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Profiles of Adjustment among Children in Institutional Care in Ghana: Predictors of Positive Functioning

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PROFILES OF ADJUSTMENT AMONG CHILDREN IN INSTITUTIONAL CARE IN GHANA: PREDICTORS OF POSITIVE FUNCTIONING

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

By

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Abstract

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Worldwide, approximately 2-8 million children reside in institutional care, which can lead to

developmental delays and setbacks. Given that the problem of eliminating institutional care has

not been solved, it is important to continue investigating youth in this setting to determine which

improvements can be made in order to provide the best care. The current study utilized a mixed-

methods design with participants from Accra, Ghana. Study 1 involved cluster analyses to

determine patterns of adjustment for 100 children in institutional care (CIC) (M age = 13.31

years, SD = 3.14; 40% female) and 100 children in families (CIF) (M age = 13.37 years, SD =

3.08; 40% female) across several domains of functioning, including academic progress, quality

of life, and anxious and depressive symptoms. ANOVA was used to evaluate whether protective

factors including self-efficacy, perceived social support, adaptability and persistence, emotion

regulation, and various forms of coping (problem solving, cognitive restructuring, support

seeking, distraction) differentiated between patterns of adjustment. Findings were compared

between the CIC and CIF. Study 2 used qualitative interviews with 19 Ghanaian teachers and 19

caregivers and social workers (M age = 43.31 years, SD = 10.37; 82% female) to understand

adult perceptions of youth adjustment and their interpretations of results from Study 1. Results revealed four patterns functioning for CIC, and three patterns of functioning for CIF. It was determined that three groups of CIC met the definition of resilience in at least one area of functioning. For CIC, problem-solving coping varied between clusters, while for CIF self-efficacy and adaptability varied between clusters. Study 2 participants largely affirmed the quantitative findings, and felt that children may struggle in one or more areas while still having strengths. Having basic needs met, a stable home, and a high level of adult support were the most common factors believed to contribute to positive functioning. Teachers typically provided more elaborate responses to questions, and deferred to talking about academics, while caregivers and institution staff provided briefer answers but commented on multiple domains of functioning. Participants explained why problem-solving coping was significant for CIC. Intervention implications and future directions were discussed.

Profiles of Adjustment among Children in Institutional Care in Ghana: Predictors of Positive Functioning

Worldwide, there are 132 million orphans – children who have lost one or both parents (UNICEF, 2015). Additionally, millions of children are abandoned by parents who are unable to care for them. Many countries and organizations encourage the placement of these children with extended family or foster families (USAID, 2016; Salifu Yendork & Somhlaba, 2016a). However, the supply of alternative homes does not meet the demand of orphaned or abandoned children (Sengendo, & Nambi, 1997; Salifu Yendork & Somhlaba, 2016a). This results in between two to eight million children living in institutional care for a large portion of their childhood (Dozier et al., 2012; McCall et al., 2016).

The quality of institutionalized care varies from site to site, but institutional childcare typically is characterized by large group sizes with high child-to-caregiver ratios, frequent caregiver turnover resulting in inconsistent contact with children, short durations of responsive care and play with caregivers, and a lack of fundamental resources for daily care and mental stimulation (Bakermans-Kranenburg et al., 2008; Dozier et al., 2012; Groark et al., 2011). Placement within institutionalized care often leads to physical, mental, social, and emotional developmental delays and setbacks (Dozier et al., 2012). For example, development of children living in institutional care (CIC) averages 1 to 1.5 standard deviations (SD) below US norms for children living in families (CIF)[1] (Dozier et al., 2012; McCall et al., 2016). Even if children are removed from institutional care, long-term deficiencies often are observed, particularly in the areas of physical growth, executive functioning, attachment, and behavior (Dozier et al., 2012).

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[1] The terms "Children living in Institutional Care" and "Children living in families" were selected over "institutionalized" or "non-institutionalized" to keep language person-centered. When alternative terms are used through the introduction, this reflects the language used by studies reviewed which examined varying populations such as orphans, foster children, etc., and not exclusively those living in institutional care.

These deficits place a burden on the child, their caregivers, and society as a whole over the course of their lives (Bakermans-Kranenburg et al., 1944; Erol et al., 2010).

The abundance of research highlighting the damaging effects of institutional care led to the United Nations publishing the *Guidelines for the Alternative Care of Children* which state that best practice is to place children in family care, and countries should take steps to eliminate institutionalized residential care facilities from existence (United Nations General Assembly, 2010). UNICEF and other international aid organizations have adopted these guidelines, stating that they will redirect funding and research support away from institutional care and instead toward improving community support for family-based care (UNICEF, 2011). Many countries acknowledge the harmful effects of institutional care and have shifted policies toward foster care and family-based solutions for children in need of alternative care. Unfortunately, not all countries have the economic resources or societal support to move in the direction of these models. Despite knowing the potential risks of institutional care, they are given no other option when a lack of funding or qualified and willing foster families exists. Hence, millions of children globally still live in institutional care for many of their developmentally influential years (Dozier et al., 2012; Groark & McCall, 2011; McCall et al., 2016; Petrowski et al., 2017).

Children raised in institutional care show heterogeneity in adjustment outcomes. There is extensive literature documenting deficits and delays in children raised in institutional care, but a dearth of literature evaluating positive or resilient adjustment within this setting (Dozier et al., 2012). Researchers who have explored positive adjustment outcomes within institutional care generally have defined positive functioning broadly, failing to illustrate the multidimensional patterns of functioning that may occur (Mota & Matos, 2015). Newer research with children in more traditional family settings has found that it is possible for a child to thrive in one or more areas of

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functioning, while struggling in others (Brody et al., 2013). This work has not expanded, though, to CIC, who appear to be on one of the most disadvantaged developmental trajectories.

Studying positive child development is a crucial part of understanding how to prevent the development of negative outcomes (Cicchetti & Garmezy, 1993). It takes far fewer resources to promote positive adjustment in a population than it does to repair the damage created by psychopathology and other negative developmental outcomes (Luthar & Cicchetti, 2000). Increased research and a deeper understanding of the key elements present in the development of positive adjustment will allow researchers to design and implement intervention and prevention programs that target at-risk individuals more precisely, and promote positive development, which will lead to greatly improved outcomes among these populations. In a longitudinal study identifying predictors of resilience in high-risk urban youth, Tiet et al. (2010) found that a feedback loop existed for positive adjustment, such that early positive functioning predicted later positive outcomes. Although it is not a guarantee, children who develop positive functioning early on are more likely to continue on a positive path through development than are children who show difficult functioning from the beginning. DuMont et al. (2007) found the same trend in resilience continuity. In their study of 676 neglected or abused adolescents, over half of those identified as resilient in early adolescence remained resilient into young adulthood, while only 11% of non-resilient adolescents became resilient during young adulthood. These findings show how early intervention can set children up for a path of positive adjustment, potentially reducing the need for later intervention (DuMont et al., 2007; Tiet et al., 2010). If we intervene early, fewer resources will be required than if wait until children display negative outcomes.

Although we know that many children overcome adversity, demonstrating resilience in the face of hardship and extreme risk, we also know youth typically do not excel in all areas of

adjustment; certain areas suffer while others thrive. From the current literature, it is unclear whether patterns of positive adjustment exist among CIC. If multiple patterns do exist, it would be useful to know what these patterns are, and whether patterns can be differentiated by protective factors. This knowledge would inform efficient, effective, targeted intervention to improve outcomes of children reared in institutional care facilities across the globe.

Given that the problem of eliminating institutional care and providing decent, stable family-based care for all children internationally has not yet been solved, it is important to continue investigating children reared in institutional care to determine which improvements can be made in order to provide the best care within this framework. Recent studies have moved in the direction of investigating predictors of positive adjustment (i.e. that in line with development of children in typical home settings) for children residing in institutional care, as well as interventions that may prove to be beneficial for this population.

The proposed study contributes to the current literature on youth in institutional care settings by addressing multiple limitations of past work. To begin, this project will provide novel information regarding the variations in functioning among CIC in Ghana. These patterns will be compared and contrasted with patterns among a CIF sample from the same region to consider how institutionalization influences adjustment outcomes. Next, a selection of positive life experiences and personal characteristics will be evaluated to determine which variables are associated with more positive patterns of adjustment within the context of institutional care. Children in institutional care settings consistently are among those with the poorest developmental outcomes, and therefore in most need of critical evaluation, consideration, and aid. Finally, this study will collect qualitative data from caregivers and teachers in Ghana to gather feedback on the patterns of adjustment identified among the CIC and CIF youth, the

significant protective factors associated with positive adjustment that emerged in the analyses, and additional areas of risk, protection, and adjustment to be considered in future studies.

Ghanaian Context

The country of Ghana is located in western sub-Saharan Africa, along the coast between Cote d'Ivoire and Togo. Ghana has a population of around 30 million (The World Bank, 2020). It was the first sub-Saharan country to establish democracy, and has maintained a multi-party democracy for nearly three decades. The capital, Accra, is an urban region along the coast, although the country includes several other vibrant cities and many rural communities as you move further inland. English is the official national language, but nine other recognized native languages are commonly spoken. The city of Accra is the largest city in the nation, home to approximately 1.6 million Ghanaians (UN Data, 2020). Accra is home to the head offices for all of the large banks, trading firms, and corporations in the country (Encyclopaedia Britannica, 2017). Further, it is an educational and cultural hub for the nation; the Ghana Medical School, University of Ghana, Ghana Academy of Arts, and the national museum are located there.

Ghanaian culture is often described as being highly collectivistic as well as hierarchical, while placing immense value on family connectedness and respect for elders (Marbell & Grolnick, 2013). Although it varies in some regions, many parts of Ghana, including the Accra region, follow a patrilineal family descent system (Salm & Falola, 2002). Men traditionally hold more leadership positions than women. Children are highly valued in Ghanaian culture, representing wealth and the continuance of family lineage, as well as the success of the parents' marriage – something else highly valued within this culture. However, children are viewed as fragile and vulnerable, and therefore strongly protected (Salm & Falola, 2002). Within the family, a hierarchical structure exists, where by elders are the most respected and viewed as the

keepers of family tradition and knowledge. Children, in contrast, are valued but expected to respect the authority of adults and comply with instructions or requests without hesitation (Salm & Falola, 2002). Gender-based expectations exist for children, with girls expected to perform more house-related chores and assist their mothers. Boys are given less chores, but expected to dedicate that time to their studies. This contributes to a gender-based gap in educational attainment seen in the country, which widens as children progress further and further in school (Salm & Falola, 2002).

Religion is a predominant part of Ghanaian culture. While Christianity has become the predominant religion practiced by Ghanaians, there are numerous other religions and spiritual practices present in the society, and religious freedom is highly valued (Salm & Falola, 2002). Outside of an explicit religious framework, the Ghanaian worldview tends to believe in a higher power and that individuals have specific purpose or destiny to fulfill in their life. This sense of purpose combines with the strong value of community, including local community as well as a national identity, which results in a drive to work hard for individual gains as well as community or national gains in areas of economics, education, policy, and recreation (Salm & Falola, 2002). In urban areas such as Accra, the awareness of Ghana's standing in comparison to global standards is an ever-present motivating factor for personal growth and improvement.

Review of the Literature

Institutional Care

Definition

For the current study, the term 'institutional care' is defined as a privately or publicly funded childcare environment within which a child resides full-time. Children in institutional care have been separated from their biological parents, or other caregiver, either by government

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intervention, parental surrender, or caregiver death. The term 'orphanage' also has been used to describe this care setting; however, 'orphanage' is inaccurate, as not all children in institutional care are orphans.

History of Institutional Care

Globally, institutional child care has been used as an alternative to family-based care for centuries (Dozier et al., 2012). Children are placed in institutional care facilities for a variety of reasons, ranging from parental death or abandonment to family financial insecurity or other circumstantial factors prohibiting parents from providing adequate care (Dozier et al., 2012). Parents may opt to forfeit parental rights, or their rights may be terminated by governmental agencies when parents are deemed unfit to provide appropriate care.

When children enter institutionalization, they receive care that typically does not mirror care received in traditional single-family homes. Standards of care vary from institution to institution, but most often children in this setting experience a high child to caregiver ratio, rotating or inconsistent caregivers, routinized care rather than warm or need-sensitive care, and a lack of stimulation and developmentally appropriate resources (Hermenau et al., 2016; Smyke, 2012). The uniqueness of these settings provides an interesting stage for research on child development. These settings allow researchers to investigate a range of questions, such as the effects of caregiving style, social isolation, and resource deprivation.

Research on Institutional Care

Social scientists have studied children reared in institutional care for decades (Gavrin & Sacks, 1963). However, most of the literature has focused on the negative effects of institutional care on physical, cognitive, social and emotional development. The research documents that the levels of deprivation often seen in institutional care can result in a wide range of detrimental

outcomes, including indiscriminate sociable behavior, stunted or delayed physical development, deficits in cognitive development, dysregulated stress-response systems and poor attachment with caregivers, both during and after institutionalization (Dozier et al., 2012; Smyke, 2012).

Physical growth is one of the most readily apparent areas of developmental delay among CIC. Smyke et al. (2007) found that height, weight, and head circumference of young children in Romanian institutions were approximately one SD below norms for appropriate development. Johnson et al. (1996) found that CIC in Romania fell behind growth norms by approximately one month for every three months that they resided in institutional care; similarly, children from the former Soviet Union showed one month of delay for every five months of institutional care.

Children's ability to form relationships to others, in childhood and later in adulthood, has been a predominant focus of the research on institutional care, given the effect this plays on the success of adoption following institutionalization, as well as youths' ability to successfully integrate into society if they age out of care. Zeanah et al. (2005) found that 65% of children living in institutional care in Romania were classified as having disorganized attachments, and 13% were unclassifiable. Relating to attachment, indiscriminate social behavior is commonly observed in CIC, which is a child's lack of caution around unfamiliar adults, willingness to approach and engage strangers, and lack of monitoring attachment figures in unfamiliar settings (O'Connor & Rutter, 2000; O'Connor & Zeanah, 2003). Zeanah et al. (2005) found that 44% of CIC showed high levels of indiscriminate social behavior, compared to only 18% of CIF.

Beyond these common areas of inquiry, negative outcomes have been identified in numerous other adjustment areas, including cognitive development and stress-responsivity. Results from a meta-analysis of 75 studies found that children living in institutional care scored on average 20 points lower on IQ tests than children who grew up in family-based care (van

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IJzendoorn et al., 2008). When looking at the stress response system, children who had previously resided in institutional care showed elevated basal levels of cortisol relative to controls, as well as slower recovery of the hypothalamic pituitary adrenal (HPA) axis under certain stress conditions (Gunnar et al., 2001; Wismer Fries et al., 2009).

Institutional Care in Ghana

Ghana has a population just under 28 million, with 10.7 million under the age of 18 (CIA, 2016; UNICEF, 2012). It is categorized as a middle-income country and has experienced political stability and democracy for decades. The adult HIV/AIDS rate is at about 1.8%, although higher among pregnant women and in certain regions of the country (UNICEF, 2012). Although the rate of AIDS is steadily declining, it is still at a level considered to be a generalized epidemic (Ansah-Koi, 2006). Poverty rates are also improving, with the nation having successfully reduced its poverty rate by nearly half in the past 15 years (UNICEF, 2012). However, approximately 28.5% of the population still live below the poverty line. The combination of the AIDS epidemic and a moderately high poverty rate has contributed to the high prevalence of orphans and vulnerable children in need of a home within the country (4.7% of the total population) (Bettmann et al., 2017).

Institutionalized care is a relatively new phenomenon in Ghana. The practice was brought to the country by European missionaries in the mid-1900s. The first official residential children's home was founded in the country's capital, Accra, in 1949 by an NGO called The Children's Society (Ministry of Manpower, Youth and Employment, & Department of Social Welfare, 2007). Since then, the number of institutional care facilities have increased rapidly. A recent audit conducted by the Ghanaian government documented that orphanages in the country have increased by 169% between 2005 and 2012, and currently care for about 4,500 children (Quartey, 2013). Today there are four residential children's homes run by the Ghanaian government, ten privately run institutions who have

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received and maintained appropriate licensure, and many others who are operating unlicensed and unregulated (Better Care Network, 2014; Ministry of Manpower, Youth and Employment, & Department of Social Welfare, 2007; Quartey, 2013).

Ghana has made great efforts to protect the wellbeing of their youth. They have signed the UN Convention on the Rights of the Child (CRC), the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) Declaration of Commitment on HIV and AIDS, the African Charter on the Rights and Welfare of the Child, and have agreed to the recommendations set forth by the UN General Assembly Special Session on Children, titled "A World Fit for Children' (UNICEF, 2010). Following research revealing the damaging effects of institutionalized care, and a push from global agencies such as the United Nations and UNICEF, the Ghanaian government has worked to deinstitutionalize the country, and return children to family-based care (Ministry of Manpower, Youth and Employment, & Department of Social Welfare, 2007). The country has made it a priority to use institutional care as a last resort, and to ensure that when residential care is used, it is done so in compliance with the requirements of Ghana's Children's Acts 560, the UN Committee of the Rights of the Child (UNCRC), and the UN Guidelines for the Protection and Alternative Care of Children without Parental Care (Ministry of Manpower, Youth and Employment, & Department of Social Welfare, 2007).

Ghanaian children are placed in institutional care for a number of reasons, including poverty, incarceration of parents, death of parents, parents' limited capacity to care for their children, and even the practice of discarding HIV infected children (Better Care Network, 2014; Frimpong-Manso, 2014a). Additionally, extended family may reject a child whose mother dies at childbirth, or who has a disability, due to the belief in some regions that these children have been cursed by witchcraft (Better Care Network, 2014). Unfortunately, children also may be placed into institutional care when parents are enticed to give up their children by the promise of quality education and accommodations (Better

Care Network, 2014). Volunteer tourism is a large and active industry in Ghana, particularly within the institutional care facilities (Rotabi et al., 2017). Due to the profitability of volunteer tourism, privately-run institutions who receive payments from volunteer organizations and subsequent funds raised by volunteers have incentives to maintain a high population within their facility (Rotabi et al., 2017). This cycle of recruitment and profit off of volunteer activity and altruism is sometimes cited as another reason for the steady increase in number of institutional care facilities, despite the government's efforts to deinstitutionalize (Rotabi et al., 2017; Voelkl, 2012). Reports suggest that most children in residential care facilities are not true orphans in that they lacked able parents or caregivers, but rather were "social orphans" who were given up under false pretenses rather than desperation (Frimpong-Manso, 2014b).

Currently, to obtain and maintain licensure to run a residential children's home in Ghana an institution must apply for licensure and complete the annual renewal process by submitting financial reports and individual progress reports for each child in care to the Department of Social Welfare (DSW) (Quartey, 2013). Institutional care facilities who are registered and in compliance with DSW's guidelines for residential homes are required to have at least one caregiver for every seven children (Ministry of Employment and Social Welfare, 2010). Children's homes are capped at a maximum of 30 children. Siblings are expected to remain together unless otherwise indicated by DSW, and in cases of separation the residential homes are expected to encourage and facilitate contact between them. Care is supposed to be arranged similarly to family-based care, with children living in small groups with a consistent caregiver who provides sensitive and responsive care. Physical punishment is prohibited and engagement in this activity can lead to staff dismissal or prosecution. A primary caregiver is assigned, who is responsible for all major care activities (meals, homework, recreation, etc.) and secondary caregiving staff assist by completing household chores and providing support for the primary caregiver.

Assistant caregivers step into the role of primary caregiver if the primary caregiver is not available, rather than relocating the children, in order to maintain consistency and familiarity for the group. All staff members must be at least 18 years old and at least four years older than the oldest child in care. Staff in management roles or who have sole responsibility for a child must be at least 21 years old. If caregivers do not have a professional degree relating to childcare, they must undergo a training by DSW. The care facilities are then required to maintain staff development and training opportunities.

Unfortunately, when the Auditor General in Ghana conducted an audit on DSW's performance in regulating residential care facilities between 2008 and 2012, it was discovered that approximately 96% of the homes in four sampled regions were operating illegally and were not monitored adequately to ensure operation within the minimum standards (Quartey, 2013). This means that despite DSW's good intentions in setting high standards of care for residential children's homes, many children are not guaranteed this level of care, and are at risk of detrimental outcomes documented by decades of previous research on institutional care.

A qualitative study on Ghanaian caregiver perceptions of care quality provided to CIC, Castillo et al. (2012) revealed that caregivers had significant concerns regarding the lack of adequate funding for essential items, lack of training, lack of supervision, and the lack of standards to ensure a sustainable care environment (e.g. staffing patterns). Of the 92 caregivers surveyed, less than half of them indicated that they had received training on caring for children. For those who had received training, the duration and content of the training varied drastically. Most of the participants reported feeling so overworked that they could not give children the individualized time and attention that they believed the children needed. They also reported that children lacked a primary caregiver and continuity of care due to staffing patterns, which clearly violates DSW's standards for care children (Ministry of Employment and Social Welfare, 2010).

In contrast, qualitative interviews with CIC in Ghana have revealed that many perceive their lives to be better in institutional care than those of the children living in the surrounding community (Lemons, 2010). Most children reported themes of feeling part of a family within the institution and feeling supported by their friends, within and outside of the home. Boakye and Wilson (2003) found that ninety percent of children in institutional care reported that they felt they were receiving adequate affection from their caregivers. Other studies have documented that, despite caregiver concerns about resources available, children in institutional care actually receive better education, nutrition, and health services than orphans who remained in family-based care in the community (Frimpong-Manso, 2014a).

The current state of the research on institutional care in Ghana suggests there is much left for investigation. Due to the high prevalence of unregulated institutions, it is unclear whether children are receiving adequate care while in residential homes, or if they are living under detrimental circumstances. There is also little documentation on the outcomes of children who leave residential care. The discrepancies in perspectives between caregivers and children within this setting suggests that further investigation is warranted, to clarify the nuances in the experience of growing up in institutional care.

Family Care in Ghana

Family, both immediate and extended, is highly valued in Ghanaian culture (Gyekye, 1996). Children are raised to understand their identity within their network of blood relatives, and develop a strong loyalty to their parents and siblings. For parents, the ability to bear and raise children is seen as one of life's main purposes, and children are regarded as their most prized possession. However, it is believed that children must develop good character, and therefore parenting focuses on passing on the values of society, teaching kindness, respect, and manners. Parents believe that having a strong and positive relationship with their children is the key to teaching good behavior and keeping them out of

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trouble. Although children grow and move into their adult lives, parents often still view them as their children and want to continue offering guidance and advice as a means of remaining involved.

Summary

Institutional child care has been a practice used globally for many years in circumstances where parents are unable to provide suitable care, or in instances of parental death where no remaining family members are willing or able to take custody of a child. Prior research indicates that residential facilities often have inadequate resources, high child-to-caregiver ratios, and frequent change in caregivers on staff. These circumstances leave many children deprived of the sensitive, loving care such as that provided by Ghanaian parents which is necessary to build healthy attachments and develop into competent, well-adjusted adults. The vast majority of research on children reared in this setting has focused on negative outcomes. Although this plethora of research documenting the detrimental outcomes of institutional care has resulted in many countries prioritizing family-based care for children in need, not all countries have been able to achieve this goal. Subsequently, millions of children still reside in institutional care settings for a majority of their developmentally influential years.

Positive Functioning

Definition

For the present study, positive youth adjustment is defined as any physical, cognitive, emotional, or behavioral outcome that is in line with family-reared child development, or significantly better than typical child development in institutional settings. With this definition it is possible for an outcome that is not inherently positive (e.g. moderate levels of externalizing) to be considered a positive outcome if it is significantly better than would be expected of a child reared in institutional care (e.g. we would have anticipated they would demonstrate severe levels of externalizing). Although the presentation of the adjustment area is not ideal, it is an

improvement upon typical outcomes within this setting, and this improvement can be considered positive. This definition is somewhat flexible, because it takes into account the context within which a child is growing, yet is an established definition among resilience researchers (Luthar & Cicchetti, 2000).

Research among Children Living in Institutional Care

Despite the frequency in focus on negative outcomes, some researchers are now shifting to examine the possibility of positive adjustment within institutional care. This area is relatively new, and therefore the number of studies is limited. The majority of studies seek to identify not only the areas of positive adjustment, but also the associated experiences or qualities predictive of better functioning. These studies have created the evidence base suggesting that positive adjustment is possible, when certain protective factors are present, and that basic interventions to increase these targeted protective variables are possible.

The current findings on significant predictors of positive adjustment are best organized through the bioecological framework (Bronfenbrenner & Ceci, 1994), which posits that influences on human development come from proximal and distal sources including individual characteristics, microsystem factors such as family and friends, mesosystem interactions between microsystem elements (e.g. the relationship between two caregivers), exosystem variables such as school or community environment, macrosystem elements like cultural values, and chronosystem influences of time.

When looking at individual level variables, child sex is differentially associated with adjustment outcomes. Boys in the Middle East demonstrated significantly fewer depressive and anxiety symptoms than girls, although they showed higher levels of aggression (Attar-Schwartz,

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2008). Globally, girls in institutional care exhibit fewer attention regulation problems than their male counterparts (Gunnar et al., 2012).

Child personality characteristics are another commonly studied individual-level element considered to influence adjustment outcomes. Some personality characteristics were linked directly to outcomes. For example, children in institutional care in Ghana with lower anxiety and who used more support-seeking coping reported higher quality of life (Salifu Yendork & Somhlaba, 2014). These same predictors were not significant predictors of quality of life for the non-orphan, family-reared comparison group. However, other studies among CIF have found that active coping strategies relates to improved academic functioning, prosocial skills, and reduced problem behaviors (DeBaryshe, Yuen & Stern, 2001). Actively regulating emotions when confronted with problems was associated with reduced internalizing and externalizing symptoms for CIF (Zeman, Shipman & Suveg, 2002)

Other personality characteristics among CIC elicited improved care quality from caregivers, which mediated the relation between traits and outcomes. For example, children in European institutional care facilities who were rated highly on the "successful" item from the child quality subscale of the Caregiver-Child Interaction Rating Scale (CIRS; Daunhauer et al., 2007) received more authoritative care – high warmth and encouragement coupled with structure, direction, and assistance from caregivers – which was then associated with children demonstrating more developmentally competent and engaged play (Daunhauer et al., 2007). European children judged by caregivers to have less disturbed behaviors and better socioemotional functioning were more likely to have a preferred caregiver, which subsequently reduced the level of child social withdrawal (Baptista et al., 2013).

Resilience is a popular variable among the studies of child development in institutional

care. The conceptualization of resilience has been revised many times over the years (Masten, 2014). The most widely-accepted definition today is that resilience is a descriptor of functioning which can vary over time, versus an inherent individual trait or a concrete outcome, and is only possible after an individual faces extreme adversity (Masten & Tellegen, 2012). Studies on institutional care are no exception to the claim that definitions vary widely, with some researchers defining resilience as an inherent child trait, while others conceptualized it as a descriptor of overall adjustment. Nourian et al. (2016) examined resilience as an achievable outcome among youth in Middle Eastern institutional care centers, finding that almost half of their sample demonstrated moderate levels of resilience, but youth who were female and those who were older at the time of assessment scored significantly higher on their measure of resilience. Salifu Yendork and Somhlaba (2015) defined resilience in this same way and found that higher self-efficacy was a predictor of higher overall resilience for Ghanaian CIC, which was true for the CIF control group as well. When conceptualized as a personality trait, resilience, along with perceived social support, emerged as a significant positive predictor of youth self-reported quality of life for Ghanaian CIC (Salifu Yendork & Somhlaba, 2016b).

Studies examining microsystem-level predictors of positive adjustment to date have focused exclusively on children's relationship quality with either biological parents prior to care, or caregivers during institutionalization. Attar-Schwartz (2008) looked at child-parent relationships, showing that children in the Middle East who resided in two-parent homes prior to institutionalization and children with fewer problems in quality of contact with parents post-institutionalization displayed fewer psychosocial problems. Having experienced parental loss had no measurable effect on a wide range of adjustment outcomes, including enuresis, sleep disturbances, eating disorders, aggression, depressive symptoms, anxious symptoms,) and

cognitive performance, according to a study by Wolff and Fesseha (1999) which compared

orphaned Ethiopian children living in institutions to refugee children in families, all of whom

had experienced recent loss and trauma associated with war. Another study looked at social

support broadly, without defining who the support came from (Salifu Yendork & Somhlaba,

2016b). Ghanaian children with higher perceptions of social support reported significantly higher

levels of quality of life. Baptista et al. (2013) showed that for European children, the more

individualized caregiving was, and the more sensitive and responsive caregivers were, the more

likely a child was to have a preferred caregiver, which in turn decreased child social withdrawal

behavior. Lower ratings of caregiver anxious behaviors correlated with lower child anxiety and

frustration (Daunhauer et al., 2007). Additionally, higher levels of caregiver support and higher

levels of mutual engagement led to higher rates of child engagement in interactions with

caregivers.

On the exosystem level, lower levels of peer violence, more after-school activities,

encouragement to pursue schooling, and food that was diverse and in sufficient quantity were

associated with fewer child psychosocial problems for youth in the Middle East (Attar-Schwartz,

2008). Children in Europe were more likely to have a preferred caregiver when they resided in

institutions rated by researchers as higher in quality care (Baptista et al., 2013). This

subsequently decreased the likelihood of a child showing social withdrawal behavior. In their

study of three Central American institutions, Groark et al. (2013) revealed that the institution

with the smallest child population, fewest number of children per caregiver, and a few consistent

caregivers (rather than large rotating staff) had children with the best physical, behavioral, and

cognitive development. When considering children who have grown up in institutional care

during times of war, Wolff and Fesseha (1999) found that Ethiopian institutions that respect the

individuality of a child and promote a close personal tie with at least one staff member leads to better cognitive development than more typical, traditional institutional environments, and can ameliorate many of the psychological effects of having lost both parents and being exposed to the dangers of war.

The chronosystem factors studied to date have been exclusively related to a child's personal timeline, such as age, age at adoption, or length of institutionalization. Child age at the time of assessment was a significant predictor of better adjustment in Attar-Schwartz's (2008) study, with older children in the sample demonstrating fewer psychosocial problems. When considering child attention regulation, earlier age at adoption (considered to represent shorter duration of deprivation) was significantly associated with fewer regulatory problems for a global sample of adopted youth (Gunnar et al., 2012). In their study of developmentally competent play, Daunhauer et al. (2007) found that children who spent shorter periods in institutional care in Europe showed more developmentally competent play when they switched from independent play to interactions with an attentive caregiver. Those who had spent longer in care did not show as great of an improvement in play quality when changing from solo play to interactive play.

Interventions Promoting Positive Adjustment

Beyond purely descriptive studies, there also have been a handful of intervention studies conducted to determine whether interventions effective in improving child outcomes outside of institutional care are effective within this setting, and whether new interventions can be designed to increase the quality of care and subsequent child outcomes within institutional children's homes.

Interventions have successfully targeted individual-level variables such as child characteristics, skills, or coping strategies. Participating in Animal Assisted Psychotherapy

(AAP) led to improvements in children's social skills and leadership abilities, as well as improvements in school adjustment, decreases hyperactive behavior, and a reduction in attention problems, as rated by teachers in a study in Europe (Balluerka et al., 2015). Additionally, Balluerka et al. (2014) administered AAP to CIC and found that participating in this intervention predicted a significant improvement in attachment security with caregivers.

Following participation in an intervention designed to increase physiological, cognitive, and behavioral coping strategies for managing stress and worry, Gallegos et al. (2012) found that risk for anxiety dropped from 50% pre-test to only 20% at post-test for CIC in North America. Risk for depressive symptoms dropped from 40% pre-test to 30% at post-test. The intervention also significantly increased child hope and positive self-concept. Hermenau et al. (2011) successfully reduced the severity of post-traumatic stress disorder (PTSD) symptoms in Tanzanian CIC using a manualized narrative exposure therapy for PTSD. Reduction in trauma symptoms and psychological distress, along with improvement in grief processing also was proven possible by Lin et al.'s (2014) six-session group therapy intervention in China. In addition, youth who experienced the intervention reported improvements in mood, relationships, self-confidence, and perceived social support.

Girona (1972) conducted a 10-week intervention in which American college students trained in positive parenting practices (giving praise, providing opportunities for autonomy, and limiting demands during free play) were randomly assigned to children in institutional care. This intervention increased the number of positive adults in a child's life within this setting and experiencing this intervention was associated with a significant increase in measures of intelligence and of general adjustment, along with a reduction in levels of need nurturance.

Institutional caregiver education programs repeatedly improved child functioning.

Caregiver trainings on the importance of sensitive and responsive caregiving, one-on-one interactions, stimulation, play, and continuity in caregiving, significantly improved caregiving quality in institutions in Europe (Berument, 2013). Improved quality was predictive of increased general development scores, cognitive test scores, and language development scores for the intervention group, compared to a continued decrease over time in all domains for the control group. A similar intervention attempting to increase caregiver knowledge on the importance of warm, responsive care, relationship building with children, and consistency in caregiver contact found that improvements in care predicted child improvements in physical growth, cognitive, language, and motor development, and child affect, with children having severe disabilities improving the most (Groark et al., 2005). When sensitive, responsive caregiving interventions were coupled with caregiver training on appropriate positioning of physically disabled children, children in Central American institutional homes improved in physical, behavioral, and cognitive development (Groark et al., 2013). Caregiver interventions predicted improvements in child development for children of varying age ranges in Central America (McCall et al., 2010). However, if children made a transition from a younger to an older ward during the time of intervention, experiencing new caregivers along with new and older peers, their outcomes did not improve significantly.

Institutional policy changes which manipulated the environment through staff or child rules also proved effective in improving child adjustment. For example, banning corporal punishment and encouraging sensitive and responsive caregiving significantly predicted a decline in youth reports of violence experienced. This reduction in experienced violence, in turn, predicted a reduction in the severity of PTSD symptoms reported by children in Tanzania (Hermenau et al., 2011).

Caregiver education and training interventions were not effective in improving all child outcomes, however. Depressive symptoms and internalizing and externalizing problems exhibited little change in Hermenau et al.'s (2011) Tanzanian study. Intervention-related improvements in caregiving quality were not predictive of improvements in child social development (Berument, 2013). None of the intervention studies attempted to improve levels of peer violence, availability of after-school activities, or diversity in food selection – all deemed to be related to better-than-expected youth outcomes by descriptive studies (Attar-Schwartz, 2008).

Summary

The current literature on positive functioning within institutional care suggests that a number of predictor variables can increase the prevalence of positive adjustment outcomes in youth reared in this setting. Studies have also demonstrated that it is possible to provide intervention to address psychological needs, build children's coping skills, and improve care quality, and that these changes lead to significant child adjustment improvements in a number of domains.

Limitations of Past Research

Although past research has a number of strengths, including frequent use of longitudinal design, the inclusion of comparison groups, and the consideration of a wide range of adjustment outcomes, there are still significant gaps and limitations of the current literature. Only recently has the consideration for the possibility of positive adjustment grown in popularity. Furthermore, the limited number of studies on positive outcomes within this setting have not looked at dynamic patterns of adjustment – rather, they have focused on one or a few variables, but not how these variables relate to one another. The current approach has been to examine adjustment outcomes in isolation, rather than taking a more person-oriented approach, considering an individual's functioning as a whole.

Similarly, studies of predictors of positive adjustment typically have considered a single protective factor or experience in relation to one adjustment outcome. If they have considered multiple adjustment outcomes, they have been investigated individually, rather than through the more nuanced, person-oriented approach. This limits our understanding of how an increase in protective factor and subsequent improvement in adjustment in one domain relates to functioning in another domain. It also limits our understanding of areas of strength a child holds, which could be used as an asset to intervention. While the prevalence of intervention research within institutional care settings is promising, it is critical to understand how interventions, or changes in protective factors, effect child development in a more holistic view. If this research is intended to influence policy and practice within institutional care settings, understanding the effects of systematic changes on the entire individual, rather than in a single domain, is crucial.

Finally, a major limitation of the current literature is the scarcity of mixed-methods research design. Although some studies have collected a combination of qualitative and quantitative data, none have presented analyses that combine the research methods. This limits our understanding of both forms of data. Quantitative data on child adjustment in institutional care has yet to gone through the more qualitative process of member-checking, to ensure that researcher interpretations of findings are in line with children's lived experiences, or caregiver observations of outcomes. Similarly, the qualitative studies previously conducted have provided substantive information on children's experience of the care they receive, and caregiver's perceptions of the needs experienced by children in their care. However, these studies have not been linked to the abundance of qualitative research, explaining how these perceptions relate to the observed or measured child outcomes.

Present Study

The current study utilized a two-part sequential explanatory mixed-methods design to address the limitations of past research (Creswell & Plano Clark, 2018). Study 1 involved quantitative analyses using secondary data collected by Dr. Joana Salifu Yendork at the University of Ghana, Accra. First, one cluster analysis was used to determine patterns of adjustment for CIC ($N = 100$) and a second to determine patterns for the CIF ($N = 100$) across anxious and depressive symptoms, educational attainment and perception of overall quality of life. Analysis of variance was used to evaluate whether patterns of adjustment were associated with varying levels of protective factors (social support, emotion regulation, self-efficacy, and determination). These findings were then compared to the patterns of adjustment and protective factor findings for the CIF group.

Study 2 involved collecting new data using semi-structured qualitative key-informant interviews with Ghanaian institution caregivers and educators. The purpose of Study 2 was two-fold. First, a grounded theory qualitative approach was used to build an understanding of adult perceptions of positive adjustment within institutional settings. Grounded theory is a qualitative approach used to develop specific and substantive theory about an experience or occurrence (Merriam & Tisdell, 2016). The qualitative data collected for Study 2 provided insight into baseline understanding of child development, risk, and resilience among teachers and caregivers, while also suggesting additional areas of adjustment, risk, and protective factors which may be relevant for future research. Following initial qualitative inquiry, caregivers and educators were presented with the findings from Study 1, and were asked for their thoughts and interpretations of the quantitative results. Findings from this study will inform interventions targeted at improving

outcomes among CIC. This study will also lay the groundwork for future studies of adjustment patterns and longitudinal pathways to positive adjustment in CIC.

Mixed-Methods Approach

The decision to use a two-part sequential explanatory mixed-methods design was made for multiple reasons. First, the collection of qualitative data adds depth to the interpretation of the quantitative results, which would not otherwise be gleaned (Merriam & Tisdell, 2016). Caregivers and teachers elaborated on the patterns revealed by the quantitative analyses and provided explanation for why certain results were found. Additionally, the engagement of the caregivers and teachers helped reduce the risk of making incorrect interpretations as a result of the cultural distance of the researcher from the original participants. This process served as a form of member checking, to increase the validity of the interpretation of the quantitative findings (Creswell & Miller, 2000).

Statement of the Hypotheses

This two-part study had four aims, each with a corresponding hypothesis. Aim one was to determine whether multiple patterns of adjustment exist among CIC, and whether any pattern demonstrated positive adjustment in one or more domains. It was hypothesized that multiple patterns of functioning would emerge among the CIC sample. At least one group would show positive functioning in one or more areas, defined as functioning one *SD* or more above the mean level of adjustment for the CIC sample, or at or above the level demonstrated by the sample of CIF children (Luthar & Cicchetti, 2000). Aim two was to examine whether factors known to be protective in other samples differentiated these pattern groups. It was hypothesized that the varying levels of social support, emotion regulation abilities, self-efficacy, coping strategies and adaptability and persistence would effectively differentiate between adjustment patterns. The

third aim was to identify how outcomes within the CIC sample compared to CIF in Ghana. A second cluster analysis was run, identical to that used for the first aim. The resulting patterns of adjustment were compared to the patterns found for the CIC. It was hypothesized that the patterns demonstrated by the CIC sample would differ from those present in the CIF sample, with the CIF showing higher functioning in each domain, on average, as well as a higher proportion of youth classified within profiles demonstrating positive adjustment.

The fourth aim was to conduct qualitative interviews to aid in interpretation of results within the Ghanaian cultural context and inform the direction of future research by identifying additional important areas of adjustment, risk, and protection. It was hypothesized that patterns of adjustment and differentiating factor interpretation would be consistent with informant perspectives, and that additional areas of risk, adjustment, and protection would be identified for future study.

Study 1 Methods

Participants

One hundred CIC and 100 CIF attending public school and living with both parents were recruited from the Accra region in Ghana. The combined sample of 200 children had an age range of 7-17 (Table 1).

Table 1

Study 1 Participant Demographics

	CIC (*N* = 100)	CIF (*N* = 100)	Total (*N* = 200)
Mean Age (*SD)*	13.31 (3.14)	13.37 (3.08)	13.34 (3.10)
Sex % (Female)	40	40	40
Religious Affiliation %			
Christian/Catholic	96	95	96
Muslim	3	5	4
None	1	0	1
Education Level %			
Not Attending	3	0	2
Primary School	40	27	34
Junior High School	35	28	32
Senior High School	22	45	34

Measures

All measures were administered to the full 200-child sample and were self-reported. Measures

selected for this study have been documented to show good validity in multiple other studies with

Ghanaian samples (Marbell-Pierre et al., 2019; Marbell & Grolnick, 2013; Salifu Yendork &

Somhlaba, 2014; Salifu Yendork & Somhlaba, 2015).

Demographics

A demographic questionnaire was used to gather information pertaining to participants'

age, sex, educational attainment, number of siblings, the types of orphanhood (i.e., maternal,

paternal, double, abandoned children), years since parental death (if applicable), current

employment status, duration of time spent in institutional care (options included "non-orphan

response," "don't know," "less than a year," "1-3 years," "4-6 years," or "More than 6 years"),

age at first admission into an institutional children's home (options included "since birth," "don't

know" or "non-orphan response"), religious affiliation (options included Christianity, Islam,

African ancestry, and other religion; however, only Christianity and Islam were reported), and

site from which participants were recruited. Questions pertaining specifically to orphanhood and

institutionalization had a "not applicable" response option for the CIF group.

Academic Progress

As part of the demographic questionnaire, children reported their age and current grade level. For the current study, academic progress was operationalized as being ahead, behind, or on-track determined by current grade level compared to expected grade level based on the child's age and Ghanaian education standards. The age ranges for each grade level are similar to the U.S., with seven-year-olds expected to be in the second grade, eight-year-olds in third, and so on (UNESCO, 2012). Progress scores were calculated using age and grade level with being on-track scored as a 0, ahead scored as a -1, and behind scored as a +1 for one year behind and +2 for two years behind. Participants in this sample were not more than one year ahead or two years behind in school. Scores were coded such that higher values indicated being farther behind academically, aligning the direction of this scale with other measures for ease of interpretation.

Anxious Symptoms

The 37-item Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) was used to assess participants' anxiety symptoms. The scale is comprised of 28 anxiety items that measure the three domains of anxiety (physiological symptoms, worry, and concentration problems) and nine lie detectors that serve to reduce social desirability (see Appendix A). The RCMAS is recommended for children aged between 6-19 years (Reynolds & Paget, 1983; Reynolds & Richmond, 1978). RCMAS is a "yes–no" response-type of scale and scores range from 0- 28, with a score of 19 and above suggesting a clinical level of anxiety years (Reynolds & Richmond, 1978). Cronbach alpha values ranging from 0.79 to 0.85, test– retest reliability of 0.98 as well as good concurrent and discriminant validity for the RCMAS have been reported years (Reynolds & Paget, 1983; Reynolds & Richmond, 1978). The internal

consistency based on Cronbach's alpha of the RCMAS for the present Ghanaian sample of 200 youth was 0.80.

Depressive Symptoms

The Children's Depression Inventory (CDI; Kovacs, 1992) was used to assess participants' depressive symptoms. This 27-item measure assess five domains of depressive symptoms including negative mood, interpersonal problems, ineffectiveness, anhedonia and negative self-esteem (see Appendix A). It is validated for children aged between seven and 17 years. Item response options range from 0 (*absence of symptoms*) to 2 (*severe symptoms*) with total scores ranging from 0 to 54. Scores are categorized into non-depressive symptoms (10 or less), mild depression (11–18), and severe depression (19 and above) (Kaslow et al., 1984; Smucker, Craighead et al., 1986). Good psychometric properties including Cronbach alpha values ranging from 0.83 to 0.89, split-half reliability of 0.77 to 0.81, test–retest reliability of 0.54 to 0.87, and concurrent validity of 0.71 to 0.84 have been established (Kaslow et al., 1984; Smucker et al., 1986). The internal consistency based on Cronbach's alpha of the Children's Depression Inventory for the 200 participant Ghanaian sample was 0.77.

Quality of Life

The World Health Organization Quality of Life-BREF Version (WHOQOL-BREF; WHOQOL Group, 1998) was used to assess the perception of the overall quality of life (QoL) of the CIC. The WHOQOL-BREF is a 26-item scale that assesses four main domains of QoL; namely, physical, psychological, social, environmental, and a global estimate (see Appendix A). Scores on the measure range from 1 (*low*) to 5 (*high*) with higher scores indicating higher quality of life. Studies have shown good psychometric values with a wide range of samples across cultures including internal consistency values ranging from.66 to 0.86, test-retest reliability

values ranging from 0.66 to 0.87, as well as good discriminant and construct validity (Garcia-Rea & LePage, 2010; Skevington et al., 2004; WHOQOL Group, 1998). For the present 200-participant sample, the Cronbach's alpha of the WHOQOL-BREF was 0.79. The proposed study reverse-coded participant's total WHOQOL-BREF scores such that higher scores indicated a worse perception of QoL, thereby aligning the directionality of this scale with other measures for ease of interpretation.

Self-Efficacy

The General Self-Efficacy Scale (GSS; Schwarzer & Jerusalem, 1995) was used to assess participants' general self-efficacy. This 10-item self-report measure assesses the general sense of self-efficacy of coping with daily hassles and adapting after the experience of stressors (see Appendix A). The GSS responses range from 1 (*not at all true*) to 4 (*exactly true*). Higher scores indicate higher levels of self-efficacy. Internal consistency values range from 0.79 to 0.91 and test–retest reliability range from 0.55 to 0.75 (Jerusalem, 1990; Schwarzer, & Jerusalem, 1995; Schwarzer et al., 1997). Good criterion, discriminant and concurrent validity have been established, including in samples of children, orphans, and CIC (Jerusalem, 1990; Schwarzer, & Jerusalem, 1995; Schwarzer et al., 1997). The internal consistency based on Cronbach's alpha of the GSS for the 200-participant sample was 0.79.

Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to measure participants' perceived adequacy of social support. This 12-item measure assesses perceived social support from three sources (family, friend and significant others) (see Appendix A). The MSPSS responses are on a seven-point Likert scale, with scores ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores reflect greater perceived social support.

Good psychometric properties for the MSPSS have been reported, including internal consistency values ranging between 0.69 and 0.90 for the subscales, and between 0.79 and 0.89 for the entire scale (Cluver et al., 2008; Getachew et al., 2011). The internal consistency based on Cronbach's alpha of the MSPSS for the 200 participant Ghanaian sample was 0.87. The proposed study summed social support from all three sources and use total level of support as a variable.

Positive Coping Strategies

The Kidcope scale (Spirito et al., 1991) was used to measure subjective distress and coping strategies in participants. This measure has a single-item question requiring children to report on any problem, irrespective of intensity. Subsequently, participants read 15 statements pertaining to various ways of coping with the problem reported and then answer two sets of questions (see Appendix A). The first set of questions assess whether or not the coping strategies listed were used and uses the yes–no response format. The second set assess coping efficacy and has three response options ranging from 0 *(not at all or not efficacious)* to 2 (*a lot or highly efficacious*). The younger childhood version was used in the present study. This version includes the coping strategies of distraction, social withdrawal, problem-solving, emotional regulation, and wishful thinking which each have two items on the scale, whereas self-criticism, blaming others, cognitive restructuring, support-seeking, and resignation each have a single item on the scale. Scores for items in each category of coping are summed to indicate the level to which a child uses a specific strategy. Higher scores indicate higher use of a strategy. Questions regarding a child's belief in a strategy's efficacy were not used for the present study. Psychometric values ranging from .41 to .81 for test–retest reliability for short durations, to .15 to .43 for a 10-week period, as well as moderate to high concurrent validity ranging from .33 to .77, have been reported (Spirito et al., 1991; Spirito et al., 1988). The present study considered

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the use of each of the following as a positive coping strategy: distraction, problem solving, emotion regulation, cognitive restructuring, and support seeking.

Adaptability and Persistence

The Resilience Scale-14 (RS14; Wagnild, 2009) is a 14-item self-report scale revised from the 25-item resilience scale, and was designed to assesses personality characteristics deemed as "resilient," however has been classified as a measure of individual adaptability and persistence for the current study (see Appendix A). Items are scored on a seven-point Likert scale with scores ranging from 1 (*strongly disagree*) to 7 (s*trongly agree*). Higher scores reflect higher levels of adaptability and persistence. Strong psychometric properties for the Resilience Scale have been reported, including Cronbach alpha values ranging from 0.72 to 0.91, test–retest reliability of 0.84 and good content and concurrent validity (Abiola & Udofia, 2011; Wagnild, 2009a). The internal consistency based on Cronbach's alpha of the Resilience Scale for the present sample was 0.79.

Procedures

Data were collected over a five-month period spanning from September 2012 to February 2013. CIC were recruited from four children's homes in the Accra, Ghana region. The institutions ranged in size from 12 to 47 children. CIC were included if they were between the ages of 7-17 years, had lost one or both parents through death or abandonment, resided within institutional care, and were willing to participate in the study. One hundred and four children originally were sampled, and four children (3.8%) were excluded on the basis that both of their parents were alive, although they were residing in institutional care. A total of 100 CIC (96.2% response rate) were included in the study.

The researchers recruited the CIF sample from two public schools in Accra, Ghana. The CIF were included if they were between the ages of 7-17 years, attended public schools in Accra, lived with their parents and were willing to participate in the study. Originally 115 children were sampled and following the inclusion criteria outlined above, 15 children (13.1%) were excluded: six were orphans and the remaining nine were excluded because they were above the cut-off age of 17 years. A total of 100 participants (86.95% response rate) were included in the CIF sample.

After obtaining permission from the administrators and head teachers of institutional children's homes and schools, respectively, the research staff administered the questionnaires to CIC during their free periods (usually after school hours or during the weekends) in their institutional children's homes and to CIF during their short break periods at their schools. Participants between the ages of 13-17 were given the questionnaires to complete independently. Children ages 7-12 were interviewed by the primary investigator, Dr. Salifu Yendork, a native of Ghana, and a research assistant. Participants were given gift with a monetary value of GHC 5 (equivalent to US $2) as compensation.

The Research Ethics Committee at Stellenbosch University, South Africa granted approval for the study. Moreover, the Ghana Education Service and the Department of Social Welfare in Accra, Ghana gave permission for the study to be conducted in schools and institutional children's homes respectively. Additionally, the researchers obtained written consent from the parents (of CIF), legal guardians (of orphaned children) and administrators of institutional children's homes (for CIC who did not have a legal representative). All children who participated in the study gave assent. To ensure confidentiality, questionnaires were securely stored away and inaccessible to anyone not involved in conducting the study. To ensure participant anonymity, codes were used to identify participants. Contingency plans were put in

place in the event of the need for referral of a child for psychological support. Despite these plans, no participant expressed nor implicitly displayed the need for the counseling services that were made available.

Data Analysis

A de-identified dataset was provided by Dr. Salifu Yendork for all quantitative analyses. All variables were checked for skewness and kurtosis before beginning analyses. Data for each variable was relatively normally distributed, so adjustments to the data to correct this were not necessary. Missing data was imputed for all variables using multiple imputation. In order to facilitate the data analyses, quality of life and academic progress scores were reverse-coded; all variables were scored such that higher values indicated more problematic scores (e.g., being behind in school or having low quality of life). All variables were standardized so that scores fell within the same scale. Then, a cluster analysis was conducted for each of the CIC and CIF samples separately using the Ward method, in SPSS version 24. The Ward method was selected due to the nature of its design, which chooses to combine clusters which, when fused, result in the minimum increase in the total within-cluster variance, therefore creating groups that are as homogenous as possible (Aldenderfer & Blashfield, 1984; Bergman et al., 2003). Ward's method is also a hierarchical method which has the advantage of allowing for comparison of cluster levels, rather than only form (Bergman et al., 2003). The squared Euclidean distance measure was used to assess similarity between cases. This measure is useful when used in tandem with the Ward method due to its ability to account for the hierarchical level of the profile in tandem with the profile form (Bergman et al., 2003). Cluster analysis was selected over Latent Profile Analysis (LPA) primarily due to the small sample size of the present study. Studies exploring the minimum required sample size for LPA have determined that samples below 300 participants do

not have sufficient power to reliably select the correct model for the data (Finch & Bronk, 2011). Other studies have even determined a sample size of 500 too small to have sufficient power for models larger than a two-class solution (Finch & Bronk, 2011). Standard practice therefore has been to consider samples over 500 as the gold standard, with 300 as a minimum, for LPA. Additionally, LPA rests on the assumption that the variables included are independent of one another, which is not true for the present study (Tein et al., 2013).

Analyses were run with the possibility of 2-6 clusters, to determine the model that best fit the data. The most optimal cluster solution was decided upon based on the dendrogram, icicle plot, and the significance of between-cluster differences. Once the model was established, clusters were evaluated to determine each cluster's pattern of adjustment in terms of high (1 *SD* above sample mean), low (1 *SD* below sample mean), or average/expected level of functioning (between 1 *SD* above and below sample mean) for the four areas of adjustment measured (anxiety symptoms, depressive symptoms, quality of life, and academic progress). Comparing cluster scores to the sample mean was decided upon to determine whether some children were functioning better than others who experienced a similar upbringing and life history. Comparing functioning to sample mean rather than national norms is common in the literature on resilient functioning (McGloin, & Widom, 2001). The 1 *SD* cutoff was chosen as this is a common indicator of high or low functioning in the resilience literature (Brody et al., 2013).

Additionally, adjustment levels of clusters were compared to mean levels of functioning for the CIF sample to determine how the experience of institutionalization influenced the levels of adjustment outcomes displayed. Positive functioning was classified as having high functioning in one or more areas of adjustment. This cut-off was selected in order to allow for the possibility of different patterns of resilience to emerge (e.g. one group showing positive adjustment in

academics while another is resilient in terms of their high level of perceived quality of life). This is somewhat different from past studies of resilience examining multiple domains of functioning, which have required average or above average in multiple or all domains in order to be classified as "resilient" (Flynn et al., 2004; McGloin, & Widom, 2001).

Clusters were examined to see whether demographic differences existed between groups using chi-square analyses or one-way Analyses of Variance (ANOVA). Demographic variables examined included child age, sex, religious affiliation, whether or not they had a sibling present with them, number of deceased parents, age at entry to care and duration of stay in the institutional children's home.

Next, an Analysis of Covariance (ANCOVA) was used to determine whether varying levels of each differentiating factor was related to adjustment pattern membership, while controlling for any significant covariates. Identifying which, and to what degree, differentiating factors are associated with positive adjustment outcomes can lead to important clinical implications; significant findings will inform efficiently targeted intervention programs designed to increase the presence of protective factors within CIC.

Study 2 Methods

Participants

For the qualitative portion of the project 40 Ghanaian teachers, caregivers, or social workers from the Study 1 schools and children's homes in the Accra, Ghana region were recruited for participation. Purposive sampling was used to recruit a balance between teachers and caregivers as well as a balance across age range and sex. However, caregivers were almost exclusively female, so the sample remained skewed in that direction. One individual opted not to participate after learning that interviews would be audio recorded, despite reassurance that the

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audio recording would not be linked to her personal information, and one audio file failed, resulting in 38 recorded interviews and 39 completed demographics forms. For the purpose of this study, only the 38 participants with both demographics and interview data were included. To be included in this study, participants needed to be over the age of 25, a full-time employee at one of the included orphanages or schools, and have lived in Ghana for the majority of their life. Participants also were excluded if they did not feel comfortable participating in the interview conducted in English (the official language of Ghana). Of the 40 participants who approached the researchers for information regarding the study, 39 agreed to participate. See Table 1 for participant demographics. All of the teachers had at least a teaching certificate, which is considered equivalent to an associate's degree, and many had bachelor's or master's degrees. Seven of the caregivers at the children's home had only completed middle school, while the rest had completed high school or tertiary certifications. The education of the social workers on staff ranged from bachelor's to master's degrees. Caregivers and staff at the children's home were asked how many years they had worked with children they would consider to be "vulnerable" and to identify which populations of children were vulnerable in their estimation. The answers ranged from 5-38 years and included orphans, street children, neglected or abused children, and those of caregivers with severe mental illness.

Table 2

Study 2 Participant Demographics

Occupation	
Teacher	50%
Caregiver	39%
Social Worker	11%
Age Range	26-63
Mean Age (*SD)*	43.31 (10.37)
Sex (Female)	82%
Religious Affiliation	
Christian/Catholic	87%
Muslim	11%
None	2%
Parental Status (Yes)	90%
Mean years working in current institution (*SD*)	10.24 (9.72)
Mean years working with children (*SD*)	17.45 (9.03)

Measures

Demographics

A demographic questionnaire was completed by participants at the start of each

interview. Questions included participants' age, sex, educational attainment, religious affiliation,

number of years living in Ghana, parental status and ages of children if applicable, number of

years working at their current institution, current job title or role, number of years working with

children, number of years working with children from a vulnerable population, if any, and which

populations (see Appendix B).

Semi-structured Qualitative Interview

The questions included on the semi-structured qualitative interview were developed following

the quantitative data analysis. First, using a grounded theory approach, caregivers, staff, and teachers

were asked about their understanding and beliefs regarding child development, risk and protective

factors, and positive adjustment among children residing within institutional settings. The interview

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included questions on the differences between adjustment of CIC and CIF, the areas of adjustment in which they see children thriving and struggling, questions assessing caregiver or teacher beliefs regarding why or how some children adjust well to the institutional care setting or what has helped most with the adjustment and why other children have struggled to transition, and questions regarding the most helpful strategies or elements they have seen used to aid in a child's positive adjustment within whichever setting they work (see Appendix B). Then, using a basic qualitative approach, the second part of the interview inquired about caregiver interpretations of the quantitative results. Participants were presented with a summary of the findings in basic language, and then asked a series of questions to gather their beliefs as to whether the patterns of adjustment found in the data aligned with their observations, how they explained certain results found for the differentiating factors explored, and any other areas of investigation they believed would be important for future research that had not been included in the current study.

Procedures

Following ethical approval of study procedures and associated documents from the VCU IRB (see Appendix C), the same four orphanages and two primary schools included in Study 1 were contacted for permission to perform recruitment and data collection for Study 2. The Ghana Department of Social Welfare (DSW) and Ghana Education Services provided approval for recruitment from these settings for the proposed data collection. Timing of data collection was scheduled so that it did not coincide with any school or orphanage vacations in order to increase rates of caregiver, staff, and teacher availability for participation. As a result, interviews were conducted within a three-week period between January and February 2019. Between the time of Study 1 data collection and Study 2 data collection, one of the children's homes closed and another experienced a significant reduction in staff size down to only two caregivers. In the end,

recruitment for study 2 was restricted to one of the original schools and one of the original children's homes. Dr. Salifu Yendork confirmed that each of the included sites were representative of typical schools and children's homes in the region, and did not believe the reduction in site number would influence the qualitative results.

Research staff included the primary investigator, Dr. Salifu Yendork, and Dr. Boadu, a clinical psychologist in the area who was a former PhD student of Dr. Salifu Yendork's and who had assisted with Study 1 data collection. The research team met as a group prior to the start of data collection to review study procedures. Once all members were trained on the study protocol, the team visited each site on days and times indicated as convenient for data collection by the head teacher and head caregivers. Staff at each site were informed that researchers from the University of Ghana and Virginia Commonwealth University were present to conduct interviews regarding child development, and they were encouraged to approach one of the researchers to learn about the study if they were interested, at a time that was convenient for their work schedule. Researchers remained in a quiet location removed from the classrooms and offices to ensure participant privacy during recruitment and data collection. When a potential participant expressed interest, they were given a brief summary of why the study was being conducted and what participation would involve. Verbal assessment of inclusion criteria was then assessed, and informed consent was obtained prior to data collection. Interviews were then conducted and audio recorded. Length of interviews ranged from 20 to 55 minutes, depending on detail of participant responses and how many elaborations or explanations were needed from the interviewer. All interviews were conducted in English (the official language of Ghana), to reduce the need for translation. Due to the primary investigator's foreigner status, she observed the first interview at each site conducted by Dr. Salifu Yendork and Dr. Boadu to identify any participant

questions that arose, how the interviewers answered or explained questions further, as well as the level of elaboration participants gave in their responses. The openness and level of detail given in responses then were compared to interviews conducted by the primary investigator to determine whether her status as an outsider influenced responses in any way. No significant differences were identified when reviewing audio recordings and transcripts. The two local researchers also observed the primary investigator's interactions with participants and did not find that participants were altering their behavior or responses with her. It was therefore determined that the principal investigator could reliably conduct interviews in order to reduce the time needed to conduct interviews. To ensure confidentiality, interviews and study forms were securely stored and inaccessible to anyone not involved in conducting the study. To ensure participant anonymity, identification numbers were assigned following consent, and used as the exclusive means to identify audio recordings and demographic forms. Participants were given the option to skip any questions they did not wish to answer or stop the interview at any time. They were compensated 40 Ghanaian Cedi for their participation following completion of the interview.

Thematic coding involved a multi-step process, beginning during data collection (Table 2). Interview transcription began in tandem with interviews. Each audio recording initially was transcribed by either the primary investigator or an undergraduate psychology student. Next, transcripts were checked by a second party to ensure that any initial transcription errors were corrected. The primary investigator acted as either the transcriber or checker for every transcript. Once all transcripts were drafted and checked, the primary investigator and an undergraduate student jointly pulled participant responses from the transcripts and organized them in a single file based on interview question, for ease of coding.

Data Analysis

The coding team included the primary investigator, who has a history of experience in Ghanaian as well as Zambian institutional care facilities, an undergraduate psychology major who has experience within Indian institutional care settings, and a developmental psychology graduate student who is of Ghanaian background, has a master's degree in human development, and has professional experience relating to child development within the Ghanaian cultural setting. Themes from the qualitative interviews were identified and evaluated in a multi-step process, as outlined by Merriam and Tisdell (2016) for grounded theory research. First, the team used open coding, whereby. each coder separately reviewed answers to each interview question and recorded codes identified. When codes were identified more than once, participant ID numbers were recorded to keep track of popularity of a code. Once all three raters were finished coding the data independently, the process of axial coding was used to compare codes across raters in order to create a consistent label for each code, which represented the thought, observation, or experience being expressed by the participants. Discussions between raters were used to reach consensus when codes appeared similar but may have been recorded slightly differently. For example, when one rater recorded a code as "children have different strengths or abilities" and another rater identified the codes "children have individualized strengths and weaknesses," it was agreed upon that these two labels represented the same overall theme.

Participants were recorded as having endorsed a theme if at least two out of the three coders independently identified the theme for that participant. The endorsed themes were then evaluated to determine frequency across the sample, with top themes for each interview question selected. Common themes typically had a 20% or higher rate of endorsement across the sample, though sometimes themes were considered common if a subsample had frequent endorsement

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(i.e., 20% of caregivers expressed a certain belief). Once common themes were identified, the demographic patterns of participants who endorsed the theme were explored. Themes and demographic patterns were summarized and reviewed by Dr. Salifu Yendork and the developmental psychology graduate student of Ghanaian background who each provided feedback on whether results appeared consistent with their perceptions of the Ghanaian cultural context. They provided further explanation and hypotheses when themes appeared discrepant from their initial expectations of results.

Table 3
Stages in the Thematic Analysis of Interviews

Stages	Description of the process
1. Interview Transcription	Audio recordings of interviews were transcribed verbatim by one team member, and checked by a second team member.
2. Organization of Participant Responses	Individual answers to interview questions were collated into a single document in order to be reviewed collectively based on question.
3. Independent Theme Identification	Coders identified themes in participant responses for all questions, independent of one another.
4. Cross-rater Theme Identification	Themes identified by each coder were compared to one another, to determine similar codes seen across raters.
5. Selection of Popular Themes & Review	The most popular themes were identified. Cultural informants reviewed popular themes and verified that they were consistent with Ghanaian culture.

Trustworthiness

Multiple efforts were made to ensure the trustworthiness of the findings. At the start of the study design process, during data collection, and throughout the exercise of summarizing the findings Dr. Salifu Yendork was a constant consultant. She provided insight into culturally appropriate language to use when drafting interview questions, served as the liaison between the primary investigator and recruitment sites, oversaw interview processes to determine whether

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participants were responding in less honest ways with the primary investigator due to cultural differences, and consulted on the identification of themes while providing insight into why certain themes were revealed as most common. Other research team members with knowledge of the Ghanaian culture were intentionally recruited to assist with data collection and coding, in order to not rely solely on Dr. Salifu Yendork's cultural perspective. Detailed descriptions of the methodology, participants, and findings are provided in order to allow readers to understand and evaluate how results were reached, and whether they may be applicable to other populations or contexts. Direct quotes from participants are used to illustrate findings in order to support the themes that are described. Three coders engaged in the coding and theme identification process for all participants. Team members met to discuss the coding process several times throughout this phase of the study. Themes were only considered present for a participant when at least two coders agreed that the theme was present, though most often all three coders agreed. After themes from the three independent coders were summarized, Dr. Salifu Yendork and the Ghanaian graduate student on the team both provided final oversight to confirm that the identified themes were consistent with Ghanaian culture.

Study 1 Results

When comparing the CIC sample to the CIF sample, age ranges were similar ($M = 13.31$, $SD = 3.14$ for the CIC sample and $M = 13.37$, $SD = 3.08$ for the CIF sample). Both groups were 60% male, and there was no significant difference in religious affiliation between groups $\chi^2(1) = 0.50$, $p = 0.48$. However, the CIF sample was at a higher level in school, on average $F(1, 199) = 12.75$, $p < .001$, and had more biological siblings present in their home $F(1, 199) = 7.22$, $p = .008$. As seen in Table 3, initial descriptive analyses revealed relatively normally distributed functioning variables for youth in both samples. Independent samples t-tests were performed to

compare means between the CIC and CIF samples for each adjustment variable. Findings

indicated no significant difference between the two samples for depressive symptoms $t(198) = -0.40$, $p = .69$ or quality of life $t(198) = -1.02$, $p = .31$. However, total anxiety scores for the CIC

were significantly higher than those for the CIF $t(173.73) = 2.06$, $p = .04$, and the CIC's average

academic progress was significantly worse than that of the CIF $t(198) = -5.54$, $p < .001$.

Table 4
Descriptive Information for All Youth Functioning Variables

Variable	*M (SD)*	Range	Skewness	Kurtosis	*M (SD)*	Range	Skewness	Kurtosis
	Children in Institutional Care				**Children in Families**			
Total Anxiety (RCMAS)	13.49 (6.35)	2-27	0.14	-1.00	11.91 (4.29)	4-21	0.33	-0.65
Child Depression Inventory (CDI)	9.72 (5.69)	0-27	0.66	0.11	10.06 (6.43)	1-31	1.06	0.85
Total Quality of Life	94 (10.99)	55-129	-0.38	1.60	95.61 (11.31)	62-120	-0.36	-0.17
Academic Progress	-0.17 (0.62)	-2-1	-0.39	0.68	0.25 (0.44)	0-1	1.17	-0.64

Pearson correlations were conducted to examine the relation between each domain of

functioning (Table 4). Anxious and depressive symptoms were positively correlated for both the

CIC and CIF samples. Anxious and depressive symptoms were both negatively correlated with

quality of life for the CIC, however only depressive symptoms were related for the CIF.

Academic progress was not correlated with any of the other adjustment variables in either group.

Table 5

Correlations of Youth Functioning Domains

	1.	2.	3.	4.
1. Anxious Symptoms	1	0.63**	-0.33**	-0.02
2. Depressive Symptoms	0.43**	1	-0.35**	-0.09
3. Quality of Life	-0.11	-0.49**	1	0.14
4. Academic Progress	-0.07	-0.13	0.18	1

Note. CIC statistics are above the diagonal and CIF statistics are reported below the diagonal.
* P < .05, ** P < .01, *** P < .001

Cluster Analysis

A Ward Method cluster analysis was conducted with the potential for a two- to six-cluster solution. Results revealed that data four-cluster solution fit the CIC data and a three-cluster solution fit the CIF data best, with clusters being significantly different in terms of anxious and depressive symptoms, academic achievement, and self-reported quality of life. Fishers Least Significant Difference (LSD) was used as a post-hoc analysis for multiple comparisons testing between cluster groups. Descriptive, ANOVA, and LSD analysis results for both samples are summarized in Table 5.

Table 6

Cluster Analysis and Post-Hoc LSD Test Results

Cluster	N	Area of Functioning M (SD)			
		Anxious Symptoms	**Depressive Symptoms**	**Quality of Life**	**Academic Progress**
Children in Institutional Care					
Worst Functioning (1)	14	1.09 (0.56) ***(3,4)	0.89 (0.84) ***(3,4)	1.05 (0.82) **(2,3) ***(4)	1.22 (0.43) ***(2,4)
High Internalizers (2)	27	0.87 (0.62) ***(3,4)	0.85 (0.85) ***(3,4)	0.17 (1.11) *(4) **(1)	-0.63 (0.68) ***(1,3)
School Strugglers (3)	12	-0.80 (0.48) ***(1,2)	-0.29 (0.59) ***(1,2)	-0.08 (0.87) **(1)	1.61 (0.63) *(2,4)
Best Functioning (4)	47	-0.62 (0.65) ***(1,2)	-0.68 (0.55) ***(1,2)	-0.39 (0.76) *(2) ***(1)	-0.41 (0.45) ***(1,3)
Overall Sample	100	0.00 (1.00)	0.00 (1.00)	0.00 (1.00)	0.00 (1.00)
F Statistic		56.35	37.28	9.78	79.66
Children in Families					
Worst Functioning (1)	33	0.99 (0.69) ***(2,3)	0.74 (1.16) ***(2,3)	0.40 (0.89) *(2) **(3)	0.43 (0.55) ***(3)
School Strugglers (2)	44	-0.58 (0.58) ***(1)	-0.42 (0.57) ***(1)	-0.05 (0.99) *(1)	0.57 (0.00) ***(3)
Best Functioning (3)	23	-0.31 (0.95) ***(1)	-0.25 (0.81) *(1)	-0.44 (1.00) **(1)	-1.72 (0.00) ***(1,2)
Overall Sample	100	0.00 (1.00)	0.00 (1.00)	0.00 (1.00)	0.00 (1.00)
F Statistic		47.91	18.32	5.43	435.52

*(x) Denotes significant difference from cluster x based on Fishers Least Significant Difference multiple comparisons analysis

* P < .05, ** P < .01, *** P < .001

Means from each of the cluster solutions were plotted in order to visualize patterns of functioning (Figures 1 and 2). Clusters were named based on functioning patterns. For the CIC, there was a "Best Functioning" cluster who were approximately half of a *SD* below the group mean for each area, a "School Strugglers" cluster who were functioning within the average range for anxiety symptoms, depressive symptoms, and quality of life, but who were more than one and a half *SD*s above the mean for academic progress. Further analysis revealed that all off the children in this cluster were at least one, and sometimes two years behind in school. The "High Internalizers" cluster were on track in school and had average quality of life, yet were almost a *SD* above the mean for anxious and depressive symptoms, indicating they reported far more internalizing symptoms than the average child in the overall sample. Finally, a "Worst Functioning" cluster emerged and demonstrated functioning around one *SD* above the mean in all areas measured.
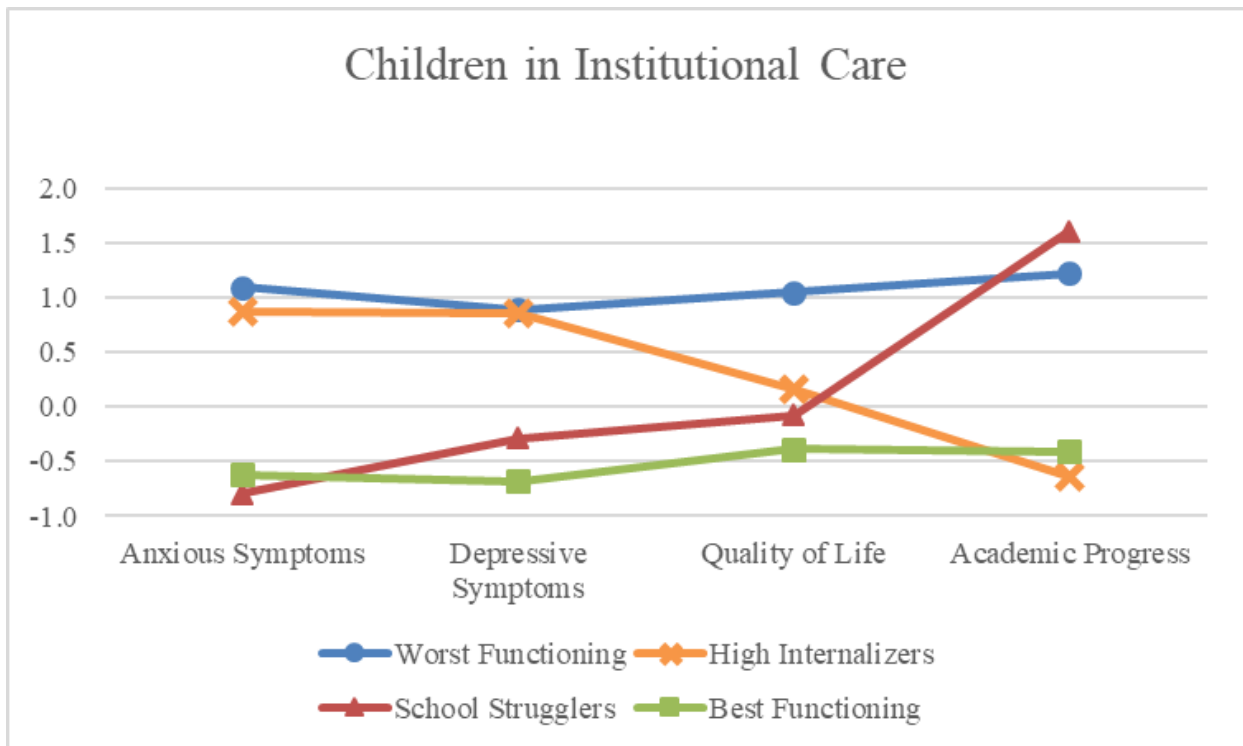
Figure 1
Means of Functioning for CIC Four-Cluster Solution

For the CIF, similar categories were seen, with slight variations in the level of functioning. The "Best Functioning" cluster scored at or below the mean in all areas and nearly two *SD*s below on academic progress – further analysis revealed that 100% of the "Best Functioning" cluster were ahead in school. The "School Strugglers" were not significantly different from the "Best Functioning" cluster except in terms of academic progress, in which they performed similarly to the "Worst Functioning" cluster. The "Worst Functioning" cluster was doing significantly worse than the other two clusters in anxious and depressive symptoms and quality of life, and scored above average in terms of academic progress.
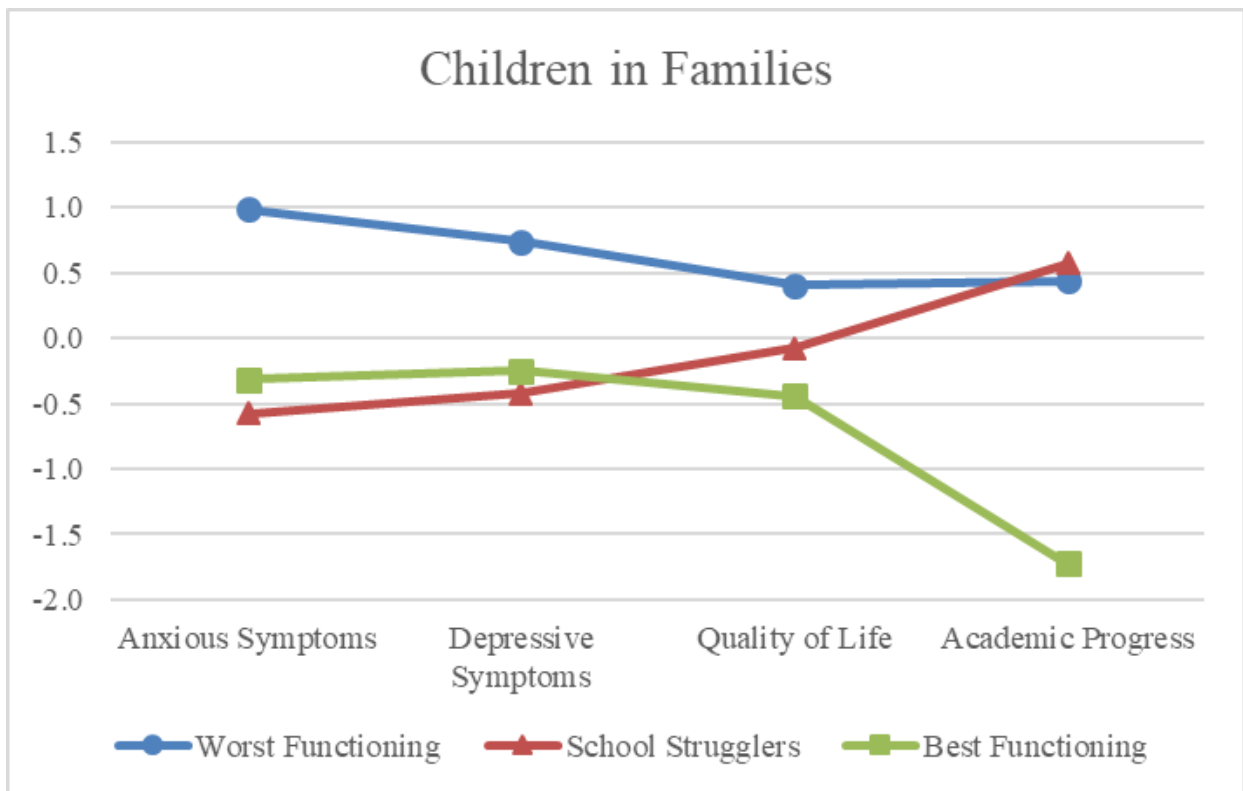
Figure 2
Means of Functioning for CIF Three-Cluster Solution

Demographic Variable Associations

A one-way ANOVA revealed no significant differences across the CIC clusters for number of siblings present or duration of stay in the institutional children's home (Table 6).

However, there was a significant difference in child ages across clusters, with the average age

being significantly younger for the "Best Functioning" and "High Internalizer" clusters. A chi-

square analysis found no significant differences in child sex, religious affiliation, setting from

which they were recruited, size of the institution they resided in, or parental status for the CIC,

although there was a significant effect for age at which they first entered care, with 40% of the

"Best Functioning" group reporting they did not know when they entered care (Table 7). For the

CIF clusters, there were no significant differences in demographic variables except for child sex;

the chi-square analysis revealed the "School Struggler" cluster consisted of significantly more

males (Table 7). Due to these results, child age and age at entry to care were controlled for in

CIC sample analyses, while child sex was controlled for in subsequent analyses for the CIF

sample.

Table 7

Demographic Variables by Cluster and Overall Sample

	Cluster	*N*	*M*	*SD*	Minimum	Maximum
	Children in Institutional Care					
Age	1 (WFCIC)	14	15.29	2.09	11	17
	2 (HICIC)	27	12.56	2.72	7	17
	3 (SSCIC)	12	15.58	1.51	13	17
	4 (BFCIC)	47	12.57	3.44	7	17
	Total	100	13.31	3.14	7	17
Number of Biological Siblings Present	1 (WFCIC)	14	2.36	1.60	0	4
	2 (HICIC)	27	2.52	1.55	0	4
	3 (SSCIC)	12	1.67	1.83	0	4
	4 (BFCIC)	47	1.98	1.57	0	4
	Total	100	2.14	1.60	0	4
	Children in Families					
Age	1 (WFCIF)	33	14.18	3.15	7	17
	2 (SSCIF)	44	12.89	3.53	7	17
	3 (BFCIF)	23	13.13	1.55	11	15
	Total	100	13.37	3.08	7	17
Number of Biological Siblings Present	1 (WFCIF)	33	2.76	1.17	0	4
	2 (SSCIF)	44	2.59	0.87	0	4
	3 (BFCIF)	23	2.61	1.08	0	4
	Total	100	2.65	1.02	0	4

Note. WFCIC = Worst Functioning Children in Institutional Care; HICIC = High Internalizer Children in Institutional Care; SSCIC = School Struggler Children in Institutional Care; BFCIC = Best Functioning Children in Institutional Care. WFCIF = Worst Functioning Children in Families; SSCIF = School Struggler Children in Families; BFCIF = Best Functioning Children in Families.

Table 8

Chi-Square Analysis of Demographic Variables by Cluster

	Chi-Square Value	Significance (2-sided)
Children in Institutional Care		
Child Sex	5.48	.140
Religious Affiliation	1.37	.713
Site Recruited From	13.20	.154
Parental Status	8.06	.528
Age at Entry to Care	71.11	.033
Duration of Time in Care	9.66	.646
Size of Institution	13.2	.154
Children in Families		
Child Sex	7.62	.022
Religious Affiliation	5.86	.053
Site Recruited From	1.83	.400

Cross-Sample Comparisons

To compare the four-cluster CIC sample results to the three-cluster CIF sample, variables were standardized to the CIF sample mean, and then means from each of the solutions were plotted in order to visualize patterns of functioning (Figure 3). The clusters themselves were not altered for these comparisons. This procedure allowed the functioning levels of CIC to be compared to the CIF sample using the same scale. As seen in the figure, patterns from the two samples appeared somewhat similar to one another, with the largest divergence in academic progress. A one-way ANOVA with LSD post-hoc testing was conducted to statistically determine similarities and differences between clusters.
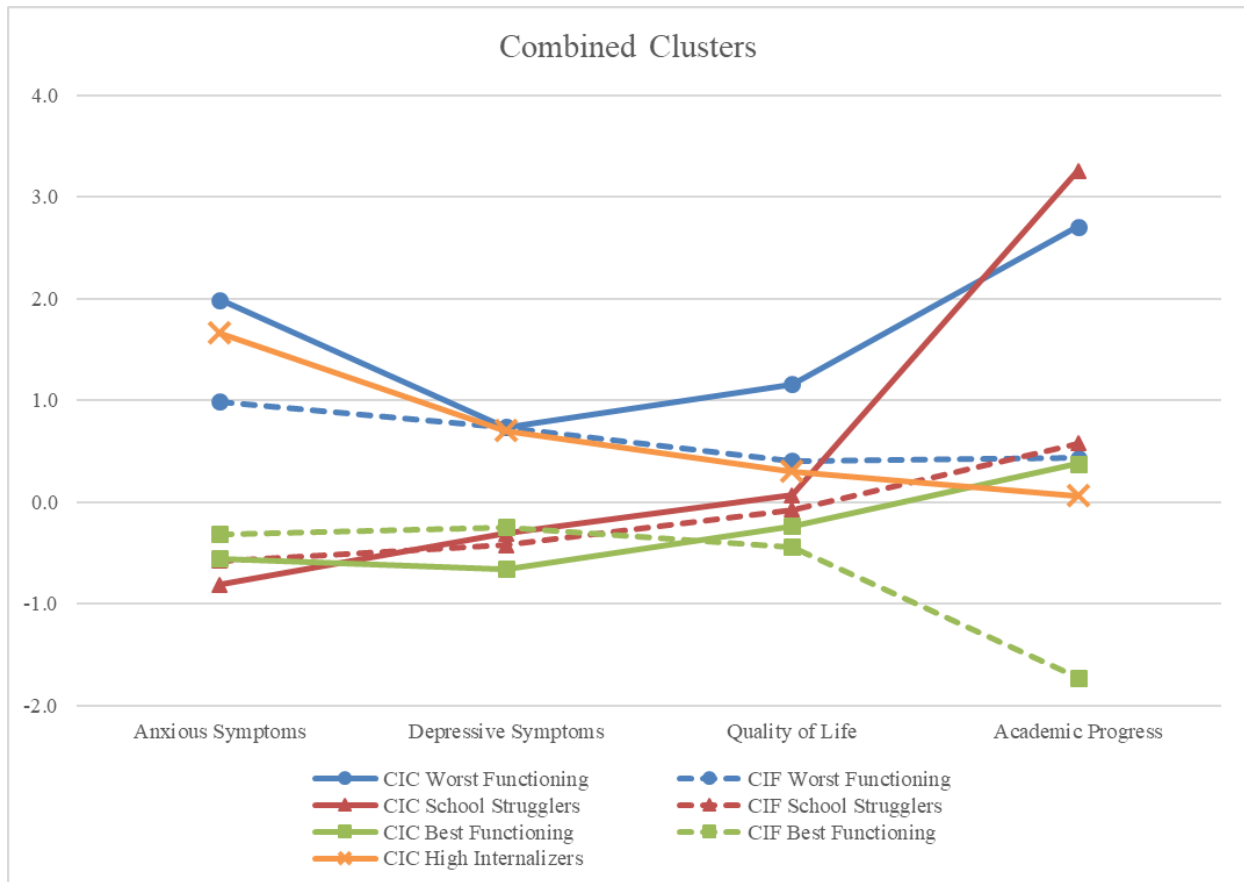
Figure 3 *Means of Functioning for Both Samples*

Results revealed that the CIC "Worst Functioning" cluster had significantly lower quality of life, endorsed more anxious symptoms, and was significantly farther behind in school than the CIF "Worst Functioning" cluster (Table 8). In fact, the CIF "Worst Functioning" cluster was more similar to the CIC "High Internalizers" than any other cluster, although significant differences still existed between the clusters in terms of anxious symptoms and academic progress. The CIC "School Strugglers" were similar to the CIF "School Strugglers" cluster, except that they were significantly farther behind in school. In fact, they were significantly farther behind any other cluster in terms of academic progress. When evaluating the "Best Functioning" clusters, the CIF cluster was significantly farther ahead in school, yet endorsed significantly more depressive symptoms than the CIC "Best Functioning" cluster.

Resilience

The definition of resilience used for this study was that the CIC sample must be performing one *SD* above the mean of their own sample, or at or above the average level of functioning for the CIF group, who presumably have not experienced the same levels of trauma and adversity. Although there was significant variance in cluster functioning, none of the CIC clusters were performing one or more *SD*s above the overall CIC means for those variables. However, when the CIC clusters were compared to the CIF overall means, three groups met the definition of resilience in at least one area of functioning. The CIC "High Internalizers" were in line with average CIF academic progress and reported similar levels of quality of life. The CIC "School Strugglers" were at the average level of anxiety and depressive symptoms as well as self-reported quality of life for the CIF sample. Finally, the CIC "Best Functioning" group met this standard of resilience for all areas of functioning evaluated in the study.

Table 9
Combined Sample LSD Test Results

Cluster	Area of Functioning			
	Anxious Symptoms	**Depressive Symptoms**	**Quality of Life**	**Academic Progress**
Worst Functioning CIC (1)	1.99 (0.83) ***(3,4,5,6,7)	0.74 (0.75) ***(3,4,6,7)	1.16 (0.80) *(5) **(2,3) ***(4,6,7)	2.71 (0.61) *(3) ***(2,4,5,6,7)
High Internalizer CIC (2)	1.66 (0.91) **(5) ***(3,4,6,7)	0.70 (0.75) ***(3,4,6,7)	0.30 (1.08) *(4) **(1,7)	0.06 (0.97) *(4,5) ***(1,3,6,7)
School Struggler CIC (3)	-0.81 (0.71) ***(1,2,5)	-0.31 (0.52) ***(1,2,5)	0.07 (0.84) **(1)	3.26 (0.89) *(1) ***(2,4,5,6,7)
Best Functioning CIC (4)	-0.56 (0.96) ***(1,2,5)	-0.66 (0.49) *(7) ***(1,2,5)	-0.23 (0.74) *(2) ***(1,5)	0.38 (0.65) *(2) ***(1,3,7)
Worst Functioning CIF (5)	0.99 (0.69) **(2) ***(1,3,4,6,7)	0.74 (1.16) ***(3,4,6,7)	0.40 (0.89) *(1,6) **(4,7)	0.44 (0.56) *(2) ***(1,3,7)
School Struggler CIF (6)	-0.58 (0.58) ***(1,2,5)	-0.42 (0.57) ***(1,2,5)	-0.73 (0.99) *(5) ***(1)	0.57 (0.00) ***(1,2,3,7)
Best Functioning CIF (7)	-0.31 (0.95) ***(1,2,5)	-0.25 (0.94) *(4) *(1,2,5)	-0.44 (1.00) **(2) ***(1,5)	-1.72 (0.00) ***(1,2,3,4,5,6)

*(x) Denotes significant difference from cluster x based on Fishers Least Significant Difference multiple comparisons analysis
* P < .05, ** P < .01, *** P < .001

Differentiating Factor ANCOVAS

ANCOVAs were run for each differentiating factor within the CIC and CIF groups respectively. For the CIC sample, age and age at first entry to care were controlled in the analyses while sex was controlled in analyses with the CIF sample. Differentiating factor levels are reported for each cluster in Table 9. Differentiating factor variables were then standardized within each sample and graphed to show varying levels by cluster (Figures 4 and 5). Results

showed that for the CIC, only problem-solving coping significantly varied between clusters $F(3,$

$94) = 4.41$, $p = .006$. Simple contrasts were used to compare each cluster to the "Best

Functioning" cluster and determined that the only significant difference between clusters was

between the "High Internalizers" and "Best Functioning," with the "High Internalizers" using

significantly more problem-solving coping ($p = .011$). In the CIF sample, self-efficacy $F(2, 96) =$

4.56, $p = .013$ along with adaptability and persistence $F(2, 96) = 6.11$, $p = .003$ varied

significantly between clusters. The "Best Functioning" cluster reported significantly higher

levels of both differentiating factors than the "Worst Functioning" cluster.

Table 10
Differentiating Factor Levels by Sample and Cluster

	Cluster	N	M	SD	Minimum	Maximum
Self-Efficacy	1 (WFCIC)	14	29.29	7.00	10	38
	2 (HICIC)	27	29.74	7.26	14	40
	3 (SSCIC)	12	27.83	5.65	15	40
	4 (BFCIC)	47	28.26	7.50	10	40
	5 (WFCIF)	33	25.91	4.81	17	35
	6 (SSCIF)	44	29.17	5.34	15	40
	7 (BFCIF)	23	29.57	6.24	15	37
Perceived Social Support	1 (WFCIC)	14	53.29	16.12	27	76
	2 (HICIC)	27	59.81	17.04	12	82
	3 (SSCIC)	12	56.58	15.00	29	78
	4 (BFCIC)	47	62.74	14.45	28	84
	5 (WFCIF)	33	54.85	15.24	20	84
	6 (SSCIF)	43	62.00	13.88	25	84
	7 (BFCIF)	23	59.39	16.66	21	79
Emotion Regulation Coping	1 (WFCIC)	14	1.21	0.70	0	2
	2 (HICIC)	27	1.07	0.62	0	2
	3 (SSCIC)	12	0.83	0.58	0	2
	4 (BFCIC)	47	1.02	0.61	0	2
	5 (WFCIF)	33	1.09	0.52	0	2
	6 (SSCIF)	43	1.07	0.59	0	2
	7 (BFCIF)	23	1.13	0.46	0	2
	1 (WFCIC)	14	1.29	0.61	0	2

Problem Solving Coping	2 (HICIC)	27	1.63	0.63	0	2
	3 (SSCIC)	12	1.00	0.95	0	2
	4 (BFCIC)	47	1.19	0.74	0	2
	5 (WFCIF)	33	1.21	0.60	0	2
	6 (SSCIF)	43	1.45	0.66	0	2
	7 (BFCIF)	23	1.13	0.82	0	2
Cognitive Restructuring Coping	1 (WFCIC)	14	0.93	0.27	0	1
	2 (HICIC)	27	0.70	0.47	0	1
	3 (SSCIC)	12	0.83	0.39	0	1
	4 (BFCIC)	47	0.60	0.50	0	1
	5 (WFCIF)	33	0.76	0.44	0	1
	6 (SSCIF)	44	0.84	0.37	0	1
	7 (BFCIF)	23	0.87	0.34	0	1
Social Support-Seeking Coping	1 (WFCIC)	14	0.93	0.27	0	1
	2 (HICIC)	27	0.74	0.45	0	1
	3 (SSCIC)	12	0.83	0.39	0	1
	4 (BFCIC)	47	0.77	0.43	0	1
	5 (WFCIF)	33	0.67	0.48	0	1
	6 (SSCIF)	44	0.77	0.42	0	1
	7 (BFCIF)	23	0.78	0.42	0	1
Distraction Coping	1 (WFCIC)	14	1.36	0.50	1	2
	2 (HICIC)	27	1.41	0.75	0	2
	3 (SSCIC)	12	1.42	0.52	1	2
	4 (BFCIC)	47	1.11	0.79	0	2
	5 (WFCIF)	33	1.24	0.71	0	2
	6 (SSCIF)	44	1.34	0.71	0	2
	7 (BFCIF)	23	1.30	0.56	0	2
Adaptability and Persistence	1 (WFCIC)	14	69.43	15.34	50	92
	2 (HICIC)	27	72.57	14.05	27	92
	3 (SSCIC)	12	71.33	10.44	59	92
	4 (BFCIC)	47	68.15	17.20	25	95
	5 (WFCIF)	33	60.70	15.62	34	92
	6 (SSCIF)	44	68.00	13.48	23	92
	7 (BFCIF)	23	71.96	14.78	46	92

Note. WFCIC = Worst Functioning Children in Institutional Care; HICIC = High Internalizer Children in Institutional Care; SSCIC = School Struggler Children in Institutional Care; BFCIC = Best Functioning Children in Institutional Care. WFCIF = Worst Functioning Children in Families; SSCIF = School Struggler Children in Families; BFCIF = Best Functioning Children in Families.
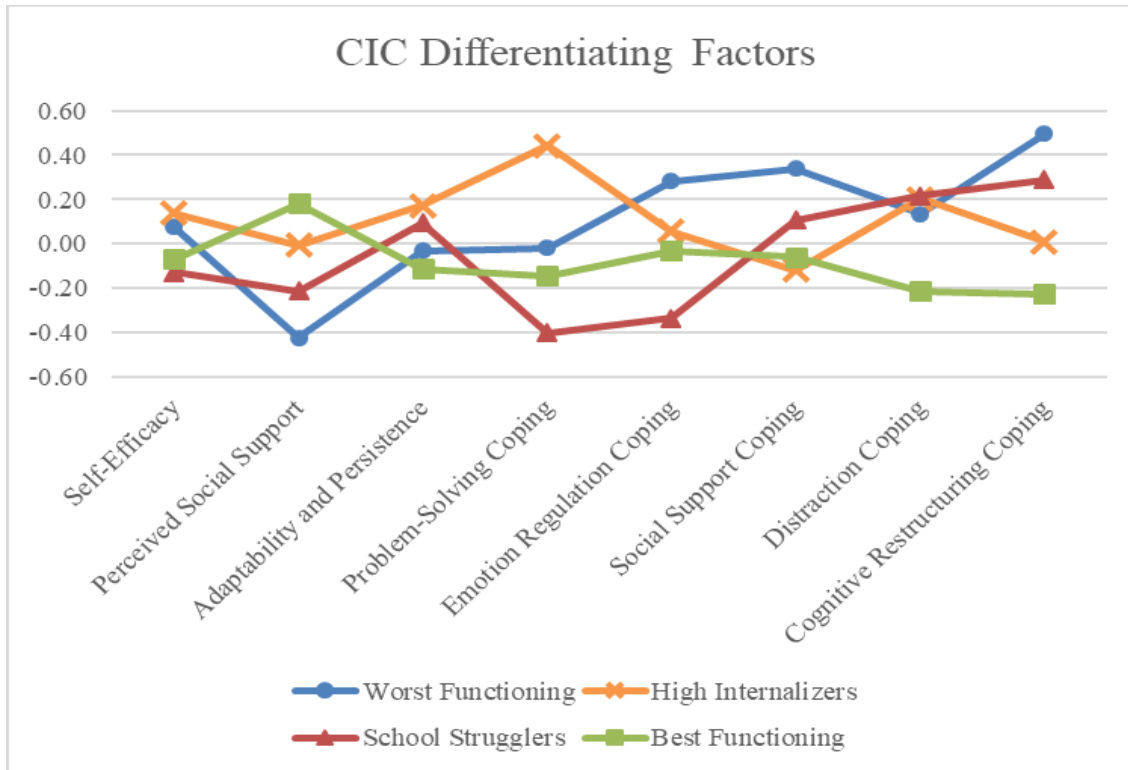
Figure 4
Mean Levels of Standardized Differentiating Factors by CIC Cluster
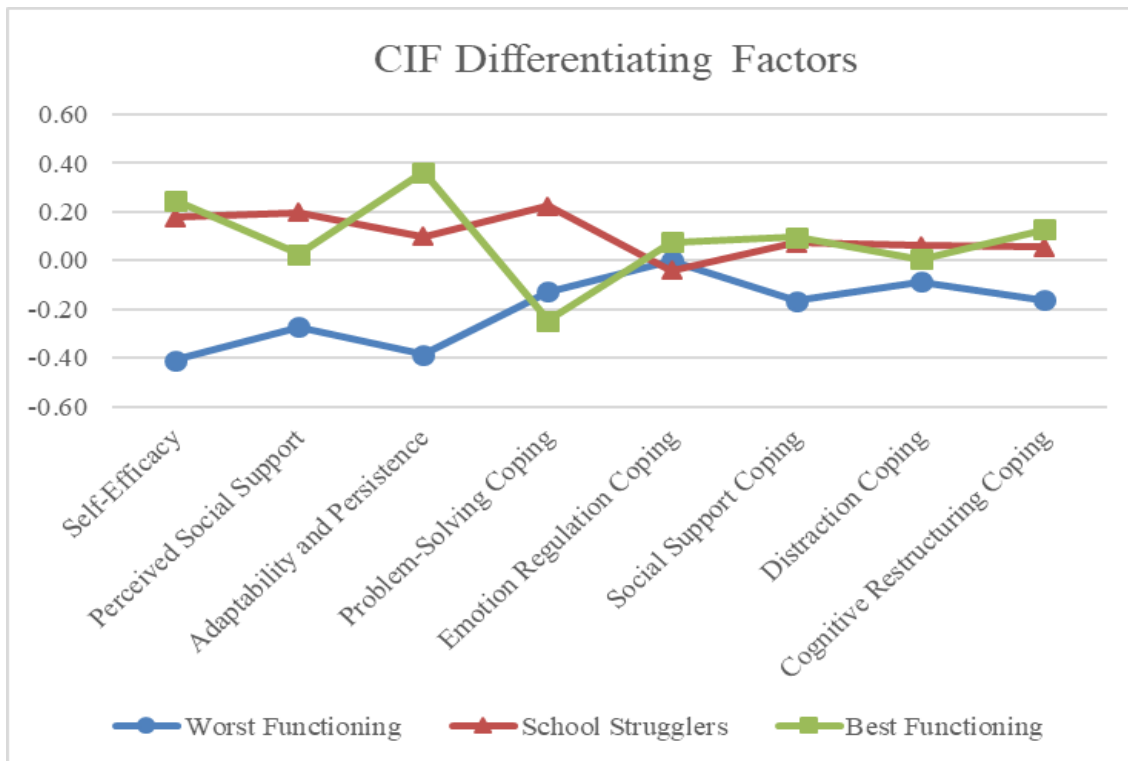
Figure 5
Mean Levels of Standardized Differentiating Factors by CIF Cluster

Summary

Study 1 findings revealed four unique patterns functioning for the children in institutionalized care, and three patterns of functioning for the children residing in families. Both samples had one group who was struggling in all areas, a group who were doing well emotionally and in terms of quality of life, but who were behind in school, and a group who were average or above average in all areas. The institutional sample also had a group who were ahead in school but had higher emotional difficulties. When comparing same-name clusters between the two samples, a few significant differences emerged. The CIC clusters were compared to CIF functioning means to evaluate how these youth compared to family-reared youth, and it was determined that three groups met the definition of resilience in at least one area of functioning.

Although there were many similarities between the CIC and CIF samples in terms of adjustment, they differed greatly in terms of which differentiating factors were associated with better functioning. For the CIC, problem-solving coping significantly varied between clusters with the "High Internalizers" using significantly more problem-solving coping, while for the CIF sample, the "Best Functioning" cluster reported significantly higher levels of both the self-efficacy and adaptability and persistence than the "Worst Functioning" cluster.

Study 2 Results

The aim of study 2 was to conduct qualitative interviews to aid in interpretation of results within the Ghanaian cultural context and inform the direction of future research by identifying additional important areas of adjustment, risk, and protection. Thirty-eight teachers or institutional care staff provided interview data that aided in the interpretation of the quantitative survey questions, providing richness and context to many of the questions raised by the results of the cluster analysis and subsequent findings on differentiating factors. This was the case even

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though many participants – particularly those from the institutional care setting and those who had lower levels of education – found some interview questions difficult to follow, especially questions related to differentiating factors.

Patterns of Functioning

When asked to describe the functioning of the children with whom they work, participants most commonly gave positive responses, indicating that, overall, the children they serve were doing well. When asked about specific patterns, the most common response was that each child has their own strengths and weaknesses. Teacher 018 explained, "There are some who do well in all areas. Some, too, do well here, and there not. It's mix up." Participants repeatedly emphasized that even children who are struggling have strengths; for example, those who are behind academically are often highly social or excel athletically. Teacher 004 reported, "It's not everyone that has intellectual ability. Others, his is to draw, his is to dance; each and every individual has his own ability."

Perceptions of Positive Adjustment

Across both caregivers and educators, participants frequently described children who were doing well as those who were often happy, were well-behaved, showed consistent progression or improvement, were playful or active, and had a good quality of life with caregivers who were actively involved. Teacher 012 shared, "You see the parents, and the parents too they normally come here [to school] – those that are good – they will be coming, you see them. Oh, they will be taking very good care of them and they don't need anything." Similarly, caregiver 117 explained, "Oh, if a child is doing well you see him happy, playing. Any time you see him or he or she is happy and playing around. Oh, they are always cheerful. Uh huh – they are always cheerful."

Teachers were more likely to describe these children as determined, enjoying a challenge, being hardworking, and performing well in school. Performing well included things like being punctual to class, always appearing willing to come to school, participating in activities or conversations, as well as having good handwriting. Teacher 011 provided elaboration:

> You could see he's having that zeal, or having that happiness in class because when a child realize the teacher likes him or her so much, the child is always willing to come to school. You never see the child absent from school.

Teacher 012 gave a personal anecdote:

> So I gave them writing, and I was expecting the boy to finish first, and I see the boy and I ask why and he says 'madam, this is writing and I have to take my time' so the boy knows when to be quick and when to even take your time to get perfect work done.

Caregivers were more likely than educators to describe children as cooperative or helpful. Meeting developmental milestones on time and growing well or being healthy was reported exclusively by caregivers. Caregiver 116 shared:

> Sometimes she even helps her colleagues who are small, maybe if they fall and we also do something then she helps them to get up. And she respects us. The little things we send her to do, she do it well.

Caregiver 101 identified physical abilities as a theme; "When the person can walk, you see that he is walking. You see that he is doing well. They're about to speak, too, they can speak." Similarly, caregiver 105 focused on physical health, "For instance, their health. When a child is growing well, you see her growing nice, she is always fine."

Perceptions of Negative Adjustment

Children who were not doing well were described by participants as those who were unsocial, timid, or bullied and who were often unhappy. Teachers frequently interjected that, although the children were struggling in some areas, they likely still had strengths in others. Teachers most often cited the example of children who struggled in class but excelled in sports. Teacher 001 explained:

They may have the interest in certain things also. Maybe that side, they might do well there – not only academically, you see? Somebody – I once taught a guy – the guy had a mental problem but if you go to football, the child is very good at goalkeeping.

Teachers focused heavily on academic success as the primary indicator of functioning. They also described struggling children as lacking motivation, having poor attendance, coming to school unprepared, being distracted in class, and having a poor quality of life. A lot of blame appeared to be placed on caregivers or the home environment for poor academic success; teachers often noted broken homes as the source of children's poor adjustment. Teacher 006 provided one instance of this:

But others, because of the background, the parental care is not there. Some come from broken homes. Some, they have teenage parents, so it has affected them in their life all around. And there is nobody to give care at home.

However, these explanations were less common among caregivers, who instead perceived poor functioning to mean developmental delays or having special needs. Their focus appeared to be more on physical health, growth, and the ability to interact with caregivers rather than success in school. Caregiver 109 explained, "Yeah that is the walking that they can't walk, or they can't

talk, can't touch anything, just lying down. Always feeding them, changing them, they can't do anything for themselves."

Contributions to Academic Functioning

The teachers interviewed focused predominantly on academic functioning, and had extensive thoughts on what leads to better or worse functioning. This is likely due to academics being their area of expertise and the arena through which they have the most contact with children. Teachers were more likely than caregivers to share beliefs that home environment, whether lack of resources or having all needs met, was a strong contributing factor to academic standing. Several teachers explained that when a child's needs aren't met, they are often preoccupied with thoughts relating to this during class, which distracts them from their work. Teacher 018 stated that she observed:

> [She] cannot concentrate in class, you will see her very quiet and always moody, you see. Those who are moody and sad, you see that there's a problem from the home. Either broken home, some staying with their parents' friends, some staying with their grandmothers, they don't have time for them, yes.

On the other hand, when all of a child's needs are met, they can focus on schooling; plus, parents are able to provide the necessary educational supplies as well as supplemental materials.

Parenting and adult support were another frequently noted factor contributing to academic success. Teachers believed that parents should provide encouragement and allow children time to focus on their studies; when they do not, children struggle through homework and cannot achieve at the same rate as their peers. Teacher 015 expressed:

> Okay to me, my opinion, I think when a child has been taken care of very well, you provide all the basic needs, you feed the child well, you buy the child textbooks and other

things for them. When that child comes to school, that child is always happy to do his or her best, but when you are lacking parents to push you academically, you can't perform well.

The final theme noted by teachers was the foundational education of children in combination with the current quality of their teaching. They described things like a teacher's ability to tailor their teaching style to the needs of their pupils, a teacher's education level, school resources, and the strength of a child's education prior to that point as dictating how well the child would succeed in a given year. Teacher 002 explained:

> And then, strategies used by the teacher. Some of them, when you look at their level, you have to come down, down, down, but if the teacher doesn't have the patience to come down to the level of the child, that one – the child – will never get it because he himself is down already. So, if you don't come down to the level so that he grabs it, you will just move on.

Caregivers attributed academic success or difficulty to individual factors such as personality or IQ. They noted that lack of motivation can lead to poor academic achievement, while having discipline and being hard-working lead to success. Caregiver 120 shared, "So, I believe that it is because the children are not motivated enough to be interested in academic work so sending them back to that becomes a struggle." Teachers endorsed these beliefs at a similar rate to the caregivers.

Contributions to Emotional Functioning

Relative to academic functioning, participants made fewer comments regarding factors leading to positive or negative emotional functioning. Both teachers and caregivers believed that poor parenting and lack of adult support contributed to emotional problems in children, and that

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having a good home environment with all needs met led to more positive emotional functioning. Caregiver 112 explained this in detail:

> The emotional problems for children is love. When you have love with them – but the person doesn't have love. Maybe the parents will be shouting at the children in the house. When he is going from school or going to the house the person will not be happy. Whenever he is going back to the house, that one too affects children.

Similarly, caregiver 110 shared, "When mothers are there taking care of the children, always at their side helping them in so many things, their emotions are very good." Teachers were more likely than caregivers to note poor home environments or lack of resources as contributors to negative emotions. Further, teachers often described difficult peer relationships or bullying as leading to poor emotional functioning, while adult support led to positive functioning. Teacher 008 reported:

> Or maybe that and if there is a quarrel between friends. You see, the child – anything the child do – emotionally he or she is not be happy because he will be thinking about the friend 'If I go out to break, who will I play with? Who will I talk to?'

Contributions to Quality of Life

Similar to the other areas of functioning, caregivers and teachers alike identified good parenting and adequate support from adults as leading to better quality of life for children, while a poor home environment lacking in basic resources contributing to a lower quality of life. Teacher 014 believed, "Everything boils down to the parents, if he is being taken care of in the house." Teachers, again, mentioned the importance of home environment and appropriate resources as contributing to quality of life. Teacher 013 explained that "A good quality of life is associated with proper treatment, proper upbringing, provision of the child's needs."

General Protective Factors

When asked broadly why children might perform better in one area or another, compared to their peers, participants reiterated themes noted previously. Individual factors, such as genetics or differences in personality were believed to set some children ahead from others. Home environment, having needs met, and the level of adult support present in a child's life were all mentioned as well. Teacher 013 noted:

> I could see that it depends on the child's genetics. Like I said, some children, their parents are very brilliant… and some of them, like a child in my class, the parents are doing everything yet so this one you can see that it's something generic. Yeah, the child is given all the methodology, yeah. Others, too, it is because they are not getting what they need.

Interpretations of Quantitative Findings

Participants were presented with a summary of the quantitative findings from study 1, and asked for their thoughts and feedback. When the patterns of functioning were outlined, 34% of the participants indicated they agreed that the patterns represented the different types of functioning they observe; Forty-seven percent indicated they agreed "somewhat."

Findings regarding the differences in differentiating factors (self-efficacy, ability to adapt and persist, and problem-solving coping) between CIC and CIF samples were explained, and participants were asked how these factors contribute to functioning, and why they may matter for one group but not the other. No consistent themes were identified for self-efficacy or adaptability/persistence. Unfortunately, it often seemed like participants were unsure of the concepts or how they would relate to functioning. This phenomenon was experienced by all three interviewers and persisted despite attempts to explain the concepts in varied ways.

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However, when it came to problem-solving coping, a clear theme emerged. Both caregivers and teachers endorsed this theme, though it was more often reported by teachers. The participants explained that, in Ghanaian culture, children are not expected to solve their own problems; parents or adults are expected to solve problems for children. Caregiver 115 explained, "Oh, they can't solve that problem by their own, they can bring it forward to a mother or a supervisor so that we can help him or her." Therefore, CIF who have more adult support have not yet needed to develop the skill of solving their own problems. This is why it was not a significant differentiating factor for the CIF clusters. The CIC, on the other hand, experience less support from adults due to higher child to caregiver ratios. Teacher 015 provided a summary of this belief:

> Those in the school, their problems are being solved by their parents, they provide— some of them, not all of them but their parents provide everything for them. So, whenever they have problem, they think their parents would do it for them, but you know those children in the orphanage, they aren't having anybody. So, they have to be taken to counseling and taught on how to solve problem on their own.

When CIC encounter problems, they may not have adults available to solve the problem for them. They have therefore been forced to develop this skill and use it as a means of coping with hardship. The presence of this skill for some CIC allows it to be a significant differentiating factor among the various clusters identified.

When asked for their thoughts on other variables that contribute to adjustment, which had not been accounted for in our study, two predominant themes emerged. Participants frequently mentioned parenting quality or the level of parents' education as a significant factor. Religion or spirituality was another factor, which was predominantly endorsed by caregivers. Caregiver 107

identified that, along with other factors, "if you teach the child a Christian life, it also makes the child become a better person in the future"

Summary

Study 2 findings revealed that caregiver and teacher perceptions of child adjustment and predictors of functioning were fairly consistent with each other, and supported the findings of Study 1. Most participants felt that children may struggle in one or more areas, but that they will have personal strengths in certain other areas. Overall, having all basic needs met, a stable home environment, and a high level of parental involvement or adult support were the most common factors believed to contribute to positive functioning across domains. Although clear themes were not identified in response to questions regarding self-efficacy and adaptability or persistence as differentiating factors that emerged from the results of Study 1, an explanation of Study 1 problem-solving coping was identified. Participants explained that in Ghanaian culture, children are not expected to solve their own problems – adults are expected to solve any problems a child will face. However, in institutional care, where the child to adult ratio is higher than in typical households, children may need to solve their own problems due to unavailability of adults to solve it for them. Therefore, these children are more likely to develop this skill, which makes it more likely to be a significant differentiating factor for children in care compared to those in families.

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Discussion

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Extensive research has documented the detrimental effects institutional care can have on children (Dozier et al., 2012; McCall et al., 2016). The focus of the field has begun to turn toward examining healthy adjustment or resilience within this setting. However, researchers who have explored positive adjustment in institutional care often have defined positive functioning broadly,

instead of examining the multidimensional patterns of functioning that may occur (Mota & Matos, 2015). The present study was designed to address this gap, by examining patterns of functioning across multiple domains of adjustment, identifying factors associated with better functioning, comparing these results to children in typical family homes, and finally contextualizing results within the cultural framework from which the data originated. This two-part sequential explanatory mixed-methods design included quantitative data from children in institutionalized care and children in family care, as well as qualitative interpretations of quantitative results provided by caregivers, social workers, and teachers within some of the same facilities from which the children had been recruited.

The present study contributes to the current literature by demonstrating that there are numerous adjustment outcomes possible within institutional care settings, just as the literature has documented that there are various possible adjustment patterns among children in families (Brody et al., 2013; Kliewer et al., 2017). Further, the study provides evidence that children raised in institutional care settings are capable of functioning at a level similar to the average range of functioning for children raised in family care settings. These findings suggest that, if it is absolutely necessary for children to reside in institutional care, this does not destine them to a life of dysfunction.

Additionally, the present study advanced the current literature by integrating the cultural values, beliefs, and perspectives of key informants working with this population into the interpretation of quantitative results. Frequently, studies of institutionalized children are conducted in one country by researchers from another (Gunnar et al., 2012; McCall et al., 2010; Wolff & Fesseha, 1999). This poses the risk of cultural bias when interpreting findings, and did so in this study as well. Though bias can exist in many forms and in many phases of the research,

the explanatory mixed-method design used in this study was a step toward reducing bias and illuminating a richer understanding of the data from the cultural context in which it was collected.

Patterns of Adjustment among Children in Institutionalized Care and Children in Families

The first aim of the study was to determine if there were variations in functioning among CIC, and if so, what patterns would emerge. It was hypothesized that the CIC sample would evidence multiple patterns of functioning, and that at least one group would show positive functioning in one or more areas. Positive, or resilient functioning was defined as functioning one *SD* or more above the mean level of adjustment for the CIC sample, or at or above the level demonstrated by the sample of CIF children. Results revealed that nearly half of the sample, classified as the CIC Best Functioning group, showed resilient functioning in all measured domains. Though they weren't a full *SD* above the mean level of functioning for their group, they were functioning at the average level for the CIF group, suggesting these youth were just as capable as CIF at achieving an average level of adjustment. In fact, the only group of CIC who did not demonstrate resilience in two or more areas of adjustment were the CIC Worst Functioning group. Fortunately, only 14% of the sample was in the CIC Worst Functioning group, meaning that resilience in one area or another was the rule, rather than the exception, in these children. This finding of resilience in one or more areas of adjustment as the rule, rather than the exception, can be seen in other literature including Tiet et al.'s (2010) or Osborn's (1990) studies of high-risk youth.

The second aim of the study was to identify factors present in children's lives and to determine if these factors differentiated patterns of functioning. It was hypothesized that varying levels of social support, emotion regulation abilities, self-efficacy, coping strategies, and

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adaptability and persistence would effectively differentiate adjustment patterns. Surprisingly, many of the protective factors included in the study did not significantly differentiate patterns of functioning for either the CIC or CIF sample. The clusters of functioning showed similar rates of perceived social support and most coping strategies, thus support and coping were ineffective in discriminating between groups. However, problem-solving coping differentiated children raised in institutionalized care: High Internalizers used this strategy significantly more than the Best Functioning group. Additionally, the Best Functioning CIF had significantly more self-efficacy and adaptability/persistence than the worst functioning group, suggesting that these factors may be protective for CIF. While these findings were unexpected, the extant literature on social support and specific coping strategies indicates these qualities are protective for children, including children in Ghana (Attar-Schwartz, 2008; Caserta et al., 2017; Salifu Yendork & Somhlaba, 2016; Wright et al., 2019), thus it may be that they were present and protective for children of each cluster in similar ways. Results of the present study would not indicate that social support and various coping mechanisms are not beneficial for CIC or CIF. Extensive literature has documented the benefits of numerous protective or promotive factors for children in institutional care (Wright et al., 2019). Further, studies have shown that it is possible for factors to differentiate between various patterns of youth functioning (Wright, 2016). It is likely that, due to restrictions caused by using secondary data for the quantitative study, there are other differentiating factors present for the current sample which could not be included in the study.

The final aim of the quantitative study was to investigate how the patterns of functioning shown in CIC compared to those for CIF. It was hypothesized that the patterns demonstrated by the CIC sample would differ from those present in the CIF sample, with the CIF showing higher functioning in each domain, on average, as well as a higher proportion of youth classified within

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profiles demonstrating positive adjustment. Results for the two samples differed in terms of

number of clusters identified, although the three patterns for the CIF sample were fairly similar

to some of the CIC patterns. The CIC included a High Internalizer group who still performed

well in school, while the CIF sample did not. In terms of the proportion of those doing well, it is

hard to draw one sweeping conclusion; the CIF Best Functioning group was smaller than the CIC

group ($N = 23$ vs. $N = 47$), although the CIF School Strugglers were actually more similar to the

CIC Best Functioning and also can be considered to be doing fairly well despite being slightly

below average in academic progress. If we include the CIF School Strugglers with the CIF Best

Functioning group, we see that an overall 67% of the CIF sample are doing well, which is greater

than the 47% of the CIC sample. Additionally, the CIC Worst Functioning group, though smaller

proportionally than the CIF Worst Functioning group, is doing worse in terms of anxious

symptoms, quality of life, and academic progress. Together, these findings would suggest that, as

hypothesized, many of the CIF are functioning better across multiple domains than the CIC.

These findings correspond to other studies of institutional care around the globe that have

documented that children in institutional care perform 1 to 1.5 standard deviations below the

norms for children in families (Dozier et al., 2012; McCall et al., 2016).

Qualitative Interpretations of Quantitative Results

Thirty-eight caregivers, teachers, and staff generously gave their time to discuss their

perspectives on child adjustment within institutional care and family contexts in Ghana. Their

contributions provided rich elaboration to the quantitative findings and helped explain results

that seemed surprising outside of the Ghanaian context. For Study 2, it was hypothesized that the

quantitative findings would not be perceived as vastly discrepant from patterns seen by the

participants, but that they would be able to identify numerous additional areas of risk, adjustment, and protection that should be investigated in future studies.

Most participants agreed that children can show varying levels of adjustment in different domains. Caregivers tended to report that the children they worked with were doing very well. When they discussed the ways in which children struggle, they commonly perceived disability or developmental delays as the primary area of poor adjustment. Because physical health or development were not included in the initial quantitative study, this area of adjustment could not be explored. It is possible that this is the area in which CIC show the worst functioning, or it is possible that this is a domain which caregivers are intimately familiar with, and more so than teachers. The rates of physical disability for individuals in Ghana are estimated to be between 7-12% (Tuakli-Wosornu & Haig, 2014). Due to limitations in accessibility, approximately 70% of children with disabilities in Ghana are not enrolled in school (Mprah et al., 2015), which would make caregivers more in touch with this area of difficulty than teachers.

However, it is also possible that the caregivers did not want to disclose other areas of difficulty, not determined by genetics or pre-institutionalization circumstances, due to concerns for how this would reflect on the care the institution was providing. Some participants inquired about the confidentiality of their interviews, which may have been out of fear of retribution from administrators if they painted the facility in a negative light. Another possibility is that caregivers may have opted to focus on positive elements of adjustment in order to avoid playing into the stereotypes that children in care are struggling, or have poor adjustment. There is nearly a century's worth of literature citing devastating developmental outcomes associated with institutional care, which perpetuates the public narrative that these care facilities are detrimental to children (McCall, 2012). There is some question to the validity of early research due to

methodological limitations (McCall, 2012), but unfortunately the stereotype has remained strong. Given the cultural tendency in Ghana to hold a high level of national pride, and have a strong desire to lift up the greater Ghanaian community, it is possible that they wanted to focus on the positives in order to align with this cultural value. Of note, the level of positivity in responses did not seem to vary based on interviewer, so this positive lens does not appear to be due to differences in comfort disclosing difficult circumstances based on "insider" or "outsider" interviewer status.

When talking about functioning broadly, teachers deferred to talking about academics and provided more elaborate responses when questioned about academics versus other areas of functioning. This is understandable, given that academic functioning was their area of expertise and the arena in which they had the most interactions with children. They still provided detailed and valuable responses to questions about other domains, but required more specific prompting to discuss those areas compared to the caregivers. It is possible that this tendency to gravitate toward discussion of academics also was due to a strong value being placed on academic achievement within the Ghanaian culture. Ghanaian culture holds a strong value on academic achievement, as individuals understand that education opens numerous financial and professional doors for individuals and by extension, their families (Chowa et al. 2013). Further, the country has made immense efforts to prioritize funding to improve educational quality and access, indicating that this is a value at the system-level as well (Adesina, 2009).

Across various interview questions regarding functioning and predictors of adjustment, caregivers were less likely than teachers to report home environment as a factor. It is possible that caregivers did not want to insinuate negative things about the facility they worked in, out of pride for their work or possibly fear of repercussions from administrators. Some caregivers

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appeared guarded in their responses at times, demonstrated by providing briefer responses to questions regarding negative functioning. However, some participants disclosed strong feelings that the institution was under-staffed for the number of children living there. This theme was endorsed by staff at all levels within the institution, though, indicating it was not just a belief held by caregivers.

Upon review of the qualitative themes identified, Dr. Salifu Yendork had several observations. She summarized the repeated themes of the importance of parenting and basic needs being met; she explained that most people believe that factors leading to positive developmental outcomes lie outside the child and can be provided by the significant adults in their life. Despite this, she expressed surprise that individual factors such as coping, intelligence, and resilience were not reported in higher frequency for questions on predictors of positive emotional functioning. Further, she had anticipated that spirituality would have been discussed more frequently, given its strong presence throughout Ghanaian culture (Salm & Falola, 2002). Her explanation for why spirituality was not noted more frequently was due to the higher education level, on average, of the sample than the general population. According to UNICEF data, only approximately 10% of Ghana's population complete their secondary education (Senadza, 2012), while 81% of the current sample completed at least their secondary education, and nearly 44% of the current sample had completed their bachelor's or master's degrees. Religion is an important value of many African cultures (Gyekye, 1996) and is associated with primary education, possibly due to increase in access, but is not associated with higher levels of education (Takyi & Addai, 2002). The Ghanaian graduate student on the team reviewed the qualitative results as well. She agreed that themes and interpretations seemed consistent with her experience and perceptions of Ghanaian culture. However, she disagreed with Dr. Salifu

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Yendork's surprise that religion was discussed so infrequently. She explained that due to the nature of the questions asked, and the framing of the study, she was not surprised that this was a smaller focus of participants' attention.

The explanation of children not being expected to solve their own problems as the reason why problem-solving coping was not a differentiating factor for the CIC sample was one of the biggest revelations from the qualitative work. Following the quantitative analyses, it was unclear why problem-solving coping was significant for CIC but not CIF. The CIF clusters all experienced similar rates of problem-solving coping, while the CIC sample showed significant variation, with the High Internalizers demonstrating far higher rates than the other clusters. Caregivers explained that CIC have fewer caregivers to solve their problems for them, so are more likely to need to develop this skill than are CIF. This aligns with the cultural perception of children as fragile and vulnerable, and needing protection from family (Salm & Falola, 2002). Dr. Salifu Yendork explained that this is consistent with the collectivist culture of Ghana (Opare-Henaku & Utsey, 2017), which she described as believing children *only* need adults and external protective factors to function. This is also highly consistent with the hierarchical nature of the culture, which perceives children to be in a position of deference to adult advice, wisdom, and support.

Intervention Implications

One of the major goals of this study was to illuminate areas of intervention which can further improve the care children receive in institutions, so as to reduce the risk of negative outcomes. Previous international intervention efforts within institutional care have targeted a range of biopsychosocial-system levels (Wright et al., 2019). Interventionists have aimed to teach skills to individuals, alter environmental contexts, and change microsystem-level factors

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such as caregiver responsivity. Given the predominant theme among the qualitative interviews that adult support and care context matter most, it seems appropriate to recommend that interventions within Ghanaian institutional care facilities focus on the micro or macrosystem levels, rather than the individual level. As Dr. Salifu Yendork illuminated, Ghanaians hold a collectivist perspective. Previous literature describes Ghanaian culture as encouraging interdependent living, whereby the wellbeing of all members is valued and fostered through social harmony and supportive efforts (Opare-Henaku & Utsey, 2017). Staff, caregivers, and administrators within the institutional care settings would likely show higher rates of buy-in and dedication to interventions aligned with this collectivist view, such as increasing the number of staff available to support children, increasing the education levels and wellbeing of caregivers, or improving care practices.

Further, a consistent message from nearly all of the qualitative participants was that stability of home environment and having all basic needs met is one of the most important factors. Before intervening in any other areas of the child's life, programs or agencies targeting improvement in care within institutions should make provision of basic needs and stability in caregivers or home environment the first priority. It was participants' beliefs that children cannot grow or show improvement in academics or emotional functioning if the basic standards of a good quality of life are not met. This view is consistent with Maslow's hierarchy of needs, which suggests humans require that physiological and safety need be met before advanced development can take place (Maslow, 1970). Other studies have supported this theory, documenting that intervention to areas of basic need such as nutrition or stable, safe care environments leads to improvement in child psychological wellbeing or academic achievements (Berument, 2013; Faught et al., 2019).

Strengths, Limitations and Future Directions

The present study had many strengths, as well as several limitations. The overall

sequential explanatory mixed-method design was a strength in that it combined the ability to

quantitatively analyze the phenomenon of adjustment in institutional care with the richness and

culturally-informed interpretation of findings provided by the qualitative data. Both the

qualitative and quantitative samples had the benefit of data provided from samples in two

contexts, schools and institutional homes, which could be compared and contrasted to see how

functioning as well as conceptualization of child adjustment vary across participants from

different backgrounds. Having a sample of children raised in families was imperative to

answering the question of how well CIC are functioning compared to what could be expected of

them outside of institutional care. Further, the team of researchers involved in the various stages

of the project included members of a variety of cultural backgrounds and experiences with CIC.

This was a significant strength in that it allowed for multiple perspectives, ideas, and

interpretations to be discussed and integrated into the final product.

Despite these strengths, it is important to discuss the limitations of the project as well.

One of the most prominent features of the study design was the primary investigator's cultural

distance and differences from the population being studied. To address this issue, cultural

differences were carefully considered at each stage of project development. The PI was involved

in interviewing participants for Study 2, and although it appeared as though participants were not

responding differentially to the PI than to Ghanaian interviewers, they were aware that their

answers were contributing to a study being conducted by a team that included foreigners.

Participants may have presented their beliefs in a more positive light, knowing that they would

represent the functioning of their nation's children to a global audience.

Another limitation was that the data used for Study 1 had been previously collected for a different project. The use of secondary data limited the current study in that the specific variables available for inclusion were limited. Importantly, Study 1 did not include measures of childhood trauma or adverse childhood experiences. This means that conclusions drawn regarding institutionalized children's resilience is based on the assumption that having lost their parents and been placed in institutional care was more traumatic than the experiences the non-institutionalized children went through. It is possible that the non-institutionalized sample had experienced a similar level of adversity to the institutionalized youth. It is crucial for future studies to include culturally-relevant measures of adverse life experiences in order to empirically compare the levels of adversity between youth before drawing clear conclusions about the presence of resilience in any population. Additionally, the dataset was cross-sectional, thereby limiting the conclusions one could draw regarding the temporal ordering of variables.

In the future, it would be helpful to collect longitudinal data including more protective or differentiating factors, as well as data on additional areas of adjustment such as social functioning or physical health and development. Qualitative interviews highlighted that quality of parenting or parent education level, provision of basic needs, and spirituality are important elements of child development which could not be explored with the present dataset. Lastly, with respect to data collected in Study 1, all measures were self-reported, which increased the likelihood that some patterns of association observed in the data were due to mono-source or method-bias. Future studies should attempt to collect information from caregivers or teachers in addition to children, or to augment self-report data with observational data, standardized tests, or other data that is not self-reported to address this bias.

Variables on care context should be included in future studies as well. Clear measurement of environmental characteristics in institutions as well as family homes are necessary to determine whether CIC have equal or more resources to their CIF counterparts. Caregivers noted on occasion that the CIC were reluctant to leave the institutional home due to acknowledgement that they were receiving more resources and better care than they may have access to if they were in the general neighborhood context. The institutional homes have the benefit of receiving donations from volunteers and charitable organizations, which caregivers believed set them above the neighboring family homes in terms of resources to offer the children. This belief should be tested empirically before drawing any conclusions. It is possible that the children in Ghanaian institutions appear to be functioning fairly well compared to their peers due to both environments having approximately equal resources. Of note, the level of outside resources and donations may vary based on urban versus rural location of an institution. The current sample was selected from a relatively urban location, and therefore may not reflect the experience of children in more rural institutional contexts.

Conclusion

The purpose of the present study was to explore the variations in functioning demonstrated by CIC, how this compared to CIF, and what factors were associated with the differences between groups. The findings provide clear evidence that CIC show a wide range in functioning; residing in an institution does not destine a child to poor developmental outcomes. Although a large proportion of CIF demonstrated better adjustment than the CIC, the majority of CIC can be considered resilient due to performing at or above the average level of functioning of those who have not gone through the same adversities as they have. Some of the factors explored

in this study varied based on cluster, though more research is needed to better explain why some children are performing well within this context, and why others are struggling.

Qualitative interviews provided a cultural context to the findings, illuminating the collectivistic nature of Ghanaian values, as well as the importance for children of having family, or the support of strong, capable adults. Future studies and any intervention efforts targeting improved outcomes among CIC need to hold this cultural perspective close in mind in order to gain buy-in from key stakeholders. This study is one step among many in the efforts to understand youth outcomes in alternative care settings, and to inform how best to meet children's needs when institutional care is the only option.

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Revised Children's Manifest Anxiety Scale (RCMAS)

Directions: Read each question carefully. Put a circle around the word 'YES' if you think it is true about you. Put a circle around the word 'NO' if you think it is not true about you.

No.	Statements	Responses	
1.	I have trouble making up my mind.	YES	NO
2.	I get nervous when things do not go the right way for me.	YES	NO
3.	Others seem to do things easier than I can.	YES	NO
4.	I like everyone I know.	YES	NO
5.	Often, I have trouble getting my breath.	YES	NO
6.	I worry a lot of the time.	YES	NO
7.	I am afraid of a lot of things.	YES	NO
8.	I am always kind.	YES	NO
9.	I get mad easily.	YES	NO
10.	I worry about what my parents will say to me.	YES	NO
11.	I feel that others do not like the way I do things.	YES	NO
12.	I always have good manners.	YES	NO
13.	It is hard for me to get to sleep at night.	YES	NO
14.	I worry about what other people think about me.	YES	NO
15.	I feel alone even when there are people with me.	YES	NO
16.	I am always good.	YES	NO
17.	Often, I feel sick in my stomach.	YES	NO
18.	My feelings get hurt easily.	YES	NO

No.	Statements	Responses	
19.	My hands feel sweaty.	YES	NO
20.	I am always nice to everyone.	YES	NO
21.	I am tired a lot.	YES	NO
22.	I worry about what is going to happen.	YES	NO
23.	Other children are happier than I.	YES	NO
24.	I tell the truth every single time.	YES	NO
25.	I have bad dreams.	YES	NO
26.	My feelings get hurt easily when I am fussed at.	YES	NO
27.	I feel someone will tell me I do things the wrong way.	YES	NO
28.	I never get angry.	YES	NO
29.	I wake up scared some of the time.	YES	NO
30.	I worry when I go to bed at night.	YES	NO
31.	It is hard for me to keep my mind on my school work.	YES	NO
32.	I never say things I shouldn't.	YES	NO
33.	I wiggle in my seat a lot.	YES	NO
34.	I am nervous.	YES	NO
35.	A lot of people are against me.	YES	NO
36.	I never lie.	YES	NO
37.	I often worry about something bad happening to me.	YES	NO

The Children's Depression Inventory

Instructions: Children sometimes have different feelings and ideas. This form lists the feelings and ideas in groups of three statements. From each group pick one sentence that describes you best for the past two weeks. After you pick a sentence from the first group, then go on to the next group of three statements. There is no right or wrong answer. Just pick the sentence that best describes the way you have been feeling recently. Put a mark like this (X) next to your answer. Put the mark in the box next to the sentence that you pick.

Here is an example how this form works. Try it, put a mark next to the sentence that describes you best.

EXAMPLE:

☐   I read books all the time.

☐   I read books once in a while.

☐   I never read books.

Remember; pick out the sentences that describe your feelings and thoughts in the past two weeks.

1.	☐ I am sad once in a while. ☐ I am sad many times. ☐ I am sad all the time.	**2.**	☐ Nothing will ever work out for me. ☐ I am not sure if things will work out for me. ☐ Things will work out for me O.K.	
3.	☐ I do most things O.K. ☐ I do many things wrong. ☐ I do everything wrong.	**4.**	☐ I have fun in many things. ☐ I have fun in some things. ☐ Nothing is fun at all.	
5.	☐ I am bad all time. ☐ I am bad many times. ☐ I am bad once in a while.	**6.**	☐ I think about bad things happening to me once in a while. ☐ I worry that bad things will happen to me. ☐ I am sure that terrible things will happen to me.	

7.	[ ] I hate myself.	8.	[ ] All bad things are my fault.
	[ ] I do not like myself.		[ ] Many bad things are my fault.
	[ ] I like myself.		[ ] Bad things are not my usually fault.
9.	[ ] I do not think about killing myself.	10.	[ ] I feel like crying every day.
	[ ] I think about killing myself but would not do it.		[ ] I feel like crying many days.
	[ ] I want to kill myself.		[ ] I feel like crying once in a while.
11.	[ ] Things bother me all the time.	12.	[ ] I like being with people.
	[ ] Things bother me many times.		[ ] I do not like being with people many times.
	[ ] Things bother me once in a while.		[ ] I do not want at be with people at all.
13.	[ ] I cannot make up my mind about things.	14.	[ ] I look O.K.
	[ ] It is hard to make up my mind about things.		[ ] There are some bad things about my looks.
	[ ] I make my mind about thins easily.		[ ] I look ugly.
15.	[ ] I have to push myself all the time to do my schoolwork.	16.	[ ] I have trouble sleeping every night.
	[ ] I have to push myself many times to do my schoolwork.		[ ] I have trouble sleeping many nights.
	[ ] Doing schoolwork is not a big problem.		[ ] I sleep pretty well.

17.	[ ] I am tired once in a while. [ ] I am tired many days. [ ] I am tired all the time.	18.	[ ] Most days I do not feel like eating. [ ] Many days I do not feel like eating. [ ] I eat pretty well.
19.	[ ] I do not worry about aches and pains. [ ] I worry about aches and pains many times. [ ] I worry about aches and pains all the time.	20.	[ ] I do not feel alone. [ ] I feel alone many times. [ ] I feel alone all the time.
21.	[ ] I never have fun at school. [ ] I have fun at school only once in a while. [ ] I have fun at school many times.	22.	[ ] I have plenty of friends. [ ] I have some friends but I wish I had more. [ ] I do not have any friends.
23.	[ ] My school work is alright. [ ] My school work is not as good as before. [ ] I do very poorly in subjects I used to be good in.	24.	[ ] I can never be as good as other kids. [ ] I can be as good as other kids if I want to. [ ] I am just as good as other kids.
25.	[ ] Nobody really loves me. [ ] I am not sure if anybody loves me. [ ] I am sure that somebody loves me.	26.	[ ] I usually do what I am told. [ ] I do not do what I am told most times. [ ] I never do what I am told.
27.	[ ] I get along with people. [ ] I get into fights many times. [ ] I get into fights all the time.		

The Kidcope scale

Instructions: Write down a problem that you have experienced during the prior month. After writing the problem down, circle how the problem made you feel, then circle any of the coping strategies you used to help deal with the problem and how effective you felt each strategy was.

1. Did the situation make you nervous or anxious?

Not at all	a little	some what	pretty much	very much

2. Did the situation make you sad or depressed?

Not at all	a little	some what	pretty much	very much

Statements	Did you do this?		How much did it help?		
1. I just tried to forget it.	Yes	No	Not at all	A little	A lot
2. I did something like watching TV or laying a game to forget it.	Yes	No	Not at all	A little	A lot
3. I stayed by myself.	Yes	No	Not at all	A little	A lot
4. I kept quiet about the problem.	Yes	No	Not at all	A little	A lot
5. I tried to see the good side of things.	Yes	No	Not at all	A little	A lot
6. I blamed myself for causing the problem.	Yes	No	Not at all	A little	A lot
7. I blamed someone else for causing the problem	Yes	No	Not at all	A little	A lot
8. I tried to fix the problem by thinking of answers.	Yes	No	Not at all	A little	A lot
9. I tried to fix the problem by doing something or talking to someone.	Yes	No	Not at all	A little	A lot
10. I yelled, screamed or got mad.	Yes	No	Not at all	A little	A lot
11. I tried to calm myself down.	Yes	No	Not at all	A little	A lot
12. I wished the problem had never happened.	Yes	No	Not at all	A little	A lot
13. I wished I could make things different.	Yes	No	Not at all	A little	A lot
14. I tried to feel better by spending time with others like family or friends.	Yes	No	Not at all	A little	A lot
15. I didn't do anything because the problem couldn't be fixed.	Yes	No	Not at all	A little	A lot

The Multidimensional Scale of Perceived Social Support (MSPSS)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement. Circle

1 if you Very Strongly Disagree,

2 if you Strongly Disagree,

3 if you Mildly Disagree,

4 if you are Neutral,

5 if you Mildly Agree,

6 if you Strongly Agree, or

7 if you Very Strongly Agree

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

The General Self-efficacy scale (GSS)

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Circle the number which best indicates your feelings about that statement. For example:

If you strongly disagree with a statement, circle ⬚ 1

If you are neutral, circle ⬚ 4

If you strongly agree, circle ⬚ 7

Statements	Responses						
1. I usually manage one way or another.	1	2	3	4	5	6	7
2. I feel proud that I have accomplished things in life.	1	2	3	4	5	6	7
3. I usually take things in stride.	1	2	3	4	5	6	7
4. I am friends with myself.	1	2	3	4	5	6	7
5. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
6. I am determined.	1	2	3	4	5	6	7
7. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
8. I have self-discipline.	1	2	3	4	5	6	7
9. I keep interested in things.	1	2	3	4	5	6	7
10. I can usually find something to laugh about.	1	2	3	4	5	6	7
11. My belief in myself gets me through hard times.	1	2	3	4	5	6	7
12. In an emergency, I'm someone people can generally rely on.	1	2	3	4	5	6	7
13. My life has meaning.	1	2	3	4	5	6	7
14. When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7

The World Health Organization Quality of Life-BREF Version (WHOQOL-BREF)

Instructions: The following questions ask you how you feel about your quality of life, health or other areas of your life. Please read each question, assess your feelings, and circle the number on the scale that gives the best answer for you for each question.

1. How would you rate your quality of life?
☐ Very poor ☐ Poor ☐ Neither poor nor good ☐ Good ☐ Very good

2. How satisfied are you with your health?
☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

The following questions ask about how much you have experienced certain things in the last two weeks.

3. To what extent do you feel that physical pain prevents you from doing what you need to do?
☐ Not at all ☐ A little ☐ A moderate amount ☐ Very much ☐ An extreme amount

4. How much do you need any medical treatment to function in your daily life?
☐ Not at all ☐ A little ☐ A moderate amount ☐ Very much ☐ An extreme amount

5. How much do you enjoy life?
☐ Not at all ☐ A little ☐ A moderate amount ☐ Very much ☐ An extreme amount

6. To what extent do you feel your life to be meaningful?
☐ Not at all ☐ A little ☐ A moderate amount ☐ Very much ☐ An extreme amount

7. How well are you able to concentrate?
☐ Not at all ☐ Slightly ☐ A moderate amount ☐ Very much ☐ Extremely

8. How safe do you feel in your daily life?
☐ Not at all ☐ Slightly ☐ A moderate amount ☐ Very much ☐ Extremely

9. How healthy is your physical environment?
☐ Not at all ☐ Slightly ☐ A moderate amount ☐ Very much ☐ Extremely

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

10. Do you have enough energy for everyday life?
☐ Not at all ☐ A little ☐ Moderately ☐ Mostly ☐ Completely

11. Are you able to accept your bodily appearance?
☐ Not at all ☐ A little ☐ Moderately ☐ Mostly ☐ Completely

12. Have you enough money to meet your needs?

☐ Not at all ☐ A little ☐ Moderately ☐ Mostly ☐ Completely

13. How available to you is the information that you need in your day-to-day life?

☐ Not at all ☐ A little ☐ Moderately ☐ Mostly ☐ Completely

14. To what extent do you have the opportunity for leisure activities?

☐ Not at all ☐ A little ☐ Moderately ☐ Mostly ☐ Completely

15. How well are you able to get around?

☐ Very poor ☐ Poor ☐ Neither poor nor well ☐ Well ☐ Very well

The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks.

16. How satisfied are you with your sleep?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

17. How satisfied are you with your ability to perform your daily living activities?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

18. How satisfied are you with your capacity for work?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

19. How satisfied are you with your abilities?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

20. How satisfied are you with your personal relationships?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

21. How satisfied are you with your sex life?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

22. How satisfied are you with the support you get from your friends?

☐ Very dissatisfied ☐ Dissatisfied ☐ Neither satisfied nor dissatisfied ☐ Satisfied ☐ Very satisfied

23. How satisfied are you with the conditions of your living place?

☐Very dissatisfied ☐Dissatisfied ☐Neither satisfied ☐Satisfied ☐Very satisfied
nor dissatisfied

24. How satisfied are you with your access to health services?

☐Very dissatisfied ☐Dissatisfied ☐Neither satisfied ☐Satisfied ☐Very satisfied
nor dissatisfied

25. How satisfied are you with your mode of transportation?

☐ Very dissatisfied ☐Dissatisfied ☐Neither satisfied ☐Satisfied ☐Very satisfied
nor dissatisfied

26. How often do you have negative feelings, such as blue mood, despair, anxiety, depression?

☐Never ☐Seldom ☐Quite often ☐Very often ☐Always

The 14-item Resilience Scale (RS-14)

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Circle the number which best indicates your feelings about that statement. For example:

If you strongly disagree with a statement, circle 1

If you are neutral, circle 4

If you strongly agree, circle 7

Statements	Responses						
1. I usually manage one way or another.	1	2	3	4	5	6	7
2. I feel proud that I have accomplished things in life.	1	2	3	4	5	6	7
3. I usually take things in stride.	1	2	3	4	5	6	7
4. I am friends with myself.	1	2	3	4	5	6	7
5. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
6. I am determined.	1	2	3	4	5	6	7
7. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
8. I have self-discipline.	1	2	3	4	5	6	7
9. I keep interested in things.	1	2	3	4	5	6	7
10. I can usually find something to laugh about.	1	2	3	4	5	6	7
11. My belief in myself gets me through hard times.	1	2	3	4	5	6	7
12. In an emergency, I'm someone people can generally rely on.	1	2	3	4	5	6	7
13. My life has meaning.	1	2	3	4	5	6	7
14. When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7

Appendix B

Study 2 Measures

Qualitative Demographics Form

1. Age: _____
2. Gender: _____
3. What is the highest level of education you have completed?

4. What is your religious affiliation, if any?

5. For how many years have you lived in Ghana?

6. Do you have any children?

   a. How many? What are their ages?

7. For how long have you worked at this institution?

   a. What is your role/job title?

8. Have you worked at any other similar institutions?

   a. If yes, why did you move to the present institution?

9. For how many years have you worked with children, here and at other institutions?

For orphanage caregivers only:

10. For how many years have you worked with children who could be considered part of a 'vulnerable population'?

   a. Which vulnerable populations of children have you worked with?

Qualitative Semi-Structured Interview Script

Site: _____

Interviewer: _____

Participant ID: _____

Participant Gender: _____

Note to Interviewer: do not use the name of the participant or their workplace while recording

Thank you for agreeing to take part in this interview. Please feel free to request to skip any questions you do not feel comfortable answering. You can also let me know when you need to take a break. I will start with some general questions about yourself, and then will ask you some questions about child development. In order to keep information confidential, please do not use your name, the name of your workplace, or the names of children or coworkers in your responses. Please also avoid sharing personal details of other individuals which could be used to identify them.

Qualitative Questions (inquire further "could you tell me more about that?" and ask for examples "do you have a specific example of when you've seen this?" when helpful)

1. In your own words, please describe how you think the children you work with are functioning (doing).
   a. Would you say they are doing well or not?
      i. What characteristics do children show when they are doing well?
      ii. When they are not doing well?
   b. Are there patterns you notice? For example, children who tend to do well in one way are also doing well or struggling in another?
2. Without using their name, please describe a child you consider to be doing well.
   a. How would you describe their emotional state? (e.g. happy, sad, anxious, lonely, etc.)
   b. How would you describe their interest in school, and their academic functioning?
   c. How would you describe their quality of life (overall well-being)?
3. Without using their name, please describe a child you consider to be struggling, or not doing well.
   a. How would you describe their emotional state? (e.g. happy, sad, anxious, lonely, etc.)
   b. How would you describe their interest in school, and their academic functioning?
   c. How would you describe their quality of life (overall well-being)?
4. What are the reasons for poor academic functioning?
   a. What are the reasons for good academic functioning?
5. What are the reasons for emotional problems in children?
   a. What are the reasons for positive emotional functioning?
6. What factors do you believe are associated lower quality of life for children?
   a. What factors are associated with higher quality of life for children?
7. Why might some children perform better in any of these areas than their peers?

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8. In your experience, how do the children you work with cope with the problems they face?
9. What structures are in place within the institution to help children succeed?

Present summary of quantitative findings:

Our research shows that for orphans, there are four main patterns of how children are functioning. These can be described as one group who is behind in school, struggling emotionally, has a low quality of life, a second group who is ahead in school but who also has higher emotional difficulties, a third group who is behind in school but is doing well emotionally, and a fourth group who is doing well in school, emotionally, and who reports the highest quality of life.

For non-orphans in the general public, there appear to be three unique patterns of functioning. Similar to the orphan group, there is one group who can be described as behind in school, struggling emotionally, with lower quality of life. There is also a group who is behind in school but is doing well emotionally, and a third group who is doing well across school, emotional functioning, and reports the highest quality of life.

For non-orphans, those with higher belief in their ability to achieve their goals and a higher ability to adapt and persist in difficult circumstances were more likely to be in the group that was doing the best emotionally and academically, and who reported the highest quality of life. However, these protective factors were not related to better outcomes for the orphans. For them, using problem solving as a method to cope with their problems was the protective factor related to the best outcomes.

We also looked at how supported children felt by others, and their use of coping strategies such as seeking distraction, managing their emotions, changing the way they think about a problem, and seeking support from others. However, none of these were related to better functioning in our analyses.

Follow-up Questions:

1. Do the children you work with show similar patterns?
   a. If no, what is different?
   b. Why might we have found different results?
2. How does self-efficacy (i.e., a person's belief in their ability to succeed in a situation or accomplish a task) affect how a child functions?
   a. Why might this not be protective for the orphan group?
3. How does a child's ability to adapt and persist in difficult circumstances affect their functioning?
   a. Why might this not be protective for the orphan group?
4. How does problem-solving coping (i.e., figuring out what is causing your problem and directly addressing it) affect how a child functions?
   a. Why might this not be protective for the non-orphan group?
5. What other factors do you believe help children do well that we have not considered?
   a. In you experience, what factors may be present for the children who are doing the best, which are not present for those struggling?

Appendix C

Study 2 Consent Form & Approval Documentation

Recruitment Script

Introduction

Hi! We are researchers from the University of Ghana and Virginia Commonwealth University in the United States, interested in studying what things help children thrive and succeed in life. We are interested in learning your opinions on this topic, since you work with children and are highly knowledgeable about their well-being. We are hoping to invite [caregivers/educators and staff] who are interested in answering some of our questions to participate in an in-person interview. The interview will take approximately 45 minutes and will be conducted here on site. We will gladly schedule it when it would be convenient for you. We will compensate you 40 GHC for your time. Your choice to participate or not will have no influence on your employment at [insert institution name]. Feel free to ask us any questions. If you are interested, please let us know, and we will determine if you qualify to participate.

Determining Inclusion/Exclusion

How old are you? [must be over 25]
How long have you lived in Ghana? [must be majority of their life]
Would you feel comfortable completing an interview in English? [if no, exclude]

Conclusion

If eligible –

Thank you! You are eligible to participate. Would you like to schedule a time for your interview to take place? [proceed with scheduling]

If ineligible –

Thank you for your interest. Unfortunately, you do not qualify to participate in this particular study. We hope that you remain interest, and that we can work with you in the future if we conduct other studies.

RESEARCH PARTICIPANT INFORMATION SHEET

STUDY TITLE: Support Provider Perceptions of Resilience in Ghanaian Youth: A Qualitative Study

VCU INVESTIGATOR: Dr. Wendy Kliewer, Professor, (804) 828-8066

GHANA CONSULTANT: Dr. Joana Salifu Yendork, jyendork@ug.edu.gh

You are being invited to participate in a research study. **It is important that you carefully think about whether being in this study is right for you and your situation.**

This information sheet is meant to assist you in thinking about whether or not you want to be in this study. **Please ask the investigator or the study staff to explain any information in this document that is not clear to you.** You may take home a copy of this form to think about or discuss with family or friends before making your decision.

Your participation is voluntary. You may decide not to participate in this study. If you do participate, you may withdraw from the study at any time. Your decision not to take part or to withdraw will involve no penalty or loss of benefits to which you are otherwise entitled.

AN OVERVIEW OF THE STUDY AND KEY INFORMATION
The purpose of this study is to gather the thoughts and opinions of adults who work with children on what leads to positive child development. We also want to learn about your views of results we found in a previous study, which looked at patterns of child development among children in orphanages and schools in Ghana.

You are being invited to participate in this study because of your experience working with children in Ghana. If you decide to participate, we will gather your thoughts and opinions on the topic through a one-on-one interview with one of our research team members. We hope that the results from this study will help inform future studies, so that caregivers can help children grow and develop positively.

WHAT WILL HAPPEN IF I PARTICIPATE IN THE STUDY?
In this study, you will be asked to answer some questions about yourself and your thoughts on child development during one interview. Your interview will be recorded using an audio

recorder. You will be interviewed by a trained research assistant in a private room. A second research assistant may be present to set up audio recording and assist with the interview.

Your participation in this study will likely last 45 minutes to an hour. Approximately 30 individuals will participate in this study.

WHAT ALTERNATIVES ARE AVAILABLE?
The alternative is to not participate in this study.

WHAT ARE THE BENEFITS OF BEING IN THE STUDY?
This study is not likely to help you. However, the information we learn from people in this study may help us learn more about positive child development.

WHAT RISKS AND DISCOMFORTS COULD I EXPERIENCE FROM BEING IN THE STUDY?
Participation in research might involve some loss of privacy. There is a small risk that someone outside the research study could see and misuse information about you.

The study interview asks questions that are personal and could make you feel uncomfortable. If there are questions that you do not wish to answer, you may skip those questions.

WHAT ARE THE COSTS?
There are no costs for participating in this study other than the time you will spend during the interview, and the cost you incurred traveling to work today.

WILL I BE PAID TO PARTICIPATE IN THE STUDY?
You will be paid 40 Ghana Cedi in cash at the end of your interview.

CAN I STOP BEING IN THE STUDY?
You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. You may also choose not to answer particular questions that are asked in the study. Tell the interviewer if you are thinking about stopping or decide to stop.

Your participation in this study may be stopped at any time by the interviewer without your consent. The reasons might include:
- the interviewer thinks it necessary for your health or safety
- you are found to not be eligible for the study
- you have not followed study instructions
- administrative reasons require your withdrawal

HOW WILL INFORMATION ABOUT ME BE PROTECTED?

All of the information that you provide will be kept private. Nothing that you tell us will be shared with your employer. All information you provide will be coded with an identification number (ID number). Your name and your ID number will not be kept together with any of the information you provide. We audio record your interview to help us keep track of the answers better. All audio recordings are saved to a password-protected server on a password-protected computer, and then deleted from the recording device. Study staff will go back and listen to the recordings and type up the interview. To protect privacy, transcripts of recordings will be labeled with your identification number, and all identifiers will be destroyed. After the tapes have been transcribed and the study ends, recordings will be destroyed.

When results of the research are published or discussed, no information will be included that will reveal your identity.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS ABOUT THE STUDY?

If you have a question at any time, call Dr. Wendy Kliewer or the study staff at Virginia Commonwealth University at +001 (804) 828-8793. You may also email Dr. Wendy Kliewer at wkliewer@vcu.edu, or Ms. Anna Wright at wrightaw5@vcu.edu, or Dr. Joana Salifu Yendork at jyendork@ug.edu.gh

You may also feel free to contact the Office for Research Subjects Protection at the address and phone number below:

> Virginia Commonwealth University
> Bio-Tech Park, Building One
> 800 East Leigh Street, Suite 3000
> P.O. Box 980568
> Richmond, VA 23219-0568 USA
> Telephone: +001 (804) 828-0868

If you have general questions about your rights as a participant in this or any other research, or if you wish to discuss problems, concerns or questions, to obtain information, or to offer input about research, you may contact:

> Virginia Commonwealth University Office of Research
> 800 East Leigh Street, Suite 3000, Box 980568, Richmond, VA 23298 USA
> +001 (804) 827-2157; https://research.vcu.edu/human_research/volunteers.htm

Consent Form

<p align="center">**RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM**</p>

STUDY TITLE: Support Provider Perceptions of Resilience in Ghanaian Youth: A Qualitative Study

VCU INVESTIGATOR: Dr. Wendy Kliewer, Professor, (804) 828-8066

NOTE: In this consent form, "you" always refers to the research participant.

ABOUT THIS CONSENT FORM
You are being invited to participate in a research study. **It is important that you carefully think about whether being in this study is right for you and your situation.**

This consent form is meant to assist you in thinking about whether or not you want to be in this study. **Please ask the investigator or the study staff to explain any information in this consent document that is not clear to you.** You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

Your participation is voluntary. You may decide not to participate in this study. If you do participate, you may withdraw from the study at any time. Your decision not to take part or to withdraw will involve no penalty or loss of benefits to which you are otherwise entitled.

AN OVERVIEW OF THE STUDY AND KEY INFORMATION
The purpose of this study is to gather the thoughts and opinions of adults who work with children on what leads to positive child development. We also want to learn about your interpretation of results we found in a previous study, which looked at patterns of child development among children in orphanages and schools in Ghana.

You are being invited to participate in this study because of your experience working with children in Ghana. If you decide to participate, we will gather your thoughts and opinions on the topic through a one-on-one interview with one of our research team members. We hope that the results from this study will help inform future studies, so that caregivers can help children grow and develop positively.

WHAT WILL HAPPEN IF I PARTICIPATE IN THE STUDY?
In this study, you will be asked to answer some questions about yourself and your thoughts on child development during one interview. Your interview will be recorded using an audio

recorder. You will be interviewed by a trained research assistant in a private room. A second research assistant may be present to set up audio recording and assist with the interview.

Your participation in this study will likely last 45 minutes to an hour. Approximately 30 individuals will participate in this study.

If you decide to be in this research study, you will be asked to sign this consent form after you have had all of your questions answered and understand what will happen during the study.

WHAT ALTERNATIVES ARE AVAILABLE?
The alternative is to not participate in this study.

WHAT ARE THE BENEFITS OF BEING IN THE STUDY?
This study is not likely to help you. However, the information we learn from people in this study may help us learn more about positive child development.

WHAT RISKS AND DISCOMFORTS COULD I EXPERIENCE FROM BEING IN THE STUDY?
Participation in research might involve some loss of privacy. There is a small risk that someone outside the research study could see and misuse information about you.

The study interview asks questions that are personal and could make you feel uncomfortable. If there are questions that you do not wish to answer, you may skip those questions.

WHAT ARE THE COSTS?
There are no costs for participating in this study other than the time you will spend during the interview, and the cost you incurred traveling to work today.

WILL I BE PAID TO PARTICIPATE IN THE STUDY?
You will be paid 40 Ghana Cedi in cash at the end of your interview.

CAN I STOP BEING IN THE STUDY?
You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. You may also choose not to answer particular questions that are asked in the study. Tell the interviewer if you are thinking about stopping or decide to stop.

Your participation in this study may be stopped at any time by the interviewer without your consent. The reasons might include:
- the interviewer thinks it necessary for your health or safety
- you are found to not be eligible for the study

- you have not followed study instructions
- administrative reasons require your withdrawal

HOW WILL INFORMATION ABOUT ME BE PROTECTED?

All of the information that you provide will be kept private. Nothing that you tell us will be shared with anyone. All information you provide will be coded with an identification number (ID number). Your name and your ID number will not be kept together with any of the information you provide. We tape record your interview to help us keep track of the answers better. All tape recordings are saved to a password-protected server on a password-protected computer, and then deleted from the recording device. Study staff will go back and listen to the recordings and type up the interview. To protect privacy, transcripts of recordings will be labeled with your identification number, and all names will be changed. After the tapes have been transcribed and the study ends, recordings will be destroyed.

 VCU may review research records and the consent form signed by you.

When results of the research are published or discussed, no information will be included that will reveal your identity.

In the future, identifiers will be removed from the information you provide in this study, and after that removal, the information could be used for other research studies by this study team or another researcher without asking you for additional consent.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS ABOUT THE STUDY?

If you have a question at any time, call Dr. Wendy Kliewer or the study staff at Virginia Commonwealth University at +001 (804) 828-8793. You may also email Dr. Wendy Kliewer at wkliewer@vcu.edu, or Ms. Anna Wright at wrightaw5@vcu.edu.

You may also feel free to contact the Office for Research Subjects Protection at the address and phone number below:

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> P.O. Box 980568
> Richmond, VA 23219-0568 USA
> Telephone: +001 (804) 828-0868

If you have general questions about your rights as a participant in this or any other research, or if you wish to discuss problems, concerns or questions, to obtain information, or to offer input about research, you may contact:

> Virginia Commonwealth University Office of Research

800 East Leigh Street, Suite 3000, Box 980568, Richmond, VA 23298 USA
+001 (804) 827-2157; https://research.vcu.edu/human_research/volunteers.htm

Do not sign this consent form unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.

STATEMENT OF CONSENT

I have been provided with an opportunity to read this consent form carefully. All of the questions that I wish to raise concerning this study have been answered. By signing this consent form, I have not waived any of the legal rights or benefits to which I otherwise would be entitled. My signature indicates that I freely consent to participate in this research study. I will receive a copy of the consent form for my records.

_____

Adult Participant Name (Printed)

_____   _____

Adult Participant's Signature   Date

_____

Name of Person Conducting Consent Discussion (Printed)

_____   _____

Signature of Person Conducting Consent Discussion   Date

_____   _____

Principal Investigator Signature (if different from above)   Date

Vita

Anna Waters Wright was born on December 15th, 1990, in Springfield, Vermont and is a United States citizen. She graduated from Burr and Burton Academy, Manchester, Vermont in 2009. She received her Bachelor of Arts in Psychology with a minor in nutrition from the University of Vermont where she graduated Cum Laude in 2012. From there she worked at the University of Vermont as a Research Coordinator in the Psychology Department from February 2013 to July 2014. She enrolled in as a Clinical/Developmental Scholar pursuing her Ph.D. in clinical psychology at Virginia Commonwealth University (VCU) in August 2014. She received her Masters of Science from VCU in 2016, and continued on to complete the doctoral program in 2020. She is an author on 11 published manuscripts on topics about parenting and child development.