However, one can hypothesize that inadequate access to health services is

inextricably linked with poorer physical health, and it is widely acknowledged that physical ill-health is linked to more mental disorders (Patel & Kleinman, 2003). Although this gap in the research exists, there is evidence that shows access to health care services may be different for orphaned children versus their non-orphan counterparts as well as for OSC across institution- and community-based care settings.

Mishra and colleagues (Misra, Arnold, Otieno, Cross, & Hong, 2007) found that children who have been orphaned by HIV/AIDS were less likely to have access to available medical care for prevention and treatment of illnesses. The reasons for less adequate health care for orphans and other vulnerable children compared to their non-orphan counterparts are likely multiple and complex. For example, during field testing for the Child Status Index (O'Donnell et al., 2013), a mother described that, since the death of the children's father, there was no one with whom to leave her other children when she walked some distance to take a sick child to the health center. This observation is consistent with a study in the Democratic Republic of the Congo demonstrating that children whose mothers have died had a higher rate of missing scheduled clinic visits than children whose parents were alive (with or without parental HIV/AIDS) (Kamenga, DaSilva, Muniaka, Matela, Batter, & Ryder, 1990). The higher overall morbidity found among orphaned children (Bledsoe, Ewbank, Isiugo-Anamihe, 1988) is also consistent with poor access to medical care. For example, children in Kenya who were ill with diarrhea were less likely to receive medical care for their illness when their parents were HIV-positive (Bledsoe et al., 1988).

There is a dearth of research that compares differences in health care among institution- and community-based care settings. One qualitative study in Malawi conducted by Zimmerman (2005) found that orphans residing in institution-based settings fared considerably better than orphans in community-based settings. This difference is partly because orphans in institutional settings are typically treated by nongovernmental organizations (NGOs), whereas most other community-based children had to use the public health care system. Additionally, a large number of health supplies that are provided by donors to nonprofit organizations in the developing world rarely find their way into the medicine cabinets of private families, and instead stay in larger clinical settings or child institutional settings. Little research has been conducted on the impact of access to health care services on child outcomes across different OSC care settings.

Realities of “Last Resort” OSC Deinstitutionalization Policies

As the number of children without parental care continues to increase in resource-poor countries, it is important not to discount institutional care as an option before conclusively assessing whether these structures have systematic negative impacts on the millions of children for which they provide care. An almost universal emphasis and focus on deinstitutionalizing children in the face of the urgent necessity for large-scale measures to care for the global orphaned population puts millions of them at risk of deprivation, degradation, and early death (Macarov, 2008). Deinstitutionalizing children in under-resourced countries without systems in place could leave many children behind.

Institutional care should be considered as no less suitable in certain cases and for certain children than other options, especially when there is a serious need for such an option in some parts of the world as well as research from a broader array of cultural and situational contexts that challenges global policy conclusions, shows variability in international institutions, and documents positive effects of interventions seeking to improve institutions. The “last resort” language used in global policies and legislature (UN General Assembly, 1989; UNICEF, 2011; Save the Children, 2009; Better Care Network, 2014) does not create a constructive way of approaching alternative care solutions for any child without parental care. Efforts to determine standards and strategies to improve institutional care to “suitability” and make them as supportive of children’s development and mental health as possible are vital.

Theoretical Framework

Maslow’s (1943) hierarchy of needs theory provides a conceptual framework of the progressively complex needs which must be met to grow and live well beyond basic survival. The hierarchy of needs (1943) encompasses five areas as they relate to humans and their development. In sequence, these include physiological needs, security and safety needs, the need for love and belonging, esteem needs, and self-actualization.

Maslow’s first three levels of needs are of particular relevance to the current study. The physiological needs include air, food, drink, shelter, warmth, and sleep. Safety and security needs entail having protection from elements, security, order, stability, and

freedom from fear. Love and belongingness needs consist of friendship, intimacy, trust and acceptance, receiving and giving affection and love (Maslow, 1943).

These first three levels of Maslow's (1943) hierarchy of needs (i.e. physiological needs, safety and security needs, and the need for love and belonging) must be satisfied before progressing on to meet higher level needs. Many people confidently assert that family- or community-based care settings are the optimal settings for OSC to meet these basic needs, and thus help children move toward more complex needs and develop positive child outcomes such as psychosocial well-being. However, some researchers (Senefeld, Strasser, Campbell, & Perrin, 2011) argued that this assumption does not hold true in many resource-poor settings with high and rising prevalence rates of orphanhood.

Thus, applying the logic of Maslow's (1943) hierarchy of needs theory supports the notion that the availability of certain components of quality of care such as food security, quality of shelter, quality of care, and access to health services may be important to a child's psychosocial well-being and development rather than solely the structure or nature of the living environment where OSC receive care. This theory provides the framework to examine predictors of psychosocial well-being and moderating factors on the associations between OSC care settings and child psychosocial well-being (see Figure 1.1).

Summary

OSC are in need of suitable living environments that promote their well-being. Because most OSC are forced to move to a variety of alternative care options such as

extended family members' homes, residential care institutions, group homes, adoption, or foster care, it may be important to understand the extent to which certain components of quality of care promote psychosocial well-being as well as the extent to which moderating factors across various OSC care settings may also promote OSC psychosocial well-being.

Currently, no other studies have focused on the availability of components of quality of care present in different OSC care settings, such as food security, quality of shelter, quality of caregiving, and access to health care services. Additionally, there are very few studies that have enrolled a statistically representative sample of both institution- and community-based OSC from culturally diverse sites across multiple low and middle income countries (LMICs).

Given the magnitude of the OSC crisis, the severe psychosocial effects of orphanhood, and the vast variety of institution- and community-based care settings in which OSC reside, the need for new research about OSC care settings that supports researchers, policymakers, and practitioners in designing and implementing strategies for OSC psychosocial well-being is urgent. Data from The Positive Outcomes for Orphans (POFO) Study could potentially illuminate such community-specific solutions for OSC.

Altogether, this detailed review of the literature revealed the need to address the following research questions:

1. To what extent do certain components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) predict child psychosocial well-being?

2. To what extent do certain components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) moderate the associations between different OSC care settings (institution- or community-based care settings) and child psychosocial well-being?
3. To what extent do certain demographic factors such as age, gender, and orphan status moderate the associations between different OSC care settings (institution- or community-based care settings) and child psychosocial well-being?

Chapter III describes the specific methods used for the study, including the research methodology, study procedures, measures, approach to analysis, and threats to validity.

CHAPTER III

RESEARCH DESIGN – METHODS AND PROCEDURES

This study was designed as an extension of Whetten et al.'s 2009 study that found psychosocial well-being was no worse for institution-based than community-based OSC and after adjusting for sites, age, and gender, institution- vs. community-based care settings explained only 0.3-7% of the variability in child outcomes. It drew from data from the ongoing Positive Outcomes for Orphans (POFO) Study (Whetten et al., 2009) at the Duke Center for Health Policy and Inequalities Research. The study employed two-stage random sampling survey methodology to select 2,837 OSC among six culturally, religiously, politically, historically, and geographically distinct sites in five medium HDI nations facing rising OSC populations: Cambodia, India (Hyderabad and Nagaland), Kenya, Tanzania, and Ethiopia. Study participants included non-orphans, institution- and community-based orphans and separated children, and their primary caregivers. This chapter details the data collection protocol, sample characteristics, research measures, approach to analysis, and threats to validity of the study.

Sampling

Positive Outcomes for Orphans (POFO) Study

The Positive Outcomes for Orphans (POFO) Study at Duke University's Center for Health Policy and Inequalities Research (CHPIR) employed two-stage random sampling survey methodology to select 2,837 (1,357 institution-based and 1,480

community-based) OSC among six culturally, religiously, politically, historically, and geographically defined study sites across five low and middle income countries (LMICs): Cambodia, India (Hyderabad and Nagaland), Kenya, Tanzania, and Ethiopia. Study participants included non-orphans, institution- and community-based orphans and separated children, and their primary caregivers.

Baseline data collection was conducted between May 2006 and February 2008 among institution- and community-based OSC and their caregivers, with follow-up data collection rounds occurring every six months since baseline (one exception being child mental health data, which was only collected every 12 months to avoid overwhelming the child participants). This longitudinal research design helped examine the influence of ongoing life events, placement, caregiver characteristics, and cultural settings on children's well-being and outcomes.

Data were collected from: (a) children aged 6-12 who resided in communities and who had a parent who had died or was missing, (b) children who resided in institutions, (c) the children's primary caregivers, and (d) a person who could respond to administrative questions about the institution. Age inclusion criteria were based on survey instrument validity and pilot testing. The study sought to look at OSC aged 4 and older due to the findings of previous studies, but the pilot testing indicated that 4-year-olds did not seem to understand many of the questions. Written informed consent was obtained from each participating caregiver and from the heads of participating institutions. Written informed assent was given by all participating children.

Country selection. From a group of thirteen countries in which the research team had existing relationships with grassroots community organizations with an interest in the proposed research, six sites in five countries were selected that were culturally, historically, ethnically, religiously, politically, and geographically diverse from each other: Battambang District, Cambodia; Addis Ababa, Ethiopia; Bungoma District, Kenya; Nagaland and Hyderabad, India; and Kilimanjaro Region, Tanzania. Political boundaries were used to define these study areas.

Cambodia. Cambodia lies in Southeastern Asia, bordering the Gulf of Thailand between Thailand, Vietnam, and Laos. Having a total area of 181,035 square kilometers, it is slightly smaller than the state of Oklahoma. The July 2016 population estimate for Cambodia was 15,957,223 with a population growth of 1.56%, making it the 69th most populated country in the world (CIA, 2016). The age structure consists of 0-14 years: 31.24%, 15-24 years: 19.02%, 25-54 years: 40.18%, 55-64 years: 5.43%, and 65 years and over: 4.14%, while the total median age of the population is 24.9 years. Ethnic composition of the population is Khmer (97.6%), Cham (1.2%), Chinese (0.1%), Vietnamese (0.1%), and other (0.9%). The religions practiced in Cambodia include Buddhism (96.9%), Islam, (1.9%), Christianity (0.4%) and other (0.8%) (CIA, 2016).

Cambodia's Human Development Index (HDI) for 2014 was 0.555— which put the country in the medium human development category—ranking it 143 out of 188 countries and territories (UNDP, 2015). Between 1990 and 2014, Cambodia's HDI value increased from 0.364 to 0.555, an increase of 52.4 percent or an average annual increase

of about 1.77 percent. Additionally, Cambodia's gross national income (GNI) per capita increased by about 292.2 percent between 1980 and 2014 (UNDP, 2015).

Ethiopia. Ethiopia lies in Eastern Africa, west of Somalia. Having a total area of 1,104,300 square kilometers, it is slightly less than twice the size of the state of Texas. The July 2016 population estimate for Ethiopia was 102,374,044 with a population growth rate of 2.88%, making it the 14th most populated country in the world (CIA, 2016). The age structure consists of 0-14 years: 43.71%, 15-24 years: 20.04%, 25-54 years: 29.45%, 55-64 years: 3.89%, and 65 years and over: 2.91%, while the total median age of the population is 17.8 years. Ethnic composition of the population is Oromo (34.4%), Amhara (27%), Somali (6.2%), Tigray (6.1%), Sidama (4%), Gurage (2.5%), Welaita (2.3%), Hadiya (1.7%), Afar (1.7%), Gamo (1.5%), Gedeo (1.3%), Silte (1.3%), Kefficho (1.2%), and other (8.8%) The religions practiced in Ethiopia include Ethiopian Orthodox (43.5%) Islam (33.9%), Protestantism (18.5%), Traditionalism (2.7%), Catholicism (0.7%), and other (0.6%) (CIA, 2016).

Ethiopia's HDI value for 2012 is 0.396—in the low human development category—positioning the country at 173 out of 187 countries and territories (UNDP, 2013). Between 2000 and 2012, Ethiopia's HDI value increased from 0.275 to 0.396, an increase of 44 percent or average annual increase of about 3.1 percent. In the 2011 HDR, Ethiopia was ranked 174 out of 187 countries (UNDP, 2013).

Kenya. Kenya lies in Eastern Africa and borders the Indian Ocean between Somalia and Tanzania. Having a total area of 580,367 square kilometers, it is slightly more than twice the size of the state of Nevada. The July 2016 population estimate for

Kenya was 46,790,758 with a population growth rate of 1.81%, making it the 31st most populated country in the world (CIA, 2016). The age structure consists of 0-14 years: 40.87%, 15-24 years: 18.83%, 25-54 years: 33.54%, 55-64 years: 3.84%, and 65 years and over: 2.92%, while the total median age of the population is 19.5 years. Ethnic composition of the population is Kikuyu (22%), Luhya (14%), Luo (13%), Kalenjin (12%), Kamba (11%), Kisii (6%), Meru (6%), other African (15%), and non-African (1%). The religions practiced in Kenya include Christianity (83%), Protestantism (47.7%), Catholicism (23.4%), other Christianity (11.9%), Islam (11.2%), Traditionalism (1.7%), other (1.6%), none (2.4%), and unspecified (0.2%) (CIA, 2016).

Kenya's HDI has experienced only modest growth since 1980, from 0.420 to 0.520 in 2012 (UNDP, 2013). The Human Development Index survey by the United Nations Development Program ranked Kenya at 145th out of 187 nations. With a gross national income (GNI) per capita of US \$840 in 2012, Kenya is considered a low-income country in Sub-Saharan Africa (UNDP, 2013).

India. India lies in Southern Asia between Burma and Pakistan, bordering the Arabian Sea and the Bay of Bengal. Having a total area of 3,287,263 square kilometers, it is slightly more than one-third the size of the U.S. The July 2016 population estimate for India was 1,266,883,598 with a population growth rate of 1.19%, making it the 2nd most populated country in the world (CIA, 2016). The age structure consists of 0-14 years: 40.87%, 15-24 years: 18.83%, 25-54 years: 33.54%, 55-64 years: 3.84%, and 65 years and over: 2.92%, while the total median age of the population is 19.5 years. Ethnic composition of the population is Indo-Aryan (72%), Dravidian (25%), Mongoloid and

other (3%). The religions practiced in India include Hinduism (79.8%), Islam (14.2%), Christianity (2.3%), Sikhism (1.7%), and other and unspecified (2%) (CIA, 2016).

India's HDI value for 2014 is 0.609— which put the country in the medium human development category— positioning it at 130 out of 188 countries and territories (UNDP, 2015). Between 1980 and 2014, India's HDI value increased from 0.362 to 0.609, an increase of 68.1 percent or an average annual increase of about 1.54 percent. India's gross national income (GNI) per capita increased by about 338.0 percent between 1980 and 2014 (UNDP, 2015).

Tanzania. Tanzania lies in Eastern Africa between Kenya and Mozambique, bordering the Indian Ocean. Having a total area of 947,300 square kilometers, it is slightly larger than twice the size of the state of California. The July 2016 population estimate for Tanzania was 52,482,726 with a population growth rate of 2.77%, making it the 27th most populated country in the world (CIA, 2016). The age structure consists of 0-14 years: 44.06%, 15-24 years: 19.71%, 25-54 years: 29.74%, 55-64 years: 3.5%, and 65 years and over: 2.99%, while the total median age of the population is 17.6 years. Ethnic composition of the population is African (99%) of which 95% are Bantu consisting of more than 130 tribes, and other (1%) consisting of Asian, European, and Arab. The religions practiced in Tanzania are Christianity (61.4%), Islam (35.2%), folk religion (1.8%), other (0.2%), and unaffiliated (1.4%) (CIA, 2016).

With an HDI score of 0.488, Tanzania falls into the bottom quartile of countries with the lowest level of human development (UNDP, 2014). Ranking at 159 out of 187 countries, the UNDP's Global Human Development Report for 2014 has therefore

classified Tanzania as a low human development country. It is important to note that Tanzania fell in ranking compared to its position in the Global Human Development Report 2013, where Tanzania was ranked 152 out of the 187 (UNDP, 2014).

Selection of institution-based children. For each of the six study areas, comprehensive lists of all institutions were created. To ensure broad representation, institutions were defined as structures with at least five orphaned children from at least two different families not biologically related to the caregiver(s). While this procedure could have resulted in the inclusion as “institutions” of family homes that are more like foster families, only 3 of the 83 institutions included were operated from caregivers’ homes. Institutions specifically for street children, special needs children, and international adoption were excluded. The institutional sampling frame was generated through inquiries to local government officials, schools, and organizations working with orphans. Lists were randomized and institutions were approached sequentially until 250 children were enrolled into the study (see child selection below). If an institution refused participation, the next institution on the list was approached. To ensure that the sample was not dominated by large institutions, up to 20 children per institution were eligible to participate; at three sites this threshold was later eliminated to allow for the enrollment target of 250 children to be met at each site (see below). In total, 83 out of 94 institutions approached participated in the study: 9 in Battambang, Cambodia (1 refusal), 12 in Addis Ababa, Ethiopia (2 refusals), 14 in Hyderabad, India (5 refusals), 14 in Dimapur and Kohima Districts of Nagaland, India (2 refusals), and 21 in Bungoma, Kenya (no

refusals). Reasons for refusals ranged from fear of psychological damage to the children to wanting monetary compensation for project participation.

Each institution provided a list of all residential children under their care aged 6 to 12. Using a list of random numbers, up to 20 children per institution were randomly selected; the exception to this protocol was sites where the enrollment target of 250 children could not be met using this restriction (i.e. Cambodia and Nagaland, India). Under this condition, all children in the age range became eligible to participate.

Selection of community-based children. Children in community-based settings are defined as community-dwelling children for whom one or both parents had died or children who had been separated from their parents with no expectation of return and no contact information for either parent. Most, but not all, community-dwelling OSC lived with the remaining parent or other biological relatives. Geographic or administrative boundaries were used to define 50 sampling areas (“clusters”) within each site. Up to 5 eligible children were randomly selected from each cluster using available lists or through a house-to-house census. In homes with more than 1 age-eligible (ages 6-12) child, the child whose first name was first alphabetically was selected.

Caregiver selection. The children’s (self-identified) primary caregivers were asked to respond to surveys about themselves and the children. In total, 193 institutional caregivers, ranging from 16 institutional caregivers in Nagaland to 52 in Cambodia, and 1,480 community-based caregivers participated in the assessments.

Participants in the Current Dissertation Study

The current study drew from data from the ongoing Positive Outcomes for Orphans (POFO) Study at Duke University's Center for Health Policy and Inequalities Research (CHPIR). For the purposes of this study, non-orphan study participants were omitted from the dataset, leaving institution- and community-based orphans and separated children, and their primary caregivers. Study participants were selected from all six culturally, religiously, politically, historically, and geographically distinct sites across five medium HDI nations facing rising OSC populations: Cambodia, India (Hyderabad and Nagaland), Kenya, Tanzania, and Ethiopia. Using the most recent round of the study (Round 7), which was administered 36 months after the baseline assessment (February 2008), data from a total of 2,013 (923 institution-based and 1,090 community-based) OSC study participants were available for analysis.

Research Measures

Assessment of Components of Quality of Care: The Child Status Index (CSI)

The Child Status Index (CSI) was developed as an easy-to-use tool to assess children's current needs, monitor improvements in specific dimensions of child well-being, and identify areas of concern that can be served by program interventions (O'Donnell et al., 2013). This simple, low-cost tool can potentially help community workers and other field personnel working directly with children and their families to systematically and continuously monitor the changes in a child's well-being relative to an intervention to inform program decisions and improve the quality of services for children

(O'Donnell et al., 2013). Initially developed for programs that support children affected by HIV/AIDS, the CSI is also applicable to programs for disadvantaged or at-risk children, including OSC (O'Donnell et al., 2013).

The CSI was developed as a high inference tool (McKenzie, 1994), meaning observers make inferences or conclusions based on direct observations and interviews with local stakeholders (guardians, children, and community members) and rate each of the factors on a four-point scale. This approach collects meaningful information about a child and his/her living environment from a community context. High inference assessments are frequently used in studies of school environments/climates and teacher effectiveness (Chavez, 1984) as well as in anthropological information gathering (White, 1990).

Several of the CSI interview questions and observations address concepts that require combining various sources of information and making judgments based on the collected information. The design of the CSI allows community workers to make inferences using multiple sources of information in a reliable manner. It is highly recommended that “the CSI is used in combination with other intervention programs that focuses on mitigating child vulnerabilities and improving child outcomes through supporting parents, caregivers, and families” (O'Donnell et al., 2013, p. 37).

The CSI rating was part of a home visit conducted by care workers. The care worker had a brief and informal discussion (usually about 30 minutes) with the child, the child's caregiver, or other involved adults in the community as needed to gather general information about the child. The care worker also observed the child's care setting as

well as the behavior of the child and caregivers toward each other, toward the care worker, and toward other adults and children. The goal was to gather information from discussions and observations that related to each of the 12 structured CSI factors. At the same time, the care worker was trained to conduct the interviews in a natural and spontaneous way, so that observations about the child's life could be done in a friendly and supportive way.

The development of the CSI tool began in Kenya and Tanzania and involved a community participatory process that involved local OSC caregivers, community workers, and village leaders (O'Donnell et al., 2013). Researchers conducted a series of informal discussions with key stakeholders in Kenya and Tanzania to derive the domains and factors of the CSI. The CSI was then tested in other countries, such as Ethiopia, Rwanda, India, and Cambodia, where fieldworkers provided additional feedback on the tool's applicability for their contexts (O'Donnell et al., 2013). After implementing this feedback, a few studies conducted in Kenya and Tanzania successfully field tested for inter-rater reliability and construct validity (Foreit, Chapman, O'Donnell, Cannon, & Moreland, 2012; Sabin, Tsoka, Brooks, & Miller, 2011; Sabin, Tsoka, Brooks, Simon, & Miller, 2012; Senefeld, O'Donnell, Umar, Murphy, Ostermann, Masnick, & Nyberg, 2011).

The tool itself was developed based on several child-centered and broader environmental factors and was organized under six domains: Food and Nutrition; Shelter and Care; Protection; Health; Psychosocial; and Education and Skills Training. For each domain, there are two different factors that are identified as areas of concern. These

identified factors can potentially be changed by providing additional resources, and can identify urgent situations for the child or care setting. Each of the 12 factors was rated on four levels of well-being, where higher scores indicated better child and care setting status in that area (i.e. 1 = very high risk; 2 = moderately high risk; 3 = moderately low risk; 4 = no risk).

Components of Quality of Care (CSI factors). Among the twelve different factors of the CSI, the following four factors were used for analysis based on their relevance to the “components of quality of care” construct as well as empirical evidence that suggests their potential moderating effects on OSC care settings. Moreover, these four factors were also chosen for the study’s analyses based on the expert recommendation of the CSI creator, Karen O’Donnell.

CSI factor 1: Food security. The goal of this factor was for the child to have sufficient and nutritious food at all times of the year to grow well and to have an active and healthy life. For the purposes of this study, “Food Security” was defined as: “the ability of the household or institution to obtain and provide enough food for the child. This food should be obtained through socially acceptable ways, without resorting to emergency food supplies, scavenging, begging, stealing, or other coping strategies” (O’Donnell et al., 2013, p.11).

CSI factor 3: Shelter. The goal of this factor was for the child to have a stable shelter that is adequate, dry, and safe. For the purposes of this study, “Shelter” describes “the physical place or structure of the home or institution where the child lives and the extent to which the structure provides security, comfort and protection from

weather. Stability is defined in terms of living in the same place for at least the past six months” (O’Donnell et al., 2013, p.15).

CSI factor 4: Caregiving. The goal of this factor was for the child to have at least one adult (age 18 or over) who provides consistent care, attention, and support. For the purposes of this study, caregiving was “seen as good when there is an identified adult (parent or guardian) who provides the child with a stable, nurturing, and emotionally secure environment. The relationship between the child and the caregiver should provide physical and psychological security for the child. This factor captured how committed the caregiver was to the child and to his/her involvement with the child” (O’Donnell et al., 2013, p.17).

CSI factor 8: Health care services. The goal of this factor was for the child to have access to health care services, including preventive care and medical treatment when ill. For the purposes of this study, adequate “health care services” was defined as “a child’s access to basic health care services that were age-appropriate, including immunizations (for children under five), bed nets, health education (e.g., HIV prevention for youth), other preventive measures, and appropriate medical care and medicines when sick” (O’Donnell et al., 2013, p.26).

Child Psychosocial Well-Being

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) was administered to children aged 10 and older and to the caregivers for all children. This

brief behavioral screening tool (applicable for children 3–16 years old) was used to assess behavioral and emotional difficulties and pro-social behavior.

The five subscales of the SDQ (emotional symptoms, conduct problems, hyperactivity/inattention; peer relationship, and pro-social behavior) had 5 items each; items were scored from 0–2. The subscales can be used to assess indications of cognitive and behavioral difficulties as well as developmental strengths. The first four difficulties subscales added up to a total difficulties score, while the fifth subscale provided assessment of acceleration in prosocial behavior. The questionnaire can be completed in 2 versions: (a) parent, teacher or caregiver report, and (b) child self-report (Goodman, 1997).

The SDQ was selected because of the dimensions of behavior assessed, its brevity, and its frequent use in studies of children in international contexts (Becker, Hagenberg, Roessner, Woerner, & Rothenberger, 2004; Goodman, 2001; Muris, Meesters, Eijkelenboom, & Vincken, 2004). Internal reliability statistics of self-reported Total Difficulties scores from these previous studies were generally sufficient, with the following reported Cronbach's alphas: $\alpha = 0.78$ in a study based in Germany (Becker et al., 2004), $\alpha = 0.73$ in a study based in the U.K. (Goodman, 2001), and $\alpha = 0.76$ in a study based in the Netherlands (Muris et al., 2004). The current study used the Total Difficulties scale (20 items; $\alpha = .78$) from the child self-report version (Goodman, 1997) as a measure of psychosocial difficulties, with higher scores signifying more behavioral and emotional difficulties (ranging from 0–40). A score of 15 was the clinical cut-off for diagnosing symptoms of PTSD in children (Goodman, Ford, Corbin, & Meltzer, 2004).

Procedures

One local male and female interviewer and a lead investigator from each site were trained on study protocol and procedures. A week-long training took place at a central location with all interviewers and primary investigators present. Following the training, the interviewers continued practicing and were certified only after repeated direct observation or video taping of interviews with local non-study children. The psychological testing was conducted by a trained child psychologist from Duke University. Site visits, with interviewer observation, were conducted during the data collection to further ensure accuracy and consistency across interviewers and sites. Interviews were conducted in the child's residence and children were interviewed verbally in their native language.

Approach to Analysis

The data set was adequately cleaned and prepared for analysis. After looking at frequencies and missing data, the most recent round of the study (Round 7) was chosen for analysis because of its completeness of relevant data (e.g. the CSI and SDQ). After omitting all rounds of data except Round 7, a series of hierarchical linear regression analyses were run to test the main effects of the components of quality of care on child psychosocial well-being, while controlling for care settings and demographic factors (Hypotheses 1A-1D). Care setting, age, gender, and orphan status (a categorical variable that was dummy coded into three separate, dichotomous variables) were entered as the independent variables in the first model (Step 1) to control for care setting and available

demographic factors. In the second model (Step 2), each of the components of quality of care (CSI variables) was added as an independent variable to the analysis. Additionally, a follow-up analysis was done entering all four of the components of quality of care into the second model (Step 2).

Next, a series of moderated multiple regressions were run to test Hypotheses 2A-2D using care setting type (which was sorted to only include institution- and community-based OSC, excluding the community-based non-orphan comparison group) as the independent variable and child psychosocial well-being (as measured by the SDQ Total Difficulties), as the dependent variable. The analyses used available key demographic factors such as age, gender, and orphan status, and CSI variables chosen to reflect certain components of quality of care (i.e. food security, quality of shelter, quality of caregiving, and access to health care services), as moderator variables, which were centered and entered in the first regression model (Step 1). Next, new interaction terms (Aiken & West, 1991) were computed by centering the moderator variables and the predictor variable, creating seven multiplicative terms, one for each CSI factor X care setting and each key demographic factor X care setting. These interaction terms were then entered in the second regression model (Step 2). This process was done with each of the seven hypothesized moderators (i.e., four CSI factors, age, gender, and orphan status). To interpret the nature of significant interaction effects, an SPSS macro called PROCESS (Hayes, 2013) was used.

Threats to Validity

Several features of this study threatened its validity, including the study site selection, a limited sample size, and the use of un-validated self-report measures. From a group of 13 countries in which the research team had existing relationships, six study sites within five different LMICs countries were selected that were culturally, historically, ethnically, religiously, politically, and geographically diverse from each other. Although this cross-cultural research design did contribute to a greater generalizability of the results to LMICs, South America and Eastern Europe were not represented, where much of the earlier research on institutional care originated. Thus, the results of this study may not be generalizable to OSC in South American and Eastern Europe cultural contexts. Moreover, since this study is limited to only LMICs, the results may not be generalizable to wealthier areas where orphaning and institutions are rarer.

The size of the sample for this specific study is also a major threat to validity. Although the POFO study attempted to draw a locally representative sample of institutions at each site resulting in one of the largest sample of care institutions ever sampled in any single study of OSC, the current study's sample size was reduced significantly after omitting the community-based non-orphan group and splitting participants into care setting comparison groups. The sample size decreased even more when multi-categorical variables (e.g. orphan status) were used for comparison group analyses. This may have caused limitations in power for significant and clear results and patterns to emerge.

Lastly, the measures used in the study and some of the methods used to collect the data may have threatened its validity. As earlier stated, the CSI was successfully field tested in several of the POFO placements for its reliability and construct validity. The CSI was developed as a high inference tool (McKenzie, 1994), where trained care workers make inferences or conclusions based on direct observations and interviews. However, even with the most effective training on interviewing methods, care workers and informants may still be susceptible to biases. Additionally, the SDQ has no published data regarding its psychometric properties or standardization in the five countries of this study. Thus, it is possible that psychosocial well-being is expressed differently in different cultural contexts (Canino & Alegria, 2008). In addition, when an instrument developed in one culture is applied to six other study sites without validation, it is possible that children's behaviors, as measured by the SDQ, may be incorrectly categorized as pathology (Kleinman, Eisenberg, & Good, 1978). Moreover, this measure was based on self-report from the children, which consequently may have allowed for social desirability response bias (Nederhof, 1985) that could affect the accuracy of the results.

Overall, many threats to validity were avoided by adhering strictly to the data collection protocol and properly cleaning and preparing the data for analysis. These procedures helped to ensure accurate results. However, the missing cultural contexts of the study site selection, limited sample size for this specific study, and the use of unvalidated self-report measures in cross-cultural contexts may affect the accuracy of the results and generalizability of the findings.

In summary, this study employed a correlational design with a sample of 2,013 orphaned and separated children (923 institution-based and 1,090 community-based). The study raised three research questions about the relationships between four components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services), key demographic factors, OSC care setting, and child psychosocial well-being. A total of eleven hypotheses were tested. The results of these analyses are presented in Chapter IV.

CHAPTER IV

RESULTS

Data from a total of 2,013 orphaned and separated children (923 institution-based and 1,090 community-based) were available for analysis. The study assessed levels of four components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services), as well as child psychosocial well-being (as reflected in the SDQ Total Difficulties score). The following chapter details the analyses and results for the eleven study hypotheses.

Data Preparation

Descriptive statistics were computed to examine the demographic characteristics of the 2,013 orphaned and separated children (923 institution-based and 1,090 community-based) included in Round 7 of the POFO study (see Table 4.1). The mean age of the sample was 9.19 years old and had a higher proportion of males ($n = 1120$, 55.6%) than females ($n = 893$, 44.4%). Of the four categories of orphans, the greatest number of children were paternal orphans ($n = 920$, 45.7%), followed by double orphans ($n = 549$, 27.3%), separated or abandoned children with no dead parent ($n = 288$, 14.3%), and finally, maternal orphans ($n = 256$, 12.7%). Table 4.1 displays the sample sizes and means for key demographic factors across OSC care settings.

Table 4.1. *Demographic characteristics across OSC care settings*

Demographic Characteristic	Institution-Based		Community-Based		All Settings
	N	% or Mean (SD)	N	% or Mean (SD)	N (%) or Mean (SD)
Age	923	9.15 (1.64)	1090	9.23 (1.58)	9.19 (1.60)
Gender					
Male	523	56.7%	597	54.8%	1120 (55.6%)
Female	400	43.3%	493	45.2%	893 (44.4%)
Orphan Status					
Double Orphan**	365	39.5%	184	16.9%	549 (27.3%)
Maternal Orphan*	92	10.0%	164	15.0%	256 (12.7%)
Paternal Orphan**	303	32.8%	617	56.6%	920 (45.7%)
Separated or Abandoned (with no dead parent)**	163	17.7%	125	11.5%	288 (14.3%)

$p < 0.05 = *$ $p < 0.01 = **$

Table 4.2 shows the means for each component of quality of care as well as the SDQ Total Difficulties scores across OSC care settings. The differences between three of four of the components of quality of care scores across OSC care setting were significant and revealed higher mean scores (high risk = 1, no risk = 4) for institution-based settings over community-based settings ($p < 0.001$ for food security (CSI 1), quality of caregiving (CSI 4), and access to health care services (CSI 8)). As Whetten et al. (2009) discovered in their baseline study, the difference between SDQ Total Difficulties scores (0 = no psychosocial difficulties, 15 = clinical cut-off for diagnosing symptoms of PTSD in

children (Goodman et al., 2004) across OSC care setting was not significant (with a mean difference of .03) after controlling for key demographic factors.

Table 4.2. *Components of quality of care and psychosocial well-being across OSC care settings*

	Institution-Based		Community-Based	
	Mean	SD	Mean	SD
Component of Quality of Care				
CSI 1 (Food Security) **	3.49	.65	3.29	.80
CSI 2 (Quality of Shelter)	3.42	.64	3.37	.73
CSI 4 (Quality of Caregiving) **	3.44	.57	3.23	.73
CSI 8 (Access to Health Care Services) **	3.26	.58	3.11	.68
Psychosocial Well-being				
SDQ Total Difficulties	8.04	5.10	8.07	5.06

$p < 0.001 = **$

Prior to conducting the regression analyses, the relevant assumptions of these statistical analyses were tested. Reliabilities were tested and informed the choice of using the SDQ Total Difficulties scale (20 items; $\alpha = .78$). An analysis of standard residuals was carried out on the data to identify any outliers, which indicated several cases needed to be removed. After omitting these participants, the data contained no outliers. Missing values were identified and all cases with missing pertinent data were omitted from the analyses. An examination of correlations revealed that no independent variables were highly correlated. As the collinearity statistics (i.e., Tolerance and VIF) were all within accepted limits, the assumption of multicollinearity was deemed to have been met.

Finally, residual and scatter plots indicated the assumptions of normality, linearity, and homoscedasticity were also all satisfied.

Research Hypothesis Testing

Hypotheses 1A-1D

The first research question examined the relationship between components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) and psychosocial well-being (SDQ Total Difficulties), after controlling for care setting and available demographic factors. This question led to four hypotheses. The analyses and results are described below for each hypothesis in turn.

H1A: After controlling for care setting and demographic factors, greater food security will significantly predict more positive child psychosocial well-being.

Hypothesis 1A was tested using a hierarchical linear regression with psychosocial well-being (as reflected in the SDQ Total Difficulties) as the dependent variable. Care setting, age, gender, and orphan status (a categorical variable that was dummy coded into three separate, dichotomous variables) were entered as the independent variables in the first model (Step 1) to control for care setting and available demographic factors. In the second model (Step 2), food security (CSI 1) was added as an independent variable to the analysis. The regression statistics are reported in Table 4.3.

The hierarchical linear regression revealed that in the first model, care setting, age, gender, and orphan status did not contribute significantly to the regression model, ($F(6, 2006) = .84, p = .54$) and accounted for 0.0% of the variation in SDQ Total

Difficulties. Entering the food security (CSI 1) variable explained 13.5% of the variation in SDQ Total Difficulties and this change in R^2 was significant, ($F(7, 2005) = 45.80, p < 0.001$) making greater food security (CSI 1) significantly predict more positive psychosocial well-being (lower score on the SDQ Total Difficulties). Hypothesis 1A was supported by this analysis.

Table 4.3. *Hierarchical regression analysis for food security predicting SDQ total difficulties*

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	B
<i>Step 1</i>			
Constant	9.34	.79	
Care setting	-.03	.24	-.00
Gender	-.27	.23	-.03
Age	-.09	.07	-.03
Double orphan status	-.08	.37	-.01
Maternal orphan status	.44	.44	.03
Paternal orphan status	.14	.35	.01
<i>Step 2</i>			
Constant	18.78	.91	
Care setting	-.44	.22	-.04
Gender	-.30	.21	-.03
Age	-.12	.07	-.04
Double orphan status	-.41	.35	-.04
Maternal orphan status	.05	.41	.00
Paternal orphan status	-.45	.33	-.04
Food security (CSI 1)	-2.55	.14	-.37***

Note. $R^2 = .00$ for Step 1: $\Delta R^2 = .14$ for Step 2 ($p < 0.001$).

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

H1B: After controlling for care setting and demographic factors, better quality of shelter will significantly predict more positive child psychosocial well-being.

Hypothesis 1B was tested using a hierarchical linear regression with psychosocial well-being (as reflected in the SDQ Total Difficulties) as the dependent variable. Care setting, age, gender, and orphan status were entered as the independent variables in the first model (Step 1) to control for care setting and available demographic factors. In the second model (Step 2), quality of shelter (CSI 2) was added as another independent variable to the analysis. The regression statistics are reported in Table 4.4.

The hierarchical linear regression revealed that in the first model, care setting, age, gender, and orphan status did not contribute significantly to the regression model, ($F(6, 2006) = .84, p = .54$) and accounted for 0.2% of the variation in SDQ Total Difficulties. Entering the quality of shelter (CSI 2) variable explained 10.0% of the variation in SDQ Total Difficulties and this change in R^2 was significant, ($F(7, 2005) = 32.65, p < 0.001$) making better quality of shelter (CSI 2) significantly predict more positive psychosocial well-being (lower score on the SDQ Total Difficulties). Hypothesis 1B was supported by this analysis.

Table 4.4. *Hierarchical regression analysis for quality of shelter predicting SDQ total difficulties*

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	B
<i>Step 1</i>			
Constant	9.23	.79	
Care setting	-.03	.24	-.03
Gender	-.27	.23	-.03
Age	-.09	.07	-.03
Double orphan status	-.08	.37	-.01
Maternal orphan status	.44	.44	.03
Paternal orphan status	.14	.35	.01
<i>Step 2</i>			
Constant	17.06	.91	
Care setting	-.12	.23	-.01
Gender	-.28	.22	-.03
Age	-.06	.07	-.02
Double orphan status	-.21	.35	-.02
Maternal orphan status	.24	.42	.02
Paternal orphan status	-.06	.33	-.01
Quality of Shelter (CSI 2)	-2.34	.16	-.32***

Note. $R^2 = .00$ for Step 1; $\Delta R^2 = .10$ for Step 2 ($p < 0.001$).

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

H1C: After controlling for care setting and demographic factors, better quality of caregiving will significantly predict more positive child psychosocial well-being.

Hypothesis 1C was tested using a hierarchical linear regression with psychosocial well-being (SDQ Total Difficulties) as the dependent variable. Care setting, age, gender,

and orphan status were entered as the independent variables in the first model (Step 1) to control for care setting and available demographic factors. In the second model (Step 2), quality of caregiving (CSI 4) was added as another independent variable to the analysis. The regression statistics are reported in Table 4.5.

The hierarchical linear regression revealed that in the first model, care setting, age, gender, and orphan status did not contribute significantly to the regression model, ($F(6, 2006) = .84, p = .54$) and accounted for 0.2% of the variation in SDQ Total Difficulties. Entering the quality of caregiving (CSI 4) variable explained 9.0% of the variation in SDQ Total Difficulties and this change in R^2 was significant, ($F(7, 2005) = 29.17, p < 0.001$) making better quality of caregiving (CSI 4) significantly predict more positive psychosocial well-being (lower score on the SDQ Total Difficulties). Hypothesis 1C was supported by this analysis.

Table 4.5. *Hierarchical regression analysis for quality of caregiving predicting SDQ total difficulties*

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	B
<i>Step 1</i>			
Constant	9.23	.79	
Care setting	-.03	.24	-.03
Gender	-.27	.23	-.03
Age	-.09	.07	-.03
Double orphan status	-.08	.37	-.01
Maternal orphan status	.44	.44	.03
Paternal orphan status	.14	.35	.01
<i>Step 2</i>			
Constant	17.53	.96	
Care setting	-.47	.23	-.05
Gender	-.31	.22	-.03
Age	-.12	.07	-.04
Double orphan status	-.14	.35	.01
Maternal orphan status	.25	.42	.02
Paternal orphan status	-.01	.33	.00
Quality of Caregiving (CSI 4)	-2.30	.16	-.30***

Note. $R^2 = .00$ for Step 1; $\Delta R^2 = .09$ for Step 2 ($p < 0.001$).

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

H1D: After controlling for care setting and demographic factors, better access to health care services will significantly predict more positive child psychosocial well-being.

Hypothesis 1D was tested using a hierarchical linear regression with psychosocial well-being (SDQ Total Difficulties) as the dependent variable. Care setting, age, gender, and orphan status were entered as the independent variables in the first model (Step 1) to control for care setting and available demographic factors. In the second model (Step 2), access to health care services (CSI 8) was added as another independent variable to the analysis. The regression statistics are reported in Table 4.6.

The hierarchical linear regression revealed that in the first model, care setting, age, gender, and orphan status did not contribute significantly to the regression model, ($F(6, 2006) = .84, p = .54$) and accounted for 0.2% of the variation in SDQ Total Difficulties. Entering the access to health care services (CSI 8) variable explained 7.6% of the variation in SDQ Total Difficulties and this change in R^2 was significant, ($F(7, 2005) = 23.52, p < 0.001$) making better access to health care services (CSI 8) significantly predict more positive psychosocial well-being (lower score on the SDQ Total Difficulties). Hypothesis 1D was supported by this analysis.

Table 4.6. *Hierarchical regression analysis for access to health care services predicting SDQ total difficulties*

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	B
<i>Step 1</i>			
Constant	9.23	.79	
Care setting	-.03	.24	-.03
Gender	-.27	.23	-.03
Age	-.09	.07	-.03
Double orphan status	-.08	.37	.01
Maternal orphan status	.44	.44	.03
Paternal orphan status	.14	.35	.01
<i>Step 2</i>			
Constant	16.68	.96	
Care setting	-.32	.23	-.03
Gender	-.34	.22	-.03
Age	-.14	.07	-.04
Double orphan status	.26	.36	.02
Maternal orphan status	.60	.42	.04
Paternal orphan status	.23	.34	.02
Access to Health Care Services (CSI 2)	-2.19	.17	-.27***

Note. $R^2 = .00$ for Step 1; $\Delta R^2 = .08$ for Step 2 ($p < 0.001$).

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Follow-up Analysis: Entering CSI Factors in Same Model

A follow-up analysis was conducted for hypotheses 1A-1D to further explore the relationship between components of quality of care and psychosocial well-being. A hierarchical linear regression was run using all four components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) as the independent variables simultaneously in the second model (Step 2). SDQ Total Difficulties remained the dependent variable, and care setting, age, gender, and orphan status were once again entered as the independent variables in the first model (Step 1). This enabled me to test the unique variance associated with each CSI factor while holding the other CSI factors constant.

This hierarchical linear regression once again revealed that in the first model, care setting, age, gender, and orphan status did not contribute significantly to the regression model, ($F(6, 2006) = .84, p = .54$) and accounted for 0.2% of the variation in SDQ Total Difficulties. Entering all four components of quality of care variables (food security (CSI 1), quality of shelter (CSI 2), quality of caregiving (CSI 4), and access to health care services (CSI 8)) explained 14.9% of the variation in SDQ Total Difficulties and this change in R^2 was significant, ($F(10, 2002) = 36.12, p < .001$). The results from this follow-up analysis further supports Hypotheses 1A-1D, suggesting that better or greater levels of each of the components of quality of care significantly and uniquely predicted more positive psychosocial wellbeing, as reflected in the SDQ Total Difficulties as lower scores (food security ($\beta = -.23, p < 0.001$); quality of shelter ($\beta = -.10, p < 0.001$); quality of caregiving ($\beta = -.07, p < 0.01$); access to health care services ($\beta = -.06, p < 0.05$)).

Hypotheses 2A-2D

The second research question examined whether four components of quality of care (including food security, quality of shelter, quality of caregiving, and access to health care services) moderated the associations between OSC care setting (institution- or community-based care setting) and child psychosocial well-being after controlling for demographic factors. This question led to four hypotheses. The analyses and results are described below for each hypothesis in turn.

H2A: Food security will significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. Specifically, when food security is scarce, it will decrease the effect of care setting on OSC psychosocial well-being.

Hypothesis 2A was tested using a moderated multiple regression analysis and a post-hoc PROCESS test (Hayes, 2013). Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting and food security) and control demographic factors (age, gender, and orphan status) centered and entered in the first step of the regression model. Next, a food security by care setting interaction term (Aiken & West, 1991) was created and entered in the second step of the regression model. This interaction term explained a significant but small increase in variance in child psychosocial well-being, $\Delta R^2 = .007$, $F(8, 2004) = 42.54$, $p < 0.001$, and the interaction term itself was also significant ($b = 1.23$, $t(2004) = 4.14$, $p < 0.001$). Thus, findings

suggested food security was a significant moderator of the association between care setting and child psychosocial well-being.

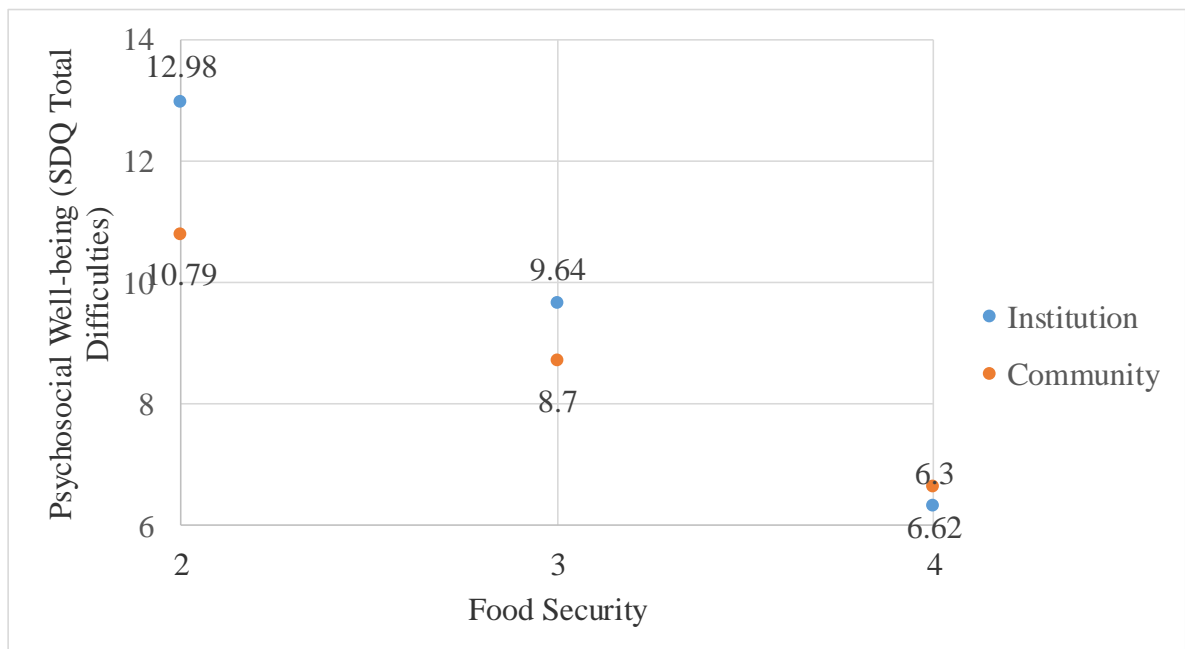
A post-hoc PROCESS test (Hayes, 2013) was conducted to interpret the nature of the moderating effect of food security. The PROCESS test revealed a significant negative association between care setting and psychosocial well-being below a food security value of 3.4 ($b = -.43$, $t(2004) = -1.96$, $p = .05$). However, when there was no risk (CSI value = 4) in food security ($b = .32$, $t(2004) = -1.12$, $p = .26$), the relationship between care setting and child psychosocial well-being was not significant.

After creating a scatterplot graph in PROCESS (Hayes, 2013), findings suggested that as food security decreased from a CSI value of 3.4, the increasing negative effects show OSC in institution-based settings had significantly lower psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than OSC in community-based settings. Figure 2 plots the care setting effects predicting psychosocial well-being at these different levels of food security.

In sum, Hypothesis 2A was partially supported by these analyses. Food security did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. However, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when food security was low (high risk), was not supported. Instead, findings suggested OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings when food security decreased from a CSI value of 3.4. At the same time, earlier analyses showed OSC in institution-based settings

had higher mean scores in food security than OSC in community-based settings. Moreover, the point value differences in SDQ Total Difficulties scores were very small between care settings when food security was at moderately high risk (CSI value = 2), with an average of 2.19 points out of 40 total on the SDQ Total Difficulties score. Interestingly, there was no significant difference in psychosocial well-being across care setting when food security was at no risk (CSI value = 4).

Figure 4.1. *Scatterplot of food security moderating care setting and psychosocial well-being relationship*



H2B: Quality of shelter will significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic

factors. Specifically, when quality of shelter is low, it will decrease the effect of care setting on OSC psychosocial well-being.

Hypothesis 2B was tested using a moderated multiple regression analysis and a post-hoc PROCESS test (Hayes, 2013). Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting and quality of shelter) and control demographic factors (age, gender, and orphan status) centered and entered in the first step of the regression model. Next, a quality of shelter by care setting interaction term (Aiken & West, 1991) was created and entered in the second step of the regression model. After running the analysis, findings revealed that the quality of shelter by care setting interaction term was not significant, $b = .39$, $t(2004) = 1.20$, $p = .23$. Hypothesis 2B was not supported by this analysis.

H2C: Quality of caregiving will significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. Specifically, when quality of caregiving is low, it will decrease the effect of care setting on OSC psychosocial well-being.

Hypothesis 2C was tested using a moderated multiple regression analysis and a post-hoc PROCESS test (Hayes, 2013). Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting and quality of caregiving) and control demographic factors (age, gender, and orphan status) centered and entered in the first step of the regression model. Next, a quality of caregiving by care setting interaction

term (Aiken & West, 1991) was created and entered in the second step of the regression model. This interaction term explained a significant but small increase in variance in child psychosocial well-being, $\Delta R^2 = .009$, $F(8, 2004) = 28.38$, $p < 0.001$, and the interaction term itself was also significant ($b = 1.57$, $t(2004) = 4.57$, $p < 0.001$). Thus, findings suggested quality of caregiving was a significant moderator of the association between care setting and child psychosocial well-being.

A post-hoc PROCESS test (Hayes, 2013) was conducted to interpret the nature of the moderating effect of quality of caregiving. The PROCESS test revealed a significant negative association between care setting and psychosocial well-being below a quality of caregiving value of 3.35 ($b = -.44$, $t(2004) = -1.96$, $p = 0.05$). On the other hand, when there was no risk (CSI value = 4) in quality of caregiving, ($b = .58$, $t(2004) = 1.83$, $p = .07$) the association between care setting and child psychosocial well-being was not significant.

After creating a scatterplot graph in PROCESS (Hayes, 2013), findings suggested that as quality of caregiving decreases from a CSI value of 3.35, the increasing negative effects show OSC in institution-based settings have significantly lower psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than OSC in community-based settings. When quality of caregiving was above 3.35 (moderately low risk to no risk), there was no significant difference in psychosocial well-being across OSC care settings.

In sum Hypothesis 2C was partially supported by these analyses. Quality of caregiving did indeed significantly moderate the associations between OSC care setting

and child psychosocial well-being after controlling for demographic factors. However, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when quality of caregiving was low (high risk), was not supported. Instead, a more complicated effect emerged. Findings suggested OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings when quality of caregiving decreased from a CSI value of 3.35. At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in quality of caregiving than OSC in community-based settings. Interestingly, there was no significant difference in psychosocial well-being across care setting when quality of caregiving was high and at no risk (CSI value = 4). Point value differences in SDQ Total Difficulties scores when quality of caregiving was at high risk were not obtainable in this model because of the low percentage of data indicating high risk (CSI = 1) in quality of caregiving (1.1%).

H2D: Access to health care services will significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. Specifically, when access to health care services is scarce, it will decrease the effect of care setting on OSC psychosocial well-being.

Hypothesis 2D was tested using a moderated multiple regression analysis and a post-hoc PROCESS test (Hayes, 2013). Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting and access to health care services) and control demographic factors (age, gender, and orphan status) centered and

entered in the first step of the first regression model. Next, an access to health care services by care setting interaction term (Aiken & West, 1991) was created and entered in the second step of the regression model. This interaction term explained a significant but small increase in variance in child psychosocial well-being, $\Delta R^2 = .03$, $F(8, 2004) = 29.90$, $p < 0.001$ and the interaction term itself was also significant ($b = 2.94$, $t(2004) = 8.31$, $p < 0.001$). Thus, findings suggested access to health care services was a significant moderator of the association between care setting and child psychosocial well-being.

A post-hoc PROCESS test (Hayes, 2013) was conducted to interpret the nature of the moderating effect of access to health care services. The PROCESS test revealed a complicated effect, with a significant negative association between care setting and psychosocial well-being below an access to health care services value of 3.13 ($b = -.44$, $t(2004) = -1.96$, $p = 0.05$) and a significant positive association between care setting and psychosocial well-being above an access to health care services value of 3.44 ($b = .47$, $t(2004) = 1.96$, $p = 0.05$).

After creating a scatterplot graph in PROCESS (Hayes, 2013), findings revealed that as access to health care services decreases from a CSI value of 3.13, the increasing negative effects show OSC in institution-based settings have significantly lower psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than OSC in community-based settings. When access to health care services was above a value of 3.44, the increasing positive effects show OSC in institution-based settings have significantly higher psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than OSC in community-based settings. Finally, when access to health care

services was at a value between 3.13 and 3.44, the differences in psychosocial well-being across care setting were not significant.

In sum Hypothesis 2D was partially supported by these analyses. Access to health care services did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being, even after controlling for demographic factors.

However, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when access to health care services was low (high risk), was not supported. Instead, a more complicated moderation effect emerged. Specifically, findings suggested that as access to health care services decreased from a CSI value of 3.13, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings. On the other hand, as access to health care services increased from a CSI value of 3.44, OSC in institution-based settings had significantly higher psychosocial well-being than OSC in community-based settings. At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in access to health care services than OSC in community-based settings. Moreover, the point value differences in SDQ Total Difficulties scores were very small between care settings when access to health care services was both moderately high risk (CSI value = 2, with an average of 3.69/40 points total on the SDQ Total Difficulties score) as well as no risk (CSI value = 4, with an average of 2.08/40 points total on the SDQ Total Difficulties score).

Hypotheses 3A-3C

The third and final research question examined whether certain demographic factors such as age, gender, and orphan status, moderated the associations between OSC care setting and child psychosocial well-being. This question led to three hypotheses. The analyses and results are described below for each hypothesis in turn.

H3A: Age will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for other demographic factors. Specifically, when a child is older, the effect of care setting on OSC psychosocial well-being will be decreased.

Hypothesis 3A was tested using a moderated multiple regression analysis. Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting and age) and control demographic factors (gender and orphan status) centered and entered in the first step of the regression model. Next, an age by care setting interaction term (Aiken & West, 1991) was created and entered in the second step of the regression model. After running the analysis, findings suggested that the age by care setting interaction term was not significant, $b = -.26$, $t(2005) = -1.81$, $p = .07$. Hypothesis 3A was not supported.

H3B. Gender will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for other demographic factors. Specifically, when a child is male, the effect of care setting on OSC psychosocial well-being will be decreased.

Hypothesis 3B was tested using a moderated multiple regression analysis and a post-hoc PROCESS test (Hayes, 2013). Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting and gender) and other demographic factors (age and orphan status) centered and entered in the first step of the regression model. Next, a gender by care setting interaction term (Aiken & West, 1991) was created and entered in the second step of the regression model. This interaction term explained a significant but small increase in variance in child psychosocial well-being, $\Delta R^2 = .01$, $F(8, 2005) = 2.16$, $p < 0.001$, and the interaction term itself was significant ($b = -1.45$, $t(2005) = -3.17$, $p < 0.01$). Thus, findings suggested gender was a significant moderator of the association between care setting and child psychosocial well-being.

A post-hoc PROCESS test (Hayes, 2013) was conducted to interpret the nature of the moderating effect of gender. The PROCESS test revealed a significant negative association between care setting and psychosocial well-being when the child gender was female ($b = -.84$, $t(2005) = -2.40$, $p < 0.01$). Specifically, a scatterplot revealed that female OSC in institution-based settings have significantly lower psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than female OSC in community-based settings. However, in terms of point values in SDQ Total Difficulties scores, the differences between care settings were very small for female OSC (0.84/40 points total). Additionally, when the child was male, the differences in psychosocial well-being across care setting were not significant.

In sum, Hypothesis 3B was partially supported by these analyses. Gender did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being. However, when the child was male, the effect of care setting on psychosocial well-being was not significant. Thus, the specific hypothesis that the effect of care setting psychosocial well-being would be decreased when the child was male, was not supported.

H3C: Orphan status will significantly moderate the associations between OSC care settings and child psychosocial well-being after controlling for other demographic factors. Specifically, when a child is a paternal orphan, the effect of care setting on OSC psychosocial well-being will be decreased.

Hypothesis 3C was tested using a moderated multiple regression analysis and a post-hoc PROCESS test (Hayes, 2013). Child psychosocial well-being (as reflected in the SDQ Total Difficulties, with higher scores indicating more difficulties) was entered as the dependent variable, with the main effects (care setting (centered) and orphan status recoded into three separate, dummy-coded dichotomous variables with the separate and abandoned category serving as the reference group) and other demographic factors (age and gender, both centered) entered in the first step of the regression model. Next, three orphan status by care setting interaction terms (Aiken & West, 1991) were created (double orphan x setting, maternal orphan x setting, and paternal orphan x setting) and entered in the second step of the regression model. These interaction terms explained a significant but small increase in variance in child psychosocial well-being, $\Delta R^2 =$

.01, $F(9, 2003) = 2.02$, $p < 0.05$. Thus, findings suggested orphan status was a significant moderator of the association between care setting and child psychosocial well-being.

A post-hoc PROCESS test (Hayes, 2013) was conducted to interpret the nature of the moderating effect of orphan status. The PROCESS test revealed a significant negative association between care setting and psychosocial well-being when the child was separated or abandoned (with no dead parent) ($b = -2.01$, $t(2003) = -3.34$, $p < 0.001$). Specifically, a scatterplot graph revealed that separated or abandoned children (with no dead parent) had significantly lower psychosocial well-being (i.e. higher SDQ Total Difficulties scores) in institution-based settings than when they were in community-based settings. However, in terms of point values in SDQ Total Difficulties scores, the differences between care settings were very small for separated or abandoned children with no dead parent (2.01/40 points total). For every other orphan status, the differences between psychosocial well-being across care setting were not significant.

In sum, Hypothesis 3C was partially supported by these analyses. Orphan status did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being. However, psychosocial well-being was significantly different across settings only among separated or abandoned children (with no dead parent). Specifically, separated or abandoned children (no dead parent) had significantly lower psychosocial well-being in institution-based settings than when they were in community-based settings. On the other hand, for children with double, maternal, or paternal orphan status, the association between care setting and psychosocial well-being was not

significant. Thus, the specific hypothesis that the effect of care setting psychosocial well-being would be decreased when the child was a paternal orphan, was not supported.

Summary of Results

Three research questions were proposed for this study regarding the extent to which four components of quality of care predicted psychosocial well-being of OSC (RQ1), and the extent to which these components of quality of care (RQ2) and other key demographic factors (age, gender, and orphan status) (RQ3) moderated the associations between OSC care setting and psychosocial well-being. Eleven hypotheses were proposed and tested. The study results supported four hypotheses and partially supported another five of the eleven hypotheses. Two of the hypotheses were not supported. A summary of the overall findings is detailed below.

Results supported Hypotheses 1A-1D. Regression models that entered each component of quality of care separately as well as a follow-up regression model that entered all chosen components of quality of care simultaneously showed significant results. Findings suggested that food security, quality of shelter, quality of caregiving, and access to health care services significantly predicted psychosocial well-being after controlling for demographic factors.

Results partially supported Hypothesis 2A. Food security did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. However, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when food security was at

high risk, was not supported. Instead, a different effect emerged that suggested as food security decreased from a CSI value of 3.4, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings. On the other hand, the difference in psychosocial well-being across OSC care settings was not significant when food security was high and at no risk (CSI value = 4). At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in food security than OSC in community-based settings. Moreover, the point value differences in SDQ Total Difficulties scores were very small between OSC care settings when food security was at moderately high risk (CSI value = 2), with an average of 2.19/40 points total.

Results did not support Hypothesis 2B. Findings suggested that the quality of shelter by OSC care setting interaction term was not significant. Therefore, there was no evidence to suggest quality of shelter significantly moderated the associations between care setting and child psychosocial well-being after controlling for demographic factors. Hypothesis 2B was not supported by these findings.

Results partially supported Hypothesis 2C. Quality of caregiving did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. However, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when quality of caregiving was low (high risk), was not supported. Instead, a different effect emerged that suggested as quality of caregiving decreased from a CSI value of 3.35, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in

community-based settings. On the other hand, the differences in psychosocial well-being across care settings was not significant when quality of caregiving was high and at no risk (CSI value = 4). At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in quality of caregiving than OSC in community-based settings, further complicating these findings.

Results partially supported Hypothesis 2D. Access to health care services did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. However, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when access to health care services was low (high risk), was not supported. Instead, findings suggested that as access to health care services decreased from a CSI value of 3.13, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings. On the other hand, as access to health care services increased from a CSI value of 3.44, OSC in institution-based settings had significantly higher psychosocial well-being than OSC in community-based settings. At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in access to health care services than OSC in community-based settings. Moreover, the point value differences in SDQ Total Difficulties scores were very small between care settings when access to health care services was both moderately high risk (CSI value = 2, with an average of 3.69/40 points total) as well as no risk (CSI value = 4, with an average of 2.08/40 points total).

Results did not support Hypothesis 3A. Findings revealed that the age by OSC care setting interaction term was not significant. Therefore, there was no evidence that suggested age significantly moderated the associations between care setting and child psychosocial well-being after controlling for demographic factors.

Results partially supported Hypothesis 3B. Gender did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being. However, it was for female OSC that there was a significant association between care setting and psychosocial well-being. Specifically, analyses revealed that female OSC in institution-based settings have significantly lower psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than female OSC in community-based settings. However, in terms of point values in SDQ Total Difficulties scores, the differences between OSC care settings were very small for female OSC, with an average of 0.84/40 points total). Additionally, when the child was male, the differences in psychosocial well-being across care setting were not significant. Thus, the specific hypothesis that male OSC will decrease the effect of care setting on psychosocial well-being was not supported.

Finally, results partially supported Hypothesis 3C. Orphan status did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being. However, it was for separated or abandoned children (with no dead parent) that there was a significant association between care setting and psychosocial well-being. Specifically, separated or abandoned children had significantly lower psychosocial well-being in institution-based settings than when they were in community-based setting. For

children with double, maternal, or paternal orphan status, however, the differences in psychosocial well-being across care settings were not significant. Thus, the specific hypothesis that children with paternal orphan status will decrease the effect of care setting on psychosocial well-being was not supported.

Overall, findings suggest significant relationships among components of quality of care, key demographic factors, OSC care setting, and child psychosocial well-being. Higher levels of all four components of quality of care, including food security, quality of shelter, quality of caregiving, and access to health care services significantly predicted more positive psychosocial well-being. Additionally, three of the four components of quality of care (food security, quality of caregiving, and access to health care services) and two of the three key demographic factors (gender and orphan status) significantly moderated the associations between OSC care setting and psychosocial well-being. Findings are discussed in detail in Chapter V.

CHAPTER V

DISCUSSION

Previous research clearly indicates that orphaned and separated children (OSC) need special consideration and care due to the devastating and complex psychosocial effects of orphanhood. Currently, there is widespread belief, a plausible logic, and some empirical evidence that supports the premise that adequate care for OSC can be most effectively provided in “family environments.” Consequently, global policies (Better Care Network, 2014; Save the Children, 2009; UNICEF, 2011) recommend alternative care institutions only be used as a last resort after all community-based care options have been exhausted.

When searching for the best alternative care option for orphaned or separated children, few would deny that opportunities within the extended family or in other community-based settings should be seriously considered. However, there is an important difference between carefully assessing the full gamut of care options equally to determine the best fit for a child and his/her needs, and examining OSC care setting options based on a priority scale. In practice, there has been movement from institution- to community-based care settings without careful consideration of whether the community-based settings better meet the needs of all children. The wide variety of reasons for which children find themselves living outside their family environment and in alternative institutional care, as well as the numerous shapes and structures of alternative care

institutions available, provide several reasons for concern with current global policies to deinstitutionalize children, especially in under-resourced LMICs.

It is reasonable to hypothesize that in under-resourced countries with high and increasing rates of OSC, the principal functions of families for children may be more focused on their most basic and essential needs. Meeting these basic, survival needs help children move toward more complex needs and develop positive child outcomes such as psychosocial well-being. Moreover, the delivery of such basic needs may not be heavily dependent on membership in a community-based setting like a Western-style nuclear family. It may instead be dependent primarily on the availability of certain components of quality of care rather than the structure or nature of the living environment where OSC receive care.

Although a small body of research suggests there may be certain components of quality of care and demographic factors that are linked to positive psychosocial outcomes, the current body of applicable research is limited in both quantity and scope, with no research that explores components of quality of care, such as food security, quality of shelter, quality of caregiving, and access to health care services within different OSC care settings, and the extent to which they predict child psychosocial well-being or moderate the associations between care settings and child psychosocial well-being. Currently, these gaps in knowledge undermine our ability to understand the specific needs and effectiveness of current OSC care settings and intervention programs.

The Convention on the Rights of the Child (CRC) (UN General Assembly, 1989) provides special protections for OSC. Article 20.1 reads, “A child temporarily or

permanently deprived of his or her family environment, or in whose own best interests cannot be allowed to remain in that environment, shall be entitled to special protection and assistance provided by the State” (UN General Assembly, 1989, p.6). Given this responsibility to protect OSC, research on characteristics that moderate the associations between OSC care settings and child psychosocial well-being is essential. These insights will allow stakeholders to create new policies and practices that effectively support OSC across all care settings.

The current study responded to these needs by testing the validity of this alternative view that specifically in under-resourced societies in LMICs, the psychosocial well-being of OSC may heavily depend on the availability of certain components of quality of care rather than solely the nature of their care setting (i.e. institution- or community-based setting). Moreover, this study was designed to identify the relative significance of certain components of quality of care that promote a “suitable” (Article 20(3)) care setting for the promotion of a child’s psychosocial well-being, as well as the demographic factors that moderate these associations.

The findings of this study suggest significant relationships among components of quality of care, key demographic factors, OSC care setting, and child psychosocial well-being. Higher levels of all four components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) significantly predicted more positive psychosocial well-being. Moreover, three of the four components of quality of care (food security, quality of caregiving, and access to health care services) and two of the three key demographic factors (gender and orphan status) significantly

moderated the associations between OSC care setting and psychosocial well-being. This chapter outlines key findings, discusses practical and policy implications, recognizes limitations, and recommends future research.

Key Findings

Group Differences by Components of Quality of Care and Demographic Variables

Standard explorations of differences in components of quality of care between OSC residing in institution- versus community-based settings revealed some significant findings that should be considered when interpreting study results.

Components of quality of care. Significant group differences emerged for three out of four tested components of quality of care. Specifically, OSC in institution-based settings reported higher levels of food security, quality of caregiving, and access to health care services than OSC in community-based settings. Each of these differences was determined to be statistically significant ($p < 0.001$). Moreover, these findings are consistent with some of the available literature regarding differences in quality of care across OSC care settings.

For instance, with regards to food security, Zimmerman (2005) found that among orphaned children in Malawi (aged 6-18), those who resided in orphanages were significantly more likely than those residing in foster homes to have three meals per day (90% vs. 10%) and to have larger portions at each meal. It is reasonable to assume that when extended families take in additional children after they are orphaned or separated, the same supply of food may need to be spread across more people in the household.

Crop production may also be reduced when the head of a household dies in a community-based care setting. Since studies of food security for OSC in institution vs. community settings are limited, more research is needed to confirm this finding.

With respect to quality of caregiving, there are currently no studies that have examined differences in institution- vs. community-based care settings. Earlier research often characterized alternative care institutions by high child-to-caregiver ratios, regimented and non-individualized care, and a lack of psychosocial investment in the children (Juffer & Series, 2008). However, recent research has provided evidence that shows 90% of orphaned children in developing countries are living under the care of extended families, and these extended family support systems are increasingly becoming overwhelmed, impoverished, and rendered unable to provide adequate care for children (Director and Simon, 2010). These findings showed nuance in quality of caregiving across care setting, and supported the notion that, especially in LMICs, OSC in community settings may have low levels of quality of caregiving. Certainly, more research is needed to clarify the current study's finding.

Finally, the finding that access to health care services was better for OSC in institution-based vs. community-based settings is consistent with Zimmerman's (2005) findings in Malawi that orphans residing in institutional care programs had better access to health care services than the children in rest of the country. As Zimmerman noted, this difference likely reflects the reality that orphans in institution-based settings are typically treated by nongovernmental organizations (NGOs), whereas most other community-based children use the public health system. Additionally, health supplies that are donated

to nonprofits in the developing world rarely find their way into the medicine cabinets of private families, and instead are distributed to larger clinical or child institution-based settings (Zimmerman, 2005). Given that this is one of only two studies focused on differences in access to health care services across OSC care settings, more research in this area is needed to clarify findings.

Nonsignificant findings. No statistically significant group differences were found between institution- and community-based care settings in terms of the quality of shelter, nor were there any differences between institution- and community-based settings in the ages, gender, or orphan status of children. Currently, there is no literature that examines differences in quality of shelter across institution- and community-based care settings. However, it is possible that when communities are very poor (which may be the case for the study's LMIC sample), structural, shelter-related differences between institution- and community-based care settings may be minimized.

Overall, these findings suggested that, on average, OSC in institution-based settings have higher levels of food security, quality of caregiving, and access to health care services than OSC in community-based settings. It is important to consider these significant group differences when interpreting the rest of the study results.

Components of Quality of Care as Predictors of Psychosocial Well-being

The first research question of this study explored the relationship between components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) and psychosocial well-being (SDQ Total Difficulties) after controlling for care setting and available demographic factors.

Food security as a predictor. This study's findings suggested food security significantly predicted child psychosocial well-being. Specifically, food security alone explained 13.5% of the variance in SDQ Total Difficulties, while care setting only explained 0.3% of the variance (Whetten et al., 2009). The results supported the hypothesis that psychosocial well-being for OSC depends in part on food security, rather than solely the nature of their care setting. The results also help identify the relative significance of food security for targeted psychosocial interventions for OSC.

This finding was consistent with the available yet scant literature on food security and child psychosocial well-being. In one previous study by Weinreb et al. (2002), severe child hunger was reported to be associated with higher levels of psychosocial distress among school-aged children. Other studies suggest that improving the nutritional status of infants and children is also associated with improved mental development (Berkman et al., 2002; Grantham-McGregor et al., 1991; Husaini et al., 1991; Pollitt et al., 1993; Pollitt & Schurch, 2000; Waber et al., 1981).

Consequently, it is reasonable to assume that food security is also significantly related to the psychosocial well-being of OSC, especially since levels of food security are likely to be compromised when primary caregivers and head of households are lost through illness, death, or separation. When extended families take in additional children after they are orphaned or separated, the same supply of food may need to be spread across a larger number of people. Crop production may also be reduced when the head of a household dies. In any of these circumstances, OSC vulnerability to hunger and malnutrition is likely to increase. As previous studies show, increased rates of hunger and

malnutrition are significantly associated with higher levels of psychosocial distress. Thus, this study's finding significantly adds to the literature as no previous study has examined the relationship between food security and psychosocial well-being specifically for OSC populations in resource-poor countries.

Quality of shelter as a predictor. Findings from this study suggested quality of shelter significantly predicted child psychosocial well-being. Specifically, quality of shelter alone explained 10% of the variance in SDQ Total Difficulties, while care setting only explained 0.3% of the variance (Whetten et al., 2009). The results also support the alternative view that psychosocial well-being for OSC may depend on access to health care services rather than solely the nature of their care setting, specifically in under-resourced societies in LMICs. Effect size results also help identify the relative significance of quality of shelter for targeted psychosocial interventions for OSC.

Currently, there are no studies that have examined how quality of shelter may be related to child psychosocial well-being. A few studies examined quality of shelter for OSC in general and documented inadequate dwellings of OSC across foster care and community settings (Atwine et al., 2005; Nyamukapa et al., 2003; Sala, 2009). Other investigators found that orphans described themselves as less content with their shelter than non-orphans in the same community (Atwine et al., 2005). Other researchers have theorized that environment-related interventions may be especially effective for improving psychosocial well-being of OSC (Howard et al., 2006; Richter et al., 2006; WCI, 2006).

Consistent with these researchers' hypotheses (Howard et al., 2006; Richter et al., 2006; WCI, 2006) and the current study's theoretical framework, it is reasonable to assume that psychosocial well-being may be dependent on the physical environment in certain resource-poor settings, since safety and shelter are basic, essential needs that must be met before a child can develop positive child outcomes. Since OSC tend to live in poorer households and in less adequate shelter (Nyamukapa et al., 2003) than their non-orphan counterparts, improving quality of shelter may be especially crucial to help OSC develop more positive psychosocial well-being. Thus, this study's finding significantly adds to the literature as no previous study has examined the relationship between quality of shelter and psychosocial well-being specifically for OSC populations in resource-poor countries.

Quality of caregiving as a predictor. Findings suggested that quality of caregiving significantly predicted child psychosocial well-being. Specifically, quality of caregiving accounted for 9% of the variance in SDQ Total Difficulties, while care setting only explained 0.3% of the variance (Whetten et al., 2009). The results also support the alternative view that specifically in under-resourced societies in LMICs, psychosocial well-being for OSC may depend on the quality of caregiving rather than solely the nature of their care setting. The results also help identify the relative significance of quality of caregiving for targeted psychosocial interventions for OSC.

This finding was consistent with the small literature on quality of caregiving and child psychosocial well-being among OSC. A few studies based in Russia have examined how quality of caregiving may be related to OSC psychosocial well-being (Groark et al.,

2005; Juffer & Series, 2008), and their results showing sustained improvements in child psychosocial well-being after caregiver training interventions were introduced in orphanages validate the importance of quality of caregiving in predicting the psychosocial well-being of OSC in under-resourced LMICs. Since the lack of quality caregiving is associated with negative child psychosocial outcomes, one could expect that children become especially vulnerable when their parents die or are sick and unable to provide consistent care. Thus, this study's finding significantly adds to the literature, as no previous study has examined the relationship between quality of caregiving and psychosocial well-being specifically for OSC populations in resource-poor LMICs.

Access to health care services as a predictor. The current study's findings suggested access to health care services significantly predicted child psychosocial well-being. Specifically, access to health care services accounted for 7.6% of the variance in SDQ Total Difficulties, while care setting only explained 0.3% of the variance (Whetten et al., 2009). The results also support the alternative view that psychosocial well-being for OSC in under-resourced LMICs may depend on access to health care services rather than solely the type of care setting. Effect size results also help identify the relative significance of access to health care services for targeted psychosocial interventions for OSC.

Currently, there is little research that focuses on how access to health care services may be related to psychosocial well-being of children. However, there is some evidence suggesting OSC have poorer access to health care services than their non-orphan counterparts (Bledsoe et al., 1988; Kamenga et al., 1990; Misra et al., 2007).

Additionally, one can hypothesize that inadequate access to health services is inextricably linked with poorer physical health, and it is widely acknowledged that physical ill-health is linked to more mental disorders and psychosocial distress (Patel & Kleinman, 2003). The reasons for less or more adequate access to health care services for OSC are likely multiple and complex, however, which may explain why access to health care services is less strongly associated with child psychosocial well-being than the other components of quality of care. Nonetheless, this study's finding adds to the literature, as no previous study has examined the relationship between access to health care services and psychosocial well-being specifically for OSC populations in resource-poor LMICs.

The Moderating Roles of Components of Quality of Care

The second research question examined four components of quality of care (food security, quality of shelter, quality of caregiving, and access to health care services) as moderators between care setting and child psychosocial well-being. To the author's knowledge, there are currently no studies that have tested these relationships. Although some prior research has examined differences in quality of care across OSC care settings (Zimmerman, 2005) and differences in psychosocial well-being across care settings (Whetten et al., 2009), no studies to date have tested components of quality of care as moderators between care setting and child psychosocial well-being.

Food security as a moderator. Consistent with expectations, food security did act as a significant moderator between OSC care setting and child psychosocial well-being. However, contrary to expectations, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when food security was at high risk,

was not supported. Instead, a different effect emerged that suggested as food security decreased from a CSI value of 3.4, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings. On the other hand, the difference in psychosocial well-being across care settings was not significant when food security was high and at no risk (CSI value = 4). Moreover, the point value differences in SDQ Total Difficulties scores were very small between care settings when food security was at moderately high risk (CSI value = 2), with an average of 2.19/40 points total. At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in food security than OSC in community-based settings. These results suggest that there are nuanced differences in psychosocial well-being across care settings at different levels of food security.

No previous studies have examined the moderating role of food security on OSC psychosocial well-being across care settings. These findings significantly add to the dichotomized institution- vs. community-based care literature and suggests that although food security predicts psychosocial well-being across both care settings, psychosocial well-being is slightly lower in institution-based settings than in community-based settings when food security is scarce. These differences in psychosocial well-being (as measured by the SDQ Total Difficulties) are modest, however. In addition, institution-based settings, on average, are shown to have higher levels of food security than community-based settings.

A few possible explanations exist for these findings. Even though levels of food security are, on average, higher in institution-based settings than community-based

settings, it is possible that when institution-based settings are under-resourced and have low quality of care (i.e. scarce food security), residing OSC may need to compete for their food with many other peers. This competition for limited resources may result in a higher likelihood for child hunger and malnutrition that may cause psychosocial distress. On the other hand, when community-based settings are poorly resourced with scarce food security, residing OSC may only need to compete for adequate food with a handful of extended family members. However, since the differences in psychosocial well-being (as measured by the SDQ Total Difficulties) are modest, it is also possible that the importance of food security in predicting psychosocial well-being isn't entirely that different for children in one setting more than the other. It is also likely that the level of food security (as a measure of quality of care) is more important to psychosocial well-being than the actual form of care (i.e. institution- or community-based care setting). Indeed, it is reasonable to assume that OSC experiencing severe malnutrition in community-based care settings may not necessarily experience better psychosocial outcomes compared to OSC experiencing equally severe malnutrition in institution-based care settings.

A few other possible explanations may exist for these results. After omitting the community-based non-orphan group and splitting the care setting comparison groups for analysis, the sample size was perhaps too limited in power for significant and clear results to emerge. It also is possible that the Child Status Index tool was used to inform specific food security interventions over time, resulting in higher average levels of food security for participants at Round 7 and, subsequently, affecting food security and

psychosocial well-being across care settings. This theory also corresponds with the fact that few participants (1.2%) across both care settings indicated they had high risk of food security (CSI value = 1) during Round 7.

Contrary to the study's findings, it is possible that food security may not have a significant moderating effect at all, or that it may act in tandem with other factors which influence psychosocial well-being. Psychosocial well-being is likely influenced by a variety of related factors that were not tested for in this study, such as prevalence and incidence of trauma (Gray et al., 2015), school attendance (Makame et al., 2002; Nyamukapa et al., 2008), experience of HIV/AIDS stigma (Cluver et al., 2008), socioeconomic status (Ruiz-Casares et al., 2009), caregiver health (Cluver et al., 2009), and socio-cultural settings. Future research should test other factors to closer examine the moderating role of food security.

Another possible explanation is that this study employed a diverse sample of residential care institutions in LMICs that varied across many dimensions. Some of these institutions looked very different from institutions described in early studies, thus possibly representing a new kind of care structure that may not fit perfectly under either of the “institutional” and “community” comparison groups. This unaccounted variance in care setting categories may be one of the reasons why the moderating role of food security on the relationship between care setting and psychosocial well-being was mixed and not entirely clear. Future research should consider different sampling techniques, controlling for and testing other potentially important mediating and moderating factors,

and variation in care setting structures to more closely examine the moderating role of food security.

Quality of shelter as a moderator. Contrary to the hypothesis, quality of shelter did not act as a moderator in this sample. Specifically, quality of shelter was equally important to the psychosocial well-being of children across both institution- and community-based care settings. A few possible explanations exist for this lack of moderation effect. First, it is possible that the quality of a care setting's shelter is more important than the actual form of care (i.e. institution- or community-based care setting). Second, contrary to depiction of quality of shelter in earlier studies that compared institution- versus community-based care settings, descriptive statistics revealed that most of the care settings in this study showed high levels of quality of shelter. Specifically, 50% of the sample had indicated no risk in quality of shelter (CSI = 4) and 41% indicated moderately low risk (CSI = 3). On the other hand, only 1% of the sample indicated high risk in quality of shelter (CSI = 1) and 8% indicated moderately high risk (CSI = 2). Thus, like the circumstances of food security, these similar levels of quality of shelter across care settings may have been influenced by the sample size, the data at Round 7, other possible mediating and moderating factors, and variation in care setting structures. Future research should consider these factors to clarify findings.

Quality of caregiving as a moderator. Consistent with the hypothesis, quality of caregiving did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being after controlling for demographic factors. However, contrary to expectations, the hypothesis that there would be a decrease in effect of care

setting on psychosocial well-being when quality of caregiving was low and at high risk, was not supported. Instead, a different effect emerged that suggested as quality of caregiving decreased from a CSI value of 3.35, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings. On the other hand, the differences in psychosocial well-being across care settings was not significant when quality of caregiving was high and at no risk (CSI value = 4). At the same time, earlier analyses showed OSC in institution-based settings had higher mean scores in quality of caregiving than OSC in community-based settings, further complicating these findings. These results suggest that there are nuanced differences in psychosocial well-being across care settings at different levels of quality of caregiving.

No previous studies have examined the moderating role of quality of caregiving on OSC psychosocial well-being across care settings. These findings significantly add to the dichotomized institution- vs. community-based care literature and suggests that although quality of caregiving predicts psychosocial well-being across both care settings, psychosocial well-being is slightly lower in institution-based settings than in community-based settings when quality of caregiving is low. These differences in psychosocial well-being (as measured by the SDQ Total Difficulties) are modest, however. In addition, institution-based settings, on average, are shown to have higher levels of quality of caregiving than community-based settings.

A few possible explanations exist for these findings. Even though quality of caregiving is, on average, better in institution-based settings than community-based settings, it is possible that when institution-based settings are under-resourced and have

low quality of caregiving (i.e. high ratios of caregiver to child), residing OSC may need to compete for positive and consistent caregiver-child social-emotional interactions with many other peers. Consequently, there may be less opportunities for OSC to develop a healthy caregiver-child relationship, which may account for lower psychosocial well-being. On the other hand, when community-based settings are poorly resourced with quality of caregiving, residing OSC may turn to other adults in the community for more consistent opportunities to develop a healthy caregiver-child relationship. It should be acknowledged, however, that the differences in psychosocial well-being (as measured by the SDQ Total Difficulties) across care settings were modest. Thus, it is also possible that the importance of quality of caregiving in predicting psychosocial well-being isn't that different for children in one setting or another. It is likely that the quality of caregiving (as a measure of quality of care) within a certain care setting is more important to psychosocial well-being than the actual form of care (i.e. institution- or community-based care setting). Certainly, OSC experiencing severe neglect in community-based care setting contexts will not necessarily experience much better developmental outcomes compared to their institution-based counterparts. Like the previous components of quality of care, these results may have been influenced by the sample size, the data collection at Round 7, other possible mediating and moderating factors, as well as unaccounted variation in care setting structures. Future research should consider these factors to clarify findings.

Access to health care services as a moderator. Consistent with expectations, access to health care services did act as a significant moderator between OSC care setting

and child psychosocial well-being. However, contrary to expectations, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when access to health care services was low and at high risk, was not supported. Instead, a more complicated effect emerged that suggested as access to health care services decreased from a CSI value of 3.13, OSC in institution-based settings had significantly lower psychosocial well-being than OSC in community-based settings. On the other hand, as access to health care services increased from a CSI value of 3.44, OSC in institution-based settings had significantly higher psychosocial well-being than OSC in community-based settings. Unexpectedly, access to health care services was not a significant moderator at CSI values between 3.13 and 3.44. Moreover, the point value differences in SDQ Total Difficulties scores between care settings was small when access to health care services was moderately high risk (CSI value = 2), with an average of 3.69 points out of 40 total. Lastly, it should be acknowledged that earlier descriptive analyses suggested that OSC in institution-based settings had higher mean scores in access to health care services than OSC in community-based settings. These results suggest that there are nuanced differences in psychosocial well-being across care settings at different levels of access to health care services.

No previous studies have examined the moderating role of access to health care services on OSC psychosocial well-being across care settings. These findings significantly add to the dichotomized institution- vs. community-based care debate in the literature and suggest that although access to health care services predicts psychosocial well-being across both care settings, psychosocial well-being is slightly lower in

institution-based settings than in community-based settings when access to health care services is scarce. Conversely, findings also suggest that psychosocial well-being is slightly higher in institution-based settings than in community-based settings when access to health care services is sufficient. These differences in psychosocial well-being (as measured by the SDQ Total Difficulties) at different levels of access to health care services are modest, however. In addition, institution-based settings, on average, are shown to have better access to health care services than community-based settings.

A few possible explanations exist for these findings. Even though access to health care services is, on average, better in institution-based settings than community-based settings, it is possible that when institution-based settings are under-resourced and have inadequate access to health care services, residing OSC may need to compete for medicine and other health care resources with their other peers. With less consistent and stable resources for medicine or funding for doctor's visits, there may be less opportunities for OSC to adequately remedy their physical health concerns that are inextricably linked to their mental health. On the other hand, when community-based settings are poorly resourced with access to health care services, it is possible that residing OSC may turn to other households or resources in the community to gain access to health care services.

When institution-based settings are sufficiently resourced and have adequate access to health care services, residing OSC may not need to compete for health care resources with their peers and may enjoy a plentiful amount of health supplies, often provided by donors to nonprofits in the developing world. Conversely, when community-

based settings in LMICs are sufficiently resourced and have adequate access to health care services, residing OSC may still encounter more obstacles to accessing health care and supplies than well-stocked institutional settings, since private families may be expected to pay more out-of-pocket expenses. Given the likelihood that many extended families who care for OSC in LMICs experience poverty, health care services for children may be less of a priority for families than providing for other basic needs.

Moreover, it should be acknowledged again that the differences in psychosocial well-being (as measured by the SDQ Total Difficulties) across care settings were modest. Thus, it is also possible that the importance of access to health care services in predicting psychosocial well-being isn't that different for children in one setting more than the other. It is also likely that access to health care services (as a measure of quality of care) within a certain care setting is more important to psychosocial well-being than the actual form of care (i.e. institution- or community-based care setting). For example, OSC in community-based care settings who experience severe neglect when it comes to their health care will not necessarily experience much better developmental outcomes compared to their institution-based counterparts. Like the previous components of quality of care, these results may have been influenced by the sample size, the data collection at Round 7, other possible mediating and moderating factors, as well as unaccounted variation in care setting structures. Future research should consider these factors to more closely examine the effect of access to health care services.

The Moderating Roles of Key Demographic Factors

The third and final research question examined key demographic factors, including age, gender, and orphan status as moderators between OSC care setting and child psychosocial well-being. To the author's knowledge, there are currently no studies that have tested these relationships. There is some research that examines differences in key demographic factors across care settings, and there is research that examines differences in psychosocial well-being across demographic factors, but none that have tested key demographic factors as moderators between care setting and child psychosocial well-being.

Age as a moderator. Contrary to the hypothesis, age did not act as a moderator in this sample. Specifically, age did not significantly predict psychosocial well-being for OSC in institution- or community-based care settings. Additionally, descriptive statistics revealed there was no significant group differences in age across care setting, nor did age moderate the relation between care setting and psychological well-being. These findings were inconsistent with previous studies that showed younger children in institution-based settings had lower levels of psychosocial well-being typically involved child participants aged four and younger (Smyke et al., 2002; Tizard & Rees, 1975; Zeanah et al., 2005).

A few possible explanations exist for the lack of significant results regarding age, care setting, and psychosocial well-being. First, the sample size was reduced significantly when the community-based non-orphan group was omitted and the participants were split into care setting comparison groups. This reduction in sample size may have made it difficult for significant findings to emerge. Second, the lack of moderation effects of age on the associations between care setting and psychosocial well-being could be explained

by the current study's sample population, which included children older than five. Future research should test the experiences of children at all different ages, since previous studies show mixed and inconsistent findings regarding the significance of age.

Gender as a moderator. Consistent with expectations, gender did indeed significantly moderate the associations between OSC care setting and child psychosocial well-being. However, contrary to expectations, the hypothesis that there would be a decrease in effect of care setting on psychosocial well-being when the child was male, was not supported. Findings suggested that there were no differences in psychosocial well-being across care setting when the child was male. On the other hand, findings revealed that female OSC in institution-based settings have significantly lower psychosocial well-being (i.e. higher scores on the SDQ Total Difficulties) than female OSC in community-based settings. In terms of point values in SDQ Total Difficulties scores, however, the differences between care settings were very modest for female OSC, with an average of 0.84/40 points total.

One possible explanation for these moderation effects is that older female OSC in institutions may be culturally expected to take on more caregiving responsibilities for their younger peers as well as household chores (such as cooking and cleaning) than their community-based counterparts, resulting in more psychosocial distress. This may be particularly true for females in mixed gender institutions within conservative, patriarchal societies. However, no previous studies have examined the moderating role of gender on OSC psychosocial well-being across care settings. Since the differences in SDQ Total Difficulties are so small, it is still unclear whether the importance of female gender in

predicting psychosocial well-being is greater for OSC in one setting more than the other. Like the previous tested moderator variables, this lack of clear effects may have been influenced by the sample size, the data collection at Round 7, other possible mediating and moderating factors, as well as unaccounted variation in care setting structures. Since the literature still shows some mixed and inconsistent findings regarding the significance of gender for OSC, future research is needed to clarify and more closely examine the effect of gender.

Orphan status as a moderator. Consistent with the hypothesis, orphan status did significantly act as a moderator in this sample. Unexpectedly, however, it was for children who were separated from or abandoned by their parents (with no dead parent) that a significant moderation occurred for the association between care setting and psychosocial well-being. Specifically, results showed that separated or abandoned children have significantly lower psychosocial well-being when they are in institution-based settings than when they are in community-based settings. Moderation effects were not significant for paternal orphans as hypothesized, nor were they significant for double or maternal orphans.

A few possible explanations exist for these moderation effects. First, out of all the analyses, the sample size was most significantly reduced when comparing four categories of orphan status. This reduction in sample size may have made it difficult for significant findings to emerge, even if they existed. Thus, it may be possible that paternal orphans did have better psychosocial well-being across both institution- and community- based care settings compared to maternal orphans or double orphans (whom, in the literature,

are consistently found to have lower levels of psychosocial well-being than their paternal orphan counterparts), but the sample size obscured these findings.

Second, little literature has looked at the effects of being a separated or abandoned child (who has no dead parent). Previous studies have only examined comparisons between paternal, maternal and double orphans and show mixed and inconsistent results (Baaroy & Webb, 2008; Cluver et al., 2009; Fang et al., 2009, Kang et al., 2008; Ruiz-Casares et al., 2009; Wood et al., 2006; Yurcelen, 2007; Zhao et al., 2010). Thus, the fact that significant results emerged for separated/abandoned children (a.k.a. “social orphans”) adds to the literature. One could hypothesize that separated or abandoned children may be just as or even more at-risk than double orphans when it comes to psychosocial distress, since neither separated/abandoned children nor double orphans have the support of a remaining parent (as maternal or paternal orphans do). It is possible that separated/abandoned children living in institution-based care settings may feel particularly disconnected or abandoned from their families, since their parents are likely still living. Additionally, separated/abandoned children in this study had no expectation of either parent returning, which is likely to further complicate their levels of psychosocial distress. More research that includes this often neglected fourth category of orphan status is needed to clarify findings.

Finally, study results should also be interpreted with caution. It may be possible that significant moderation effects for separated and abandoned children emerged because the sample size of this orphan category across care settings was small ($n = 163$ for institution-based settings and $n = 125$ for community-based settings). Studies with

low statistical power not only reduce the chance of detecting a true effect, but they also reduce the likelihood that a statistically significant result reflects a true effect (Button, Ioannidis, Mokrysz, Nosek, Flint, Robinson, & Munafo, 2013). Additionally, point value differences in SDQ Total Difficulties scores between care settings were very small for separated and abandoned children with an average of 2.01/40 points total. Future research focused on the moderating role of orphan status should strive to enroll larger samples of participants across all four orphan statuses.

Overall, findings suggested significant relationships among components of quality of care, key demographic factors, care setting, and child psychosocial well-being. All components of quality of care were significantly related to child psychosocial well-being, and the amount of variance explained in psychosocial well-being (as reported in the SDQ Total Difficulties) ranged from 7.6% to 13.5%. The explained variances of these components of quality of care show different levels of importance for psychosocial interventions with food security being most important, and access to health care services being least important. However, since the differences of explained variance between these three components of quality of care was modest, these results should be interpreted with caution.

Additionally, three out of four components of quality of care and two out of three key demographic factors significantly moderated the associations between care setting and child psychosocial well-being. However, for all the components of quality of care that significantly moderated this association (food security, quality of caregiving, and access to health care services), results show nuanced effects, each with a small point

value difference in SDQ Total Difficulties across care setting. Moreover, even though gender and orphan status proved to be significant moderators, results also showed a very small point value difference in SDQ Total Difficulties across care setting. These findings still significantly add to the dichotomized institution- vs. community-based care debate in the literature and suggest that many of these factors predict psychosocial well-being across both care settings. Practical and policy implications of these findings are discussed in the next section.

Practical & Policy Implications

This study is a significant contribution to the literature on orphaned and separated children. Significant relationships emerged among components of quality of care, key demographic factors, OSC care settings, and child psychosocial well-being. Most importantly, components of quality of care significantly predicted psychosocial well-being, supporting the view that specifically in under-resourced societies in LMICs, the psychosocial well-being of OSC may depend on the availability of certain components of quality of care rather than solely the nature of their care setting. It is important to revisit the purpose and significance of this research while outlining the implications of the study findings.

Inform Targeted Interventions for OSC Psychosocial Well-being

Understanding the extent to which components of quality of care predict child psychosocial well-being, as well as the extent to which they moderate the relationships between OSC care settings and child psychosocial well-being, can help inform more

targeted psychosocial interventions for OSC. Specifically, findings may help identify the relative significance of certain components of quality of care and the circumstances under which they matter most to inform targeted interventions for OSC. In addition, understanding the extent to which key demographic factors moderate the relationships between OSC care settings and child psychosocial well-being may also help identify the relative significance of certain demographic factors and the circumstances under which they matter most to inform targeted interventions for OSC.

Findings from this study suggested that components of quality of care matter for OSC psychosocial well-being. Specifically, higher rates of quality of care significantly predicted higher psychosocial well-being. In addition, results suggested three out of four components of quality of care (food security, quality of caregiving, and access to health care services) mattered for OSC psychosocial well-being across both institution- and community-based care settings. Follow-up analyses suggested that OSC in community-based settings fared slightly better than those in institution-based settings in regards to psychosocial well-being when there were low levels of food security, quality of caregiving, and access to health care services. However, because the point differences in SDQ Total Difficulties across care settings was modest, results should be interpreted with caution.

In regards to key demographic factors, findings suggested that gender and orphan status matter to OSC psychosocial well-being across care settings, while age does not. Specifically, findings suggested that female OSC have lower psychosocial well-being in institution- than in community-based care settings. Additionally, separated or abandoned

children (with no dead parent) have lower psychosocial well-being in institution-based settings than in community-based settings. These findings should be interpreted with caution, however, given that the point value differences in SDQ Total Difficulties were small across care setting when a child was female or separated or abandoned. In addition, findings showed that being male or a double, maternal, or paternal orphan did not predict significant differences in psychosocial well-being across care settings.

This study and other studies also inform different areas of focus and approaches to interventions for OSC psychosocial well-being to effectively support OSC across both institution- and community-based care settings. For example, collaboration between multiple sectors and stakeholders is needed to address the full scope of psychosocial distress of OSC. Specifically, findings from this study suggest stakeholders from the international community and State level should work together to create new standards and strategies to assess and improve quality of care within both institution- and community-based care settings to help improve child psychosocial well-being. Findings suggest the potential of easy-to-use, low-cost, monitoring and evaluation tools, such as the Child Status Index (CSI), to monitor improvements in certain components of quality of care and quickly identify areas of concern that need to be addressed. Specifically, these interventions should include a focus on improving the status of food security, quality of shelter, quality of caregiving, and access to health care within a particular care setting. Results also suggest different levels of importance of components of quality of care when considering targeted psychosocial interventions. Specifically, findings show food security was most important to psychosocial functioning and access to health care services as least

important of the four components of quality of care. However, since the differences of explained variance between food security, quality of caregiving, and access to health services were modest, these levels of importance should be interpreted with caution. Again, it is important to acknowledge that findings equally supported efforts to improve components of quality of care and children within both institution- and community-based settings.

Although all OSC are vulnerable to psychosocial distress, they may have different needs for psychosocial support. This study suggests there are two groups that are particularly vulnerable: separated and abandoned children (“social orphans”) and female orphans in institution-based care settings. Findings suggest stakeholders should give special and individualized attention to these OSC groups given their vulnerability status. In addition, although age did not emerge as a significant moderator in this study, it is possible that age characteristics matter for interventions that serve children under the age of five. Specifically, several previous studies have suggested younger children (aged 4 and younger) in institution-based settings had lower levels of psychosocial well-being compared to their older counterparts (Smyke et al., 2002; Tizard & Rees, 1975; Zeanah et al., 2005). Thus, future psychosocial programming that serve children under the age of five should still consider age characteristics in their targeted interventions.

Beyond targeted psychosocial interventions involving components of quality of care, other interventions should move past single-issue interventions and adopt more multi-faceted strategies with ecological approaches (Bronfenbrenner, 1977) to strengthen “child protection” systems (Forbes, Luu, Oswald, & Tutnjevic, 2011; UNICEF, 2008;

Wulczyn, 2010). Broadly speaking, past psychosocial support and intervention approaches have mostly included single-issue programs on grieving and coping skills, professional counseling, peer-support groups, and many other positive youth development programs aimed at building OSC psychosocial capacity (Wu & Li, 2013). Many development organizations, nongovernmental organizations (NGOs), national governments, and private donors, however, are beginning to shift from issue-specific programming for OSC to adopting more “holistic” and multi-pronged responses to the psychosocial distress of OSC. This is intended to address the fact that children can suffer from multiple vulnerabilities at multiple levels, and “single-issue” interventions alone are viewed as less sustainable or effective (Fluke et al., 2012).

For example, psychosocial support can be integrated into existing, wider systems in other sectors such as education by linking existing health advocacy training programs to teachers and counselors in schools (UNICEF, 2010). Existing local youth groups can be mobilized to lead youth development programs for OSC to promote peer-support. Microfinance projects can target community-based OSC caregivers and provide income generating activities for the caregivers to build capacity of their household. Local university students studying social work can be trained in monitoring and evaluation tools (such as the Child Status Index (CSI)) to consistently support interventions targeting components of quality of care. General health staff who work for institutions can be trained in psychological components of emergency health care as well as extend their attention to supporting the physical and psychosocial health of caregivers. Indeed, UNICEF (2010) suggests that multi-sectoral and community-based interventions that

utilize community networks, processes, and practices in a systematic manner is not only cost-effective, but also enable scalable programming, more sustainability, and may carry less stigma.

Inform Larger Institution- vs. Community-Based Care Setting Debate

Understanding the extent to which components of quality of care predicted child psychosocial well-being and the extent to which they moderate the relationship between care setting and psychosocial well-being can potentially inform the institution- vs. community-based care setting debate. Specifically, findings may support the alternative view that particularly in under-resourced societies in LMICs, the psychosocial well-being of OSC may heavily depend on the availability of certain components of quality of care rather than solely the nature of their care setting.

Findings suggest that all four components of quality of care (food security, quality of shelter, quality of caregiving, and access to health services) significantly predict OSC psychosocial well-being. In addition, three out of four components of quality of care significantly moderated the associations between care setting and psychosocial well-being. Compared to the 0.3% variance in psychosocial well-being explained by care setting (Whetten et al., 2009), food security explained 13.5%, quality of shelter explained 10%, quality of caregiving explained 9%, and access to health care services explained 7.6% of the variance in psychosocial well-being. Generally, findings suggest that when there was low to no risk across these three components of quality of care, the care setting was unrelated to psychosocial well-being. On the other hand, when there was higher risk across these three components of quality of care, children in institution-based settings

seem to have more slightly more psychosocial difficulties than children in community-based settings. Although significant, the point value differences in SDQ Total Difficulties were small across care settings when components of quality of care were at high to moderately high risk, averaging 2-3 points out of 40 total. These findings are further nuanced, given that components of quality of care are, on average, better in institution- than in community-based care settings. It is also important to acknowledge that findings show very few children indicated they had high risk (CSI value = 1, 1.1% - 1.2%) or moderately high risk (CSI value = 2, 9.0% - 13.3%) in any of the components of quality of care.

These findings cast doubt on conclusions from past studies indicating that institution-based care settings are systematically associated with poor child outcomes. These findings should not be taken to mean that institution-based care settings are the better care setting for OSC, but rather that community-based care settings may perhaps not be all that different when it comes to predicting child psychosocial well-being. Instead, this study's findings suggest that in this study's population across five LMICs, the psychosocial well-being of OSC in institution-based settings (as measured by the SDQ) is no different from that of their community-based counterparts.

The proposition that every OVC should be raised in a family environment that is family-based is an ideal to be striven for, but perhaps may work better in theory than in practice until improved systems in under-resourced countries are in place. As the number of OVC continues to increase in resource-poor countries, it is important not to discount institutional care as an option, absent more conclusive findings that children fare worse in

these settings than in community-based alternatives. Indeed, a focus on deinstitutionalizing children while there is an urgent need for large-scale care solutions for OSC puts millions of children at risk of deprivation, degradation, and early death.

Findings from this and other studies (Aboud, et al., 1991; Braitstein et al., 2013; Embleton et al., 2014; Hong et al., 2011; Merz et al., 2013; Otieno et al., 1999; Whetten et al., 2009; Whetten et al., 2014; Wolff et al., 1995) and commentators (Cantwell & Holzscheiter, 2008) suggest that there should be refinement of the language of Article 20 of the CRC to promote an equal assessment of suitability and necessity of all alternative care options, without relegating institutions to a last resort. Specifically, the use of the term “if necessary” and the last position of institutions as an alternative care option in Article 20(3) have influenced several international development organizations and programs to focus on deinstitutionalization efforts (Save the Children, 2009; United Nations General Assembly, 2009; UNICEF, 2011). Thus, it is recommended that the term “if necessary” be omitted to support the State’s actions of equally assessing the potential suitability of every placement, whether it is with the extended family, in a family-based foster placement, or in a residential facility such as institutional care. Institutional care should be considered as no less suitable in certain cases and for certain children than other options, especially when there is research, including this study, that challenges the conclusion that institution-based care settings are systematically associated with poorer child outcomes than community-based care settings (Aboud, et al., 1991; Braitstein et al., 2013; Embleton et al., 2014; Hong et al., 2011; Merz et al., 2013; Otieno et al., 1999; Whetten et al., 2009; Whetten et al., 2014; Wolff et al., 1995), shows variability in

international institutions (Whetten et al., 2009), and documents positive effects of interventions seeking to improve institutions (Groark et al., 2005; Juffer & Series, 2008). The CRC and its implicit “last resort” language, as well as subsequent global policies that also use this language (Better Care Network, 2014; Save the Children, 2009; United Nations General Assembly, 2009; UNICEF, 2011) certainly do not create a constructive way of approaching alternative care solutions for any child without parental care.

Limitations

This study significantly contributed to the understanding of the relationships among components of quality of care, key demographic factors, OSC care setting, and child psychosocial well-being, but several limitations compromised the strength of the findings.

First, the sample size for this study was reduced significantly when the community-based non-orphan group was omitted and participants were split into two care setting groups. The sample size decreased even more when multi-categorical variables (e.g. orphan status) were used for comparison group analyses. Additionally, the study used data from the latest round (Round 7) of data collection, which may have influenced sample further. POFO researchers noted that the sample size steadily decreased over the years and rounds of data. Specifically, retention of Round 1 baseline participants was difficult as some children would “age-out” and leave the institutions, move to different geographic areas, or they would be reintegrated in community-based settings, often making it difficult to find them for follow-up data. Children may have also grown up and

decided to decline participation in ongoing evaluation efforts because of stigma, disinterest, or discomfort, which may have influenced the reporting of child outcomes in addition to the reduced sample size. Thus, choosing the last and most recent round of the POFO data, Round 7, meant that there would be a smaller sample size available than earlier rounds. The small sample size increased the likelihood of a Type 2 error. Thus, it could very well be that other group differences and moderating effects of quality of care and demographic factors wouldn't emerge even if they existed.

A second limitation involves the potential for observation bias. As earlier stated, the CSI was successfully field tested in several of the POFO placements for its reliability and construct validity. The CSI rating is often conducted by trained care workers to gather observations and information related to each of the 12 structured CSI factors. However, even with the most effective training on interviewing methods, care workers and informants may still be susceptible to certain biases. For example, social acceptance bias may be present, influencing key informants to give more “socially acceptable” answers to questions. This can be explained by the concept of “courtesy bias,” where individuals express only views which they think the interview wants to hear (Mitchell, 1965). This phenomenon has been observed among Southeast Asian participants in research (Jones, 1993). Social acceptance and courtesy bias may have similarly occurred similarly with child participants from Southeast Asia who were self-reporting the Strengths and Difficulties Questionnaire (SDQ).

A third limitation involves cross-cultural construct validity of the SDQ measure. The SDQ scale was selected, in part, because of its wide use in both resource rich and

resource poor countries. However, the SDQ has no published data regarding its psychometric properties or standardization in the five countries of this study. It is possible that psychiatric disorders express themselves differently in the different cultures in this study (Canino & Alegria, 2008). Moreover, it is possible that children's behaviors, as measured by the SDQ, may have been incorrectly interpreted as pathology (Kleinman, Eisenberg, & Good, 1978).

A fourth limitation of this study involves the range of predictors and moderators examined. Research suggests there are other possible predictors, mediators, and moderators that are significantly associated with OSC psychosocial well-being, such as prevalence and incidence of trauma (Gray, Pence, Ostermann, Whetten, O'Donnell, Thielman, & Whetten, 2015), school attendance (Makame et al., 2002; Nyamukapa et al., 2008), experience of HIV/AIDS stigma (Cluver, Gardner, & Operario, 2008), socioeconomic status (Ruiz-Casares et al., 2009), caregiver health (Cluver, Operario, & Gardner, 2009) or socio-cultural settings. These factors were not included in the analyses either because relevant data were unavailable or there were not enough data to support hypotheses (i.e. socio-cultural settings). Accordingly, it is possible that some of the associations among components of quality of care, key demographic factors and psychosocial outcomes in this study models may have been different if these other factors were included in analyses.

Another limitation of this study is its focus on children aged 6 to 12 years. Although the focus on this age group was important because of its potential insights into the longer-term effects of orphanhood as well as the effects of orphanhood on children at

older ages, the lack of age moderation effects in this study could perhaps be explained by the lack of younger child participants available for analysis. Previous studies that showed younger age to be significantly associated with lower psychosocial well-being focused primarily on institution-based infants and children aged 5 and younger. Thus, because this study focuses on older children, results cannot be generalized to younger OSC.

A final major limitation of this study was the broad categorization of “institution-based” and “community-based” care settings in the POFO study (Whetten et al., 2009). When the POFO researchers initially selected institution-based children for the study, they defined an institution as any structure with at least five orphaned children from at least two different families not biologically related to the caregiver(s) (Whetten et al., 2009). Thus, the POFO study employed a diverse sample of residential care institutions in LMICs that varied across many dimensions, primarily with the goal of ensuring broad representation. However, Whetten et al. (2009) noted that some of institutions in the sample looked very different from institutions described in early studies, thus possibly representing a new kind of care structure that may not fit under either of the “institution-based” and “community-based” comparison groups. This unaccounted variance in care setting categories may be one of the reasons why some of the components of quality of care and key demographic factors showed modest or unclear moderation effects. Indeed, it is possible that categorizations of different care setting types need to be more precise to find group differences.

Although several limitations were identified, this study was innovative in its design. No previous studies have used a study sample of OSC across both institution- and

community-based care settings to examine the extent to which components of quality of care, such as food security, quality of shelter, quality of caregiving, and access to health care services, predict child psychosocial well-being as well as the extent to which these components of quality of care and other key demographic factors moderate the associations between care settings and child psychosocial well-being. Further, applicable research on the psychosocial well-being of OSC across both institution- and community-based care settings is scarce. The study is a significant contribution to the field, but more research is needed to arm stakeholders with the information needed to effectively support and advocate for the well-being of orphaned and separated children.

Future Research

One of the key issues for future research is the addition of other possible predictors, mediators, and moderators that are significantly associated with OSC psychosocial well-being, such as prevalence and incidence of trauma (Gray et al., 2015), school attendance (Makame et al., 2002; Nyamukapa et al., 2008), experience of HIV/AIDS stigma (Cluver et al., 2008), socioeconomic status (Ruiz-Casars et al., 2009), caregiver health (Cluver et al., 2009), and socio-cultural settings. It is likely that components of quality of care and key demographic factors act in tandem with other mediating and moderating factors. Future research should also employ longitudinal research designs to consider changes in these factors and their relationships to psychosocial well-being over time, since this current study was limited to only cross-sectional research questions.

Additionally, future research should use and create other measures to examine quality of care within OSC care settings. Previous research has shown sustainable, positive “school climates” (referring to the quality and character of school life) help foster youth development and learning necessary for a productive and satisfying life (Cohen, McCabe, Michelli, & Pickeral, 2009). This climate includes norms, values, and expectations that allow children to feel socially, emotionally, and physically safe. Currently, there are no OSC care setting “climate” scales, however existing scales that have been used to assess group-care programs, such as the School-Age Care Environment Rating Scale (SACERS) (Harms, 2013), could potentially be adapted to an OSC context.

Similarly, future research should examine the psychosocial well-being of OSC using a variety of other valid and reliable measures, as well as continue to test the reliability and validity of the SDQ in other cultural contexts. Other measures may include child bereavement or experienced trauma, as well as measures that examine more positive dimensions of psychosocial well-being such as sense of belonging (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier (1992), or self-acceptance, autonomy, and personal growth (Ryff, 1995). Moreover, future research should include other child outcomes besides psychosocial well-being to examine potential differences between care settings and their relative merits. Parallel to the large vs. small school setting debate, it is reasonable to suggest that after controlling for basic needs being met, large vs. small OSC care settings may have their own unique yet complementary advantages for children.

Future research is also needed to better understand which children are at highest risk. Specifically, findings from this study suggest that children who are female or

separated or abandoned appear to be at particular risk in institution-based care settings. Little literature, however, has focused on the experience of being a female or separated or abandoned child (who has no dead parent) in an institutional care setting and how it relates to child psychosocial well-being. Specifically, previous studies have only examined comparisons of psychosocial well-being between paternal, maternal, and double orphans (Baaroy & Webb, 2008; Cluver et al., 2009; Fang et al., 2009, Kang et al., 2008; Ruiz-Casares et al., 2009; Wood et al., 2006; Yurcelen, 2007; Zhao et al., 2010). Future studies examining child outcomes by orphan status should include this potentially high-risk group of children.

The “study site” variable that indicated the location of the child (Cambodia, India [Hyderabad and Nagaland], Kenya, Tanzania, and Ethiopia) was not used for this study because of a lack of detailed site-specific data that could support potential hypotheses. Therefore, future research should attempt to collect more site-specific data regarding socio-cultural practices, religious customs, historical contexts, current political landscapes, State-specific policies, and other socio-culturally specific data that may influence child outcomes. Additionally, as the POFO study authors acknowledge (Whetten et al., 2009), there is no representation in the POFO study from South America or Eastern Europe, where much of the earlier research on institutional care originated. Thus, future studies should focus on inclusion of other cultural contexts not represented in this study.

There is some evidence that suggests there is more variability in care setting structures than what is currently acknowledged in the literature. Whetten et al. (2009)

found that, on average, modern-day institutions are neither family-style community care nor foster care, but they also do not look like the institutions described in early studies. Some of these modern-day institutions look like small residential units, such as family-type homes or group homes (Whetten et al., 2009). If these modern-day institutions represent a new kind of care structure that minimizes the harm demonstrated in early studies, then it is important that future qualitative research sufficiently documents and acknowledges this variability in OSC care structure for inclusion beyond the standard, dichotomized choice set of institution- or community-based care.

Similarly, future studies that examine OSC outcomes should employ research designs that include as much variability in care setting as possible. At the very least, future research should include both institution- and community-based care settings, since most research studies currently focus solely on either institutional care or community-based care, thus perpetuating a dichotomized choice set between the two. Moreover, research specifically regarding psychosocial well-being of OSC in more than one type of care settings is scarce. Such research is essential as the number of children without parental care across both institution- and community-based care settings continues to increase in resource-poor LMICs.

Conclusion

The current study was an extension of Whetten et al.'s 2009 study that found psychosocial well-being was no worse for institution-based than community-based OSC and after adjusting for sites, age, and gender, institution- vs. community-based care

settings explained only 0.3-7% of the variability in child outcomes. Findings from this study significantly contributed to the understanding of the role of care setting and components of quality of care on child psychosocial well-being. This study supported the assertion that, specifically in under-resourced societies in LMICs, psychosocial well-being for OSC may heavily depend on the availability of certain components of quality of care rather than solely the nature of their care setting. Findings suggested that compared to the 0.3% variance in psychosocial well-being (as measured by the SDQ Total Difficulties) explained by care setting (Whetten et al., 2009), food security explained 13.5%, quality of shelter explained 10%, quality of caregiving explained 9%, and access to health care services explained 7.6% of the variance in psychosocial well-being. Additionally, this study also helped identify the relative significance of both certain components of quality of care and key demographic factors and the circumstances under which they matter most to inform targeted psychosocial interventions for OSC.

Past research clearly indicates that OSC need special consideration and care due to the devastating and complex psychosocial effects of orphanhood. However, applicable research that provides stakeholders with insights into effectively supporting OSC across both institution- and community-based care settings continues to be scarce. While further research is crucial, findings from this study have many implications for supporting all orphaned and separated children, but especially for the most vulnerable groups of OSC.

Appendix A

Caregiver Consent & Child Assent for POFO Study



DUKE UNIVERSITY HEALTH SYSTEM

Consent To Participate In A Research Study

Positive Outcomes for Orphans

PURPOSE:

You and the child for whom you are legal guardian are being asked to participate in a research study under the direction of Dr. Kathryn Whetten from Duke University, Durham, North Carolina, USA and (*organization, location*). You and the child are being asked to participate in the study because, *for orphaned children*, the child has a parent who has died. *For non-orphaned children*, you live in an area in which other children live whose parents have died. The purpose of this research is to compare how children who have been orphaned develop on an emotional and physical level in both community-based care versus institutionalized care (like an orphanage).

DURATION:

The evaluation for the child will last about 45 minutes, and the interview for you, the caretaker of the child, will last for about 60 minutes. This is a longitudinal study, which means we will return to interview you again with some of the same and some different instruments every six months for up to eight years.

PROCEDURES:

If you agree that you and the child will take part in this study, you will be asked to respond to questions about your household or institution as well as questions about the child's physical and psychosocial health. The child evaluation will involve tests of learning ability that evaluate the child's memory, ability to create shapes from a model, and solve problems with pictures. For children over 10 years old, we will also ask the child questions about feelings, behavior, and experiences. The interview will be conducted by a member of (*organization*). If you choose to, you, the guardian, have the right to be with the child for the duration of the interview.

RISKS AND DISCOMFORTS:

There are no physical risks to participate in this study. Some of the questions may make you or the child sad, since there are some questions about the parent who has died. The



DUKE UNIVERSITY HEALTH SYSTEM

Consent To Participate In A Research Study

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interviewers are training to help you or the child, if needed, if the questions are emotionally difficult. The interviewers will be trained to help if you, the child, or the legal guardian, want to talk about any issues that come up in the interview with the interviewer or with another community person. In addition, you or the child can refuse to answer any questions; and you or the child can ask that the interview be stopped at any time. There are no negative outcomes for asking that the interview be stopped.

BENEFITS:

There are no direct benefits to you, the child, or the legal guardian, from both your participation in this study. However, knowledge gained from this study may contribute to providing the best care for children who have been orphaned as well as the needs of their caregivers.

CONFIDENTIALITY:

Every effort will be taken to protect the identity of the participants in the study. However, there is no guarantee that the information cannot be obtained by legal process or court order. No subjects will be identified in any report or publication of this study or its results. Only with the legal guardian's written permission and the child's assent will we share the results of your interview with anyone.

Neither yours or the child's name or other identifying information will appear on the interview form. This consent form will be the only form with your and the child's name as well as a study number. The consent forms are kept at (*organization*) in a locked cabinet, and only the lead interviewer, (*name*), will have access to the file that has both your name and the study number. The interview information for both you and the child, which will only have a study number on it, will be kept in a separate locked file.

When the information from the interviews is sent to the U.S. for analyses, it is sent without your or the child's name. In the U.S, we will store all the information in a locked office. Copies of the consent forms, with your and the child's name and the study number, will be sent separately to Dr. Whetten and will be stored in a separate locked cabinet.

In other words, no one, except (*lead interviewer*), at (*organization*) and Dr. Whetten at Duke will be able to connect your name with the interview information you and the child provide. Only information about the whole group of participants will be written and published, and it will not be possible to identify any one person.



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Sometimes, there are future studies where the information you give us *but not yours or the child's name* could be helpful for comparison purposes. You can agree to allow Duke University to use the interview information you and the child provide, or you may refuse at anytime. You may also be contacted again to participate in future research studies. You can agree to allow Duke University to contact you, or you may refuse at anytime.

FINANCIAL COST OF RESEARCH:

There is no cost to you, the child or the legal guardian for participation in the study.

PAYMENTS TO PARTICIPANTS:

There are no payments for participation.

ETHICAL CLEARANCE:

Ethical clearance for this study has been obtained by Duke University and

_____.

RIGHT TO REFUSE:

Your participation in this study is voluntary, which means you, or the child, don't have to do it if you don't want to. You can stop at any time without penalty. You may also refuse to answer any of the questions. If either of you have any questions, you may contact (lead interviewer at number), (organization director) at (organization) (number), or the Duke Researchers directly at: +1-919-613 9353.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

For questions about your rights as a research participant, contact Duke University Health System Institutional Review Board (IRB) Office at +1-919-668-5111.



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Consent To Participate In A Research Study

Positive Outcomes for Orphans

SUBJECTS AGREEMENT:

"I have read or had read to me the information provided above. I voluntarily agree to participate in this study and that the data may be utilized by Duke University for possible future studies. After it is signed, I understand I will receive a copy of the consent form."

I give permission for staff associated with Duke University or its partner organizations to contact me for other studies in the future:

_____ Yes

_____ No

_____ Initials

Signature of the child (Assent)

Date_____

Name of child

Signature of caretaker (legal guardian)

Date_____

Name of caretaker (legal guardian)

Signature of person obtaining consent

Date_____

Name of person obtaining consent

Appendix B

The Strengths and Difficulties Questionnaire (SDQ)

I. Child's strengths and difficulties – Ask the child to describe himself; for use with all children, regardless of caregiving circumstances.	Usually true of me	Sometimes true	Never true of me
1. I try to be nice to other people. I care about their feelings.			
2. I am restless. I cannot stay still for long			
3. I get headaches, stomachaches, or sickness.			
4. I share with others, for example toys and food.			
5. I get very angry and lose my temper.			
6. I would rather be alone than with others my age.			
7. I do what adults tell me to do.			
8. I worry a lot.			
9. I am helpful if someone is hurt, upset, or feeling ill.			
10. I am constantly moving around, squirming, feel restless.			
11. I have one good friend or more.			
12. I fight a lot			
13. I am unhappy, depressed, tearful.			
14. Other people my age like me.			
15. I am easily distracted. I find it difficult to concentrate.			
16. I am nervous in new situations. I easily lose confidence.			
17. I am kind to younger children.			
18. I have been accused of lying or cheating.			
19. Other children or young people pick on me or bully me.			
20. I offer to help others (adults, other children.)			
21. I think before doing things.			
22. I take things that are not mine from school, home, or elsewhere.			
23. I get along better with adults than with people my own age.			
24. I am afraid of many things. I am easily scared.			
25. I finish the work I am doing. My attention is good.			

Note: This is the self-report version of the SDQ for children ages 10 and older. Caregivers of children under 10 years of age were asked to fill out the SDQ adapted for caregivers.

Appendix C

Child Status Index (CSI) Domains

DOMAIN	1 — FOOD AND NUTRITION		2 — SHELTER AND CARE		3 — PROTECTION	
	1A. Food Security	1B. Nutrition and Growth	2A. Shelter	2B. Care	3A. Abuse and Exploitation	3B. Legal Protection
GOAL	<i>Child has sufficient food to eat at all times of the year.</i>	<i>Child is growing well compared to others of his/her age in the community.</i>	<i>Child has stable shelter that is adequate, dry, and safe.</i>	<i>Child has at least one adult (age 18 or over) who provides consistent care, attention, and support.</i>	<i>Child is safe from any abuse, neglect, or exploitation.</i>	<i>Child has access to legal protection services as needed.</i>
Good = 4	Child is well fed, eats regularly.	Child is well grown with good height, weight, and energy level for his/her age.	Child lives in a place that is adequate, dry, and safe.	Child has a primary adult caregiver who is involved in his/her life and who protects and nurtures him/her.	Child does not seem to be abused, neglected, do inappropriate work, or be exploited in other ways.	Child has access to legal protection as needed.
Fair = 3	Child has enough to eat some of the time, depending on season or food supply.	Child seems to be growing well but is less active compared to others of same age in community.	Child lives in a place that needs some repairs but is fairly adequate, dry, and safe.	Child has an adult who provides care but who is limited by illness, age, or seems indifferent to this child.	There is some suspicion that child may be neglected, over-worked, not treated well, or otherwise maltreated.	Child has no access to legal protection services, but no protection is needed at this time.
Bad = 2	Child frequently has less food to eat than needed, complains of hunger.	Child has lower weight, looks shorter and/or is less energetic compared to others of same age in community.	Child lives in a place that needs major repairs, is overcrowded, inadequate and/or does not protect him/her from weather.	Child has no consistent adult in his/her life that provides love, attention, and support.	Child is neglected, given inappropriate work for his or her age, or is clearly not treated well in household or institution.	Child has no access to any legal protection services and may be at risk of exploitation.
Very Bad = 1	Child rarely has food to eat and goes to bed hungry most nights.	Child has very low weight (wasted) or is too short (stunted) for his/her age (malnourished).	Child has no stable, adequate, or safe place to live.	Child is completely without the care of an adult and must fend for him or herself or lives in child-headed household.	Child is abused, sexually or physically, and/or is being subjected to child labor or otherwise exploited.	Child has no access to any legal protection services and is being legally exploited.
DOMAIN	4 — HEALTH		5 — PSYCHOSOCIAL		6 — EDUCATION AND SKILLS TRAINING	
	4A. Wellness	4B. Health Care Services	5A. Emotional Health	5B. Social Behavior	6A. Performance	6B. Education and Work
GOAL	<i>Child is physically healthy.</i>	<i>Child can access health care services, including medical treatment when ill and preventive care.</i>	<i>Child is happy and content with a generally positive mood and hopeful outlook.</i>	<i>Child is cooperative and enjoys participating in activities with adults and other children.</i>	<i>Child is progressing well in acquiring knowledge and life skills at home, school, job training, or an age-appropriate activity.</i>	<i>Child is enrolled and attends school or skills training or is engaged in age-appropriate play, learning activity, or job.</i>
Good = 4	In past month, child has been healthy and active, with no fever, diarrhea, or other illnesses.	Child has received all or almost all necessary health care treatment and preventive services.	Child seems happy, hopeful, and content.	Child likes to play with peers and participates in group or family activities.	Child is learning well, developing life skills, and progressing as expected by caregivers, teachers, or other leaders.	Child is enrolled in and attending school/training regularly. Infants or preschoolers play with caregiver. Older child has appropriate job.
Fair = 3	In past month, child was ill and less active for a few days (1 to 3 days), but he/she participated in some activities.	Child received medical treatment when ill, but some health care services (e.g. immunizations) are not received.	Child is mostly happy but occasionally he/she is anxious, withdrawn. Infant may be crying, irritable, or not sleeping well some of the time.	Child has minor problems getting along with others and argues or gets into fights sometimes.	Child is learning well and developing life skills moderately well, but caregivers, teachers, or other leaders have some concerns about progress.	Child enrolled in school/training but attends irregularly or shows up inconsistently for productive activity/job. Younger child played with sometimes but not daily.
Bad = 2	In past month, child was often (more than 3 days) too ill for school, work, or play.	Child only sometimes or inconsistently receives needed health care services (treatment or preventive).	Child is often withdrawn, irritable, anxious, unhappy, or sad. Infant may cry frequently or	Child is disobedient to adults and frequently does not interact well with peers, guardian, or others at home or school.	Child is learning and gaining skills poorly or is falling behind. Infant or preschool child is gaining skills more slowly than peers.	Child enrolled in school or has a job but he/she rarely attends. Infant or preschool child is rarely played with
Very Bad = 1	In past month, child has been ill most of the time (chronically ill).	Child rarely or never receives the necessary health care services.	Child seems hopeless, sad, withdrawn, wishes could die, or wants to be left alone. Infant may refuse to eat, sleep poorly, or cry a lot.	Child has behavioral problems, including stealing, early sexual activity, and/or other risky or disruptive behavior.	Child has serious problems with learning and performing in life or developmental skills.	Child is not enrolled, not attending training, or not involved in age-appropriate productive activity or job. Infant or preschooler is not played with.

Public Domain: Developed by the support from the U.S. President's Emergency Fund for AIDS Relief through USAID to MEASURE Evaluation & Duke University. O'Donnell K., Nyangara F., Murphy R., & Nyberg B., 2008

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Appendix D

Child Status Index Record Form

Child's Name: _____ Age in years: _____ Gender: F/M _____ Child ID: _____
 Location: District _____ Ward/Division: _____ Village/Neighborhood: _____
 Caregiver's Name: _____ Relationship to Child: _____

I. CSI SCORES:	Date:	Evaluator's Name or ID:
Domains	Scores (Circle One)	Action taken today:
1 — FOOD AND NUTRITION		
1A. Food Security	4 3 2 1	
1B. Nutrition and Growth	4 3 2 1	
2 — SHELTER AND CARE		
2A. Shelter	4 3 2 1	
2B. Care	4 3 2 1	
3 — CHILD PROTECTION		
3A. Abuse and Exploitation	4 3 2 1	
3B. Legal Protection	4 3 2 1	
4 — HEALTH		
4A. Wellness	4 3 2 1	
4B. Health Care Services	4 3 2 1	
5 — PSYCHOSOCIAL		
5A. Emotional Health	4 3 2 1	
5B. Social Behavior	4 3 2 1	
6 — EDUCATION AND SKILLS TRAINING		
6A. Performance	4 3 2 1	
6B. Education and Work	4 3 2 1	
Source(s) of information: (Circle all that apply) Child, Parent/Caregiver, Relative, Neighbor, Teacher, Family Friend, Care worker, Other (Specify) : _____		
II. IMPORTANT EVENTS: <i>(Check any events that have happened since the last CSI assessment if applicable.)</i>	<input type="checkbox"/> Child left program <input type="checkbox"/> Child pregnant <input type="checkbox"/> Child died <input type="checkbox"/> Parent ill <input type="checkbox"/> Parent/guardian died (specify who) _____ <input type="checkbox"/> Family member died <input type="checkbox"/> Change in caregiver/adoption <input type="checkbox"/> Change in living location <input type="checkbox"/> Community trauma (violence, famine, flood, etc.) <input type="checkbox"/> Other (Specify) _____	Comment(s) if necessary:
III. TYPES OF SUPPORT/SERVICES PROVIDED (at present):		What was provided?
A. Food and nutrition support (such as food rations, supplemental foods)		
B. Shelter and other material support (such as house repair, clothes, bedding)		
C. Care (caregiver received training or support, child placed with family)		
D. Protection from abuse (education on abuse provided to child or caregiver)		
E. Legal support (birth certificate, legal services, succession plans prepared)		
F. Health care services (such as vaccinations, medicine, ARV, fees waived, HIV/AIDS education)		
G. Psychosocial support (clubs, group support, individual counseling)		
H. Educational support (fees waived; provision of uniforms, school supplies, tutorials, other)		
I. Livelihood support (vocational training, micro-finance opportunities for family, etc.)		
J. Other:		
Suggestions for other resources or services needed:		

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