Group Home Care: The Influence of Positive Youth Development Factors and Social Capital on Youth Outcomes

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Group Home Care:
The Influence of Positive Youth Development Factors and Social Capital on Youth Outcomes

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

GROUP HOME CARE: THE INFLUENCE OF POSITIVE YOUTH DEVELOPMENT FACTORS AND SOCIAL CAPITAL ON YOUTH OUTCOMES

By Sundonia Jeanette Williams Wonnum, Ph.D.

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

Virginia Commonwealth University, 2014

Dissertation Chair: Elizabeth Farmer, Ph.D.

This study examined the influence of positive youth development factors and social capital on outcomes among youth in group home care. One of the major assumptions of this study was that existing research is deficit-focused and provides little evidence of what practices are linked to positive outcomes among youth residing in and exiting group homes. A conceptual model was developed to depict the influence of predictors (derived from the Positive Youth Develop Framework and Social Capital Theory) on youth outcomes – change in psychosocial problem severity and prosocial behavior, living environment, school involvement, employment, delinquency, and extracurricular activity. An exploratory analysis of secondary data was conducted. Multiple regression and binary logistic regression were used to answer the overarching question, *What group home factors correlate with positive outcomes among youth?* Major findings from these analyses showed: 1) group home staff’s positive view of youths’ competence impacted youths’ psychosocial problem severity, and 2) for youth who exhibited troublesome behavior while in group care, if they experienced a trusting relationship with an adult staff member, they are more likely to exhibit prosocial behaviors after leaving group care.
CHAPTER I. THE PROBLEM

Introduction

The transition from adolescence to adulthood is one characterized by a tension between impending perils and budding opportunities. Youth residing in residential group homes comprise a small but highly vulnerable subpopulation of youth for whom the probability of future adversity, disadvantage, and truncated potential is much greater than the possibility for a flourishing future. Youth in group homes are often problematized and characterized as living on the margins due to their high rates of behavioral and emotional difficulties (Brelan-Noble et al., 2005), housing and care instability, social and economic impediments, and academic challenges (Berzin, 2008). Such challenges often lead to deficit-focused research and pathology-based treatment, to further marginalize and increase the vulnerability of this already challenged group (Donovan, Jessor, & Costa, 1988). This study addresses a threefold problem in the area of research with group home youth: (1) lack of explicitly used social science theories sensitive to youths’ developmentally-specific experiences or diverse contexts, (2) inattention to the range of adolescent developmental processes and functions, and (3) a dearth of empirical data that indicates what specific group home practices are linked to positive outcomes.

Problem Description

Of the available group home research, the preponderance of published studies do not explicitly state what social science theories guide their inquiry. Of the few residential care studies that mention theory at all, the focus is on understanding group home youths’ problematic behavior using Jessor’s (1998) Problem Behavior Theory (Aguilar-Vafaie et al., 2011), practices to modify youths’ problematic behavior based on social learning theory (Bastiaanssen et al., 2012; Lietz, 2004), or behavior trajectories and post-placement functioning from Elder’s (1998)
Life Course Perspective (Lee, Chmelka, & Thompson, 2010). The theories or concepts discussed in current research are not those indicative of youths’ developmentally-appropriate experiences, reactions, or functions within the unique context of group home care. Therefore, I chose to develop this study first by exploring theory sensitive to youths’ developmental processes and functions and to allow relevant concepts and propositions to guide my inquiry throughout my research processes – from the declaration of the overarching study question to the explication of be inferences made about youth within the context of group home care.

Secondly, upon review of literature about group homes and group home youth, there appears to be an imbalanced focus in research with much attention to correcting pathology (i.e. substance abuse, mental health disorders, and delinquent or criminal behavior) over bolstering development. Emphasis in group home care and evaluation is mainly on managing or reducing youths’ wide range of problem behaviors or externalizing symptoms and reducing poor behavioral outcomes (Burns et al., 2004; Berzin, 2008; Courtney & Barth, 1996; James, 2011; Jones, 2012; Lee et al., 2011; Lee et al., 2010; Lee et al., 2009). For example, a study by Lee and colleagues (2009) focuses on associations among group home effectiveness, the reduction of negative (externalizing) behaviors, and post-placement behavioral outcomes. There is little emphasis on promoting positive developmental processes and functions or little empirical evidence that details group home efforts to effectively balance behavior or symptom management with support of adolescents’ healthy developmental processes during and after their stay (James, 2011; Lee et al., 2010). Existing empirical data runs the risk of distorting perceptions of group homes as an effective intervention for some troubled youth by almost exclusively addressing pathology or behavioral deviations from social norms. Research should
be inclusive of developmentally-based theory that examines, explains, and informs how practice approaches can buttress adolescents’ growth as well as assuage problem behavior and symptoms. 

Finally, there is little to no available empirical data that indicates what specific group home practices bolster youths’ overall development and leads to positive and lasting youth outcomes. Given this ambiguity, developing and implementing effective group home program models and appropriately matching youth to the type or model of group home in which they are most likely to thrive seems to be present challenges. Such research may have considerable implications for policies and practices around placing youth in group care and preparing youth for success upon transitioning to adult living. In order to better serve the diverse make-up of youth while in and upon departing group care, both practitioners and researchers should work collaboratively to broaden the scope of sound, theory-based approaches and/or methodologies that create a sharper picture of youths’ needs and services to meet them.

**Group Home Context**

Group homes have origins dating back over 100 years to orphanages (Fruendlich, Morris, & Blair, 2004; Lee et al., 2008). In the mid to late nineteenth century, orphanages housed children who were orphaned, abandoned, or whose parents were temporarily unable to care for them because of illness or poverty. There were few alternatives to institutional care. By the early 1900’s, growing concern about the negative developmental, psychological and social effects on children as a result of institutionalization led to legislative and social reform and the development of alternative ways of caring for children, including direct supports and services for families, boarding out (the forerunner of foster care), and adoption. Subsequently, most orphanages closed or were redesigned into various congregate care models (e.g. children’s homes, group care facilities, residential treatment homes, residential charter schools, cottages,
ranches, wilderness camps, and academies) that provided different types of services for children (Freundlich, Morris, & Blair, 2004). The continuum of care for out-of-home placement starts with traditional foster care. Traditional foster care is described as 24-hour substitute care for children placed away from their parents or guardians and for whom a state agency has placement and care responsibility (e.g. foster family homes, kinship care) (United States Department of Health and Human Services (US DHHS), 2012). In the continuum of care, group homes are considered to be more restrictive than traditional foster care but not as restrictive as locked institutions. Instead, group homes commonly serve youth whose emotional or behavioral needs exceed the capacity of traditional family foster care. Because of this, group homes’ organizational structures (e.g. additional day staff or overnight awake staff augment the roles of front-line providers) and practices (e.g. use of behavior charts and token economy) are often designed to care for and control youth with problematic behaviors (Stroul & Friedman, 1999). The proliferation of descriptive names of group home facilities makes it increasingly difficult to understand the exact nature of the services that these facilities provide or propose to provide. Additionally, in an article published by the Alliance for the Safe, Therapeutic and Appropriate Use of Residential Treatment (A START), researchers provided extensive details about many group homes that are neither licensed nor monitored and whose practices are unorthodox, unsafe, or marginal at best (Freundlich, Morris, & Blair, 2004).

While general descriptions of what constitutes a group home are available from national-level organizations, these descriptions are not entirely consistent and thus there is lack of consensus between states or localities regarding the definition of a group home (Friedman et al., 2006). “Group care terminology does not adequately differentiate troubled programs from high quality settings” (Lee & Barth, 2011, p. 264). There is also a lack of clarity regarding the
definition, parameters, and beneficiaries of group home care. Researchers often fail to clearly articulate the purpose, function, and population of the group homes involved in their studies and what constitutes good practices (Lee & Barth, 2011). Currently, there is no clear, consistent definition of group home care because facility types vary and practice protocols run the gamut from unstructured to highly structured models of care (Friedman et al., 2006; James, 2011). “Group care, residential care, and residential treatment are often used interchangeably in policy, research, and practice” (Lee & Barth, 2011, p. 264). The Child Welfare League of America (2013) describes group homes as including a broad array of services for children with various special needs (i.e. mental health, maltreatment, emergency housing) and lengths of stay and housing in community-based, family-style homes or residential campuses. The US DHHS (2013) defines group homes as public or privately-run community-based group homes or campus facilities and inclusive of therapeutic, educational, and family services. Even still, James (2011) asserts, “Clear operational distinctions between different group care settings do not exist in the research literature, leading to the aggregation of diverse programs under one umbrella term as if group care were a monolithic construct” (p.308). Therefore, for purposes of this study, the term, group home care is used henceforth and defined by this researcher as: *an out-of-home placement intervention characterized by congregate housing and care in public or privately-run community-based group homes or residential campus facilities and includes services to address youths’ developmental, educational, mental health, and/or family needs.*

Ideally, group homes offer safe, therapeutic environments for youth deemed at-risk due to experiences of unstable care, maltreatment, and behavioral problems. However, the use of group
home care as an out-of-home intervention for youth has fallen out of favor among many organizations, researchers, and policy makers concerned about child welfare and development. Mounting concerns about unclear, inconsistent, and unsafe practices (Friedman et al., 2006), iatrogenic effects related to peer contagion (Dishion et al., 1999), adverse socioeconomic outcomes among youth (Lee et al., 2008; Friedman et al., 2006; Ryan et al., 2008), and lack of group home reporting standards (Lee & Barth, 2011) have led to the reduction of group homes nationwide (Annie Casey Foundation, 2010) and the perception that group care is an option of last resort for troubled youth (James, 2011; Ryan et al., 2008). Even still, group care remains prevalent as it is deemed a viable intervention for approximately one out of every five youth placed in out-of-home care (Lee & Thompson, 2007; Adoption and Foster Care Reporting System (AFCARS), 2009). Therefore, because of the criticisms of group home care, additional research is needed to understand the viability and potential gains of placing some youth in group home care and to determine what types of youth are best served and under what conditions they best thrive.

**Characteristics and Problems of Group Home Youth**

The US DHHS (2012) details the number of youth who are involved in the child welfare system (CWS) and are placed in group homes, but little is known about the prevalence and demographics of youth living in group homes for reasons other than foster care (e.g. mental health, juvenile justice, direct placement, transience/homelessness, etc.). Whittaker (2000) described mental health and juvenile justice systems as the “hidden sector” of residential care, because these systems do not consistently publish their population trends. In the 1990s, approximately 25% of the roughly 500,000 children and youth in CWS out-of-home care were in residential (broadly defined) homes or facilities (Whittaker, 2000). McMillen and colleagues
(2004) concluded that approximately 77% of youth involved with the CWS experienced a group home placement at some point in their service trajectories. Reports in the last decade on the number of youth in group care reflect that roughly 100,000 children and youth live in residential or group care settings under CWS supervision, on any given day (US DHHS, 2007). The 2009 federal AFCARS report stated that 16% (67,3112) of children and adolescents in the custody of CWS are cared for in group home or institution (facility operated by a public or private agency that provides 24-hour care and/or treatment for children who require separation from their own homes and group living experience), which accounts for approximately one third of youth aged 11 and older (AFRCARS, 2009). Current AFCARS reporting requirements do not require states to distinguish group care placement any more narrowly than classifying between group home care and institutional care, which limits the understanding of national trends in group care services (Lee & Barth, 2011). In addition, the 2011 census of juvenile justice youth in residential placements (broadly defined) was 61,423 youth (Sickmund, Sladky, Kang, & Puzzanchera, 2013). An older estimate of a similar number (approximately 65,000) of youth received residential care through the mental health system over the course of a year (Pottick et al. 2002). While the U.S DHHS (2010) reported a steady increase of youth in group homes over the past decade that has reached nearly half of all foster youth, the Child Welfare Information Gateway (2011), in contrast, reported that there were 400,540 children in foster care, only 6% (24,032) of which resided in group homes. Due to the many interpretations of what constitutes group home care, the multiple referral sources, and lack of a consolidated tracking system, the actual number of adolescents residing in group homes is unclear. Therefore, concerns about the use and outcomes of group home care, efforts to reduce the number of group homes, and mixed reports about the prevalence of group home placements create a cloud of confusion among
researchers, practitioners, advocates, and policy makers.

In some cases, social services professionals determine group home placement to be the most appropriate to meet the needs of a child. This is particularly true for difficult-to-manage or hard-to-place children who are in the custody of or involved with mental health, juvenile justice, and child welfare systems (James, 2011; Breland-Noble et al., 2005) but whose needs do not sufficiently warrant inpatient psychiatric hospitalization or juvenile detention (James, 2011; Lee, Bright, Svoboda, Fakunmoju, & Barth, 2011). While policy and practice trends suggest that youth with less severe challenges should be placed in less restrictive environments (i.e. traditional or family foster care), group home admission criteria are too vague, practice guidelines are unclear, and outcome evidence is too sparse to validate this assertion (James, 2011). What is becoming better understood through research is that social service systems utilize group homes, among other forms of out-of-home care, for youth who are at risk for poorer psychosocial outcomes in adulthood (e.g. criminal behavior, substance abuse, reliance on public assistance, teenage pregnancy, and school dropout) (Berzin, 2008).

Adolescents who have experienced group home care represent a wide range of youth with varying psychosocial histories, placement care experiences, and behavioral and emotional presentations (James, 2011; Lee et al., 2010). While some youth who end up in group homes have no significant history of behavior problems (Lee et al., 2009), others have experiences with more restrictive, locked institutions or hospitals due to surges of problem behavior or symptom severity. The dominant trend is that youth with group home care experiences are a transient population with multiple out-of-home placements due to various circumstances (e.g. availability or appropriateness of foster home care, mental or behavioral health problems, and tenuous reunification with kin) (Breland-Noble et al., 2005).
A disproportionate number of youth in group homes have mental health diagnoses or problems (Breland-Noble et al., 2005). Lyons and Rogers (2004) suggested that the CWS is a “de facto mental health system” and argued that one of its primary functions should be to address and provide effective interventions for youths’ psychological problems. This may be due, in part, to youths’ experiences of separation or loss of their birth family, removal from a familiar environment, and maltreatment or trauma (Landsverk, Burns, Staumbaugh, & Rolls Reutz, 2006).

More specifically, youth with externalizing behavior leading to delinquency are overrepresented among foster care and juvenile justice populations (Pilowsky & Wu, 2006), both of which commonly end up in group home care at some point. Additionally, Simmel (2012) cited overburdened parents, often with limited or no insurance coverage or treatment options, as partial cause for many children with significant emotional or behavioral problems being placed in out-of-home care. Such a practice raises social justice concerns for youth who may be inappropriately placed in group home care because parents have limited options or skills to deal with their children’s issues in their own homes, the place that should ideally be safe, secure, and consistent even when children have behavioral struggles. Overall, many youth struggling with mental and/or behavioral health challenges are placed in many different types of residential placements across their service trajectory and experience settings that span the continuum of restrictiveness. As they move up or down the continuum of care they often end up in group homes for various periods of time.

Psychopathology that manifests into antisocial behavior raises considerable concern for practitioners and researchers about peer contagion. Peer contagion is defined as the effects of grouping together youth with varying types and degrees of pathology or disruptive behaviors (Dishion, McCord, & Poulin, 1999; Lee et al, 2009; Robst et al., 2011). For example, when
comparing congregate care to treatment foster care, Robst and colleagues (2011) found greater negative effects following congregate care, to include post-treatment felony charges and return to out-of-home and residential treatment placements. Poulin et al. (2001) found significant peer contagion – stronger, negative effects among youth with initially low levels of delinquency. These data underscore concerns about the negative relationship between youth with significant externalizing antisocial behavior and congregate care, a point in which this study seeks to address and dispel.

Problems abound for this seemingly small group of American adolescents who end up in group homes at one time or another. However, the paucity of available research with group home youth does not enable scholars to conclude that the presence of psychosocial problems, if appropriately intervened upon, truncates youths’ potential to positively develop while in group care. Furthermore, when examining group home effects and outcomes among smaller, subsamples of group home youth differentiated by demographics (i.e. sex, race, and age) or background characteristics (i.e. custody status, prior placement history, length of stay in at current group home, and mental health needs), it is even more difficult for researchers to draw conclusions about what impacts how a young person thrives upon group home placement or discharge.

Relationship to Social Work

Values and Ethics

Even with significant attention to the myriad of problems and risks experienced by youth populations served by group homes, regarding each as a human being worthy of respect and support as an adolescent endowed with plasticity and the potential for positive change is paramount. Inattention within practice and research to the full span of adolescent developmental
processes and functions is a problem well suited for social work professionals to address. The absence of problems does not equate to full preparedness for adulthood (Pittman, 1991). How an adolescent views him/herself and his/her ability to navigate the world is integral to his/her adaptation to adulthood, irrespective of behavioral, psychosocial, emotional, or other problems. Exclusion of these processes in the study of and practice with group home youth relate to underlying issues of human dignity and worth, interpersonal relationships, and social justice, all of which are core values of the profession of social work (National Association of Social Workers (NASW), 2008). These issues are not well represented in the group home literature but are important for scholars to tackle in keeping with the values and ethics of the social work profession. Furthermore, issues of child welfare have always been central to social workers, the primary service providers in these settings. Thus, positive development among group home youth is a prime area for social work research.

**Human Dignity and Worth**

Regard and respect for individual differences and diversity of experience, thought, and action are central to social work values. Social workers are expected to honor free will and self-agency of vulnerable and/or young groups. Youth who are displaced from their homes of origin due to experiences or risk of conflict, violence, or instability need more from support systems or agencies than to have their behavior deemed socially unacceptable and made the center of the attention they receive. At a minimum, group home youth need what other youth need – to be respected, valued, and treated as individuals of worth, with voice, and the capacity to change in meaningful ways. Social work practitioners and researchers working with group homes and the youth who reside in them should continually be mindful of youths’ value and worth within the group home context, not merely the measurable, behavioral outcomes. Understanding of youths’
perceptions and experiences within group care is integral for the development and/or modification of group home practices.

**Interpersonal Relationships**

Any examination of group home care must consider the social context in which youth live and grow. By design, congregate care is embedded with multiple relationships of various types, functions, and strengths. Youth who reside in group homes are influenced by and influence the development of relationships with group home peers, staff, and community partners. While some researchers viewed peer contagion between youth of dissimilar levels of pathology as negative aspect of interpersonal communication and behavior modeling in group treatment sessions (De-Haan & MacDermid, 1999; Dishion et al., 1999), there may be a significant number of positive peer as well as staff interactions, relationships, and/or networks that bolster youths’ experiences that researchers have yet to fully explore. Social workers understand that relationships between and among individuals are powerful vehicles for change (NASW, 2008). An investigation of group home care from a social work perspective must include attending to the relationships and social exchanges that both enhance and constrain youths’ experience of group home care.

**Social Justice**

Social justice is central to problems defined within a social work framework. Within group home practice and study, social workers are concerned about the social, political, and economic obstacles that adolescents face prior to their entrance and beyond their exit of care. Adolescents transitioning directly from group home care to adult living comprise a population vulnerable to psychosocial and economic challenges greater than that of most youth (Berzin, 2008). Research should seek to understand not only what makes youth vulnerable but also the
impact of that vulnerability on their development and trajectories. Illuminating these vulnerabilities, and linking them to disparities across race and socioeconomic class, may guide practitioners’ efforts to modify protocols, improve service delivery, and stimulate change at individual, organizational, community, and societal levels.

**Introduction to the Study**

This study may add to discourses among researchers and practitioners about the vulnerabilities of group home youth by examining the assets, connections, and functions that aid youths’ abilities to face and/or overcome the obstacles in their transition to adulthood. The project is documented in a five-chapter text that begins with: (1) the present description of a critical problem with existing research about youth in the context of group home care and an overarching research question, (2) an exploration of existing, explanatory empirical data and conceptual literature, (3) a detailed description of the study’s sample, variables, goals, and procedures, (4) quantitative analyses of findings, and (5) a discussion of multilevel implications for developing youth within the context of group home care and implications for social work research and practice.

Subsequent chapters describe this project in detail. Chapter 2 *Literature Review* is a review of existing conceptual and empirical literature, which provides a foundation for the study and guide the decision-making for inclusion of relevant concepts and constructs for study. Chapter 3 *Methodology* is an explication of the research method beginning with a reiteration of the research questions, study aims, research design, sampling, and data analysis plan. In Chapter 4 *Findings*, I draw conclusions about the results from my secondary data analysis. Finally, Chapter 5 *Discussion*, discusses associations and differences between my secondary findings (if any), from that which have been published from Farmer’s original study as well as findings
reported in other relevant studies. It includes inferences about how my study may add to the conversation about group home and the youth who benefit from group home care and services as well as discussion of the study’s limitations, directions for future work, and potential implications of the findings for ongoing discussions and decisions about group home care.

**Rationale for the Study**

The rationale for this study is based upon two major observations about existing literature on the use of group homes and youth with group home care experiences. First, many existing studies lack explicit use of theory. While theory may guide the development of researchers’ questions and choice of variables, the specific theories, concepts, and propositions associated with existing research is not often explicated. This study adds to the existing body of research by integrating social science theories throughout the research design. Two main perspectives guide this investigation – Positive Youth Development (PYD) framework (Roth & Brooks-Gunn, 2003; Lerner et al., 2005) and Social Capital Theory (SCT) (Bourdieu, 1983; Lin et al., 2001). The PYD framework and SCT are introduced in the following sections but the key concepts relevant to this study are expounded upon in the subsequent literature review chapter. Second, existing research emphasizes behavioral (externalizing or internalizing behavior) (Lee & Thompson, 2007; 2009) or psychosocial and functional (employment, education, parenthood, and income) (Berzin, 2008) outcomes that are meaningful for adult functioning to some degree but do not capture the full picture of developmentally appropriate milestones or processes integral to youths’ perceptions of self and ability to cope upon transition to adulthood. What is missing in the field of group home study is a broad understanding about healthy development of adolescents. I argue that theoretical perspectives can enhance understandings of adolescent development in group home settings and thus lay the groundwork for this inquiry. Therefore, the
present study examines the presence and associations of assets important for overall, healthy adolescent development as well as adult functioning in the psychosocial and economic arenas described in existing studies – competence, confidence, connection, and social capital. It is the expectation that the inclusion of applicable, social science theories and a broader scope of psychosocial constructs lead to a robust findings about youth with group home experiences not prevalent within the body of literature.

Positive Youth Development (PYD) Framework. The PYD framework was chosen as a key theoretical framework with which to augment the investigation of psychosocial outcomes among group home youth with developmentally appropriate functions that aid in their healthy adaptation to adulthood. In general, PYD is a process that prepares young people to meet the challenges of adolescence and adulthood through coordinated activities and progressive experiences that help to build social, moral, emotional, physical, and cognitive competence (Collins et al., 2008). In contrast to deficit-based views, PYD is not simply the absence of bad things but the presence of assets in young people’s lives (King et al., 2005). The PYD framework assumes that young people should be regarded as resources to be developed not as problems to be managed (Roth, Brooks-Gunn, Murray, & Foster, 1998; Larson, 2000; Lerner et al., 2005). As youth begin to experience increased power and freedom, they are also expected to be more adept at self-management, to be more personally responsible, and to participate more in society (Bowers et al, 2010). Growing emphasis on the healthy development of “difficult-to-work-with” youth, who begin their life marginalized from mainstream sources of support (e.g. group home youth) raises concern for the need to broaden existing knowledge to include intervention approaches that specifically target this population (Sherrod, 1997). Therefore, the essence of the PYD framework is enlarging the opportunity space across domains (family, peer,
social, and school) (Lerner et al., 2005; Theokas & Lerner, 2006) that supports youths’ development of five major internal assets – competence, confidence, and connection as well as caring and character (not measured in this study), which collectively help steer youth toward a life indicative of successful contributions to self, others, and the world (Benson, Scales, Hamilton, & Sesma, 2006; Lerner et al., 2005). Because the primary populations of study in PYD research have been mainstream (Lerner et al., 2005) or at-risk (Fredricks & Simpkins, 2012; Ulrich-French & McDonough, 2013), but not necessarily youth involved in social service systems, the sample of group home youth is a deviation from typical samples. Thus, this study takes into account how the group home population may have to nuanced differences in terms of youth success in and upon exiting group care.

**Social Capital Theory (SCT).** SCT assumes rational actions framed within social contexts, which accounts for individual actions and group organization (Coleman, 1988). Social capital translates into a pathway of possibility to improve the lives of youth and families (Laser & Leibowitz, 2009). Social capital is inclusive of three key concepts relevant to group home environments – relationships, resources, and exchanges. Relationships are the interpersonal connections that can change both the psychodynamic process and outcomes for individuals and groups as a result of preferential treatment and the receipt of resources (Laser & Leibowitz, 2009). Resources are the tangible and intangible benefits garnered from relationships. Exchanges are the trading of resources – expressions of validation, goods, services (Laser & Leibowitz, 2009), knowledge, information, opportunities, information (Lin, 1999), and socialization (Putnam, 1995) – for the benefit of individuals or groups, and the relationships between them. Contemporary SCT links an individual’s ability to acquire resources through the connection of social networks and other social commodities to positive outcomes (Portes, 1998).
SCT is relevant to this study because it is a social science theory that aids in understanding of the social relationships, resources, and exchanges that take place in group home settings, which can be translated into assets upon youths’ transition to adulthood.

**Study Questions**

There are several aspects of this study that separate it from previously published studies. This begins with the development of the research questions. In keeping with the tenants of the PYD framework and SCT, the overarching research question for this study is: *what contributes to positive outcomes among youth in group home care?* This question is addressed by examining two more specific questions (1) *What group home factors correlate with positive outcomes among youth?* and (2) *Do group differences (e.g. age, race/ethnicity, and sex) impact positive outcomes?* Each of these questions may help inform a better understanding of group home practices, youths’ responses to those practices, and potential differential effects for identified subgroups of youth.

**Overview of Methods**

A secondary data analysis, congruent with the tenants of functionalism (Burrell & Morgan, 1979), is be the primary mode of answering the central research questions. Quantitative methods include univariate analyses to provide descriptive statistics of the sample and identified constructs/variables. Multivariate analyses may illuminate relationships (strength and directionality) among constructs (i.e. positive youth development and social capital).

This study utilizes data from the “What Affects Outcomes in Group Homes for Youth” study (2007 – 2012) conducted by Principle Investigator Elizabeth Farmer and her research team. The purpose of Farmer’s study was to “examine: (1) outcomes for youth in group homes; (2) effects of theoretically- and empirically-based organizational factors and core processes on
outcomes; (3) rates and predictors of iatrogenic effects; and (4) whether adherence to a promising model of group home treatment, the Teaching Family Model (TFM) produces more positive outcomes for youth” (Farmer, 2006). Key constructs and variables of the study were organizational factors (e.g. strategy, structure, culture, and climate), staff characteristics, youth characteristics, core processes (e.g. monitoring/supervision, consistent discipline, peer relationships, adult/child relationships, and other services), and outcomes (e.g. improved functioning, decreased problems, improved outcomes post-discharge). Farmer’s study sample (n=554) consisted of youth served in group homes across the state of North Carolina that utilized the TFM of care and from group homes in the same geographic catchment areas as the TFM homes that did not use the Teaching Family Model. Though participants were drawn from two different types of group homes, Farmer’s study was not a controlled test of the TFM versus other approaches. Instead, the study was a quasi-experimental study that was designed to examine what factors increase positive outcomes and reduce problematic outcomes within and among group homes (Farmer, 2006). The present study is exploratory and uses theories I believe may augment our understanding of youths’ perceptions of group home experiences and likelihood for positive outcomes.

**Conclusion**

Defining and understanding positive outcomes among group home youth is critical to the fields of child welfare, development, and mental health as well as social work. “The relationship between group care activities and outcomes is just one of the knowledge gaps resulting from a lack of good descriptive information about the components of group care treatment” (Lee & Barth, 2011, p. 256). Group homes are criticized due to little empirical support for their effectiveness and links to positive, long-lasting outcomes for their young residents. Even still,
group homes remain a viable out-of-home placement option for troubled youth because there are few alternatives due to youths’ prior placement failure(s) and/or inadequate capacity of group homes to care for the vast needs of youth referred to them. To date, positive outcomes as defined by the PYD framework – competence, confidence, and connection, have also not been studied in group home research. Additionally, mechanisms for developing such outcomes – through relationships and via embedded resources – have also been ignored. What I seek to do in this study is to investigate the development of positive youth functions within the unique context of group home care and begin to fill a gap in social work research that may ultimately provide needed support for the effectiveness of group home care.
CHAPTER II: LITERATURE REVIEW

Introduction

“[S]uccessful development is viewed not as the absence of risk behavior but as the presence of positive attributes that enable youth to reach their full potential as productive and engaged adults” (Guerra & Bradshaw, p. 3). The problem is that many community, organizational, governmental efforts are targeted at extinguishing adolescents’ problematic behaviors more so than bolstering their desirable ones, thus underemphasizing the complex and critical processes of adolescent development. Community, organizational, and governmental viewpoints may discount youths’ capacity to transform their disparities into successes, particularly those at highest risk of negative outcomes in adulthood. Even still, the possibility exists that individual, environmental, and/or systemic factors may combine in such a way that positive and meaningful change can occur for such youth. Therefore, not taking steps to better understand and promote positive outcomes among youth thought of as damaged and hopeless, particularly those placed in group home care, leaves them vulnerable to greater difficulty in adulthood.

The purpose of this chapter is to offer a synthesis of conceptual literature and empirical data to begin to broadly answer the question, what contributes to positive outcomes among youth in group home care? This review of literature includes key concepts and constructs studied in positive youth development and social capital research and outlines their importance and application to youth in the context of group homes and in the broader conversation of at-risk, or troubled, youth. This chapter begins with justification for studying youth within the context of group home care. It goes on to describe individual-level characteristics that may impact individual outcomes as well as variables that have a potentially additive effect on youths’ trajectory toward positive functioning and health adaptation upon exiting group home care.
Finally, inferences are drawn from the literature that contributes to the development of this study, research questions, paradigm, and methodology, as well as foreshadowed conjectures.

**Why Study Group Home Youth**

Youth with group home care experiences are the focus of the present study for one main reason – their often difficult psychosocial histories warrant placement in group care, which is perceived by many in the field as an option of last resort for troubled or difficult-to-place youth (Barth, 2002; James, 2011; Ringle et al., 2012; U.S. DHHS, 2010) as opposed to a multi-faceted intervention with the potential to elicit substantial, psychosocial change. Nearly forty years ago, Morris Fritz Mayer (1975) described the “marginalization and the stigmatization of acting-out youths and the group services designed to meet their needs”, which “reflected frustration at the field’s inability to raise the level of discourse about group care and afford it the theoretical and empirical attention it deserved” (as cited in Whittaker, 2000, p. 62). This perception and practice among child welfare professionals may further marginalize such youth beyond the structural impediments and limiting life circumstances that landed them in group care. It runs the risk of minimizing their need to be regarded, cared for, and developed to similar standards as their mainstream (non-group home youth) peers. Samuels and Price (2008) describe, foster youth, in particular, as “uniquely disenfranchised” citing foster care as “not always a developmentally caring context for those children involved” (p. 1199). Nonetheless, group home care is a viable intervention for youth whom traditional foster care or in-home interventions are neither sufficient nor appropriate (Whittaker, 2000).

**Ideology**

For the past century, perceptions in the field about group home care vacillate between general disfavor and desire to prove group home effectiveness. Negative views of group care can
be traced back to the criticisms and subsequent abolition of orphanages in America in the early to mid-twentieth century, which resulted from poor, institutional practices and abuses. As a result, boarding out, the forerunner of present-day family foster care, was solidified as the preferred option for “orphaned” children. Subsequently, group care settings were left to change their focus from basic child care centers to specialized care and treatment facilities designed to provide intervention services for disturbed or problem youth whose needs exceeded that which traditional foster parents could provide (Freundlich, Morris, & Blair, 2004; Whittaker, 2000).

While gains were made by this practice shift of group care, multiple concerns prevailed in the latter half of the twentieth century. Group home placement became viewed as an intervention that departs from the prevailing ideologically, which emphasizes community-based care in the least restrictive setting (Stroul & Friedman, 1986). Concerns arose around staff reliability, stability, and training adequacy, children’s physical and emotional safety (Barth, 2005; Burns, Hoagwood, & Mrazek, 1999; Dishion, McCord, & Poulin, 1999), and negative peer effects (Huefner & Ringle, 2012). Additional policy and practice controversies stemmed from: (1) perceptions that residential placement was an intrusive and disempowering intervention, particularly for families, (2) scant evidence for comparative, long-term treatment efficacy, and (3) unclearly defined core components of residential treatment services and consensus on treatment protocols. At the same time, investigation of group care effectiveness and child well-being virtually lost attention as did the desirability of group care as a viable practice intervention (Whittaker, 2000). Therefore, James K. Whittaker (2000) declared:

Given the manifest needs of children, youth, and their families for high quality and effective services, the greatest tragedy would be to extend into the next century the polarizing debate that has engulfed group child care throughout much of the last hundred years…Group care in many forms, is no panacea. Yet, it deserves a thoughtful, critical review to determine its proper place and function in the overall continuum of care and services.” (p. 72)
Thus, around the turn of the twenty-first century, negative views began to be challenged with evidence of the ongoing need to maintain group home care as a practice intervention. Currently, 6% of all children (400,540 in 2011) in CWS care reside in group homes (Adoption and Foster Care Analysis and Reporting System (AFCARS), 2011). This data is somewhat nebulous because it does not account for the number of youth in the custody of their parents or state-level juvenile justice and mental health systems, who are placed in group care. This data, coupled with efforts to dispel long-standing criticisms, fueled fervor among leading group home researchers to prove and improve group home effectiveness, particularly with regard to long-term, positive outcomes for group home residents and alumna. This led to the emergence of empirical evidence of general group home effectiveness, particularly when protocols and practices were clearly defined and/or theoretically or empirically based (Barth et al., 2011; Brelad-Noble et al., 2005; James, 2011; Lee & Thompson, 2007; Lee & Thompson, 2008).

More specifically, standardized, evidenced-based residential programs or models of care became the focus of study, but few were actually empirically tested and said to be efficacious (James, 2011): (1) Project Re-ED (Hobbs, 1966), an ecologically and psycho-educationally-based approach, not rated due to lack of comparison studies; (2) Sanctuary Model (Bloom, 1997), a trauma-focused program deemed “promising” with little empirical evaluation (James, 2011); (3) Stop Gap (McCurdy & McIntyre, 2004), a multilevel, short-term program deemed “promising” due to only early stage evaluation (James, 2011); (4) Positive Peer Culture model, which girded strong empirical support (James, 2011; Lee & Barth, 2011); and finally, (5) Teaching Family Model (TFM), a family-like, behavior-based program, deemed “promising” and one of the most studied programs in child welfare history (James, 2011). These theory-based, program models organize the interventions and activities within group home settings (Lee
& Barth, 2011). Study of these programs answers, in part, some of the questions about group care that Whittaker posed in 2000: (1) What are the critical ingredients of successful residential care programs, and how can they be empirically validated, captured, and monitored? (2) How should a program be measured as successful? (3) How can care and treatment needs of children be balanced and integrated, and what are the implications?

Whittaker’s (2000) questions and charge to the field along with existing studies provide support for this study and its methodological approach to answering the question: what contributes to positive outcomes among youth in group home care? Additionally, findings from this line of inquiry may begin to counter the belief that group home care is an option of last resort for troubled or difficult-to-place youth and offer support for group home care as a viable placement intervention that supports youths’ positive development, particularly when practices and protocols are theoretically-based and empirically-sound.

Data on Group Home Care

Knowledge of what happens in group homes and the outcomes of youth who reside in them is critical to understanding what’s missing in the scholarship about group home care. Few studies were found that investigated specific group home practices that impacted youths’ functioning, trajectories, and/or outcomes. The preponderance of data on group home care is quantitative and quasi-experimental or comparative and provides modest evidence of youths’ functioning and behavioral trajectories while in care as well as outcomes upon discharge.

Limited Outcome Data. Outcome data is sparse at best, but existing studies point to group home care being more efficacious than deleterious. Lee and Thompson (2009) compared outcomes among youth cared for in group homes (n=716) to Multidimensional Treatment Foster Care (MTFC) (n=112) homes. MTFC differs from group home care in that MTFC is an
evidenced-based intervention, which limits peer contagion (adverse consequences from the exposure of emotionally or behaviorally challenged youth to deviant peers (Lee & Thompson, 2009). However, Lee and Thompson (2009) found that group home youth were still more likely to be favorably discharged and reunified with family and less likely to experience subsequent placement upon discharge (six months post-discharge) than MTFC youth. Although researchers identified study limitations related to representativeness of the sample and program fidelity, findings from this study support the idea that some youth thrive better in group home care than other, evidenced-based out-of-home placement interventions (e.g. MTFC) (Lee & Thompson, 2009). A subsequent paper by Lee and colleagues (2011) reviewed 19 empirical outcome studies of group care and an alternative intervention (i.e. family foster care, treatment foster care, non-placement services, and various group care models). Among studies that reported poorer group home outcomes than among the alternatives, group home program models were unstructured or not empirically supported (i.e. therapeutic community approaches, community-based group care, and wilderness programming). Upon reviewing comparison studies (n=3) of short-term group care to family foster care, researchers found no outcome that substantively favored group care placement for older youth. However, this finding may be attributed to inadequate effect sizes among the available studies. When examining comparison studies (n=8) of group care to treatment foster care, researchers found that treatment foster care, particularly MTFC, was associated with diminished delinquency measures among youth (boys more so than girls). Further, outcomes from studies of group care versus non-placement services (n=3) were mixed. Intensive home services favored group home care on a composite variable of stability with family, legal trouble, educational progress, and subsequent out-of-home placement (Barth et al, 2007). No differences in juvenile offending or adult convictions were found between group care
and day treatment (Byrnes et al., 1999). Differential outcomes from these group care studies may be linked to the lack of specificity in group care practices and competencies linked to intended outcomes. Lee and colleagues (2011) summarized their findings by stating, “While the umbrella term ‘group care’ was used to categorize the comprehensive studies reviewed…substantive differences in results draw attention to the diversity in group care program quality and approach” (p. 185).

**Risk of Peer Contagion.** Huefner and Ringle’s (2012) study of peer contagion in residential care settings addressed the concern that group homes create toxic environments due to the co-housing of troubled youth. Their study found that negative peer density, the percentage of youth diagnosed with Conduct Disorder and the overall level of problem behavior within the residential setting, was not significantly related to the rate of problem behaviors that occurred among group home youth ages 7 to 18 years (n=1,438). This countered Dishion, McCord, and Poulin’s (1999) widely cited, earlier paper that stated peer influence among high-risk youth (not in group home care) is associated with subsequent increases in problematic outcomes (i.e. substance abuse, delinquency, and violence). However, data from Huefner and Ringle’s study corroborated, in part, Lee and Thompson’s (2009) findings that less than 10% of youth exhibited increases in serious externalizing behavior while in group home care and that the structure and supervision of group care may help most youth curb problem behaviors. Therefore, findings from this study indicate that placing troubled youth together does not necessarily lead to increased problematic behavior. However, Lee and Thompson’s (2009) study does not provide evidence of what specific group home efforts (other than more staff experience) were associated with limiting youths’ problem behavior. Lee and Thompson (2009) speculated that close, staff supervision and behavioral monitoring may be group home strengths that relate to youths’
engagement in problem behaviors. This idea of staff supervision will be revisiting later in this chapter upon discussion of how close staff relationships may positively benefit youth outcomes.

**Knowledge of Group Home Youth**

**Demographics**

Various characteristics of youth served in group homes influence quality and outcomes (Lee & Barth, 2011). Because youth who enter and exit group homes are not tracked by a collective or national-level system (Lee, Chmelka, & Thompson, 2010; Strack et al., 2007), it is difficult to ascertain the demographic make-up of group home youth. However, some basic demographic data are reported by national organizations or gathered from studies of youth residing in foster home and/or group home settings. What is most consistently reported and applicable for this study are data on youths’ age, sex, and race (Breland-Noble et al., 2005; Huefner & Ringle, 2012; Lee & Barth, 2011; Lee & Thompson, 2008; Lee et al., 2010; Ringle et al., 2012; Strack et al., 2007).

**Age.** In general, group homes tend to be populated by adolescent youth (ages 12 to 18 years), who comprise nearly 40% (approximately 160,000) of all children out-of-home care (US DHHS, 2010). Although the number of children in out-of-home care steadily decreased in the past decade, the proportion of teens in foster care has increased (Barth et al., 2011). This trend underscores the need to address adolescents’ unique needs while in out-of-home care, particularly group home care.

Scholars in group home research report the mean age of youth studied to be approximately between 14 and 15 years. Upon comparing service use of youth in treatment foster care to group homes, Breland-Noble and colleagues (2005) reported the age of their group home subsample (n=120) to be 14.3 years. While the effects of age on service use was not
isolated in their published model, the researchers found associations among older age, African American race, and engagement in juvenile justice and outpatient mental health services (Breland-Noble et al., 2005). Such a finding is consistent with statistics from social services and juvenile justice system reports that African American youth are overrepresented in these sectors (AFCARS, 2011; Barth, 1997). In Lee and Thompson’s (2008) multi-state, group home study, the average age of their sample \((n=716)\) was 14.9 years at intake. In a study of behavioral trajectories and post-placement functioning, Lee and colleagues (2010) reported the mean age of youth at intake to be 15.1 years. However, they did not find that age was a significant determinant in youths’ trajectory. Age did not impact whether or not youth departing group care returned home favorably, experienced a subsequent formal placement, or engaged in illicit behavior (Lee et al., 2008). In a larger study \((n=1438)\) of negative peer contagion in residential care by Huefner and Ringle (2012), youth participants ranged from ages 7 to 18 years with an average age of 15 years-old. From this data, it is evident that group homes predominantly house and cater to young teens, largely between the ages of 14 to 15 years, a stage when the development of key psychosocial functions (to be discussed later in this chapter) are paramount. Therefore, youth aged 14 to 17 years at the time of admission is the focus of analysis in this study.

**Sex.** In the study of youth with group home care experiences, biological sex is dichotomized into two groups (excluding minority sexual groups) – boys (male) and girls (female). On the whole, boys are the predominant recipients of group home care and associated services. The Child Welfare League of America (CWLA) (2005) estimated that 52% of all youth (513,000) in the custody of CWS and placed in out-of-home care are boys. In their study of group home processes, Lee and Thompson’s (2008) sample \((n=716)\) was 62% male \((n=449)\). A
consistent description was found in Huefner and Ringle’s (20102) study sample (n=1,438), of which males represented 60%. Similarly, Lee and colleagues (2011) reported the predominant sex (gender) of their sample (n=744) to be 60% male (n=447), a factor that had a significant inverse impact on youths’ favorable departure from group home care. The fact that group home populations consist mostly of young, teen males, may have implications the types of practices that occur in these settings and which interventions most positively benefit the dominant groups represented.

**Race.** Similar to the investigation of sex among group home youth, race is typically dichotomized into two groups – White versus non-White, or Black. Huefner and Ringle (2012) described their study sample as 60% Caucasian (White). Lee and Thompson (2008) described their sample (n=716) as being 60% White (n=429). Likewise, Lee and colleagues (2010) described their sample (n=744) as 61% White (n=457). What the latter Lee and Thompson study uncovered through investigation is that being White significantly increases the probability of a youth departing group home care under favorable conditions (Lee et al., 2010). Although White youth are the primary recipients of group home care, Black youth are overrepresented in foster care (National Council of Juvenile and Family Court Judges, 2011) and juvenile justice systems (Snyder, 1996). Due to the fact that courts routinely refer youth to group homes, the overrepresentation of Black youth in juvenile justice care may be translated to their also overrepresentation in group homes. Focusing on Blacks (African American) rather than Whites, Breland et al. (2005) found that African American youth were significantly more likely to be involved in juvenile justice services and receive in-home counseling and crisis services. Virtually no empirical studies with large or representative sample sizes were found that explicated the impact of races other that White or Black.
This type of reporting may be the case because most group homes are predominantly populated by White youth followed by Black youth. Of all youth (513,000) in the custody of CWS placed in out-of-home care, approximately, 41% are White non-Hispanic (compared to 61% nationwide) and 32% are Black, non-Hispanic (compared to 15% nationwide). Other races – Hispanic, American Indian/Alaska Native, Asian/Pacific Islander, mixed race and other races account for the remaining 27% of CWS youth at rates comparable to the general population (CWLA, 2005). The AFCARS data from 2011 showed that approximately 27% of children in foster care were African American, which is twice the percentage of African American children in the United States. To put in perspective with other minorities, approximately 21% of foster children are of Hispanic origin compared to 24% of children who are Hispanic nationwide.

In a multi-site longitudinal study, Barth (1997) found that the rate of adoption for African-American children was far lower than that of Caucasian children. Consequently, African-American children, especially those under the age of six, were two times more likely to remain in foster care until their adolescent years (Barth, 1997). As such, the family reunification rate for African-American children in this study was found to be a quarter of that among Caucasian children. Additionally, African-American foster youth experience a considerable degree of unmet educational, behavioral health, and social service needs (Leslie et al., 2004). Researchers attributed organizational factors to the high level of African Americans in foster care over other races – inadequate funding for policy implementation (i.e. in the Multiethnic Placement Act of 1994 and Interethnic Adoption Provisions of 1996), staff, training, and resource shortages, individual and systemic racism inherent in many child welfare practices and procedures (Knott & Donovan, 2005), and too few psychological assessment and contacts with case managers (Chipungu & Bent-Goodley, 2004).
Published findings from empirical studies have not enabled scholars in the field to make strong inferences about correlations or differences in care experiences or outcome between or among racial groups. Further, while focusing only on dominant races may be a methodological approach in existing studies that is taken to remove the limitation of small effect sizes of other minority groups, it does not attend to nuanced differences or affects on outcomes or trajectories of other-raced youth in group home samples. Therefore, this study examined and discussed significant findings (if any) from non-dominant minority races along with White and Black racial groups as well as highlight associations among age, sex, and race.

**Relevance of demographic characteristics to youth outcomes,** Age, sex, and race represent three discrete demographic characteristics that can collectively impact group differences and outcomes in the study of youth with group home experiences. Studies may gather demographic information to paint a descriptive picture of their sample but do not focus on such characteristics in analytical models. An exception is Stack and colleagues’ (2007) study, *Race and Gender Differences in Risk and Protective Factors among Youth in Residential Group Homes.* From a sample of 328 youth (ages 14-21 years) residing in non-therapeutic group homes or shelters in Maryland, the researchers found and reported statistical differences between sex and race and their experiences while in care: (1) White girls (n=22) were more likely to attempt suicide in the past year, to experience physical/sexual abuse or rape, and to have spent at least one night in drug treatment in the past year; (2) Black girls were more likely to have experienced familial drug use; (3) Black boys were more likely to have engaged in early or risky sex (e.g. multiple partners, frequent coitus) and survival sex (in exchange for sustenance or drugs), and forced into sex while they were intoxicated; and (4) White boys were more likely to have used drugs other than marijuana or tobacco. While these findings help to depict the experiences of
group home youth as they may relate to health outcomes, inferences cannot be drawn about how well these youth will function upon discharge given their difficult life experiences. Therefore, to extend existing research about group home youth, this study focuses on a sampling frame of adolescents ages 14 to 17 years, explicate how group home factors are different or similar between sexes, and include any sample differences or correlations found among minority race groups other than Black. Additionally, what this study investigates is how demographic characteristics may change or improve outcomes for youth – transitional adjustment, engagement, and psychosocial problem severity. Such outcomes will be discussed in a subsequent section of this literature review.

**Background Characteristics**

In addition to the aforementioned demographic characteristics, prior studies found that youths’ custody status, placement history, length of stay in current group home, and mental health need to be significant factors in predicting youth outcomes (Griffith et al., 2012; Lee et al., 2010). Custody status refers to a child’s legal dependence on a parent or guardian or on a state-level social service system (e.g. North Carolina Department of Health and Human Services, Division of Social Services). Placement history is the number of a child’s out-of-home placements upon removal from his or her home of origin or other out-of-home placement and prior to admission at the current group home. A child’s length of stay in any group home includes the time between formal admission and formal discharge but is not the additive sum of each stay in the same group home. Mental health need, a common factor among youth with group home care experiences, specifically refers to a youth’s experience with psychiatric and/or behavioral problems that have been diagnosed, addressed, and/or treated (with or without psychotropic medication) within the context of a group home intervention services. The
amalgamation of these factors (and more not addressed within the bounds of this study) are in part the result of structural conditions and individual youth characteristics, which compound challenges of young people who enter group home care.

**Custody status.** Group homes house youth who are in either in the custody of their parents or guardians or in legal custody of the state child welfare, juvenile justice, or mental health systems. While several demographic characteristics may influence youths’ group home care experiences and/or outcomes, involvement or status in social service systems may also be relevant (Lee & Barth, 2011). “Concerns have been raised about the practice of co-housing youth from different public systems in the same group care unit; however, little research is available on the frequency or impact of this practice” (Lee & Barth, 2011, p. 260). In a recent study of a large, Midwestern residential, group care program, Griffith and colleagues (2012) found youth (n=1010) to be referred mostly by family members (29.8%), followed by social service agencies (22.4%), mental health services (11.5%), the court system (17.4%), or by other service agencies (19.0%) along the continuum of care (e.g. intensive residential treatment, specialized treatment group homes, foster homes) and schools or military programs. Most group home youth are in state custody (temporary or permanent) for what may be very long periods of time (Strack et al., 2007). Due to the lack of a consolidated tracking system for youth in group care, the exact proportion of youth who are in family versus state custody is unknown. This ambiguity adds to the challenge of determining what factors affect positive outcomes for youth because custody status may impact how a youth perceives his or her experience of group care. For example, a young person residing in a group home but still in the custody of his parents may possibly perceive the care experience as temporary and futile and choose not to invest in the change process. Conversely, an adolescent who resides in group care with no plan for family
reunification, may (or may not) perceive group home staff and peers as a surrogate family with whom to foster healthy relationships and make positive gains. What will be explored in this study is if differential custody status, which affects youths’ legal rights and access to federal and/or state funding and services during and upon discharge from care, impacts youths’ capacity to achieve and sustain positive outcomes in the context of group home care.

**Out-of-home placement history.** A common characteristic among group home youth is care instability. Many youth enter and exit group homes multiple times before family reunification, permanent placement, or aging out of care. This may be due, in part, to the severity of a child’s mental or behavioral health needs, which may require placement at various levels along the continuum of care (Huefner et al, 2010). Youth with multiple mental or behavioral health problems and/or complex needs typically have a greater number of placements than those that do not (Griffith et al., 2012). Consequently, youth may experience several failed placements before they make their way to the setting that is most appropriate to meet their treatment needs (Ringle et al., 2012). Courtney & Barth (1996) found that youth experience 7.6 different placements while in the social service system. More recently, Griffith and colleagues (2012) found that youth (n=1010) had 1.8 placements prior to entry in the large, Midwestern group home facility that was the focus of their study. While there is a vast range of variables related to the number of out-of-home placements group home youth experience, it is not evident that more placements are indicative of failed placements for reasons related to individual youth challenges and/or inadequate group home availability to meet complex needs. Therefore, the experience of out-of-home placement(s) youth prior to data collection is a critical background factor for analysis in this study.
**Length of stay at the current group home.** A child’s length of stay in a group home varies between each placement and among servicing organizations. It is difficult to ascertain the average length of stay in a group home care because of the transient nature of group home residents and the lack of a consolidated tracking system for youth in group home care. A child may go in and out of the same group home multiple times due to placement interruptions (e.g. temporary reunification with family, residential treatment at a higher level of restrictiveness, juvenile detention/incarceration). Not only do youth have to deal with the challenges that led to group home placement in the first place, they also have to overcome the obstacles related to a time-limited placement or multiple reassignments. From available research, it is difficult to ascertain a minimum or average length of time in which a youth should remain in care to achieve and sustain long-term, positive gains. What is known is that youth typically show decreasing levels of problem behavior over time (Huefner & Ringle, 2012). Therefore, youths’ length of stay at their current group home was included as a potential factor influencing positive outcomes.

**Psychosocial problem severity.** Group homes represent one of the most commonly utilized community-based facilities to care for and treat youth struggling with psychiatric disorders, aggressive behavior, and/or complex familial and psychosocial histories (Breland-Noble et al., 2005; James, 2011). Youth who reside in out-of-home care likely have experiences of loss of one more caregivers, maltreatment and/or prior mental health conditions, which may manifest or exacerbate psychosocial symptoms (e.g. intimacy, aggression, negative self-image, etc.) (Aguilar-Vafaie et al., 2011). Residential care facilities, to include group homes included in this study, provide mental health interventions for approximately 200,000 youth nationwide (Child Welfare League of America, 2009), approximately 90% of which have severe mental
health problems and 80% are on psychotropic medications at the time of admission (Griffith et al., 2012).

Mental health needs discussed in the current empirical literature, tend to highlight youths’ observable or clinical-level internalizing symptoms (i.e., anxious, depressive, and over-controlled) and externalizing behavior (i.e. aggressive, hyperactive, noncompliant, and under-controlled), (Jonson-Reid & Barth, 2000; Mason, Chmelka, Howard, & Thompson, 2013; Ryan, Marshall, Herz, & Hernandez, 2008) as well as use of psychotropic medication (Breland-Noble et al., 2004; Griffith et al., 2012). In a study of post-discharge outcomes for youth (n=120) departing three levels of residential care, Ringle and colleagues (2012) found that 93% (n=43) carried a DSM diagnosis at the time of admission. Raghavan and colleagues (2005) found that even when controlling for mental health status, CWS-involved youth are significantly more likely to be prescribed psychotropic medication than youth not involved with CWS. However, published group care research studies do not consistently include youths’ symptoms and diagnoses despite their relationship to outcomes (Bettman & Jasperson, 2009).

In their examination of psychotropic medication use among youth (n=1010) entering residential treatment, Griffith et al. (2012) assessed mental and behavioral functioning using four variables: (1) risk for suicide, (2) level of problem behavior, (3) mental health symptoms, and (4) psychotropic medication use. In a logistic regression model that accounted for 24.5% of the variance (p<.001), researchers found the following associations among variables: White youth were 2.8 times more likely to be on one or more psychotropic medications; for every out-of-home placement, youth were 3.87 times more likely to be on one or more psychotropic medications; youth with higher levels of suicidality, internalizing behavior, and more mental health symptoms were 1.02, 0.72, and 0.92 times more likely to be prescribed psychotropic
medications (Griffith et al., 2012). The findings that greater number of out-of-home placements are associated with more complicated mental health need is relevant to this study in that such individual-level factors may be indirectly related to a youth’s potential for positive outcomes upon discharge from group care.

For the present study, youths’ psychosocial problem severity, as assessed by the *Strengths and Difficulties Questionnaire* (SDQ) (Goodman et al., 1998), provides information about their mental health needs, particularly presence of emotional, conduct, hyperactivity/inattention, and peer relationship problems as well as prosocial behavior (Goodman et al., 1998: Youth in Mind, 2012). Psychosocial problem severity is the only construct in this study that is characterized as both a background characteristic as well as an outcome. This is so because baseline SDQ scores provide information into youths’ mental health needs upon admission, while SDQ scores obtained at discharge and/or post-discharge may provide insight of a group home effect or inclusion of additional variables (e.g. positive youth development factors, social capital) present within the group home context.

**Factors Influencing Positive Youth Outcomes**

The purpose of the present study is to better understand what contributes to positive outcomes for youth in group home care. Answering this question may help dispel some of the concern over group home efficacy and youths’ capacity to thrive after experiencing group home care. Youth often enter residential care (broadly defined) with high levels of problem behavior, multiple and complex mental health issues, and a host of other issues that place them at risk for poor long-term outcomes (Griffith et al., 2012). Therefore, it is generally accepted that youth with less severe dysfunction have better outcomes (James, 2011). But what remains uncertain are what variables mitigate the individual factors (demographic and background) that typically
lead to adverse outcomes for these youth. What can occur in group home care that may change a youth’s trajectory from one characterized by maladjustment and poor functioning to one characterized by adaptation and productivity? Further, what’s missing in existing literature about group home care is a clear link to a theoretical framework that helps explain how group homes with structured or evidence-based approaches can have positive iatrogenic effects on their young residents. Thus, the subsequent discussion details factors, based upon established theory, that may impact or support positive youth outcomes for youth in the context of group home care.

**Positive Youth Development (PYD) Factors**

Adolescence, an incredibly dynamic period leading to adulthood, has long been studied with various subpopulations of youth. Irrespective of the context in which development is examined, researchers have found common elements that are key contributors to adolescents’ plasticity – competence, confidence, and connection. Among other elements not discussed in this study, these three assets lend to youths’ positive development even in the face of challenging life circumstances. Because positive outcomes among a subpopulation of highly vulnerable youth are the focal point of this study, a framework that values and integrates promoting factors pertinent to study of youth processes and outcomes is discussed.

The PYD framework is a rapidly emerging framework for the study of child and adolescent development (Naudeau et al., 2008; Bowers et al., 2010). The PYD framework assumes that all youth, irrespective of their background or environment, should be provided with opportunities and supports throughout adolescence (Larson, 2000; Pitman et al., 2001; Catalano et al., 2004). Naudeau and colleagues (2008) argued for the value of PYD as a preventative approach for “at-risk” youth who face environmental, social, and family hindrances to successful development.

PYD constitutes a shift from deficit or risk-based perspectives that describe adolescence as a
The period of “storm and stress” (Hall, 1904), developmental disturbance (Freud, 1969), crisis (Erikson, 1968), and problem behavior (Jessor & Jessor, 1977) to views of youth as resources to be developed (Naudeau et al., 2008). Guerra and Bradshaw (2008) stated:

[O]ne of the principal challenges of a risk-focused approach is that it resulted in the proliferation of separate problem-specific programs…rather than emphasizing the identification of shared risk, protective, and promotive [or promoting] factors, both research and practice generally have treated adolescent risk behaviors as separate and independent, with little consideration of their interconnectedness and common causal pathways. (p. 2-3)

The PYD framework asserts that deficit orientation to youth work with a primary focus on problem behavior (e.g., mental disorders, substance abuse, school failure) does not constitute best practice. As opposed to diminishing undesirable behavior, the framework emphasizes promoting youth confidence and competence in adulthood (Batavick, 1997) and developing individual assets and capabilities (Costello et al. 2001).

**Plasticity.** PYD theorists and researchers argue that a major strength of human development and a hallmark of adolescence is *plasticity*, one’s capacity to systematically change given adequate resources (Lerner et al., 2011) and across the life span (Gottlieb, 1997). Plasticity can occur for better or for worse and significantly impact one’s developmental trajectory. The PYD framework, stemming from developmental systems theories (Overton, 2010), is based on the premise that adolescents, endowed with plasticity, can be shaped in positive, meaningful ways (Lerner et al., 2011). Therefore, it is important to emphasize the potential for positive individual (e.g. cognitive, behavioral, and social) and contextual change during adolescence and for a youth to actively and effectively contribute to his or her growth (Lerner et al., 2011). Lerner and colleagues (2005) asserted, “research in life-span developmental psychology (Baltes, Lindenberger, & Staudinger, 1998), bioecological developmental psychology (Bronfenbrenner, 2005), and life-course sociology (Elder, 1998) has demonstrated the possibility of optimizing
individual and group change by altering bidirectional relations between individuals and their ecologies to capitalize on this plasticity” (p. 11). Lerner and colleagues (2011) add that “adolescence is an ideal ‘ontogenetic laboratory’ for studying the plasticity of human development and for exploring how coupling individual and contexts within the developmental system may promote positive development during this period” (p. 1108).

**Competence, confidence, and connection.** Young people’s plasticity is what enables them to develop competence and confidence and forge connections needed to improve their chances for a smooth transition to adult life (Lerner, 2004). While there is no universally agreed upon list of functions or processes that constitute key markers for adolescent development and adjustment, certain constructs have received considerable attention in developmental and prevention research (Guerra & Bradshaw, 2008). Specifically, the Five Cs Model of PYD (Pitman et al., 2001) identifies five major constructs that constitute PYD – competence, confidence, connection character, and caring. The Five Cs Model was empirically tested in Lerner and colleagues’ (2005) 4-H Study, a cohort, sequential longitudinal study beginning with 1700 fifth grad 4-H students (and 1100 parents) followed until twelfth grade. The Five Cs Model of PYD posits that positive development occurs if youths’ strengths (e.g. plasticity) are “aligned systematically with positive, growth promoting resources in ecology of youth (Bowers et al., 2010, p. 721).

Collectively, these constructs, competence, confidence, connection, character and caring, constitute key markers for healthy adolescent development and a positive trajectory toward a productive adulthood (Lerner et al., 2005). These markers are applicable to youth’s access and engagement across contexts – in the community, the workplace and the broader society (Pittman et al., 2001). For purposes this study, competence, confidence and connection are the focus of examination because character and caring cannot be assessed within the data available.
“It is critical to the future of society that its children become competent adults and productive citizens” (Masten & Coatsworth, 1998, p. 205). Bowers et al. (2010) defines competence as the positive view of one’s actions in various domains (i.e. social, academic, cognitive, and vocational). Competence reflects mastery of key developmental tasks and effective adaptation within one’s environment (Masten & Coatsworth, 1998; Guerra & Bradshaw, 2008). Competence is a demonstration of youths’ capabilities within the context of environmental opportunities, while confidence refers to “an internal sense of overall positive self-worth and self-efficacy” (Bowers et al., 2010, p. 721). It is not domain specific as it refers to one’s global self-regard. A young person’s self-confidence is built by positive investments made from others in their environment and the self-perception that he or she can achieve valued goals.

Values and expectations of competence vary by culture, community, setting, and domain; therefore, individuals’ competence may be judged differently from one setting to the next. Masten and Coatsworth (1998) argued that relationships with caring adults and self-regulation are significant indicators of youths’ competence. Longitudinal studies of competent adolescents who have experienced marked adversity also strongly indicate the importance of caregiver relationships for healthy growth and successful adaptation to a given environment (Masten & Coatsworth, 1998).

Youth connectedness across multiple domains – family, peer/social, community, school, and institutional – is a primary determinant of adjustment (Guerra & Bradshaw, 2008). Authors of an Annie Casey study categorized four major subpopulations of youth ages 14 to 18 years who are most vulnerable of disconnection (lack of connection across domains) prior to age 25: school dropouts, teens in foster care, incarcerated youth, and teen mothers (Wald & Martinez, 2003) –
any of which can be group home youth. PYD theorists describe connection as youths’ positive bonds with people and institutions that are indicative of bidirectional exchanges and investments across contexts (e.g. home, social, school, and community) (Bowers et al., 2010). The construct connection is used synonymously in PYD literature with terms such as investment, engagement, attachment, bonding, and sense of belonging. Guerra and Bradshaw (2008) argued that these terms share an overarching experience of belonging in which youth feel cared for, acknowledged, trusted, and empowered within a given context. Because connection and relationships contributing to social capital may be similar constructs, it is important to distinguish this study distinguished them by measuring connection in terms of youths’ perceived relationships with peers and social capital by youths’ perceived relationships with adult staff member. This distinction will be elaborated upon in the subsequent Methods chapter upon discussing measurement of each PYD construct – competence, confidence, and connection.

In a recent study, Bowers et al. (2010) measured each of the Five Cs using a battery of standardized assessment tools. These researchers extended data from the 4-H Study of Positive Youth Development to determine if PYD constructs hold across groups (i.e. age, race/ethnicity, and gender) of middle adolescents sampled (n=920) and over time. Descriptive and multivariate analyses (i.e. configural invariance model and cross-sectional, confirmatory factor analyses) showed that the Five Cs Model of PYD does indeed hold among middle adolescence though some indicators for each construct slightly change from one developmental stage to the next. For example, Bowers et al. (2010) found that athletic competence was less indicative of overall competence and perceptions of physical appearance were more indicative of overall confidence among middle adolescents (eight through tenth graders) than was found to be the case among early adolescents (fifth through seventh graders) in a separate study by Phelps et al. (2009).
While PYD researchers have been successful in showing the robustness of the Five Cs Model of PYD among early and middle adolescent periods, Bowers et al. (2010) proclaim the need for further research to test if the constructs hold across all stages of adolescent development, from early to late adolescence.

**Social Capital**

Derived from Social Capital Theory, social capital is a product of the connections between an individual’s ability to acquire (tangible and intangible) resources via a web of prosocial networks to yield positive outcomes (Laser & Leibowitz, 2009). The combination of meaningful relationships and useful resources can be conceptualized as *social capital*. Lin, Cook, and Burt (2001) describe social capital as “investment in social relations with expected returns” (p. 6), which is arguably congruent with conceptualizations of previous social capital theorist (Bourdieu, 1983; Coleman, 1988; Putnam, 1993). Putnam (1995) argued that social capital has a role in providing individual and social resources and in potentially buffering the effects of problematic outcomes. Lin, Cook, and Burt (2001) explicitly defined social capital as “resources embedded in a social structure which are accessed and/or mobilized in positive actions” (p. 12) and comprised of three main elements: resources embedded in a social structure, individual access to those resources, and utilization of those resource for purposeful action. Youth connectedness to positive relationships and useful resources, or social capital, can enhance relative plasticity “through strengthening the linkages between developing individuals and their changing family and community settings” (Lerner et al., 2002). Furthermore, social capital is not a static resource; it must be continually cultivated and nurtured (Loeffler et al., 2004).

Congruent with PYD scholars, social capital theorists and researchers in the field of youth studies argue that there is a positive linear relationship between social capital and
outcomes (Bassani, 2007; Thorlindsson, Valdimarsdottir, & Jonsson, 2012; Ungar, 2011). For example, Thorlindsson and colleagues (2012) found that the presence of social capital partially moderates the association between community characteristics and smoking behavior among adolescents (n=6,818). For a young person who has experienced resource-poor environments (like many group home youth), increased social capital can help to overcome the limitations of those environments and gain access to opportunities that improve his or her position or circumstance. Youth experiencing multiple or cumulative risks, particularly contextual risks (e.g. low SES, healthcare disparities, neighborhood crime, inequitable education, etc.), are less likely to possess and reap the benefits of social capital similar to those of mainstream youth (Stanton-Salazar, 2011; Laser & Leibowitz, 2009). Individuals may possess some social capital, but if it is not perceive it as meaningful, it lies dormant. Therefore, the knowledge of the development of individual social capital is pertinent to enhance the ability of a youth to function at their full potential (Laser & Leibowitz, 2009).

There is little evidence that group homes intentionally emphasize or capitalize upon social capital to facilitate youths’ transition to adulthood and improve post-placement outcomes. Many youth exit or “age out” of group homes with few supportive ties and useful resources to sustain positive gains or successfully transition to independent, adult living. Understanding the utility of social capital includes the analysis of how prosocial relationships may positively benefit youth in group home settings and improve youths’ post-discharge outcomes. Within care, youth may be vehicles of positive change in building new social capital and contributing to the shape of the group home environment, a process that seemingly contradicts perspectives of negative peer contagion. Outside of care, youth as social actors are key resources for the betterment of their own futures (Ballet & Biggeri, 2008).
Relationships and Resources. Ungar (2011) describes social capital as informal relationships and formal service provision. Relational exchanges with group home staff are an integral part of their daily lives and development. In general, social capital ties, or relationships, take three forms: bonding, bridging, and linking (Lin, 2000). Bonding social capital refers to ties between people of similar circumstances (e.g. family members, friends, or neighbors). Bridging social capital describes distant ties between people of similar circumstances (e.g. acquaintances, classmates, and co-workers). Linking social capital encompasses ties between people of dissimilar circumstance (e.g. those outside the community) (Lin, 2000). Program and policy-makers often develop bridging and linking social capital in a pragmatic approach to addressing socioeconomic-based problems (static risk) of youth (Bassani, 2007). However, there is little empirical data that speaks to efforts to bolster bonding social capital among like individuals, which would most likely occur within a shared sociocultural environment. It is believed that in the context of group homes, all three forms of social capital are present and accessible, though fluid. Even if a child is no longer in the legal and physical custody of their natural family, the caretakers and youth within the group home may act as surrogate family for which bonding social capital may be established and nurtured. “For adolescents living in residential foster care homes having good models may be of critical importance because normally the characteristics of foster care residential homes turn out to be unfavorable for the adolescents’ development” (Aguilar-Vafaie et al., 2011, p. 2).

SCT proposes that embedded resources associated with social ties within networks enhance the outcomes of actions. Social ties facilitate the (1) certification of social credentials, (2) exertion of influence, (3) flow of information, and (4) reinforcement of intrinsic resources (e.g. health) (Lin, Burt, & Cook, 2001). Within group home settings, embedded resources are
cultivated among youth’s interactions with staff/caretakers and peers. For example, a youth (actor) that deems a particular group home staff member (agent) as part of his/her social network may approach the agent about matters of sexual behavior and health. The fact that the actor chose a particular agent to discuss the sensitive topic with, may be evidence that the agent possesses a resource (e.g. emotional safety, viable information) that is of added value to the actor. Their communication exchange serves to exert influence on the agent as a person that plays a critical role in the actor’s development. The specific dialogue that ensues is the information flow may positively impact the actor’s developmental processes (e.g. sexual identity development). Such social relations are expected to reinforce one’s sense of identity and recognition (Lin, Cook, & Burt, 2001). Therefore, the youth may find that the interaction with the staff member and the information shared are both resources, not only for matters related to the topic of sexual behavior and health, but also psychosocial affirmation and emotional gratification. All four of these aspects of embedded resources – certification of social credentials, exertion of influence, flow of information, and reinforcement of intrinsic resources – help to explain why social capital may be an integral part of youth development within the context of group home care.

It is believed that all three forms of social capital ties, or relationships, (bonding, bridging, and linking) serve as conduits for youth’s receipt of embedded resources in congregate care. Therefore, in the complex context of group homes, SCT is viewed as a theory that may explain the power of relationships and resources in affecting change among a particularly vulnerable group. Social capital found within group home settings are the relationships, particularly staff, and resources (programs and services) that aid in the promotion of positive outcomes. Youth who exit group care and experience positive outcomes and healthy adaptation to their environment despite prior exposure to adversity are said to be resilient (Aguilar-Vafaie et al.,
However, resilience is an individual characteristic and does not fully take into account the investments made from others within the system, or specifically the group home context. Group home staff members are key to the investments made in youth who show a positive trajectory upon discharge.

**Fostering Positive Youth Development in Group Home Care**

“Both theory and research suggest that high quality youth development programs are a strong contextual asset for promoting positive outcomes in the lives of diverse youth” (Mueller et al., 2011, p. 1115). PYD scholars, Roth and Brooks-Gunn (2003), concluded that youth development programs, irrespective of the modality in which they are delivered, “seek to enhance not only adolescents’ skills, but also their confidence in themselves and their future, their character, and their connections to other people and institutions by creating environments, both at and away from the program, where youth can feel supported and empowered” (p. 180). PYD program models emphasize that the fundamental process of human development involves mutually-influential relations between that developing individual and the multiple contexts or domains (e.g. family, peer/social, school) in which he or she grows (Mueller et al., 2011). The congregate care design and activity of group homes make them multi-domain settings in which positive development may occur because they simultaneously provide surrogate families, peer/social groups, and learning environments. While PYD interventions are sensitive to the context in which they are delivered, there is no empirically supported PYD model for the institutional context of residential group home care. Given that group homes are the context for this study, it is important to explore program models that are supportive of positive outcomes and congruent with the PYD framework.

Few evidence-driven program models for group home care exist. No known group home
models explicitly link the PYD framework with youth outcomes. James (2011) conducted a comprehensive, systematic review of outcome studies using group home models. She classified each based upon clinical or empirical support, documentation, acceptance within the field, and potential for harm. Of them, Positive Peer Culture (PPC) (Vorrath & Brendtro, 1985), Sanctuary Model (Rivard, 2004), Stop-Gap Model (McCurdy & McIntyre, 2004), Re-ED (Hobbs, 1996), and Teaching Family Model (TFM) (Wolf et al., 1976; Blasé, Fixsen, Freeborn, & Jaeger, 1989) were studied for effectiveness. While stating the difficulty of comparing the five models to each other, James reported that all targeted at-risk youth characteristic of group home populations and were applicable for short-term stays ranging from three to twelve months.

**Programs that Foster Positive Youth Development**

Though a program may not have PYD in its title or be explicitly mentioned in its description, a PYD program is one that includes protocols and practices deliberately incorporated to foster youths’ healthy growth in their transition toward adulthood. Roth and Brooks-Gunn (2003) identified and investigated 48 PYD programs to determine what, how, and why some programs develop youth. The researchers mapped the defining principles of youth development to practice by looking at which elements are present in successful programs, specifically to examine relationships between these elements and program outcomes. Roth and Brooks-Gunn (2003) focused on three defining program characteristics: goals, atmosphere, and activities. They posited that program atmosphere resembles that in a caring family, where knowledgeable and supportive adults empower adolescents to develop their competencies. PYD programs create physically and psychologically safe places with a strong sense of membership, commitment, explicit rules and responsibilities, and expectations for adolescents’ success. Such an atmosphere is fostered in TFM group homes to be discussed subsequently in this chapter.
The Teaching Family Model

Cited as being “one of the best disseminated programs in child welfare history” (Barth, et al., 2011), the TFM closely resembles a PYD program. The Teach Family Association (TFA) developed the TFM as a multi-level approach to treatment and care for children and youth in congregate care settings (Wolf et al., 1995; Wolf et al., 1976). The TFM stands out in terms of positive outcomes (Barth, Greeson, Zlotnik, & Chintapalli, 2011; James, 2011). Lee and Thompson (2008) cited TFM as a noteworthy, largely implemented exception to other group home models. Using an observational research design, Lee and Thompson (2008) compared delinquency and adjustment outcomes in treatment foster care (n = 112) and family-style group care (n = 716) in six eastern and Midwestern geographic regions across the United States. They found youth in group homes using TFM were more likely to be favorably discharged and reunified with a kin, and less likely to experience subsequent formal placement compared to youth in treatment foster care. Their study supported the viability of group home environments when using the TFM standardized model of care (Lee & Thompson, 2008).

TFM group homes typically consist of live-in “teaching parents” who provide consistent care and supervision and nurturing relationships for approximately 6–8 youth. The emphasis of TFM is maintaining a family-like environment through relationship-building, youth self-government, social skills development, and positive reinforcement of socially desirable behaviors (Lee & Barth, 2011; Lee & Thompson, 2009; The Teaching Family Association, 2013). These TFM practice elements guide, which structured group home activities are designed and incorporated to promote positive change among its youth recipients (Lee & Barth, 2011). The TFM is congruent with PYD program models in that the TFM similarly acknowledges that with maturation, youth are expected to be more adept at self-management, to be more personally
responsible, and to participate more in society (Bowers et al., 2010). Therefore, PYD elements congruent with TFM are explored in this study.

Youth Outcomes

Living Environment, School Involvement, and Employment

Of the many outcomes that provide information about a youth’s adjustment upon transition out of group home care, type of post-discharge living environment, school involvement, and employment are commonly used indicators. As previously stated, many challenges stem from the lack of a consolidated tracking system for youth who exit group home care. Focusing on foster youth, the CWLA (2009) estimated that 20,000 young people transition from, "age out" of, the U.S. foster care system. Many are only 18 years old and still need support and services. Several foster care alumni studies show that without a lifelong connection to a caring adult, these older adolescents/young adults are often left vulnerable to a host of adverse circumstances: only 54% earn a diploma; up to 51% are unemployed; and approximately 25% experience at least one night of homelessness.

Not completing high school, obtaining work, or securing housing has serious consequences for troubled youth and is a special risk for youth in out-of-home settings (Ringle et al., 2012). Upon comparing outcome variables among three types of residential settings (locked intensive, staff-secure, and TFM group home) 12 months post-discharge, Ringle and colleagues’ (2012) found that youth were significantly more likely to reside in a “homelike” setting (89% compared to 48% from locked-intensive and 65% from a staff-secure) and also more likely to be enrolled in school or graduated compared to youth discharged from a more restrictive, residential setting. The finding that those who departed TFM homes were more likely to live at home or in a home-like setting 12 months post-discharge suggests that these youth may have been better
prepared to return to a normative living environment.

**Prosocial Behavior and Extracurricular Activity**

A potential conclusion to be drawn from this study is that adaptation to environments outside of group care is a marker for (or outcome of) PYD. It may be indicative of a carry over effect from positive investments made in group care that sustain upon discharge. Engagement in prosocial, extracurricular (at school or in the community) activities as well as the absence of delinquent and/or criminal behavior constitutes a positive outcome for youth both upon exit from group home care and upon maturation to healthy, productive adult living. For example, in their study of three types of residential settings, Ringle and colleagues’ (2012) found that youth exiting TFM group homes were less likely to be arrested (23% compared to 28% from locked secure and 40% from a staff-secure) than youth from more restrictive settings. Even still, this range (23-40%) of arrest rates is well above the 6.3% national average for all adolescents (Office of Juvenile Justice & Delinquency Prevention, 2009), but clearly lower than the 55% for juvenile justice youth (Snyder & Sickmund, 2006), who are a closer behavioral match to the youth in the study sample (Ringle et al., 2012). What these findings may indicate is that when positive investments, like those from structured group home care, are made in troubled youth, then problem behavior may be curbed. However, as previously discussed in the explication of PYD, the absence (or reduction) of problem behavior is not indicative of positive development. Thus, what cannot be gleaned from this study are what, if any, prosocial activities do these youth engage in that may limit their exposure and/or desire to engage in delinquent and/or criminal activity. Therefore, in this study, the presence of prosocial engagement is examined as a pertinent outcome for positive development and outcomes among group home youth.
Change in Psychosocial Problem Severity

Psychosocial health is a commonly studied outcome for at risk youth (Bongers et al., 2004; Nagin & Tremblay, 1999; Hankin, 2009). Psychosocial health is a complex concept that includes psychological, behavioral, and social problems and adaptive functioning and differs based upon a youth’s individual characteristics, social and familial supports, and environmental exposures. Psychosocial health is linked to a myriad of other outcomes, to include employment (Lenz-Rashid, 2006; Tandon et al., 2008), education (Berlin, Binnerljung, & Hjern), physical health (Jee et al., 2011), and delinquency (Dembo et al., 2012; Loeber et al., 2008). Psychosocial health is a critical factor to explore among trouble youth in group home care. Researchers concerned with group home care and youth outcomes have examined psychosocial health as it relates to mental health problems (Leslie et al., 2004), externalizing and/or internalizing behaviors (Lee & Thompson, 2009), and interpersonal challenges (Moses, 2010) among youth. Therefore, change psychosocial problem severity is a construct included in this study due to the potential relationship it has with other aforementioned youth outcomes.

Conclusion

The scant research on group home care includes few studies that examine positive youth outcomes post-discharge. Based upon her extensive systematic review the literature, James (2011) argued that “the outcome literature on group care is scant, and current knowledge about its effect on targeted outcomes is mostly based on studies with small non-representative samples, and weak study designs, lacking control groups and standardized measures” (p. 308). Consistent standards for reporting and describing group care programs do not exist, which makes it virtually impossible to refine and identify the common elements of effective practice. The relationship between group care activities and outcomes is one of several knowledge gaps that result from
poorly descriptive information about the components of group care treatment (Lee & Barth, 2011). “Reporting group care program characteristics in a standardized and comprehensive way would allow a more nuanced understanding of group care practice and effectiveness to emerge” (Lee & Barth, 2011, p. 256).

Furthermore, no published research to date links group home youth experiences to positive outcomes based on a formal theoretical framework. This study uses the Positive Youth Development (PYD) framework and Social Capital Theory (SCT) to identify what concepts are relevant to the study of group home youth and to better understand what yields positive outcomes. As a multi-domain context, group homes can provide healthy surrogate families, peer groups, social networks, and learning environments for many youth, who may not otherwise experience them. The PYD framework considers how core functions (i.e. competence, confidence, and connection) that put youth on a positive trajectory toward a healthy, productive adulthood develop across multiple domains. Social capital is also a contextually-bound concept that can help explain how the relationships and resources embedded in group home care can positively benefit youths’ experiences, functioning, and developmental processes during and post-care. The literature reviewed in this chapter suggests that demographics (i.e. age, sex, and race) and background factors (e.g. custody status, placement history, length of stay in current group home, and mental health need) may influence youths’ outcomes upon exiting group home care. However, these factors have not been explicitly studied when positive youth development constructs (e.g. competence, confidence, and connection) and social capital are operationalized and analyzed as variables with a potentially additive effect on outcomes in a conceptual model. Therefore, this study analyzes relationships among youths’ demographics and background factors, presence of positive youth development factors and social capital, and individual positive
outcomes in an overall model that seeks to predict what yields positive outcomes for youth in group home care. The following chapter details the methodology developed to achieve this goal.
CHAPTER III: METHODS

Introduction

This study is a secondary data analysis of the What Affects Outcomes in Group Homes for Youth study (henceforth referred to as the primary study). This dataset was chosen because it is congruent with the researcher’s interest in positive youth development (PYD) strategies and youths’ exposure and utilization of social capital. In close consultation with the Principal Investigator (PI), Dr. Elizabeth Farmer, this researcher learned the background, purpose, and intent of the primary study as well as the nuances of the study’s design, procedures, measures, and variables. With this information, this researcher developed research questions and a meaningful project that may potentially enhance understanding of the flexibility and utility of the PYD framework and social capital theory among high-risk youth, particularly those cared for in group home settings.

Secondary Data Analysis

Secondary data analysis includes analyses of data that were collected by another researcher for a separate purpose. It is a method that can be useful in addressing “high impact” questions that may otherwise be too time intensive and/or cost prohibitive to address otherwise (Smith et al., 2011). The same basic research rules apply to secondary analysis as in primary analysis; there should be no expected differences in methodological soundness and rigor. However, it is important to note that there are some advantages and disadvantages to conducting secondary data analyses over collecting and analyzing primary data. In this case, advantages include access to a large sample, relevant measures, longitudinal data, and a “bird’s eye view” of group home youth population trends that a future primary data study may further address. Disadvantages are that the primary study does not consist of a sample, measures, and variables.
that precisely fit with the initial researcher questions. While the auspices of the primary study are consistent with this researcher’s topic and overarching study question, the literature review deliberately focused on the PYD framework and social capital theory and was limited to adolescent youth only.

Furthermore, the formulation of research questions must be flexible so that they are actually answerable within the parameters of the primary study (Smith et al., 2011). The type and scope of one’s research questions typically dictates the method chosen to answer the question (Alexander, 2006). The purpose of this secondary data analysis is to answer the overarching research question, *what contributes to positive outcomes among youth in group home care?* While this study question mirrors that of the primary study, the current researcher’s aim at theory testing includes a sharply different theoretical lens through which to organize, analyze, and understand the data.

**Functionalist Theory Testing**

After developing a sound research question, formal inquiry is often guided by the set of paradigmatic assumptions that order the researcher’s worldview in the context of the experiences. These assumptions, or *paradigm*, are organizing principles governing perceptions (e.g. beliefs, values, and techniques) that describe what exists, where to look, and what the researcher can expect to discover (Burrell & Morgan, 1979). Functionalist paradigmatic assumptions lend to this researcher’s search for certainty or clarity and the reduction of conflict among competing views and values. Functionalist methodologies are rational and orderly in their approach and are typically positivistic – often quantitative and deductive and developed to test a set of theories (O’Connor, 2011; Payne, 2005). New theory generation is seldom the goal. Instead, theory testing, or refinement, begins with an extensive review of relevant literature. This study is a
quantitative, secondary data analysis of a quasi-experimental study congruent with the tenants of functionalism.

**Design**

Before conducting any secondary data analysis, it was critical to gain significant familiarity with the primary study’s purpose, design, procedures, measures, and variables of the primary study. The purpose of the primary study was to examine what factors increase positive outcomes and reduce problematic outcomes among youth in group home care. Using longitudinal data, the primary study was designed to examine: (1) levels of change and presence of subgroups of youth who show positive or negative trajectories; (2) effects of organizational factors and core processes on outcomes; (3) rates and factors related to iatrogenic effects and whether subgroups exist that are especially vulnerable to such effects; and (4) whether adherence to a promising group home model of care, the Teaching Family Model (TFM), impacts core processes to produce positive outcomes for youth. The intent of the primary study was to provide rapid, useable knowledge to the field about what makes group homes most effective (Farmer, 2006).

**Sample**

**Group Home Context**

Group homes, in general, include residential settings that employ a plethora of treatment approaches, organizational strategies, and standards of care for a wide range of children and youth (James, 2011; Lee & Barth, 2011). Data for the primary study were collected from group homes throughout North Carolina. Each U. S. state has somewhat different licensing standards and requirements for group home organization and child placement criteria. Therefore, holding the state constant helped to control for some external factors (e.g. Medicaid rules/payments,
state-level licensing requirements) and guard against differential period effects that might have occurred with a multi-state sample (Farmer, 2006). Given concerns about the quality of group homes in the field, the researchers from the primary study determined that a random sample of group homes would likely consist of eclectic, poor quality homes and results from such a sample would be unlikely to advance knowledge in the field about group home effects. Therefore, the primary researchers oversampled group homes that adhered to the Teaching Family Model (TF homes) as well as a sample that does not specifically adhere to TFM (non-TF homes). To increase generalizability, the primary researchers sought to ensure that TF homes and non-TF homes were representative of their type of group home and to assess differences and effects. The sample included group homes that were unlocked (level 1, 2, or 3 facilities according to NC licensing standards), licensed by NC Department of Health and Human Services’ (NC DHHS) Division of Social Services (DSS) and/or Mental Health, and designed to serve youth (up to 10 per home) with moderate levels of psychological and behavioral problems. This sampling strategy included neither “child care institutions” designed primarily to provide living quarters for youth with unstable homes or caregivers nor large residential treatment settings.

An additional layer of distinction in the group home sample is the level of care provided. In general, North Carolina Department of Health and Human Services (NC DHHS) strives to serve children and adolescents in “the least restrictive, most inclusive settings with maximum involvement of parents and other significant care givers” (Cansler, 2009, p. 2). As such, NC DHHS Department of Social Services and Division of Health Service Regulation licenses and distinguishes residential care facilities by four levels based upon differential needs of children. Level 1 describes family-style homes for children with low to moderate behavioral health needs. Level 2 facilities are supervised, family or program-based placement settings for children with
moderate to high needs who do not require awake, overnight staff supervision. Level 3 facilities are program-based homes that cater to high-needs or high-risk children who require supervision from awake staff overnight. Level 1, 2, and 3 facilities are not locked to restrict the movement of youth residents. Finally, Level 4 facilities are structured to support and treat children with severe problems and needs in a physically secure, locked environment. All are designed to provide a structured, therapeutic and supervised environment to improve the level of functioning for recipients (NC DHHS, 2012). Only levels 1, 2, and 3 are included in the sampling frame for the current study.

Integration of the Teaching Family Model

The primary researchers focused on group homes that followed a specific model of group home care, the TFM, as well as those that did not. The Teaching Family Association (TFA) seeks to “ensure the quality of care provided by professionals who actively pursue the goals of humane, effective, individualized treatment for children, families, and dependent adults using the common framework of the Teaching Family Model for treatment and support” and “is the only entity in the U.S. that defines and implements standards and review procedures related to the actual performance and quality of treatment and service delivery systems at all organizational levels” (The TFA, 2013). The TFA has specific certification and evaluation standards outside of those mandated by state regulatory or licensing agencies. The TFA asserts that the care providers and clinical practitioners they choose to work among TF homes are carefully selected based on their ability to provide individualized treatment in a positive, affirming manner. TF group home staff receives extensive training, support, consultation, supervision, and evaluation. Additionally, the primary researchers chose the TFM for quasi-experimental study because it was deemed the most empirically supported model of group home treatment and shares key
elements with other evidence-based treatments in the field (Farmer, 2013; James, 2011; Lee et al., 2011; Wolf et al., 1976).

**Group Home Recruitment and Selection**

Farmer and colleagues selected group homes for the study based upon geographic location and the homes’ affiliation with the TFA. The researchers identified seven agencies in NC that were linked to the TFA. The seven TF agencies supported 30 group homes that were certified, staffed, and monitored to varying degrees by the TFA. In addition, primary researchers identified approximately 750 non-TF homes statewide that were licensed by the NC DSS and/or Division of Mental Health. Selection of non-TF homes was based upon a six-step process: (1) non-TF homes were coded by geographic catchment area; (2) then mapped along with TF homes; (3) non-TF homes found to be in the same geographic catchment area were included in the list of eligible agencies; (4) existing data were used to create simple descriptions (e.g. number of beds, age range of youth served, and ownership) of TF and non-TF homes; (5) homes were excluded that primarily served adults, met criteria for a residential treatment facility (more than 10 beds), or were not affiliated with a servicing agency; and finally (6) one non-TFA agency was randomly selected for each TFA agency operating in the same catchment area. It was determined that while there were many commonalities between TF homes and non-TF homes, there were substantial differences among all group homes (see Table 1). Nearly all non-TFA affiliated agencies were described as utilizing an eclectic approach and reported multiple models of care or treatment approaches being used simultaneously (e.g. Treatment Crisis Intervention, Positive Peer Culture, behavior modification, relationship enhancement, Transitions Model, and individualized treatment planning). The final sample consisted of 50 group homes from 14 programs with a rich range of organizational youth characteristics to study and analyze.
Youth Recruitment and Selection

A consistent gap found among existing group home literature is a lack of explicit descriptions of youth served. Many studies publish minimal details about its youth samples – age, race, gender, and some psychosocial characteristics (Breland-Noble et al., 2005; Huefner & Ringle, 2012; Lee & Barth, 2011; Lee & Thompson, 2008; Lee et al., 2010; Ringle et al., 2012; Strack et al., 2007). A strength of the primary study is the wealth of descriptive information provided about each youth participant. In addition to basic demographics (i.e. age, race, and sex), characteristics compiled from the primary study also include youths’ average length of stay, psychiatric diagnosis, custody status, maltreatment history, preadmission placement, lifetime placement history, severity of symptoms at admission, and assessment of a wide range of skills, strengths, and problems at the start of the study. The youth sample included all youth who resided in and/or entered each participating group home during a two-year recruitment period. All youth in group home care during the study period were eligible. Ultimately, 2-10 youth were included from each group home for a total sample of 554 youth aged 6 to 20 years. The majority of these participants were adolescents. Because adolescence is the period of focus in the present study, only youth aged 14 to 17 years (n = 400) are included in the sample for secondary analysis. Finally, unlike many existing studies, the primary and present studies place emphasis on youths’ responses to and perceptions of group home care. It was deemed essential in the primary study to gather data from direct observation as well as interviews with youth residing in group homes.

Data Collection

Organizational Data

Using a systematic process for data collection is integral to establishing and maintaining methodological integrity. Upon initiating the study, the researchers met with and established
good working relationships with group home key staff, particularly administrators, and front-line staff. Interviews with each group home’s administrator and key staff members took place sequentially over a nine-month period. First, the PI met with the group home administrators and/or administrative team to solicit input on how to best implement the research protocol within their home(s), to learn who the stakeholders were, and to discuss each home’s organizational structure, function, and staffing. Second, the research team met with each group home’s front-line staff members to familiarize them with the study’s procedures, obtain their inputs and buy-in about how to best work with the children and youth, and to answer their questions about the process. Prior to the formal data collection phase, the researchers participated in an intensive, week-long training, which included standards for interviewing and following up on ambiguous or missing data. These efforts made by the PI and research team facilitated high participation rates: all selected homes participated, nearly 90% of eligible youth enrolled, data were collected on nearly 100% of enrolled youth while they were in the home, and approximately 70% were followed for post-discharge interviews. Overall, the study had an approximate 85 percent response rate from all participants (i.e. group home staff, youth and post-discharge care providers) combined (Farmer et al., 2006).

Organizational data encompass multiple domains of each group home – strategy, structure, climate, and culture. Group home strategy describes approaches used to meet organizational goals, specifically congruence with the TFM and systematic training and support for staff members. Based upon social learning theory (Jones & Timbers, 2003), the TFM was found to be the most empirically supported group home model and deemed “promising” in a systematic review of five, major evidence-based group home models (James, 2011). Researchers of the primary study assessed the use of the TFM in two ways: (1) whether or not each group
home was affiliated with the TFA (The TFA, 2013) and (2) level of conformity to TFM standards based upon direct observations and staff and youth interviews. Direct observation is a primary method the TFA assesses each group home’s conformity to TFM on a variety of dimensions (i.e. teaching skills, family-style living, self-government, motivational system) and to provide continuous quality control and improvement (Wolf et al, 1995).

The researchers from the primary study initially consulted with established TFA leaders to “genericize” the TFA measure to more adequately capture the core domains, regardless of the model being employed by the home. They also completed training to ensure that researchers objectively observed and rated each group home’s adherence to these core domains (i.e. youth skills, staff teaching skills, structure and systems, and home environment).

“Whole home” observations of each group home were completed upon the start of the study. Two research team members spent an afternoon and evening in each group home and observed and coded a structured set of items in accordance with modified TFA guidelines. Documentation of observations and informal interactions focused on four general, core domains that provided evidence of group home structure and decision-making protocols: (1) youth skills, (2) staff teaching skills, (3) structure and systems, and (4) home environment. Secondary data analyses focused on the latter three domains (see Table 1). Observers were trained how to conduct observations in an objective, pleasant, and non-intrusive manner. Concerted efforts were made not to cause an unnecessary disturbance or burden on any group home observed, which may have compromised the researchers’ role and/or effectiveness.

**Group Home Staff Data**

Interviews with staff and youth were conducted in-person at each group home. All group home administrators and staff signed an informed consent before participating in any interview.
A single staff member was designated as the primary respondent for each home based upon who was deemed to spend the most time with and know the youth best. Interviews were conducted every 4 months in each participating home across the 2-year study period. Each interview lasted approximately 90 minutes with each staff member. Interviews covered a range of topics, including general information about the home as well as detailed information about each of the youth who currently resided in the home.

**Individual Youth Data**

Conducting interviews with youth, particularly youth with significant psychological, social, cognitive, and/or behavioral problems, is delicate. Great care was taken to ensure that researchers conducting interviews were competent to handle potential interpersonal challenges or behavioral reactions the interview questions or process. The researchers of the primary study were formally trained on how to obtain as much usable information as possible in a safe and respectful manner and how to deal with potential difficulties in conducting interviews with youth. The interviewers were apt in deciding when it was necessary to terminate an interview and how to foster each youth’s sense of success upon completing the interview process. All interviews were conducted one-on-one and in a verbal, in-person format to guard against literacy challenges. Interviewers were trained to ensure that each individual understood each question asked and/or how to modify a question to enhance the interviewee’s understanding while maintaining the integrity of the data collected. For each home, parent/guardian consent was obtained prior to inviting a youth to participate. Youth then provided assent before beginning their interview. As noted above, interviewers visited each home every four months. During this visit, individual in-person interviews were conducted with each participating youth for as long as the youth remained in the home. Post-discharge care providers were identified as a parent, relative, group
home staff, or other responsible adult who cares for each youth participant upon exiting a group home. The post-discharge interviews were completed via telephone with these post-discharge care providers (or directly with youth participants, who “aged out” of care during the post-discharge period and were living semi-independently or independently).

The most compelling aspect of the primary study is the extensive data obtained on and directly from youth in group home care. Key dimensions assessed and included in secondary analyses are: 1) child characteristics, 2) child-adult relationships, 3) psychological and behavioral problems and functioning, and 4) post discharge outcomes. Data on peer relationships and use of additional services were also collected but were not included in secondary analyses. Child characteristics were obtained from multiple sources at the start of the study to gather the most accurate information – group home staff, youth, preadmission caregivers, and case records reviews. Information gathered on each child included his or her demographics, referral source, group home admission date, placement history prior to current group home placement, and contact with family. While a wide range of items and measures were used in the youth interview process, only select items/scales that captured concepts central to the conceptual framework for this project were included in analyses (see Table 1).

**Instrumentation & Measures**

Because this study is secondary data analysis, no new instruments were introduced to gather additional or comparative data. The primary study included a battery of instruments to measure desired factors – child and youth, staff, and organizational. Much of, but not all, the data obtained from these instruments were utilized in the present study.
Table 1

*Listing of Variables*

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
</tr>
<tr>
<td>1. Age (14 – 17 years)</td>
<td>Continuous</td>
</tr>
<tr>
<td>2. Sex (boy, girl)</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>3. White race</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>4. Black race</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>5. Other minority race</td>
<td>Dichotomous</td>
</tr>
<tr>
<td><strong>Background Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>6. DSS custody status</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>7. Prior out-of-home placement</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>8. Initial length of stay (at first interview)</td>
<td>Continuous</td>
</tr>
<tr>
<td>9. Total length of stay (at last interview)</td>
<td>Continuous</td>
</tr>
<tr>
<td>10. Psychosocial problem severity (imputed pre-admission SDQ score)</td>
<td>Continuous</td>
</tr>
<tr>
<td>11. Prosocial scale score (imputed pre-admission SDQ score)</td>
<td>Continuous</td>
</tr>
<tr>
<td><strong>Other Descriptive Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>1. Foster care</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>2. Group home/residential care</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>3. Psychiatric hospitalization</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>4. Criminal detention/incarceration</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>5. Abuse history</td>
<td>Dichotomous</td>
</tr>
<tr>
<td><strong>Positive Youth Development (PYD) and Social Capital Variables</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PYD Factors</strong></td>
<td></td>
</tr>
<tr>
<td>1. Competence (ICS score – staff administered)</td>
<td>Continuous</td>
</tr>
<tr>
<td>2. Confidence (ICS score – youth administered)</td>
<td>Continuous</td>
</tr>
<tr>
<td>3. Confidence composite variable (7 scaled items)</td>
<td>Continuous</td>
</tr>
<tr>
<td>4. Connection composite variable (3 scaled items)</td>
<td>Continuous</td>
</tr>
<tr>
<td><strong>Social Capital</strong></td>
<td></td>
</tr>
<tr>
<td>Group home staff relationships</td>
<td></td>
</tr>
<tr>
<td>5. Any activities with staff other than meals</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>6. Anyone looks out for you</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>7. TRQ score - youths’ perceptions of staff (first in-home interview)</td>
<td>Continuous</td>
</tr>
<tr>
<td>Group home resources/programming</td>
<td></td>
</tr>
<tr>
<td>8. Core domain 2: Staff teaching skills composite variable</td>
<td>Continuous</td>
</tr>
<tr>
<td>Refrains from use of ineffective responses</td>
<td></td>
</tr>
<tr>
<td>Recognizes youth appropriate behaviors</td>
<td></td>
</tr>
<tr>
<td>Recognizes opportunities for timely pre-teaching</td>
<td></td>
</tr>
<tr>
<td>Provides youth-centered rationales</td>
<td></td>
</tr>
<tr>
<td>Interjects praise</td>
<td></td>
</tr>
<tr>
<td>9. Core domain 3: Structure and systems composite variable</td>
<td>Continuous</td>
</tr>
<tr>
<td>Decision making</td>
<td></td>
</tr>
<tr>
<td>Issues important youths’ addressed</td>
<td></td>
</tr>
</tbody>
</table>
### Youths’ given choices, encouraged to express

<table>
<thead>
<tr>
<th>Core domain 4: home environment composite variable</th>
<th>Continuous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure to support healthy routines</td>
<td></td>
</tr>
<tr>
<td>Home-like</td>
<td></td>
</tr>
<tr>
<td>Pleasant youth interaction</td>
<td></td>
</tr>
<tr>
<td>Youth and staff interaction</td>
<td></td>
</tr>
<tr>
<td>Youth and staff meals</td>
<td></td>
</tr>
<tr>
<td>Access to age-appropriate material</td>
<td></td>
</tr>
</tbody>
</table>

### Group Home Descriptive Variables

<table>
<thead>
<tr>
<th>Group Home Descriptive Variables</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Program consistency</td>
<td>Continuous</td>
</tr>
<tr>
<td>12. Level of care (1, 2, 3)</td>
<td>Categorical</td>
</tr>
<tr>
<td>13. Program Model: TF home / non-TF home</td>
<td>Dichotomous</td>
</tr>
</tbody>
</table>

### Dependent Variables

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Living environment restriction</td>
<td>Categorical</td>
</tr>
<tr>
<td>2. School activity</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>3. Employment status (employed, unemployed)</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>4. Police involvement/arrest</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>5. Probation</td>
<td></td>
</tr>
<tr>
<td>6. Dangerous/illegal activity</td>
<td></td>
</tr>
<tr>
<td>7. Extracurricular activity – school</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>8. Extracurricular activity – community</td>
<td></td>
</tr>
<tr>
<td>9. Prosocial behavior change (from first to last in-home)</td>
<td>Continuous</td>
</tr>
<tr>
<td>10. Prosocial behavior change (post discharge)</td>
<td>(1 – 10)</td>
</tr>
<tr>
<td>11. SDQ change (from first to last in-home)</td>
<td>Continuous</td>
</tr>
<tr>
<td>12. SDQ change (post-discharge)</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

**Strengths and Difficulties Questionnaire.** Youth participants’ wellbeing while in group home care and upon discharge was key to the primary study. The presence and severity of psychological and behavioral problems during care were assessed using the *Strengths and Difficulties Questionnaire* (SDQ) (Goodman et al., 1998), a 25-item self-report, scale developed for adolescents ages 11-16 years, and the behavior checklist portion of the *Parent Daily Report* (PDR) (Chamberlain & Reid, 1987; 1991). SDQ responses are scaled along a numerical continuum and data were obtained at various points throughout the study. For secondary
analyses, three points of time were of interest: (1) at admission (independent variable), (2) last in-home interview, and (3) at 4 months post-discharge. It is important to note that SDQ scores were calculated for these three different points for secondary analyses because they may be indicative of an intervention (group home) effect and/or independent variables impacting dependent variables within the overall model. Change in SDQ scores between discharge and post-discharge is of particular importance because it is hypothesized that positive investments (PYD factors and social capital) made while a youth is in group home care will hold after they are discharged. Therefore, a consistent or positive change in SDQ score may indicate that positive change was maintained post-discharge.

**Interpersonal Competence Scales.** Interpersonal skills and functioning were measured using the *Interpersonal Competence* Scale (ICS) (Cairns et al., 1995), both the teacher/adult-report (ICS-T) and self-report (ICS-S) versions. The ICS consists of 18 items that assess youths’ social and behavioral characteristics across a range of domains (i.e. social, physical, behavioral, emotional, and academic). In some cases, there is modest only a relationship between child/youth self-ratings of social and behavioral characteristics and collateral assessment by a close adult. Collateral ratings tend to be more predictive of measurable, developmental outcomes (Cairns et al, 1995). Even still, assessment tools that allow self-ratings as well as adult ratings are useful in ascertaining the underlying dimensions of complex constructs. For purposes of secondary analyses, this researcher made an assumption that youths’ self-rating on the ICS would assess confidence and staff ratings using the ICS-T would assess competence, which are two, key Positive Youth Development (PYD) constructs. The rationale for using two different reporters for each construct is that youth may be better reporters of their own confidence on various dimensions, while an adult who knows the child well may provide a more
reliable raters of youths’ competence on the same dimensions. Developers of the ICS recommend that factor analyses be run to uncover the underlying structures of the data, as was conducted in the Cairns and colleagues (1995) study. It is particularly important that a factor analysis be conducted when utilized with a new population, such as youth in group homes.

Psychometric properties of the ICS were obtained primarily from a longitudinal study sample of 695 youth (364 girls and 331 boys) from a Southeastern state. The sample consisted of two cohorts, fourth grade (mean age 10.2 years) and seventh grade (mean age 13.4 years). The data from both cohorts were factor analyzed to determine whether an a priori grouping of items would be matched by empirically derived factors. Cairns and colleagues (1995) utilized both Principle Component Analysis (PCA) and Principle Axis Factoring (PAF) to analyze the data. Using a Minimum Eigen value of 1.0 and Varimax rotation, three distinct factors: (1) Popular (POP) representing “popular with boys”, “popular with girls”, and “has many friends”; (2) Aggressive (AGG) representing “argues”, “gets into trouble”, and “fights”; and (3) academic (ACA) representing “good at spelling” and “good at math” each loaded in nearly all of the 30 analyses irrespective of age and sex. Further, Cairns et al (1995) reported, “a LISREL measurement model indicated an excellent fit of the hypothesized items to these clusters” (p. 728). For example, the Goodness of Fit Index for the seventh grade sample was reported as 0.98 ($\chi^2 = 13.83$, df = 17, p = 0.67). Notably, the three AGG items significantly loaded ($\geq 0.40$) together as a distinct factor in 29 of the 30 analyses (97%). Two additional factors, affectionate (AFF) (including “smiles” and “friendly”) and Olympian (OLY) (including “good at sports”, “good looking”, and “wins”) also emerged but were not consistent across cohorts or sexes. The findings from this study show that the psychometric properties (e.g. internal structure, reliability, and long-term stability) the ICS are sound (Cairns et al., 1995). Additional work with this
measure in recent years (Rodkin, Farmer, Pearl, & VanAcker, 2000; Farmer, Estell, et al., 2007) suggest a fairly consistent set of factors across age groups and cohorts of school-based samples).

**Trustworthy Relationships Questionnaire (TRQ).** The *Trustworthy Relationship Questionnaire* (TRQ) (Mustillo, Dorsey, & Farmer, 2005) was administered to youth and group home staff to assess their perceptions about youth-adult relationships. The TRQ is a scaled measure that asks youth to rate how often an identified staff member expresses positive regard or affirming response toward them. As developed by Vance and Sanchez (1997), the child version of the TRQ consists of 16 items, and the adult version contains 18 items. The 18-item, adult version was used in the primary group home study. However, previous psychometric analyses have suggested that several items did not load well and have been excluded from more recent studies (Mustillo et al., 2005). Therefore, the primary researchers for the group home study utilized the 14-item version of the TRQ to ascertain youths’ impressions of their relationships with group home staff members. For this secondary data analysis, a continuous variable using mean TRQ scores was created as a measure of youths’ perceptions of their relationships group home staff.

**Restrictiveness of Living Environments Scale (ROLES).** The *Restrictiveness of Living Environment Scale* (ROLES) (Hawkins, Almeida, Fabry, & Reitz, 1992) is an interval scale designed to measure the level of living restriction for children and youth with serious emotional or behavioral disturbance. The developers argued that three major aspects of a living environment influence its restrictiveness: (a) the physical facility, appearance, and layout; (b) the rules and requirements that affect free movement, activity, or choice; and (c) the voluntariness with which children and youth enter or leave the setting permanently. These three components individually and collectively affect other living and interpersonal conditions (e.g. contact with
family and friends, social activity and engagement). In the scale’s development, data were obtained from 159 childcare professionals who rated the restrictiveness of 27 environments. The results yielded a spectrum of living environments and associated level of restriction. Living independently or semi-independently or with a parent, relative or other guardian was rated as the least restrictive environmental condition. Placement in a correctional facility or psychiatric hospital was rated the most restrictive. Foster home and group home care were rated at the midrange (Hawkins et al., 1992; Rautkis et al., 2009). The ROLES was administered to the primary study’s participants upon discharge at four-month intervals. Data from the first post-discharge interview (at four months only) were used to assess youths’ transition from the group home to another environment, a potentially positive youth outcome.

**Data Management**

Interviewers from the primary study entered data from interviews and observations using laptop computers. After which, it was cleaned and coded, it was saved in SAS software and uploaded onto a secure data management website supported by the Pennsylvania State University. The PI for the study granted this researcher unlimited access to the de-identified data for purposes of this project. All secondary analyses were conducted using SAS software.

**Protection of Human Subjects**

Protection of human subjects is of utmost concern in social science research, and efforts should be made to identify and minimize risks for harm to any participant. The primary study utilized established research procedures from reputable, empirical studies. The measures and approaches employed were based upon well-established, safe protocols for data collection. The research team was trained and experienced in collecting data and working with community-based residential treatment settings prior to executing this study. Risk of harm to participants was
deemed minimal – primarily discomfort with the interview process or questions. The researchers took steps to minimize these risks through training and supervision and assurance of each participant’s informed consent and confidentiality.

**Informed Consent**

Informed consent was obtained from all group home staff members for their own participation in interviews. Informed consent was also obtained from all participating youths’ parent/legal guardian. Youth were invited to participate only after their parent/guardian gave consent. All participating youth signed an assent form for their own participation. All of this was done in accordance with the Duke University IRB, the IRB of record for this study.

All participants (i.e. group home staff, care providers, and youth) were informed of the study’s risks and benefits and consented or assented in writing. Data collection from staff interviews was delineated between two roles – caregiver respondent (for youth data) and group home staff member (for organizational data). This allowed staff to consent to one or both parts of the staff interview process. Data collection from interviews and from observations were delineated as separate sections of the informed consent so that legal guardians could choose to allow their child to participate in one or both parts of the study. Youth were also given the option to enroll (assent) in one or both parts of the study.

**Remuneration**

Though the primary study helped to advance knowledge in the field, there were not direct benefits for participating group home staff or youth. Group home staff members were remunerated for their time and participation with $50 per in-person interview. Youth were given $10 or an item valued at $10 (e.g. ball cap, t-shirt, or other age-appropriate item) for each in-
person interview. Post-discharge caregivers were offered a $25 gift card for their participation in the interview process.

Confidentiality

The researchers took various steps (e.g. HIPAA waivers, signed assurance of confidentiality forms, federal certificate of confidentiality, and consent to release information forms) to protect the confidentiality of all participants. Interviewers were trained to ensure confidentiality during the interview process and to safeguard confidentiality of data after the interview was completed. All interviews were conducted in areas that provided privacy for the interviewer and respondent. Data were stored in a password protected electronic data repository. All hard copies of data and other study information was kept in locked cabinets within locked offices of key project staff. In publications, care is taken to not identify any individual programs or individuals.

Institutional Review Board

The primary study was reviewed and approved by the Institutional Review Board (IRB) at Duke University. Specified measures to protect all participants, youth and staff, were considered by the IRB and deemed acceptable. Data from the primary study were de-identified prior to receipt by this researcher. In accordance with Virginia Commonwealth University’s (VCU) IRB guidelines, further IRB review is not required if a secondary researcher cannot identify any human subjects from a primary study.

Research Questions

Not only do research questions guide a study’s methodology, they also dictate the constructs of interest, particularly in a functionalist inquiry. The overarching research question for the proposed secondary analysis study is: *what contributes to positive outcomes among youth*
in group home care? This question was addressed by examining two more specific questions:

(1) do group differences (e.g. age, race/ethnicity, and sex) impact positive outcomes? and (2) what group home factors influence youth outcomes? The goal of each of these questions is to extend understanding of group home practices, youths’ responses to those practices while in care, and youths’ post-discharge outcomes.

Variables

Predictors

Demographic data were collected in the primary study, which have bearing on the proposed secondary data analyses. Existing research on youth with group home care experiences indicate that age, sex, and race are the primary demographic variables of study (Lee & Thompson, 2008; Berzin, 2008). Data on youths’ age, sex, and race were collected in the primary study through administrative review and direct interview of staff and youth participants. Youth participants between the ages of 14 and 17 years were the focus of secondary analysis. As such, age is a continuous variable. The variable sex was simply dichotomized, boy (male) and girl (female). Based upon the literature, White youth are the dominant recipients of group home care, but Black youth are over-represented in group homes. The preponderance of research does not discuss other minority races, typically due to limited sample sizes and effect sizes. However, it is of interest in the proposed study to understand if there are differences or correlations between youth of other-minority races (i.e. Hispanic, Native American, mixed race) and individual youth outcomes. Therefore, the original categorical variable race was separated into three dichotomous variables White race, Black race, and other minority race. Each of these demographic variables aided in describing the sample as well as for making associations between/among variables to include in the overall, multivariate model.
Youths’ background characteristics are additional, individual-level variables that were included in the current study. The primary study collected a wealth of data on youths’ backgrounds. Those of interest for the proposed secondary analysis are: custody status (e.g. social services, parent, other relative, and other), out-of-home placement history, length of stay in current home, and psychosocial problem severity at indicated by the SDQ (immediately prior to group home admission).

As discussed in the preceding literature review, each of these variables has been found to have relevance in outcomes for group home youth. Custody status (at the time the youth entered the primary study) was dichotomized into DSS custody or not. Originally, out-of-home placement history was a variable that refers to the type of out-of-home placement each child had before admission to the focal group home (i.e. foster care, group home/residential care, psychiatric hospitalization, and correctional facility). For purposes of secondary analyses, out-of-home placement history was recoded to a dichotomous variable to indicate only if a youth had been in any out-of-home placement prior to the present group home stay.

Two continuous variables were created and used to describe youths’ length of stay in the group home: (1) initial length of stay – number of months each child resided in the group home prior to enrollment in the study and (2) total length of stay – total number of months each child resided in the group home (from placement to discharge). Finally, psychosocial problem severity (i.e. emotional, conduct, hyperactivity/inattention, and peer relationship) and prosocial behavior are continuous variables assessed using SDQ scores (Goodman et al., 1998; Youth in Mind, 2012).
Predictors with Potentially Additive Effects

Rather than a cause-effect relationship, a third variable can limit or enhance the effect of predictors on a criterion variable (Hayes & Matthes, 2009). Therefore, testing the additive effect of conceptually-relevant PYD and social capital variables is critical to understanding the totality of the regression models for this study. Based on the literature about what constitutes positive outcomes for youth in general and theories that explains how youth broker such positive outcomes, PYD and social capital variables were successively added to each analytical model. As discussed in the preceding literature review, PYD framework and social capital collectively provide a holistic, theoretical framework from which to extrapolate variables useful for the present study. Within the Five C’s Model of PYD, competence, confidence, and connection are key markers of adolescent development. In the proposed study, it is believed that the prosocial relationships and resources that comprise the construct social capital may be the conduits in which competence, confidence, and connection are developed and sustained within the context of group home care. However, the PYD and social capital literature do not specify if or how specific constructs should be used analytically with a group home youth sample. Therefore, these constructs were operationalized and systematically included into the analyses a posteriori.

Competence, Confidence, and Connection. Competence, confidence, and connection, among many other variables not explored in the proposed study, are believed to influence the impact of youths’ individual characteristics on their post-group home outcomes. Understanding youths’ competence helps to answer the question, how do others know how well a young person is doing within and/or beyond his or her environment? Competence, youths’ demonstration of capabilities within their environment, was operationalized using the ICS completed by group home staff. The ICS-T assesses interpersonal competence across multiple domains – social,
behavioral, emotional, and academic but excludes occupational/vocational.

Similarly, understanding youths’ perceived confidence helps to answer the question, how does a young person perceive his or her abilities and functioning? In addition to using youths’ self-report data from the ICS-S, youth were asked to respond and rate to six additional statements about rated how well he or she is doing in group home care and upon discharge: 1) *I think I am doing pretty well*, 2) *I can think of many ways to get the things in life that are most important to me*, 3) *I am doing just as well as other kids my age*, 4) *When I have a problem I can come up with lots of ways to solve it*, 5) *I think the things I have done in the past will help me in the future*, and 6) *Even when others quite, I know that I can find ways to solve the problem*. A composite variable of these six items was created to use as an additional measure of confidence from youth’s perspective. This composite was coded as the mean of these items.

Youths’ sense of *connection* is supported by the presence of valued relationships within their environment. PYD theorists describe connection as youths’ positive bonds with people and institutions that are indicative of bidirectional exchanges and investments across contexts (e.g. home, social, school, and community) (Bower et al., 2010). The construct *connection* is used synonymously in PYD literature with terms such as *investment, engagement, attachment, bonding,* and *sense of belonging* (Guerra & Bradshaw, 2008). For this secondary data analysis, the variable *connection* was operationalized using a composite measure of three scaled items that described youths’ perception of staff’s care, fairness, and support. Upon interview, youth were asked, “Do the staff care about you?” Are the staff fair with you?” and “Do the staff help you learn things to make your life better?” Responses to these items were from 1 (not true), 2 (sometimes true), and 3 (certainly true). Mean response to these three questions was used as a composite measure to assess *connection* as a PYD factor that influences youth outcomes.
Social Capital. The variable *social capital* can be measured when examining two components – youths’ relationships with staff members as well as group home resources. The literature indicates that environments rich with social capital – positive relationships and meaningful resources – likely improve youths’ chances of developing a strong sense of global competence. Bassani (2007) argued that the more social capital youth have, the greater their chances of positive outcomes. Social capital consists of the resources that an individual is able to acquire or receives through investments from valued relationships or networks (Portes, 1998). Literature on social capital development and exchanges underscores the value of resources invested in youth through relationships from multiple domains – home, school, community, and social/peer interactions (Bassani, 2007; Thorlindsson, Valdimarsdottir, & Hrafn, 2012; Ungar, 2011). As previously argued, the congregate nature of group homes mimics that of a home, community, and social setting for youth and is therefore a multi-domain setting from which to assess the development and exchanges of social capital. Because the primary study only assessed aspects of youths’ experiences and perceptions within the context of group home care, secondary data analysis of the construct, social capital, can only be done in the same manner. Youths’ acquisition of resources from school or outside community domains will not be assessed from this study.

For the proposed study, social capital will be measured both in terms of the presence and perception of youths’ group home staff relationships and the presence of various group home resources. In direct interviews, youth were asked if they spent time engaging in activities with a group home staff member other than eating meals together. Data from this item was used to create a dichotomous variable. Additionally, the TRQ measure comprised an integral component of the social capital believed to impact the influence of youth characteristics on outcomes.
following group home care. Regarding group home resources, the primary researchers identified core domains of the TFM that could be identified and assessed in all group homes, regardless of whether or not they were officially labeled TF homes. The primary researchers focused on core (practice) domains, which included 20 scaled measures – youth skills, staff teaching skills, structure and systems, and home environment – of group homes in general because they also found to be considerable variation of practices and processes both between and within all group homes (both TF and non-TF). The core domain, youth skills, refers to youths’ observed interpersonal skills and understanding of the group home programming (e.g. general purpose, relevance to life, rules), but was not included in secondary analysis. Staff teaching skills refers to staff members’ observed modeling behavior (e.g. pleasant/appropriate affect, use of verbiage, humor, interpersonal behavior, responses, pre-teaching, corrective teaching, and use of positive affirmations). Structure and systems refers to organizational decision-making, peer leadership opportunities, and positive motivational behaviors among each group home staff. Home environment refers to the atmosphere of each group home. The primary researchers attempted to observe the degree to which each group home had healthy routines, resembled a natural home environment, had youth who interacted well with each other and with staff members, and contained age-appropriate material (e.g. magazines, music, games, books, etc.). These measures were used to develop composite variables of group home programming, which is believed to serve as a social capital resource that may have an additive effect on youths’ characteristics on outcomes in the context of group home care.

**Dependent Variables**

The present study sought to determine what factors influence youths’ positive engagement (lack or have with low levels of delinquent activity coupled with evidence of
prosocial activity) in their environment after exiting group home care. Therefore, dependent variables were drawn from empirical studies of youth in group homes and what constitutes meaningful measures of treatment effects while in and upon discharge from care. *Living restriction, school involvement, employment status, criminal activity, prosocial extracurricular activity, and psychosocial problem severity* are individual-level variables that were considered in the secondary data analyses.

After discharge, respondents (youth or responsible adult) were asked, where each youth was currently living (i.e. independently/with friends, at home w/parents, other relatives, foster care, treatment foster care, other group home, residential treatment center, hospital, correctional facility, runaway/homeless, other, nowhere else, don’t know, or refused response). They were also asked if each youth lived anywhere else in the prior four months. These questions along with the ROLES will help to determine the outcome variable *living environment restriction*. Because the results of their study showed overall of most settings in more than one category, the living environment variable was dichotomized to reflect whether or not youth transitioned to a less restrictive environment (i.e. independently/with friends, at home w/parents, other relatives, foster care, treatment foster care,) or to a similar, elevated, or other level of restrictiveness (i.e. other group home, residential treatment center, hospital, correctional facility, runaway/homeless, other, nowhere else, don’t know, refused to respond).

The construct *school activity* consists of two dichotomous variables drawn from 1) whether or not individuals were enrolled in school and/or 2) had behavioral, social, or academic problems that lead to discipline problems in school. *Employment* is the third of three variables that constitute transitional adjustment activity upon exiting group home care. Because some youth are not of working age or may not work due to a variety of circumstances, the present
study is only concerned with whether or not youth work rather than the quality (e.g. favorable or unfavorable) of employment. Therefore, the variable employment status will be dichotomized into employed and unemployed. Delinquency and/or criminal activity are outcome variables commonly reviewed in group home research. For purposes of the proposed study, delinquency was examined collectively and measured by responses to four questions posed about each youth in the primary study: (1) gotten in trouble or in school; (2) been picked up by the police or arrested during the past 4 months; (3) probation, house arrest or other legal arrangement; and (4) done anything else that was dangerous/illegal in the past four months. A composite measure of delinquency was created from these four dichotomous items so that the dummy was coded as “yes” if any of the four were present. Prosocial, extracurricular activity is an outcome not commonly accounted for in group home research. However, PYD research indicates that youths’ engagement in prosocial activities supports healthy development (Fredricks & Simpkins, 2012). For the present study, the variable prosocial, extracurricular activity was measured using two questions that asked whether or not each youth engaged in activities at school and activities in the community.

Additionally, a subscale of the SDQ focuses on prosocial behavior, but is not included in the total scoring. Therefore, change in youths’ scores on the SDQ prosocial subscale from 1) first in-home interview to last in-home interview and 2) from last in-home interview to post-discharge interview were used as continuous, dependent variables. Table 2 describes independent and dependent variables included in this study.

**Analysis Plan**

Just as in primary data analysis, it is important to carefully structure the analysis of secondary data in order to construct and tell a meaningful and coherent story to the readers.
(Smith et al., 2011). For the present study, this began with basic univariate and bivariate analyses. Univariate analysis using frequency tables were run to provide to detect the presence of outliers basic details about the sample – central tendency, dispersion, and frequency distributions. Bivariate analyses using a series of correlation matrices were conducted to compare differences between and among independent and dependent variables. Collectively, descriptive and inferential statistics aided in understanding the study variables and how to deal with them in subsequent multivariate analyses (Tabachnick & Fidell, 2007).

**Exploratory Factor Analyses**

A factor analysis is a statistical strategy used to reduce, simplify, and/or balance data (Tabachnick & Fidell, 2007). More specifically, an exploratory factor analysis is a systematic method of probing a relatively large set of variables to identify the underlying structure. An exploratory factor analysis is commonly used when there is no pre-established theory to explain the structure, or factors, of data. Exploratory factor analyses are needed in the present study to uncover the presence and characteristics of one or more factors associated with the *Interpersonal Competence Scale* (ICS). Results the factors analyses were used to create variables associated with the ICS that were later included subsequent regression analyses.

**Regression Analyses**

*Regression analysis* is a statistical technique for predicting relationships among variables. Because this secondary analysis will examine both dichotomous and continuous dependent variables with multiple potential independent variables, a multiple regression framework will be used. Multiple regression is used to predict the score of one dependent variable from the scores on several independent variables. Multiple regression will allow for the prediction of the dependent variable without having to have correlation between the independent variables
For continuous dependent variables, OLS regression was used (see Table 2). For dichotomous outcomes, logistic regression was employed (see Table 2). In both cases, independent variables will be entered sequentially/hierarchically to examine contributions to explained variance. Variables were added to each model sequentially in blocks to assess influence on each outcomes. Modeling included three sets of blocks: demographics and background characteristics, positive youth development factors, and social capital variables. For the latter two of these blocks, significant variables were retained in the model, and the next set of factors were included. Demographic factors were retained in all models, regardless of significance to assure that these factors were accounted for in all models. Prior to conducting multivariate analyses, it is critical to prescreen for complete data, outliers, multicollinearity, and homoscedasticity (Tabachnick & Fidell, 2007). Each regression model was prescreened to determine if the appropriate assumptions were met.

**Conceptual Diagram**

A conceptual path diagram can be included in multiple regression analysis to help describe the expected direction of dependencies among variables (Tabachnick & Fidell, 2007). For the present study, the diagram depicts the influence of basic predictors (demographics and background characteristics) and additional variables (positive youth development and social capital) on criterion variables (living restriction, school involvement, employment status, criminal activity, prosocial extracurricular activity, and change in psychosocial problem severity). This diagram was used to guide how the data were entered and analyzed in the multiple regression models.
Diagram 1

Interaction of Positive Youth Development Factors and Social Capital on Outcomes

**Predictors**
- Demographics: age, sex, race
- Background characteristics: DSS custody, prior out-of-home placement, length of stay, initial psychosocial problem severity

**Variables with Potentially Additive Effect**
- Positive Youth Development Factors: competence, confidence & connection
- Social Capital: GH staff relationships & GH resources (programming)

**Criterion - Individual Outcomes**
1. Living environment restriction
2. School activity
3. Employment
4. Criminal activity
5. Prosocial activity
6. Change in psychosocial problem severity

**Point in time**
- Initial data capture
- Last in-home interview
- 4-months post-discharge
CHAPTER IV: RESULTS

Introduction

This chapter is a summary of statistical findings from the secondary data analyses of the *What Affects Outcomes for Youth in Group Homes* study. The initial sections are delineated by variable groupings: (a) demographic and background characteristics, (b) Positive Youth Development (PYD) factors and social capital, and (c) youth outcomes. The first section *Demographic and Background Characteristics* describes univariate and bivariate analyses conducted to describe the sample and group differences. The second section *Positive Youth Development Factors and Social Capital* provides details about variables that have a potentially additive effect with demographic and background variables on youth outcomes. This section also includes results from the exploratory factor analyses conducted on data from the *Interpersonal Competence Scale* (ICS), from which variables with a potentially additive effect were created. The third section *Youth Outcomes* provides descriptive and inferential statistics about the dependent variables as well as their relationship to predictors. This chapter concludes with results of multiple regression and binomial logistic regression analyses and description of the path diagram that depicts the overall findings of this study.

Predictors

**Demographics: Age, Sex, and Race**

The demographic variables of interest are age, sex, and race (see Table 1). This secondary sample was selected by truncating the primary sample of youth ages 6 – 20 years (n = 554) to only adolescents aged 14 to 17 years (n = 400), or 72.20% of the original sample. Adolescents 18 years and over were excluded because they are both small in number and characteristically different from adolescents aged 17 years and younger. For the 400 participants
included in this sample, the mean age is 15.44 years. This sample is divided nearly in half between boys (50.50%) and girls (49.50%). White youth comprise approximately half (49.25%) of the sample. Black youth are overrepresented (31.25%) compared to their prevalence in the general population. Youth categorized by other minority ethnicities/races (i.e. Asian, Native American, Hispanic, mixed, and other) represent 19.50% of the sample. The most common combinations of age, race, and sex is of 15-year-old White girls (n=32, 8.00%) followed by 15-year-old White boys (n=29, 7.25%) and 15-year-old Black boys (n=29, 7.25%).

**Background Characteristics**

Other information useful for describing the complexity of the youth in this group home sample include some background data gathered on each youth, which give a snapshot of their history prior to the start of the study. This secondary data analysis focuses on four characteristics that related to youths’ background: (1) custody status, (2) prior out-of-home care, (3) length of stay in current group home (prior to enrollment in the study and total), and (4) psychosocial difficulties and strengths as indicated by the *Strengths and Difficulties Questionnaire* (SDQ) at the time of placement in the group home.

Youths’ custody status, a dichotomous variable, differentiates between those in the custody of Department of Social Services (DSS) and those who are not (most of this latter group remain in the custody of their parents/family). Slightly more youth (53.72%) are in DSS custody, while 46.28% of the youth remain in the custody of their parents or guardians.

Prior out-of-home care, a dichotomous variable, describes whether or not a participant was in an out-of-home care placement prior to their present stay in group care. Most youth (61.38%) resided at home with a parent or guardian prior to placement in the group home. Another small percentage were not living at home, but were also not in a formal/system setting:
3.10% were living semi-independently and 4.06% were in an unknown situation. The remaining 31.46% of youth were in out-of-home placements, primarily a psychiatric hospital, foster care, or a correctional facility. Some 41.49% of youth were previously in group home care at some point prior to the current group home stay. Such data underscore the assertion that the characteristics of this sample mirrors the complexity of the group home youth discussed in other literature.

Length of stay, a continuous variable, is examined at two points – initial (when the youth was enrolled in the study) and total. Initial length of stay is calculated as the difference in months between each participant’s date of admission into the group home and initial interview for the primary study. Total length of stay is calculated by the difference in months between each participant’s date of discharge and date of admission into the group home. The average length of stay upon initial interview for the entire sample is 4.47 months (SD = 7.08). The average total length of stay for the entire sample is nearly 11.43 months (SD = 10.03).

Finally, the SDQ, a continuous measure of youths’ behavioral functioning, has a potential total score of 0-40 points or may be examined using its five subscales (i.e. emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial behavior) with scores of 10 points each. SDQ subscales, except for prosocial behavior, were not analyzed in this study. Youths’ prosocial behavior is also assessed using the SDQ for a score of 10 points, but it is not a tabulated as part of the total score or used as a predictor. Total SDQ scores were analyzed at three data points: (1) immediately prior to group home placement, (2) at the last four-month follow-up interview while the youth remained in the group home, and (3) at 4 months after discharge from the group home. The mean for youths’ (n = 394) SDQ total score at baseline is 15.54 (7.14 standard deviation). Psychometric analyses of the SDQ suggest a cut-point of over
13 points for moderate/borderline problems and 16 for severe problems (Goodman et al., 1998).

Hence the sample, on average is on the cusp between moderate and severe total problem score.

Youths’ mean prosocial behavior score was 6.57 out of a possible 10 points (see Table 2).

Table 2

*Sample Demographics and Background Characteristics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (n)</th>
<th>Percent</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEMOGRAPHICS</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>91 (400)</td>
<td>22.75%</td>
<td>15.44</td>
<td>1.05</td>
</tr>
<tr>
<td>15</td>
<td>124 (400)</td>
<td>31.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>104 (400)</td>
<td>26.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>81 (400)</td>
<td>20.25%</td>
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<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>202 (400)</td>
<td>50.50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>198 (400)</td>
<td>49.50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>White</td>
<td>197 (400)</td>
<td>49.25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>125 (400)</td>
<td>31.25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other minority</td>
<td>78 (400)</td>
<td>19.50%</td>
<td></td>
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<tr>
<td><strong>BACKGROUND CHARACTERISTICS</strong></td>
<td></td>
<td></td>
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<tr>
<td>DSS Custody</td>
<td>195 (363)</td>
<td>53.72%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior out-of-home placement</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Foster care</td>
<td>45 (347)</td>
<td>12.97%</td>
<td></td>
<td></td>
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<tr>
<td>Group care</td>
<td>161 (388)</td>
<td>41.49%</td>
<td></td>
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<tr>
<td>Psychiatric hospitalization</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Incarceration/detention</td>
<td>100 (388)</td>
<td>25.77%</td>
<td></td>
<td></td>
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<tr>
<td><strong>Length of Stay (months)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial</td>
<td>4.47</td>
<td>7.08</td>
<td></td>
<td></td>
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<tr>
<td>Discharge</td>
<td>11.43</td>
<td>10.03</td>
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<tr>
<td><strong>Psychosocial difficulties at baseline: SDQ scores (n=394)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total difficulties score</td>
<td>15.54</td>
<td>7.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosocial behavior subscale</td>
<td>6.57</td>
<td>2.31</td>
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</tr>
</tbody>
</table>

Bivariate Analyses

Bivariate analyses of all predictors were conducted to better understand the nature and the strength of the relationships between each variable. Using correlation matrices, *Pearson’s r* and probability values among variables were examined to get a quick initial sense of potential...
relationships and strength of relationships among variables. Of the demographic variables, age was most often correlated with other predictor variables. Age was significantly correlated with variables that describe youths’ length of stay (at the start of the study), custody status and prior out-of-home placement. Older youth were significantly more likely to (a) have been in group care longer ($r = 0.116, p = 0.020, n = 400$), (b) been in DSS custody ($r = 0.113, p = 0.031, n = 363$), and (c) to have a history of prior out-of-home placement ($r = 0.137, p = 0.007, n = 391$). Sex was also significantly correlated with length of stay ($r = 0.119, p = 0.017, n = 400$) and prior abuse ($r = -0.157, p = 0.004, n = 342$). Boys were more likely than girls to be in group care longer (at the start of the study) and to have experienced some type of abuse. A correlation matrix shows that Black race is significantly correlated with other demographic characteristics, age ($r = 0.128, p = 0.010, n = 400$) and sex ($r = 0.010, p = 0.048, n = 400$) and with history of out-of-home care ($r = 0.105, p = 0.038, n = 391$). Black youth stand out as being older, more likely male, and having a history of previous out-of-home placement, of which psychiatric hospitalization was most correlated. These findings are concordant with data from other studies and national statistics that show overrepresentation of Black male youth in social service programs that converge in group home care – foster care (US DHHS, 2012), mental health (Darensbourg, Perez, & Blake, 2010), and juvenile justice (Rosich, 2007).

Of the predictor variables describing youths’ background characteristics, DSS custody and prior out-of-home care were most often correlated with other predictor variables. Youth described with the dyad of DSS custody and prior out-of-home placement were significantly more likely to: (a) have higher scores on the SDQ, (b) have a history of foster care, (c) have previous mental health hospitalization, and (d) history of abuse (See Table 2). History of foster care or abuse, alone, did not yield a statistically significant correlation with initial psychosocial
problem severity (SDQ scores). Youth with history of juvenile justice incarceration or detention were also more likely ($r = -0.104$, $p = 0.040$, $n = 388$) to have been in group home care longer (at the start of the study) than those without prior incarceration. Youths’ initial length of stay in group care (at the start of the study) did not correlate with any other background characteristic (see Table 3).

Table 3

*Relationship Between Predictors*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sex</th>
<th>Age</th>
<th>Race (Black)</th>
<th>Initial length of stay</th>
<th>Total length of stay</th>
<th>DSS Custody</th>
<th>Baseline SDQ score</th>
<th>Prior Out-of-home care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>----</td>
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<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.6103</td>
<td></td>
<td>0.12810</td>
<td>0.0103*</td>
<td>0.11886</td>
<td>0.048</td>
<td>0.1596</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400</td>
<td></td>
<td>0.09904</td>
<td>0.0478*</td>
<td>0.11591</td>
<td>-0.049</td>
<td>0.11319</td>
<td>0.01131</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.01202</td>
<td>0.06023</td>
<td>0.03833</td>
</tr>
<tr>
<td>Race (Black)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0174*</td>
<td>0.0204*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.8107</td>
<td>0.08298</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>0.1186</td>
<td>0.11591</td>
<td>0.01202</td>
</tr>
<tr>
<td>Initial length of stay</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.049</td>
<td>0.06023</td>
<td>0.03833</td>
</tr>
<tr>
<td>Total length of stay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.347</td>
<td>0.338</td>
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<td>0.264</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;.0001**</td>
<td>&lt;.0001**</td>
<td></td>
</tr>
<tr>
<td>DSS custody</td>
<td>-0.07397</td>
<td>0.11319</td>
<td>0.06023</td>
<td>0.03833</td>
<td>0.132</td>
<td>0.1596</td>
<td>0.0311*</td>
<td>0.2524</td>
</tr>
<tr>
<td>Baseline SDQ score</td>
<td>0.04349</td>
<td>-0.00651</td>
<td>-0.01486</td>
<td>0.00999</td>
<td>0.007</td>
<td>-0.21040</td>
<td>0.3857</td>
<td>0.8968</td>
</tr>
<tr>
<td>Prior out-of-home care</td>
<td>-0.05259</td>
<td>0.13702</td>
<td>0.10492</td>
<td>0.02896</td>
<td>0.121</td>
<td>0.27928</td>
<td>0.11444</td>
<td>0.2996</td>
</tr>
</tbody>
</table>

*p < .05  **p < .01
Positive Youth Development (PYD) Factors and Social Capital

Four main constructs were operationalized to help determine the presence of additive effects: competence, confidence, connection, and social capital. It was determined that no single variable would sufficiently operationalize these four constructs. Therefore, a combination of scales and composite measures were used in the overall analyses. Of the several standardized measures used in the primary study, the Interpersonal Competence Scales (ICS) and Trusting Relationships Questionnaire (TRQ) were used to operationalize additional variables, particularly competence, confidence, and social capital. Composite measures comprise two or more empirical indicators and get at complex concepts more adequately than a single variable can alone. This researcher constructed composite measures using items taken directly from youth interviews and group home observations to operationalize other dimensions of confidence, connection, and social capital.

Interpersonal Competence Scales (ICS). The ICS are brief sets of rating scales designed for self-assessment (ICS-S) or adult/teacher assessment (ICS-T) of youths’ social and behavioral characteristics (Cairns & Cairns, 1984). Both the ICS-S and ICS-T were developed to allow direct comparisons across childhood, adolescence, and adulthood and to plot normative trajectories. Each item is represented as a unidimensional, 7-point biopolar scale with 10 of the 18 items scored inversely (items 1, 3, 4, 7, 8, 9, 12, 13, 16, 18). The ICS-S and ICS-T were originally designed for “normal” populations but has been successfully used with high-risk populations (Cairns et al., 1995). Therefore, the researchers of the primary study deemed the ICS-S and ICS-T appropriate for use with the group home sample. As discussed in the second chapter, youth from group homes are differ from “normal” youth in many respects. Therefore, unlike the a priori analyses conducted by Cairns and colleagues (1995), ICS data obtained from
group home youth were factor analyzed a posteriori to determine what, if any, dimensions would emerge.

**Factor Analyses of the ICS-S and ICS-T.** Prior to executing factor analyses on the youths’ self-report and staff report data, the dataset was initially prescreened for assumptions of complete data, absence of outliers, and linearity. Missing data, particularly patterned missing data, can adversely impact the factor solution and consideration of replacement/substitution would be required. Outliers can adversely impact correlations among data. Violations of linearity can lead to large residuals and transformation as a prescreening step should be considered. An assessment of missing data, outliers, and linearity suggest that there is no major concern for these data. Only 5.25% (n = 21) of the ICS-S youth-report data were missing; no substitutions were made due the negligible number of missing data points. However, 9.75% of the data were missing on from the ICS-T staff-report data (n = 35 missing). Factor analyses were run on existing data without substitution or imputation. Since final ICS-S and ICS-T scores were composites of multiple items, all available data were utilized and only youth whose data were missing on all of the included items for a particular subscale were actually missing. Additionally, items that were reversed coded were recoded so that the highest values were the same for all of the 18 items. Consistent with Cairns et al. (1995), PCA and PAF both with orthogonal (Varimax) rotation were performed. Criteria for retaining factors included (1) an eigenvalue greater than 1.0, (2) a scree test (see Figure), (3) a factor loading threshold greater than 0.30, (4) at least three items loading to create a clear factor, and (5) total variance explained. Varimax rotation produces a simple-structure solution in which a pattern of structure coefficients is found that maximizes the collective variance. The findings from the PCA did not yield clear factors. Therefore, the PAF solution was utilized and included subsequent regression models.
**Results of Factor Analyses – ICS-S Youth-report Data.** The ICS-S was used to operationalize the PYD construct *confidence* from youth’s perspective. According to all five criteria, three factors were retained among the youth self-report data. As summarized in Table 4 below, communalities, which represent the proportion of the variance in a scale item explained by a factor, suggest that the model explained less than 10% of all 18 scale items. Factor One was named “physical and interpersonal strengths,” Factor Two was named “internalizing mood,” and Factor Three was named “externalizing behavior.” According to this factor solution, confidence, as self-perceived by youth, consists of three dimensions – physical and interpersonal strengths, mood, and behavior.

Bivariate analyses were conducted to determine the presence and nature of inter-factor correlations among the ICS-S youth report data. Only Factors One “physical and interpersonal strengths” and Two “internalizing mood” showed a significant inverse, but weak correlation (r = -0.144, p = 0.004, n = 400). Therefore, youth who perceive themselves to be confident in the areas of physical appearance, athleticism, outgoing behavior, and popularity with others do not report significant internalizing mood (e.g. sadness, worry, and crying).

**Results of Factor Analyses – ICS-T Staff-report Data.** The ICS-T was used to operationalize the PYD construct *competence* of youth from group home staff’s perspective. According to the aforementioned criteria for retaining factors, four factors were retained among the ICS-T staff-report data. As summarized in Table 5 below, communalities suggest that the four-factor model explained less than 10% of all 18 scale items. Factor One was named “physical and interpersonal strengths,” Factor Two was named “internalizing mood,” Factor Three was named “externalizing behavior,” and Factor Four was named “social skills.”
According to this factor solution, competence consists of four dimensions, and is best viewed as a balance among physical and interpersonal strengths, behavior, mood, and prosocial skills.

Table 4

*Rotated Factor Matrix of ICS-S Youth-report Data*

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Label</th>
<th>3-Factor Solution</th>
<th>Eigen Values</th>
<th>Communalities (h^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1) Interpersonal &amp; Physical Strengths</td>
<td>(2) Negative Internalizing Mood</td>
<td>(3) Externalizing Behavior</td>
</tr>
<tr>
<td>7R</td>
<td>Good looking</td>
<td>0.548</td>
<td>-0.045</td>
<td>-0.007</td>
</tr>
<tr>
<td>1R</td>
<td>Sports</td>
<td>0.504</td>
<td>-0.823</td>
<td>0.016</td>
</tr>
<tr>
<td>6</td>
<td>Shy</td>
<td>-0.387</td>
<td>0.151</td>
<td>-0.108</td>
</tr>
<tr>
<td>12R</td>
<td>Popular w/ girls</td>
<td>0.364</td>
<td>-0.205</td>
<td>0.068</td>
</tr>
<tr>
<td>5</td>
<td>Popular w/ boys</td>
<td>0.305</td>
<td>-0.117</td>
<td>-0.054</td>
</tr>
<tr>
<td>10</td>
<td>Sad</td>
<td>-0.092</td>
<td>0.522</td>
<td>0.024</td>
</tr>
<tr>
<td>15</td>
<td>Worries</td>
<td>-0.064</td>
<td>0.556</td>
<td>-0.042</td>
</tr>
<tr>
<td>18R</td>
<td>Cries</td>
<td>-0.134</td>
<td>0.526</td>
<td>0.097</td>
</tr>
<tr>
<td>3R</td>
<td>Trouble</td>
<td>-0.018</td>
<td>-0.020</td>
<td>0.511</td>
</tr>
<tr>
<td>9R</td>
<td>Fights</td>
<td>0.141</td>
<td>-0.016</td>
<td>0.487</td>
</tr>
<tr>
<td>2</td>
<td>Argues</td>
<td>0.010</td>
<td>0.155</td>
<td>0.389</td>
</tr>
<tr>
<td>17</td>
<td>Friendly</td>
<td>0.037</td>
<td>0.027</td>
<td>-0.197</td>
</tr>
<tr>
<td>4R</td>
<td>Smiles</td>
<td>0.208</td>
<td>0.028</td>
<td>-0.069</td>
</tr>
<tr>
<td>8R</td>
<td>Good speller</td>
<td>0.131</td>
<td>-0.012</td>
<td>0.143</td>
</tr>
<tr>
<td>16</td>
<td>Wins</td>
<td>0.283</td>
<td>-0.209</td>
<td>0.050</td>
</tr>
<tr>
<td>11</td>
<td>Good at math</td>
<td>0.087</td>
<td>-0.078</td>
<td>-0.026</td>
</tr>
<tr>
<td>13R</td>
<td>Lots of friends</td>
<td>0.297</td>
<td>-0.079</td>
<td>0.053</td>
</tr>
<tr>
<td>14</td>
<td>Gets own way</td>
<td>-0.021</td>
<td>-0.046</td>
<td>0.046</td>
</tr>
<tr>
<td></td>
<td>Rotated Explained</td>
<td>1.217</td>
<td>1.041</td>
<td>0.751</td>
</tr>
</tbody>
</table>

**Total (Factor 1-3)**: 3.009

**Explained Variance**

Extraction Method: Principle Axis Factoring  
Rotation Method: Orthogonal Varimax with Kaiser Normalization
### Table 5

**Rotated Factor Matrix of ICS-T Staff Data**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Label</th>
<th>1. Physical &amp; Interpersonal Strengths (1)</th>
<th>2. Externalizing Behavior (2)</th>
<th>3. Negative Internalizing Mood (3)</th>
<th>4. Prosocial Skills (4)</th>
<th>Eigen Values</th>
<th>Communality (h²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1R</td>
<td>Sports</td>
<td>0.558</td>
<td>0.038</td>
<td>-0.221</td>
<td>0.077</td>
<td>3.909</td>
<td>0.441</td>
</tr>
<tr>
<td>5</td>
<td>Popular w/boys</td>
<td>0.397</td>
<td>-0.137</td>
<td>-0.002</td>
<td>0.284</td>
<td>0.380</td>
<td>0.315</td>
</tr>
<tr>
<td>7R</td>
<td>Good looking</td>
<td>0.387</td>
<td>-0.067</td>
<td>-0.114</td>
<td>-0.215</td>
<td>0.128</td>
<td>0.284</td>
</tr>
<tr>
<td>13R</td>
<td>Lots of friends</td>
<td>0.695</td>
<td>-0.056</td>
<td>-0.160</td>
<td>0.226</td>
<td>-0.151</td>
<td>0.678</td>
</tr>
<tr>
<td>12R</td>
<td>Popular w/girls</td>
<td>0.672</td>
<td>-0.109</td>
<td>-0.171</td>
<td>0.118</td>
<td>-0.136</td>
<td>0.566</td>
</tr>
<tr>
<td>16R</td>
<td>Wins</td>
<td>0.388</td>
<td>-0.030</td>
<td>-0.153</td>
<td>0.079</td>
<td>-0.239</td>
<td>0.429</td>
</tr>
<tr>
<td>2</td>
<td>Argues</td>
<td>-0.058</td>
<td>-0.628</td>
<td>0.149</td>
<td>-0.063</td>
<td>1.280</td>
<td>0.438</td>
</tr>
<tr>
<td>9R</td>
<td>Fights</td>
<td>0.008</td>
<td>0.602</td>
<td>0.072</td>
<td>-0.063</td>
<td>0.033</td>
<td>0.382</td>
</tr>
<tr>
<td>3R</td>
<td>Trouble</td>
<td>-0.061</td>
<td>0.578</td>
<td>0.068</td>
<td>-0.064</td>
<td>0.845</td>
<td>0.362</td>
</tr>
<tr>
<td>10</td>
<td>Sad</td>
<td>-0.112</td>
<td>0.204</td>
<td>0.610</td>
<td>-0.218</td>
<td>0.000+</td>
<td>0.502</td>
</tr>
<tr>
<td>15</td>
<td>Worries</td>
<td>-0.191</td>
<td>0.070</td>
<td>0.581</td>
<td>-0.092</td>
<td>-0.207</td>
<td>0.415</td>
</tr>
<tr>
<td>18R</td>
<td>Cries</td>
<td>-0.099</td>
<td>0.110</td>
<td>0.553</td>
<td>-0.004</td>
<td>-0.307</td>
<td>0.346</td>
</tr>
<tr>
<td>4R</td>
<td>Smiles</td>
<td>0.202</td>
<td>-0.088</td>
<td>-0.208</td>
<td>0.619</td>
<td>0.620</td>
<td>0.452</td>
</tr>
<tr>
<td>17</td>
<td>Friendly</td>
<td>0.180</td>
<td>-0.350</td>
<td>-0.152</td>
<td>0.489</td>
<td>-0.239</td>
<td>0.448</td>
</tr>
<tr>
<td>6</td>
<td>Shy</td>
<td>-0.277</td>
<td>-0.239</td>
<td>0.257</td>
<td>-0.335</td>
<td>0.241</td>
<td>0.409</td>
</tr>
<tr>
<td>8R</td>
<td>Good speller</td>
<td>0.187</td>
<td>-0.150</td>
<td>-0.050</td>
<td>-0.011</td>
<td>0.090</td>
<td>0.414</td>
</tr>
<tr>
<td>11</td>
<td>Good at math</td>
<td>0.106</td>
<td>-0.049</td>
<td>-0.012</td>
<td>0.070</td>
<td>-0.052</td>
<td>0.368</td>
</tr>
<tr>
<td>14</td>
<td>Gets own way</td>
<td>0.183</td>
<td>-0.081</td>
<td>-0.040</td>
<td>0.058</td>
<td>-0.171</td>
<td>0.278</td>
</tr>
<tr>
<td>Rotated Explained Variance (by each factor)</td>
<td>2.000</td>
<td>1.410</td>
<td>1.294</td>
<td>1.016</td>
<td>Total</td>
<td>Final</td>
<td>Eicen Value: 6.033</td>
</tr>
</tbody>
</table>

ICS Variables. For each factor that emerged from the youth-report and staff-report data, a new variable was created. After bivariate analyses were conducted to determine correlations among factors within each set of data, additional bivariate analyses were performed to determine if correlations exist between the youth and staff report data (see Table 6). Strong intercorrelations among variables may cause statistical problems if included simultaneously in regression models. Youth Factor One “interpersonal and physical strengths” is correlated with Staff Factors One “interpersonal and physical strengths” (r = 0.230, p < .0001, n = 400), Two
“externalizing behavior” \( (r = 0.121, p = 0.017, n = 391) \), and Three “negative internalizing mood” \( (r = -0.152, p = 0.002, n = 400) \). These correlations indicate that there are relationships between youth who perceive themselves to be confident about their interpersonal strengths and physicality and group home staff perceptions of the same traits as well as youths’ expression of externalizing behavior and lack of expression of negative internalizing mood. There are moderately strong, positive relationships between Youth Factor 2 and Staff Factor 3 \( (r = 0.280, p < .0001, n = 400) \), which both encompass characteristics of internalizing mood, as well as Youth Factor 3 and Staff Factor 2 \( (r = 0.334, p < .0001, n = 391) \), which encompass characteristics of externalizing behavior. There is a weak, inverse correlation between Youth Factor 3 and Staff Factor 4 “prosocial skills” indicating that youths’ perceptions of their own externalizing behavior is related to staff perceptions of youths’ competence of prosocial skills \( (r = -0.123, p = 0.014, n = 400) \). Most notably, Staff Factors 1 and 3 \( (r = -0.364, p < 0.0001, n = 400) \) as well as Staff Factors 2 and 4 \( (r = -0.371, p < 0.0001, n = 391) \) should not be included in a regression model together because there are strong, inverse correlations between that may adversely impact the variance explained by the model. All of the aforementioned correlations were noted for subsequent, multivariate analyses.
Table 6

Relationships Between ICS-S (Youth) and ICS-T (Staff) Factors

<table>
<thead>
<tr>
<th></th>
<th>Youth Factor 1 “Interpersonal &amp; physical strengths”</th>
<th>Youth Factor 2 “Negative internalizing mood”</th>
<th>Youth Factor 3 “Externalizing behavior”</th>
<th>Staff Factor 1 “Interpersonal &amp; physical strengths”</th>
<th>Staff Factor 2 “Externalizing behavior”</th>
<th>Staff Factor 3 “Negative internalizing mood”</th>
<th>Staff Factor 4 “Prosocial Skills”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth Factor 1</td>
<td>-0.14439</td>
<td>---</td>
<td>----</td>
<td>-0.22969</td>
<td>-0.15165</td>
<td>-0.06222</td>
<td>0.2143</td>
</tr>
<tr>
<td>Youth Factor 2</td>
<td>0.0038*</td>
<td>0.00216</td>
<td>0.8329</td>
<td>0.0778</td>
<td>0.2962</td>
<td>0.0141**</td>
<td>0.5346</td>
</tr>
<tr>
<td>Youth Factor 3</td>
<td>0.8329</td>
<td>0.00216</td>
<td>0.01058</td>
<td>0.0778</td>
<td>0.0141**</td>
<td>0.05346</td>
<td>0.0141**</td>
</tr>
<tr>
<td>Youth Factor 4</td>
<td>0.400</td>
<td>400</td>
<td>400</td>
<td>0.0778</td>
<td>0.0141**</td>
<td>0.05346</td>
<td>0.0141**</td>
</tr>
<tr>
<td>Staff Factor 1</td>
<td>0.22969</td>
<td>-0.08830</td>
<td>0.2962</td>
<td>&lt;.0001**</td>
<td>0.33420</td>
<td>-0.16702</td>
<td>0.33420</td>
</tr>
<tr>
<td>Staff Factor 2</td>
<td>0.01058</td>
<td>0.00216</td>
<td>0.8329</td>
<td>&lt;.0001**</td>
<td>0.00216</td>
<td>0.33420</td>
<td>0.0141**</td>
</tr>
<tr>
<td>Staff Factor 3</td>
<td>0.8329</td>
<td>0.00216</td>
<td>0.8329</td>
<td>&lt;.0001**</td>
<td>0.00216</td>
<td>0.33420</td>
<td>0.0141**</td>
</tr>
<tr>
<td>Staff Factor 4</td>
<td>0.400</td>
<td>400</td>
<td>400</td>
<td>0.0778</td>
<td>0.0141**</td>
<td>0.05346</td>
<td>0.0141**</td>
</tr>
</tbody>
</table>

* p < .05    ** p < .01

Trustyng Relationship Questionnaire (TRQ). As discussed in the previous chapters, social capital is conceptualized as the relationship and resources youth have access to within the group home context. Social capital relationships were measured, in part, using the Trusting Relationships Questionnaire (TRQ) (Vance & Sanchez, 1997). The TRQ was designed to measure the quality of relationships between youth, particularly those with psychiatric diagnoses or behavioral problems, and the (para)professionals involved in their care (Mustillo et al., 2005). The TRQ measures the quality of adult-child relationships using a strengths-based perspective and includes both the youths’ and adults’ impressions. Table 7 depicts univariate analyses for
each TRQ item; responses range from 1 to 5 points. Item 5, “staff talk positively about you to others”, yielded the highest mean score of 4.02 with a standard deviation of 1.08. It should be noted that only 323 of 400 responses were obtained for this item. Item 16, “Tell staff when they hurt you”, yielded the lowest mean score of 2.70 with a standard deviation of 1.42. It should be noted that only 358 of 400 responses were obtained for this item. Response rates for both of these items were somewhat lower than for other items in the scale. This may be because more youth responded “I don’t know,” due to lack of knowledge of staff’s interactions with others or internal states (see Table 7).

Table 7

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Staff identify things they like about you</td>
<td>384</td>
<td>3.43</td>
<td>1.13</td>
</tr>
<tr>
<td>2</td>
<td>Talk to staff about your problems</td>
<td>393</td>
<td>3.16</td>
<td>1.35</td>
</tr>
<tr>
<td>3</td>
<td>Staff want to spend time with you</td>
<td>334</td>
<td>3.75</td>
<td>1.14</td>
</tr>
<tr>
<td>5</td>
<td>Staff talk positively about you to others</td>
<td>323</td>
<td>4.02</td>
<td>1.09</td>
</tr>
<tr>
<td>6</td>
<td>Seek counseling/advice from staff</td>
<td>390</td>
<td>3.20</td>
<td>1.36</td>
</tr>
<tr>
<td>8</td>
<td>Staff consider your point of view</td>
<td>374</td>
<td>3.47</td>
<td>1.12</td>
</tr>
<tr>
<td>9</td>
<td>Staff tell you they are sorry</td>
<td>367</td>
<td>2.93</td>
<td>1.39</td>
</tr>
<tr>
<td>10</td>
<td>Staff tell you when you hurt them</td>
<td>357</td>
<td>2.87</td>
<td>1.49</td>
</tr>
<tr>
<td>12</td>
<td>Share things you like about staff with them</td>
<td>390</td>
<td>3.13</td>
<td>1.37</td>
</tr>
<tr>
<td>14</td>
<td>Staff when you are sorry</td>
<td>382</td>
<td>3.46</td>
<td>1.25</td>
</tr>
<tr>
<td>15</td>
<td>Talk about staff in positive way to others</td>
<td>392</td>
<td>3.56</td>
<td>1.21</td>
</tr>
<tr>
<td>16</td>
<td>Tell staff when they hurt you</td>
<td>358</td>
<td>2.70</td>
<td>1.42</td>
</tr>
<tr>
<td>17</td>
<td>Enjoy spending time with staff</td>
<td>391</td>
<td>3.80</td>
<td>1.20</td>
</tr>
<tr>
<td>18</td>
<td>Consider staff points of view</td>
<td>386</td>
<td>3.76</td>
<td>1.09</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>393</td>
<td>3.36</td>
<td>0.87</td>
</tr>
</tbody>
</table>

Bivariate analyses were conducted to determine if differences between demographic characteristics and average TRQ scores exist. A chi-square test showed a statistically significant difference between youths’ age (chi-square statistic = 149.98, DF = 117, probability = 0.02) and mean TRQ scores indicating that older youth have higher mean TRQ scores. Additional chi-square tests showed no statistically significant differences between mean TRQ scores and sex or race. When examining youths’ background characteristics, a series of chi-square tests showed
no statistically significant differences.

**Confidence Composite Measure.** In addition to self-report data from the ICS-S, a composite measure was created from seven scaled, interview items that got at youths’ sense of confidence, particularly their self-perceptions of functioning and ability to problem-solve. Higher response values indicated greater sense of confidence. Missing observations were substituted with the overall mean value. The mean for the confidence indicator was 3.599 (n = 400, SD = 0.756), indicating that most youth described feeling confidence “a lot” of the time. Because confidence is such an abstract concept and there was the potential that the ICS-S would not fully measure it, it was decided that an additional, multi-dimensional measure may better operationalize confidence as a construct.

Table 8

**Confidence Composite Measure**

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I think I am doing pretty well.</td>
<td>379</td>
<td>4.156</td>
<td>1.136</td>
<td>2 – 6</td>
</tr>
<tr>
<td>2) I can think of many ways to get the things in life that are most important to me.</td>
<td>377</td>
<td>4.241</td>
<td>1.193</td>
<td>1 – 6</td>
</tr>
<tr>
<td>3) I am doing just as well as other kids my age.</td>
<td>372</td>
<td>3.909</td>
<td>1.382</td>
<td>1 – 6</td>
</tr>
<tr>
<td>4) When I have a problem I can come up with lots of ways to solve it.</td>
<td>378</td>
<td>3.693</td>
<td>1.396</td>
<td>1 – 6</td>
</tr>
<tr>
<td>5) I think the things I have done in the past will help me in the future.</td>
<td>376</td>
<td>3.612</td>
<td>1.835</td>
<td>1 – 6</td>
</tr>
<tr>
<td>6) Even when others quit, I know that I can find ways to solve the problem.</td>
<td>376</td>
<td>4.117</td>
<td>1.247</td>
<td>1 – 6</td>
</tr>
<tr>
<td>7) How well do you think you’re doing?</td>
<td>369</td>
<td>1.518</td>
<td>0.576</td>
<td>1 – 4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>400</td>
<td>3.599</td>
<td>0.756</td>
<td>1 – 5.3</td>
</tr>
</tbody>
</table>

**Connection Composite Measure.** Connection, a third PYD construct, is conceptualized as youths’ engagement and attachment to group home staff members. There was not a standardized measure among the primary data that reasonably measured this construct. Therefore, this researcher created a composite measure of three scaled items that described youths’ perception of the care, fairness, and support they experienced with group home staff.
Youth were asked three scaled questions that get at their impressions of connectedness with group homes staff: 1) Do the staff here care about you, 2) Are the staff here fair with you, and 3) Do the staff try to help you learn things that can make your life better? Responses to these items were from 1 (not true), 2 (sometimes true), and 3 (certainly true). Univariate analysis showed that responses to each question were positively skewed, with the majority of youth responding “certainly true.” A large majority of youth (68.45%, n = 256) responded that staff “certainly” care about them, followed by 28.88% agreeing that staff “sometimes” care about them. Less than 3% expressed the belief that staff do not care about them.” Therefore, it was decided that each variable be recoded to reflect dichotomous responses: “certainly true” or “not true” combined with “sometimes true”.

Youths’ positive belief that staff care about them was consistent even when examined by demographic variables (i.e. age, sex, and other minority race/ethnicity). Chi-square analyses showed no statistically significant differences between age (chi-square statistic = 7.62, df = 6, probability = 0.27), sex (chi-square statistic = 3.05, df = 2, probability = 0.22), and other minority race/ethnicity (chi-square statistic = 0.15, df = 2, probability = 0.93). However, Black and White youth reported different impressions. Chi square analyses showed that Black youth (n = 117) and White youth (n = 182) reported different impressions when asked, “Do staff care about you?” (chi-square statistics = 12.53, df = 2, probability = 0.002). Like the previous question, a chi-square test showed that Black youth (n = 117) were more likely to report experiencing group home staff as caring (chi-square statistic = 12.53, df = 2, probability = 0.002). There were no statistically significant differences between youths’ reported belief in staffs’ fairness and age (chi-square statistic = 4.86, df = 6, probability = 0.56), sex (chi-square statistic = 0.72, df = 2, probability = 0.70), White race (chi-square statistic = 1.28, df = 2, probability =
0.53), and other minority race/ethnicity (chi-square statistic = 1.09, df = 2, probability = 0.58).

Regarding youths’ perception that group home staff members do things to make their lives better, chi-square analyses showed no significant differences. What these overall analyses show is that Black race, more so than any other demographic variable, is related to youths’ perception of group home staff as caring.

**Social Capital Composite Measures.** For this project, social capital was conceptualized as a combination of positive relationships and resources to which youth have access. Particularly, the social capital resources of interest are those that exist within the context of group care. Therefore, observational data on group home programming were operationalized for this construct because they provide a reasonably objective view of nurturing/therapeutic resources available. Table 9 provides details on the three of four domains examined and used in secondary analyses: (1) staff teaching skills, (2) structure and systems, and (3) group home environment. Composite variables were constructed using the mean scores of select items associated with each domain. If more than 5% data were found to be missing, single-step imputation was done by substituting with mean values. These composite variables were entered into subsequent regression analyses to determine if an interaction of predictors and social capital resources influenced each dependent variable.
Home Observation Data

<table>
<thead>
<tr>
<th>Domain</th>
<th>Item Description</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td><strong>Teaching Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrains from use of ineffective responses</td>
<td>356</td>
<td>3.875</td>
<td>1.240</td>
<td>1 – 5</td>
</tr>
<tr>
<td></td>
<td>Recognizes youths’ appropriate behaviors</td>
<td>376</td>
<td>3.445</td>
<td>1.188</td>
<td>2 – 5</td>
</tr>
<tr>
<td></td>
<td>Recognizes opportunities for the timely use of pre-teaching</td>
<td>376</td>
<td>3.289</td>
<td>1.178</td>
<td>1.5 – 5</td>
</tr>
<tr>
<td></td>
<td>Provides youth-centered rationales and some form of</td>
<td>98</td>
<td>3.709</td>
<td>1.392</td>
<td>1 – 5</td>
</tr>
<tr>
<td></td>
<td>acknowledgment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interjects praise and words of encouragement</td>
<td>101</td>
<td>3.015</td>
<td>1.346</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Structure</td>
<td><strong>Composite Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Systems</td>
<td>House meeting routinely occur</td>
<td>335</td>
<td>3.942</td>
<td>1.020</td>
<td>2 – 5</td>
</tr>
<tr>
<td></td>
<td>Issues important to youths are routinely addressed in meetings</td>
<td>329</td>
<td>4.093</td>
<td>1.037</td>
<td>2 – 5</td>
</tr>
<tr>
<td></td>
<td>Outside of family conferences youths are given choices/options, encouraged to express</td>
<td>368</td>
<td>4.224</td>
<td>0.895</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Group Home</td>
<td><strong>Composite Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>Enough structure in place to support healthy routines</td>
<td>378</td>
<td>4.455</td>
<td>0.605</td>
<td>2.5 – 5</td>
</tr>
<tr>
<td></td>
<td>Structure of the home is as natural and home-like as possible</td>
<td>378</td>
<td>4.463</td>
<td>0.502</td>
<td>3 – 5</td>
</tr>
<tr>
<td></td>
<td>Youths interact with one another in a pleasant, considerate manner</td>
<td>377</td>
<td>4.135</td>
<td>0.633</td>
<td>2.5 – 5</td>
</tr>
<tr>
<td></td>
<td>Youths and staff spend time enjoying each others’ company</td>
<td>374</td>
<td>4.349</td>
<td>0.763</td>
<td>1 – 5</td>
</tr>
<tr>
<td></td>
<td>Youth and staff share meals together</td>
<td>368</td>
<td>4.190</td>
<td>1.012</td>
<td>2 – 5</td>
</tr>
<tr>
<td></td>
<td>Youth have access to age- and interest-appropriate items</td>
<td>373</td>
<td>4.158</td>
<td>0.821</td>
<td>2 – 5</td>
</tr>
</tbody>
</table>

Youth Outcomes

Measuring Change in Psychosocial Symptom Severity

Since the mid-1970s, statisticians increasingly calculated and used change scores as a reliable approach in quantitative analysis (Zimmerman & Williams, 1982; Sharma & Gupta, 1986). Allison (1990) argued that change scores are robust to measurement error, which is desirable given the generally low reliability of measurement in the social sciences. SDQ scores may only be available for baseline and/or first follow-up. The first follow-up interview may be the only follow-up data available for analysis. Therefore, change scores were calculated to provide an outcome measure of the difference between youths’ scores on the SDQ at baseline and their last in-home interview (SDQ change score 1) as well as to reflect the differences between youths last in-home and, if available, 4-months post-discharge SDQ scores (SDQ...
change 2). Because the prosocial scale of the SDQ is not included in the total SDQ, change scores and corresponding variables were created to reflect difference in scores at the same points in time, Prosocial Change Score One and Prosocial Change Score Two respectively.

Missing data for the baseline SDQ and prosocial change scores were imputed prior to this secondary data project for youth who entered the group homes prior to start of the study (see Farmer, et al, under review, for details). Missing data were not a problem for the SDQ and prosocial scale scores (n = 396) obtained at the last in-group-home interview. Thus, an additional variable to account for missing data was not created. While there were a significant amount of missing data from the post-discharge SDQ and prosocial scale (145 missing), imputation was not done because these data were obtained from the sample remaining after youth left the group home. Univariate analyses were conducted to provide descriptive details about all change scores created (see Table 10). As shown, there was substantial variation among scores, particularly on the overall SDQ scores while still in group care (SDQ Change One).

Table 10

**SDQ Change Scores Among Groups**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>SDQ Change One</th>
<th>Prosocial Change One</th>
<th>SDQ Change Two</th>
<th>Prosocial Change Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Overall</td>
<td>394</td>
<td>3.75</td>
<td>8.34</td>
<td>394</td>
</tr>
<tr>
<td>Girls</td>
<td>195</td>
<td>3.71</td>
<td>8.53</td>
<td>195</td>
</tr>
<tr>
<td>Boys</td>
<td>199</td>
<td>3.79</td>
<td>8.18</td>
<td>199</td>
</tr>
<tr>
<td>White</td>
<td>194</td>
<td>3.26</td>
<td>8.32</td>
<td>194</td>
</tr>
<tr>
<td>Black</td>
<td>123</td>
<td>4.81</td>
<td>7.82</td>
<td>123</td>
</tr>
<tr>
<td>Other</td>
<td>77</td>
<td>3.30</td>
<td>9.00</td>
<td>77</td>
</tr>
<tr>
<td>DSS Custody</td>
<td>191</td>
<td>2.29</td>
<td>8.60</td>
<td>191</td>
</tr>
<tr>
<td>Non-DSS custody</td>
<td>167</td>
<td>4.46</td>
<td>8.19</td>
<td>167</td>
</tr>
<tr>
<td>Prior Placement</td>
<td>141</td>
<td>3.20</td>
<td>8.04</td>
<td>141</td>
</tr>
<tr>
<td>No Prior Placement</td>
<td>244</td>
<td>4.51</td>
<td>8.99</td>
<td>244</td>
</tr>
</tbody>
</table>
Post-Discharge Living Environment

A strong indicator of youths’ success upon discharge from congregate care living is the restrictiveness of their subsequent living environment. Youth who transition from group care to independent or semi-independent housing as adults or less restrictive supervised care (e.g. in-home care with a parent, guardian, or relative, single-family foster care, or treatment foster care) are considered to be moving in a positive trajectory. Placement in another group, residential, psychiatric, or correctional facility or status as homeless or runaway are indicative of restrictive settings that may reduce opportunities for positive development. Living environment restriction was included in analyses as an outcome variable. From the primary dataset, this variable was a categorical variable with fourteen levels, which included the aforementioned living conditions as well as categories for other or unknown conditions. For purposes of secondary analyses, the categorical variable was truncated to a dichotomous variable separating living environments deemed less restrictive than group home care (i.e. (semi)independent, in-home, foster care, treatment foster care) from care with equal or greater restrictiveness (i.e. group home, residential, psychiatric, or correctional facility, homeless/runaway, other, or unknown). At four-months post-discharge, data on 302 youth were obtained, 75.50% of the sample. Of that, 63.25% the sample that provided data (n=191) had transitioned from the group care to a less restrictive living environment. When compared with demographic variables, girls were more likely to transition to less restrictive care (r = -0.115, p = 0.045, n = 302). Youths’ age (mean = 16.20 years) and race were not significant predictors of post-discharge care. Regarding youths’ background characteristics, it is important to note that DSS custody status (r = -0.201, p = 0.0007, n = 281), length of stay at the start of the study (r = -0.124, p = 0.032, n = 302), and total length of stay in group care (r = -0.132, p = 0.022, n = 302) were significantly and inversely correlated with their transition to less restrictive care upon discharge. Hence, youth who were in DSS custody and
who had been in the group home longer were less likely to move to less restrictive settings upon discharge.

**Post-Discharge Activity: School, Employment, Prosocial, and Delinquency**

**School.** School activity is another strong indicator and youths’ positive or negative trajectory toward adult functioning. School activity at four-months post-discharge was measured as a youth outcome using two dichotomous variables that indicated youths’: (1) enrollment in school and (2) trouble in school. Upon bivariate analyses, girls ($r = -0.128$, $p = 0.037$, $n = 265$) were found to be more likely enrolled in school. While younger youth were more likely to be both enrolled in school ($r = -0.215$, $p = 0.0005$, $n = 261$) and described as having trouble in school ($r = -0.190$, $p = 0.005$, $n = 222$). There was no significant relationship between race and school activity at four-months post-discharge. There were no statistically significant relationships between any of youths’ background characteristics and their school activity at four-months post-discharge.

**Employment.** Whether or not a youth is gainfully employed upon discharge can speak volumes about his/her readiness for or sustainability of adult living. Therefore, youths’ employment activity was examined as a dichotomous, outcome variable. At four-months post-discharge, data on employment were obtained from 247 youth. Of them, 20.24% ($n=50$) reported being employed. The majority of these ($n = 30$) were 16 years or older. However, 20 youth under age 16 years were reported as being employed. What is not known is the type or amount of employment youth were engaged in. Employment could be anything ranging from babysitting a few hours per week to full-time employment outside of the home. Even still, an individual’s engagement in work of any sort is a marker for a positive trajectory (Catalano et al., 2004)
**Prosocial.** The PYD framework not only takes into account the efforts that adults sow into children, but also how positive investments manifest and shape youths’ behavior and engagement in society. One way to measure youths’ engagement is by looking at youths’ participation in extracurricular activities. At the start of this group home study, youth were asked if they engaged in extracurricular activities at school or in the local community. For these items, there are data for approximately 54.50% (n = 218) and 63.25% (n = 253) of the sample. Of the data available, roughly 31% of the respondents confirmed that they did participate in extracurricular activities at school (n = 61) or outside of school (n = 77). Upon examining differences between age and extracurricular activity participation (in school and outside of school), a t-test showed no statistically significant difference.

A potential outcome of positive youth development interventions and social capital investment is youths’ engagement in prosocial activity. Prosocial activity was operationalized as youths’ reported post-discharge engagement in: (1) extracurricular activities in school, (2) extracurricular activities within their community (outside of school), and (3) behavior and interpersonal interactions as indicated by the prosocial scale of the SDQ. A minority of youth reported being involved in prosocial, extracurricular activities in school (n = 218, 27.98%) and/or outside of school (n = 253, 30.43%). There were no significant differences among demographic or background characteristics impacting change on youths’ prosocial scale scores from their last in-home to first post-discharge interviews. Youths’ (1) prior history of out-of-home care (r = 0.150, p = 0.028, n = 214), (2) last in-home SDQ score (r = -0.170, p = 0.012, n = 217), and (3) total length of stay in group care (r = 0.159, p = 0.019, n = 218) were significantly correlated with more involvement in school-related prosocial activities. DSS custody status (r = 0.154, p =
0.018, n = 235) and prior history of out-of-home placement (r = 0.178, p = 0.005, n = 248) were significantly correlated with greater engagement in prosocial activities within their community.

**Delinquency.** Criminal or delinquent activity contradicts efforts made to bolster youths’ development. Therefore, the absence of delinquent activity was examined as a youth outcome. Youth were asked if in the past four months they were (1) picked up by police or arrested, (2) on probation, house arrest, or other legal arrangement, and (3) engaged in anything else illegal or dangerous. Overall, 45.80% (n = 120) of youth with available data had been involved in delinquent or dangerous behavior. Girls were significantly less likely than boys to have been arrested (r = 0.190, p = 0.002, n = 261) or on probation or legal arrangement (r = 0.269, p < 0.0001, n = 260).

**Prescreening Data**

**Complete Data**

Prescreening for the presence and pattern of missing data is a critical first step in data analysis (Tabachnick & Fidell, 2007). The data were screened to determine the pattern of missing data: missing completely at random (MCAR), missing at random (MAR), or missing not at random (MNAR). The latter might result in bias, whereas the former is generally acceptable (Smith et al., 2011). Common causes of missing data include participant nonresponse and research design (Little & Rubin, 2002). Data MNAR may create the greatest challenge because it is indicative of systematically missing data and may result in biased parameter estimates. After determining the pattern of missing data, decisions were made on how they should be handled – either deletion or imputation (Kline, 2004). No statistical procedure was used for variables missing five or less percent of data. It is important to note that missing data for the predictor *SDQ baseline score* were imputed by the primary researchers. Therefore, missing data
was not a problem on this variable for this secondary analysis. Of the remaining nine predictors included in each model, only one was found to have a significant (greater than 5%) number of missing data points (refer to the listing of variable for the name and description of each predictor): DSS custody (n = 363, missing n=37 (9.25%). Given that DSS custody is a dichotomous variable, a corresponding variable of missing data was created. A correlation matrix of all predictors showed that the missing DSS custody variable was correlated with race ($r = 0.101, p = 0.043, n = 400$), prior out-of-home care ($r = -0.126, p = 0.012, n = 391$), and length of stay at first interview ($r = 0.134, p = 0.007, n = 400$). Therefore, it was determined that the DSS custody variable was MNAR. As discussed in the review of literature, being in the custody of social services is a condition linked a wide range of other variables. Therefore, listwise deletion, not imputation, was conducted to handle missing data because there was not sufficient collateral data to justify a particular value with which to substitute. Allison (2002) argued that listwise deletion is a viable alternative because it may be less biased than multiple imputation when data are missing on predictor variables in regression analysis. Participants with missing data on this variable were not excluded from the statistical calculations, but are, of course, missing in any analysis that included this variable.

Variables tested for a potentially additive effect were also prescreened to determine the presence and pattern of missing data (refer to the listing of variables for names and descriptions). Thirteen of these variables are composite variables constructed prior to regression analyses. Missing data were substituted with mean value of each of the original variables. Missing data was not a problem for the two items that describe: (1) if youth participated in any activities other than meals with staff (n = 396) and (2) if youth perceive that anyone looks out for them (n = 395).
Finally, outcome variables were prescreened for missing data. Univariate analyses showed that all variables were missing a significant number observations (see Table 11). Additional variables were created to account for missing data on living environment, delinquency, and psychosocial problem severity (post-discharge) because it was determined that these variables were more likely to be provide a global sense of missing data than other outcome variables. Correlations analyses showed similarities between each of these three variables. Only age was significantly correlated with missing data. Therefore, it appears that youth without post-discharge data on living restriction ($r = 0.172$, $p = 0.0005$), delinquency ($r = 0.176$, $p = 0.0004$) and psychosocial problem severity (SDQ score) ($r = 0.173$, $p = 0.0005$) were significantly older than youth who provided data. While observations on outcome data could neither be imputed or deleted, the characteristics associated with youth missing data were noted (See Table 12).

Table 11

**Missing Outcome Data**

<table>
<thead>
<tr>
<th>Outcome Variable</th>
<th>Frequency Missing on SDQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Living environment restriction (higher)</td>
<td>111</td>
</tr>
<tr>
<td>Less restrictive environment</td>
<td>191</td>
</tr>
<tr>
<td>School Activity</td>
<td></td>
</tr>
<tr>
<td>2 School enrollment</td>
<td>135</td>
</tr>
<tr>
<td>3 Trouble in school</td>
<td>177</td>
</tr>
<tr>
<td>4 Employment</td>
<td>247</td>
</tr>
<tr>
<td>5 Delinquency/criminal activity composite</td>
<td>262</td>
</tr>
<tr>
<td>Police involvement/arrest</td>
<td>261</td>
</tr>
<tr>
<td>Probation</td>
<td>260</td>
</tr>
<tr>
<td>Dangerous/illegal activity</td>
<td>258</td>
</tr>
<tr>
<td>Extracurricular involvement (composite)</td>
<td>226</td>
</tr>
<tr>
<td>Extracurricular activity – school</td>
<td>218</td>
</tr>
<tr>
<td>Extracurricular activity – community</td>
<td>253</td>
</tr>
<tr>
<td>8 Prosocial behavior change (from first to last in-home)</td>
<td>394</td>
</tr>
<tr>
<td>9 Prosocial behavior change (post discharge)</td>
<td>262</td>
</tr>
<tr>
<td>Psychosocial problem severity (SDQ)</td>
<td></td>
</tr>
<tr>
<td>10 SDQ change 1 (from first to last in-home)</td>
<td>394</td>
</tr>
<tr>
<td>11 SDQ change 2 (post-discharge)</td>
<td>264</td>
</tr>
</tbody>
</table>
### Table 12

**Univariate and Bivariate Analyses of Missing Outcome Data**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>sd</th>
<th>Range</th>
<th>Pearson's R</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>400</td>
<td>15.438</td>
<td>1.053</td>
<td>14–17</td>
<td>0.173</td>
<td>0.0005</td>
</tr>
<tr>
<td>Sex</td>
<td>400</td>
<td>0.505</td>
<td>0.501</td>
<td>0–1</td>
<td>-0.018</td>
<td>0.724</td>
</tr>
<tr>
<td>Race</td>
<td>400</td>
<td>0.313</td>
<td>0.464</td>
<td>0–1</td>
<td>-0.033</td>
<td>0.512</td>
</tr>
<tr>
<td>Initial length of stay</td>
<td>400</td>
<td>4.470</td>
<td>7.079</td>
<td>0–60</td>
<td>-0.035</td>
<td>0.483</td>
</tr>
<tr>
<td>Total length of stay</td>
<td>392</td>
<td>11.426</td>
<td>10.030</td>
<td>0–71</td>
<td>-0.078</td>
<td>0.122</td>
</tr>
<tr>
<td>DSS custody</td>
<td>363</td>
<td>0.537</td>
<td>0.499</td>
<td>0–1</td>
<td>0.003</td>
<td>0.960</td>
</tr>
<tr>
<td>Prior out-of-home placement</td>
<td>391</td>
<td>0.366</td>
<td>0.482</td>
<td>0–1</td>
<td>-0.006</td>
<td>0.904</td>
</tr>
<tr>
<td>Psychosocial problem severity (SDQ score at baseline)</td>
<td>400</td>
<td>18.758</td>
<td>5.650</td>
<td>3–36</td>
<td>0.040</td>
<td>0.425</td>
</tr>
<tr>
<td>Psychosocial problem severity (SDQ score post-discharge)</td>
<td>266</td>
<td>13.000</td>
<td>8.236</td>
<td>0–35</td>
<td>-----</td>
<td>-----</td>
</tr>
</tbody>
</table>

*p < .05 **p < .01

**Outliers.** Regression analyses also is sensitive to outliers. Outliers can occur by chance in any distribution, data entry error, or incorrect distributional assumptions (e.g., treating count data as normally distributed data). Unusual or extreme values are defined as observations that appear to be inconsistent with other observations in the data set. In particular, outliers in ordinary least squares (OLS) regression can overstate the coefficient of determination ($R^2$), and give erroneous values for the slope and intercept.

Upon prescreening data for outliers, there are three important characteristics of potentially troublesome observations: leverage leading to unusual predictor values, discrepancy (distance^2) between predicted and observed criterion values, and influence, which reflects the product of leverage combined with discrepancy. *Cook’s Distance (Cook’s D)* is commonly used to understand the nature (leverage, discrepancy, and influence) of an outlier and its impact on an the estimated regression coefficient (Lorenze, 1987). Cook’s D helps identify outliers; however, additional approaches should be considered before eliminating them: (1) transformation of data, (2) deletion of outliers, (3) use of robust regression models, (4) fitting models with and without outliers to compare the coefficients, mean-squared error and, $R^2$ from both models, and/or (5)
conjecture about possible reasons for outliers (e.g. conclusions about the representativeness of a sample with outliers). Overall, this prescreening suggested that outliers were not a problem for the included variables. Several variables (mostly measuring “time spent” on various activities) showed significant problems with outliers and were deemed “non-essential” to the study and were not included.

**Multicollinearity.** Multicollinearity occurs when variables are highly correlated. As a rule of thumb, inter-correlation among predictors above 0.35 signals a possible problem. Likewise, high multicollinearity is signaled when high $R^2$ and significant F-tests of the model occur in combination with non-significant t-tests of coefficients. Large standard errors because of multicollinearity result in a reduced probability of rejecting the null hypothesis (i.e. power) and wide confidence intervals. Under multicollinearity, estimates are unbiased, but assessments of the relative strength of the explanatory variables and their joint effect are unreliable.

Three common approaches to determining the presence of multicollinearity are: (1) inspecting the bivariate correlations among predictors usually in a correlation matrix, (2) calculating the tolerance (tolerance value < 0.20 can be problematic), or (3) calculating the variance inflation factor (VIF), which is the reciprocal of tolerance (VIF > 4.0 can be problematic). For these data, the first approach was used and correlation matrices for independent and dependent variables were run separately and combined. Upon inspection of each correlation matrix, there were two pair of Pearson's $r$ values greater than 0.35 among the PYD factors: ICS Factors 2 “externalizing behavior” and 4 “prosocial skills” (staff-report) ($r = -0.372, p < .0001$) and ICS Factors 1 “interpersonal and physical strengths” and 3 “negative internalizing mood” ($r = -0.364, p < 0.0001$). Thus, these pair of variables were not entered
together in the same regression model. Multicollinearity was not a problem for independent or dependent variables.

**Homoscedasticity.** An assumption for OLS regression is the homogeneity of variance, or homoscedasticity, of the residuals. Homoscedasticity indicates a situation in which the variance of the dependent variable is the same for all the data. If the model is well-fitted, there should be no pattern to the residuals plotted against the fitted values. If the variance of the residuals is non-constant, then the residual variance is said to be heteroscedastic. A graphical methods for detecting heteroscedasticity was used by inspecting a scatterplot of the residuals versus predicted (fitted) values. Visually, a pattern of the data points that narrows toward the right end of the graph is an indication of mild heteroscedasticity. OLS regression is not optimal when heteroskedasticity is present because it gives equal weight to all observations when, in fact, observations with larger disturbance variance contain less information than observations with smaller disturbance variance (Allison, 1990). Heteroscedasticity can be a by-product of other violations of assumptions. Given that other assumptions are met, heteroscedasticity can be dealt with by: (1) respecifying the model, or transforming the variables, (2) using robust standard errors to counter the biased standard errors caused by the heteroscedasticity, or (3) using weighted least squares, which minimizes the weight of the sum of squared residuals. Because the assumption of homoscedasticity was met for all data included in the subsequent models, none of the aforementioned procedures were executed.

**Hierarchical Regression Modeling**

Given the state of the literature on youth in group home care as well as the exploratory nature of the current project, it was decided that it was premature to formally test for any mediation or moderation effects of the PYD factors and social capital. Therefore, hierarchical
regression approaches were used to help explain the influence of independent variables along with the potential additive effects of conceptually-relevant PYD factors and social capital on the observed variation in the focal outcomes. Successive models were built using Ordinary Least Squares (OLS) and binomial logistic regression analyses. OLS regression models were used to predict the variance explained with continuous dependent variables: SDQ Change One (during care), SDQ Change Two (post-discharge), Prosocial Change One (during care), and Prosocial Change Two (post-discharge). Binomial logistic regressions were used to predict the variance explained among dichotomous variables: living environment restriction, school activity, delinquency, employment, and prosocial activity.

As previously discussed, the data were prescreened for assumptions of complete data, outliers, multicollinearity, and heteroscedasticity. Each dependent variable was regressed on select predictors (demographics and background variables) to find the most parsimonious model. Predictors where individually added, or stepped into, each model and either removed or retained based upon its statistical significance (CITE). Then, PYD and social capital variables were individually and systematically added to each model to determine the presence and nature of any effect. Variables, except demographics, were removed from the model if not found to be significant ($p > 0.05$) and/or to reduce the $R^2$ value. To avoid multicollinearity, variables found to be moderately correlated ($r > 0.35$) were not included in the same model. Tables 13-24 detail regression coefficients, point estimates, and confidence intervals for each independent variable included in the model.

**Change in Psychosocial Problem Severity While in Group Care**

For SDQ Change One, the most parsimonious model was found when regressed with sex, age, race, DSS custody status, and total length of stay in group care. The model $R^2_{adj} = 0.032$,
which was statistically significant ($F_{5, 346} = 2.09, p = 0.007$). The effect of DSS custody status and total length of stay were significant ($p = 0.018, p = 0.008$). The parameter ($beta = -2.351$) and standardized estimates ($B = -0.141$) showed that youth in the custody of DSS had greater psychosocial problem severity at their last interview than at the start of the study. However, youth with a longer stay in group care, showed a decrease in severity of psychosocial problems by their last interview ($beta = 0.096, B = 0.113$). A post hoc t-test showed a statistically significant difference between the variables DSS custody and total length of stay ($df = 355, t = -2.50, p = 0.013$). Youth in DSS custody were in care an average of 12.51 months compared to 9.94 months for those who were not in DSS custody.

Upon adding variables with a potentially additive effect to the model, ICS-T (staff-report) Factors One “interpersonal and physical strengths” ($p = 0.004$) and Two “externalizing behavior” ($p < 0.0001$) were both significant. The final model $R^2_{adj} = 0.135$, which was statistically significant ($F_{7, 340} = 8.75, p < 0.001$). Thus, when predictors are held constant, there was a positive relationship between staff’s perceptions of youths’ competence on two dimensions and reduction in psychosocial problem severity scores during their group home stay (see Table 13). Youth whom staff reported had higher levels of interpersonal and physical strengths and/or lower levels of externalizing behavior showed greater reduction in problem severity while in the group home.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
<td>Sig.</td>
<td>B</td>
<td>b</td>
<td>S.E.</td>
<td>Sig.</td>
<td>B</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.072</td>
<td>0.892</td>
<td>0.935</td>
<td>-0.004</td>
<td>0.848</td>
<td>-0.274</td>
<td>0.747</td>
<td>-0.016</td>
</tr>
<tr>
<td>Age</td>
<td>0.836</td>
<td>0.425</td>
<td>0.050</td>
<td>0.105</td>
<td>0.404</td>
<td>0.520</td>
<td>0.199</td>
<td>0.066</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>1.703</td>
<td>0.977</td>
<td>0.082</td>
<td>0.093</td>
<td>0.926</td>
<td>2.116</td>
<td>0.023*</td>
<td>0.116</td>
</tr>
<tr>
<td>DSS Custody</td>
<td>-2.156</td>
<td>0.905</td>
<td>0.018*</td>
<td>-0.128</td>
<td>0.855</td>
<td>-2.351</td>
<td>0.006**</td>
<td>-0.141</td>
</tr>
<tr>
<td>Total length of stay</td>
<td>0.123</td>
<td>0.46</td>
<td>0.008**</td>
<td>0.143</td>
<td>0.043</td>
<td>0.096</td>
<td>0.027*</td>
<td>0.113</td>
</tr>
<tr>
<td>ICS- Factor 1 (staff-report)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.458</td>
<td>1.323</td>
<td>0.004**</td>
<td>0.149</td>
</tr>
<tr>
<td>ICS Factor 2 (staff-report)</td>
<td>0.355</td>
<td>-1.913</td>
<td>&lt;.0001**</td>
<td>-0.275</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Change in Psychosocial Problem Severity Post Group Care

Similarly, multiple regression analyses were conducted to find the most parsimonious model with youths’ change in SDQ score from their last in-home interview to their first post-discharge interview at four-months (SDQ change 2). Youths’ sex, age, and race (p = 0.020) were regressed on SDQ change 2. The variables initial length of stay, DSS custody status, and prior out-of-home placement were not found to be significant and removed from the model. Thus, the $R^2_{adj}$ was 0.014, which was not statistically significant ($F_{3,260} = 2.20, p < 0.088$). With other variables held constant, psychosocial problem severity scores upon discharge were positively related to demographic variables. The effect of race (Black) was statistically significant (p = 0.020) and inversely related to change in SDQ scores post-discharge ($beta = -3.111, B = -0.169$). The only variable found to have an additive effect was ICS-T (staff-report) Factor Two “externalizing behavior”. Upon adding it to the model, the $R^2_{adj}$ increased to 0.034, which was statistically significant ($F_{4,257} = 3.31, p = 0.011$). When predictors were held constant, there was a positive
relationship between group home staff’s perceptions of youths’ externalizing behavior and reduction in psychosocial problem severity four months post-discharge from group care (see Table 14). It was considered that this finding may relate to the post-discharge living environment because settings with a greater level of restrictiveness (i.e. more restrictive group home, psychiatric hospital, or correctional facility) may lend to rapidly improved behavior, particularly at the onset of care. Thus, the variable living environment was added to the model post hoc but not found to have a significant relationship. Therefore, it may be more likely that this finding could suggest a "ceiling effect". Staff’s perception of youths’ negative behavior may appear to reach an apex, in some respects, while in care, and then begin to level out shortly after leaving group home care.

Table 14

Predictors and Connection Regressed on SDQ Change Two

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
<td>Sig.</td>
<td>B</td>
<td>S.E.</td>
<td>Sig.</td>
</tr>
<tr>
<td>Step 1 Predictors</td>
<td>Sex</td>
<td>0.789</td>
<td>1.083</td>
<td>0.467</td>
<td>0.045</td>
<td>0.990</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-0.276</td>
<td>0.551</td>
<td>0.618</td>
<td>-0.031</td>
<td>-0.227</td>
</tr>
<tr>
<td></td>
<td>Race (Black)</td>
<td>-2.741</td>
<td>1.170</td>
<td>0.020*</td>
<td>-0.146</td>
<td>-3.111</td>
</tr>
<tr>
<td>Step 2 Predictors</td>
<td>ICS Factor 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PYD / SC</td>
<td>“externalizing behavior” (staff-report)</td>
<td>0.941</td>
<td>0.433</td>
<td>0.031*</td>
<td>0.134</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.025</td>
<td>0.049</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.014</td>
<td>0.034</td>
</tr>
</tbody>
</table>

*p < .05 **p < .01

Change in Prosocial Behavior While in Group Care

For Prosocial Change One, no background variables were found to be significant when included in the model. Upon stepping variables with a potential additive effect into the model, ICS-T Factors Two “externalizing behavior” and Four “prosocial skills” both from the group home staff’s report were significant (p < .01). The model R² adj values increased to 0.030 for both
models, which were statistically significant \((F_{4,385} = 3.00, p = 0.019\) and \(F_{4,389} = 3.21, p = 0.013\), respectively). It is important to note that this pair of variables could not be included in the same regression model because it was previously determined that multicollinearity was a problem \((r > 0.35)\). When demographic variables and \textit{ICS-T Factor Two} “externalizing behavior” were held constant, there was an inverse relationship between staff’s perceptions of youths’ externalizing behavior and prosocial behavior scores during group home care. Conversely, when demographic variables and \textit{ICS-T Factor Four} “prosocial skills” were held constant, there was a positive relationship between staff’s perceptions of youths’ prosocial skills and their prosocial behavior scores during group home care (see Table 15).

Table 15

\textit{Demographics and ICS-T Factors Two and Four Regressed on Prosocial Change One}

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(B)</td>
<td>S.E.</td>
<td>Signif.</td>
</tr>
<tr>
<td>Sex</td>
<td>0.080</td>
<td>0.212</td>
<td>0.683</td>
</tr>
<tr>
<td>Age</td>
<td>-0.048</td>
<td>0.100</td>
<td>0.631</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>-0.091</td>
<td>0.230</td>
<td>0.691</td>
</tr>
<tr>
<td>ICS Factor 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“externalizing behavior”</td>
<td>(staff-report)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICS Factor 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“prosocial skills”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(staff-report)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. (R^2)</td>
<td>-0.006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*\(p < .05\)  **\(p < .01\)

\textit{Change in Prosocial Behavior Post Group Care}

Similarly, multiple regression analyses were conducted to find the most parsimonious model with youths’ \textit{Prosocial Change Two} scores from their last in-home interview to their first post-discharge interview at four-months (prosocial change 2). Youths’ sex, age, and race were regressed on SDQ change 2. The background variables were not found to be significant and
removed from the model. Thus, the $R^2_{adj}$ was 0.019, which was statistically significant ($F_{3,260} = 2.72, p = 0.045$). With other variables held constant, prosocial behavior scores upon discharge were positively related to demographic variables. The effect of race (Black) was statistically significant ($p = 0.018$) before stepping in variables with a potentially additive effect. In all models, Black race was inversely related to prosocial behavior change. Significant PYD factors were ICS-T Factors One “interpersonal and physical strengths” and Two “externalizing behavior” (staff-report) and ICS-S Factor One “interpersonal and physical strengths” (youth-report). However, ICS Factors One and Two (staff-report) were not found to be significant in the same model and were regressed separately. Additionally, the $TRQ$ was found to be a significant social capital variable in each model. When group home staff perceive youth as having greater interpersonal and physical strengths, even though youth perceiving themselves as having less interpersonal and physical strengths but report experiencing a trusting relationship with staff, there was a positive relationship youths’ prosocial behavior change post-discharge ($F_{6,255} = 4.64, p = 0.0002$) (see Table 16). In a separate model, when predictors are held constant, there is a positive relationship between group home staff’s perceptions of youths’ externalizing behavior combined with youths’ perception of a trusting relationship with group home staff and youths’ positive change in prosocial behavior four months after their discharge from group care ($F_{5,258} = 3.92, p = 0.002$) (see Table 17).
Table 16

Demographics, ICS Factors, and TRQ Regressed on Prosocial Change Two

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
<td>Sig.</td>
<td>B</td>
<td>S.E.</td>
<td>Sig.</td>
<td>B</td>
<td>S.E.</td>
<td>Sig.</td>
</tr>
<tr>
<td>Step 1 Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>N = 264</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>0.141</td>
<td>0.305</td>
<td>0.644</td>
<td>0.028</td>
<td>0.234</td>
<td>0.310</td>
<td>0.451</td>
<td>0.047</td>
<td>0.251</td>
</tr>
<tr>
<td>Age</td>
<td>0.302</td>
<td>0.155</td>
<td>0.053</td>
<td>0.121</td>
<td>0.246</td>
<td>0.154</td>
<td>0.112</td>
<td>0.098</td>
<td>0.255</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>-0.785</td>
<td>0.329</td>
<td>0.018*</td>
<td>-0.148</td>
<td>-0.640</td>
<td>0.334</td>
<td>0.156</td>
<td>-0.121</td>
<td>-0.508</td>
</tr>
<tr>
<td>Step 2 PYD</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N = ???</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ICS Factor 1 “interpersonal and physical strengths” (staff-report)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ICS Factor 1 “interpersonal and physical strengths” (youth-report)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3 SC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 262</td>
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<td></td>
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<td>TRQ mean score</td>
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<tr>
<td>R²</td>
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<td>0.075</td>
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<td>0.098</td>
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</tr>
<tr>
<td>Adj. R²</td>
<td>0.019</td>
<td></td>
<td>0.057</td>
<td></td>
<td>0.077</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05 **p < .01

Table 17

Demographics, ICS-T Factor 2 and TRQ Regressed on Prosocial Change Two

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
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<td>S.E.</td>
<td>Sig.</td>
<td>B</td>
<td>S.E.</td>
<td>Sig.</td>
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<tr>
<td>Sex</td>
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<td>0.225</td>
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<td>Age</td>
<td>0.302</td>
<td>0.155</td>
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<td>0.121</td>
<td>0.239</td>
<td>0.156</td>
<td>0.127</td>
<td>0.096</td>
<td>0.241</td>
</tr>
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<td>Race (Black)</td>
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<td>0.329</td>
<td>0.018*</td>
<td>-0.148</td>
<td>-0.712</td>
<td>0.332</td>
<td>0.033*</td>
<td>-0.134</td>
<td>-0.631</td>
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<td>ICS Factor 2 “externalizing behavior” (staff-report)</td>
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<td>0.047</td>
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<td>0.072</td>
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<td>Adj. R²</td>
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<td></td>
<td>0.032</td>
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<td>0.054</td>
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</tr>
</tbody>
</table>

*p < .05 **p < .01
Living Environment Restriction

The data were also analyzed using a binary logistic regression with *living environment restriction* as the dependent variable and *sex, age, race (Black), DSS custody, and initial length of stay* as predictors and *ICS-S Factor One “interpersonal and physical strengths”* as an additional variable. Using a binary logit model, *lower living restriction = 1*. Of the original sample (n = 400), 281 observations were used in the analyses. As previously discussed, missing data were not imputed. The regression model had a good fit (Chi square = 27.274, df = 6, p =0.0001). The percent concordant was 68.2, which is a measure for assessing the predictive ability of the model. Therefore, the model appears to yield a strong relationship between the predicted and observed value. This suggest that when demographic and background variables are held constant, youth who had higher scores on *ICS-S Factor One*, which describes youths’ self-perception of confidence along interpersonal and physical dimensions, were significantly less likely to transition from group care to a less restrictive living setting (i.e. semi or independent living, living with parent/guardian, traditional foster care, or treatment foster care) at four months post-discharge (see Table 18).

Table 18

*Predictors and PYD Factors Regressed on Lower Living Restriction*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
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<td></td>
<td></td>
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<td>Lower</td>
<td>Upper</td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sex</td>
<td>0.024</td>
<td>0.548</td>
<td>0.326</td>
<td>0.923</td>
<td>0.089</td>
<td>0.628</td>
</tr>
<tr>
<td>Age</td>
<td>0.916</td>
<td>0.986</td>
<td>0.758</td>
<td>1.282</td>
<td>0.915</td>
<td>1.014</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>0.138</td>
<td>0.661</td>
<td>0.383</td>
<td>1.142</td>
<td>0.444</td>
<td>0.804</td>
</tr>
<tr>
<td>DSS Custody</td>
<td>0.0005</td>
<td>0.370</td>
<td>0.211</td>
<td>0.649</td>
<td>0.0008</td>
<td>0.405</td>
</tr>
<tr>
<td>Length of stay (initial)</td>
<td>0.044</td>
<td>0.951</td>
<td>0.907</td>
<td>0.999</td>
<td>0.121</td>
<td>0.965</td>
</tr>
<tr>
<td>Step 2 (PYD) ICS-S Factor 1</td>
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<tr>
<td></td>
<td>0.041</td>
<td>0.701</td>
<td>0.499</td>
<td>0.985</td>
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</tbody>
</table>
School Enrollment Post Group Care

To better understand youths’ school activity post-discharge, sex, age, and race (Black) was regressed on school enrollment. Using a binary logit model, school enrollment = 1. Of the original sample (n = 400), 265 observations were used in the analyses; missing data were not imputed. The regression model had a good fit (Chi square = 21.727, df = 3, p < 0.001) with a percent concordant of 69.3. Therefore, the model appears to yield a strong relationship between the predicted and observed value. This suggests that only the independent variables sex (p = 0.019) and age (p < 0.001) predicted youths’ school enrollment post group care (see Table 19). No other independent variables were significant in this model.

Table 19

Demographics Regressed on School Enrollment

<table>
<thead>
<tr>
<th>Variables (pd_25)</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for EXP(B)</th>
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<tbody>
<tr>
<td>Sex</td>
<td>0.020</td>
<td>0.379</td>
<td>0.168</td>
</tr>
<tr>
<td>Age</td>
<td>0.0001</td>
<td>0.421</td>
<td>0.270</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>0.308</td>
<td>1.562</td>
<td>0.663</td>
</tr>
</tbody>
</table>

Trouble in School Post Group Care

This data were also analyzed using a binary logistic regression, with trouble in school as the dependent variable and sex, age, and race (Black) as predictors and ICS-T Factor Four “prosocial skills”, ICS-S Factor Three “externalizing behavior”, and activities with staff as variables found to have additive effects. Using a binary logit model, trouble in school = 1. Of the original sample (n = 400), 221 observations were used in the analyses; missing data were not imputed. The regression model had a good fit (Chi square = 29.329, df = 6, p < 0.0001), and the percent concordant was 70.9. Therefore, the model appears to yield a strong relationship
between the predicted and observed value. This suggest that when demographic variables are held constant that *ICS-T Factor Four*, which describes group home staff’s perception of youths’ competence in prosocial skills, *ICS-S Factor Three*, youths’ self-perception of externalizing behavior, and youths’ report of engaging in activities with staff all influence youth getting into trouble in school after discharge from the group home. Youth perceived by group home staff as having strong prosocial skills were less likely to get into trouble at school. Youth who perceived themselves as displaying externalizing behavior during care were more likely to report having trouble in school post-care. Also, youth who reported engaging in activities with staff during their group home stay were less likely to get into trouble in school post-discharge (see Table 20).

Table 20

 Demographics and PYD Factors and Social Capital Regressed on School Trouble

<table>
<thead>
<tr>
<th>Variables (pd_29)</th>
<th>Sig. (B)</th>
<th>Exp. for Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig. (B)</th>
<th>Exp. for Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig. (B)</th>
<th>Exp. for Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>0.755</td>
<td>0.495</td>
<td>1.666</td>
<td>0.475</td>
<td>0.804</td>
<td>0.442</td>
<td>0.463</td>
<td>0.902</td>
<td>0.48</td>
</tr>
<tr>
<td>Age</td>
<td>0.005**</td>
<td>0.445</td>
<td>0.876</td>
<td>0.004</td>
<td>0.613</td>
<td>0.441</td>
<td>0.852</td>
<td>0.612</td>
<td>0.43</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>0.594</td>
<td>0.618</td>
<td>2.322</td>
<td>0.427</td>
<td>1.301</td>
<td>0.679</td>
<td>2.493</td>
<td>0.650</td>
<td>1.167</td>
</tr>
<tr>
<td>ICS Factor 4 (staff)</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICS Factor 3 (youth)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities w/staff</td>
<td>0.013*</td>
<td>0.614</td>
<td>0.902</td>
<td>0.017*</td>
<td>0.620</td>
<td>0.418</td>
<td>0.919</td>
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<tr>
<td>Employment Post Group Care</td>
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</tr>
</tbody>
</table>

**Employment Post Group Care**

To better understand what influences post-discharge employment, *sex, age, race (Black), and DSS custody status* were regressed on *employment*. No other independent variables were
significant in this model. Using a binary logit model, employment = 1. Of the original sample (n = 400), 230 observations were used in the analyses; missing data were not imputed. The regression model had a good fit (Chi square = 21.008, df = 4, p = 0.0003) with a percent concordant of 69.0. Therefore, the model appears to yield a strong relationship between the predicted and observed value. This suggests that only the independent variables age (p = 0.005) and DSS custody status (p = 0.003) predicted youths’ being employed post group care. Of the available data, 28.91% of youth were both employed and in the custody of DSS. Post hoc t-tests showed that youth in DSS custody were older and more likely to be employed (see Table 21).

Table 21

Demographics Regressed on Post-discharge Employment

<table>
<thead>
<tr>
<th>Variables (pd_41)</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for EXP(B)</th>
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<tr>
<td></td>
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</tr>
<tr>
<td>Sex</td>
<td>0.602</td>
<td>0.836</td>
<td>0.426</td>
</tr>
<tr>
<td>Age</td>
<td>0.0052**</td>
<td>1.656</td>
<td>1.162</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>0.267</td>
<td>0.655</td>
<td>0.310</td>
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<tr>
<td>DSS Custody</td>
<td>0.0026**</td>
<td>3.155</td>
<td>1.492</td>
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</tbody>
</table>

Delinquency Post Group Care

Four different binary logistic regression models were created to analyze the influence of independent variables on post-discharge delinquency. The need for separate models was based on the presence of multicollinearity between variables. For each binary logit model, delinquency = 1. First, sex, age, race (Black), and total length of stay as basic predictors as well as ICS-T Factor Two “externalizing behavior” as a variable with an additive effect were regressed on delinquency. Of the original sample (n = 400), 259 observations were used in the analyses; missing data were not imputed. The regression model had a good fit (Chi square = 39.500, df = 5, p < 0.0001) with a percent concordant value of 71.9. Therefore, model appears to yield a strong relationship between the predicted and observed value. The variables sex (p = 0.0009)
and total length of stay (p = 0.015) were significant predictors for all four models. This suggests that boys were more likely to engage in delinquent behavior, and youth in care longer were less likely to engage in delinquent behavior. When demographic and background variables are held constant, ICS-T Factor Two, which describes group home staff’s perception of youths’ externalizing behavior, positively influences youths’ delinquent behavior post-discharge (see Table 22).

Next, sex, age, race (Black), and total length of stay as predictors with ICS-S Factor Three “externalizing behavior” as a variable with an additive effect were regressed on delinquency. The regression model had a good fit (Chi square = 36.086, df = 5, p < 0.0001) with a percent concordant value of 70.8. Therefore, model appears to yield a strong relationship between the predicted and observed value. This suggest that when demographic and background variables are held constant, ICS-S Factor Three, which describes youths’ self-perception of externalizing behavior, is positively related to youths’ delinquent behavior post-discharge (see Table 21a). When ICS-T Factor Four “prosocial skills” was added to the model along with ICS-S Factor Three “externalizing behavior”, the regression model had a good fit (Chi square = 41.124, df = 6, p < 0.0001) and a percent concordant value of 71.9. This suggests that when group home staff perceive youth as being competent in prosocial skills, youth are less likely to engage in delinquent behavior post-discharge. Also, youth who perceive themselves as exhibiting externalizing behavior while in group care are more likely to engage in delinquent behavior four months after discharge (see Table 23).
### Table 22

**Predictors and PYD Factors Regressed on Delinquency**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
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<td>Low</td>
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<tr>
<td></td>
<td>0.0001*</td>
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<td>1.008</td>
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<tr>
<td>Age</td>
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<td>0.001</td>
<td>0.766</td>
<td>1.303</td>
<td>0.482</td>
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<td>0.838</td>
<td>1.45</td>
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<tr>
<td>Race (Black)</td>
<td>0.433</td>
<td>0.219</td>
<td>0.720</td>
<td>2.154</td>
<td>0.727</td>
<td>1.10</td>
<td>0.627</td>
<td>1.95</td>
<td>0.745</td>
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<tr>
<td>Total length of stay</td>
<td>0.003**</td>
<td>-</td>
<td>0.043</td>
<td>0.930</td>
<td>0.986</td>
<td>0.96</td>
<td>0.932</td>
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<td></td>
<td>1.535</td>
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<tr>
<td>ICS Factor 3 (youth)</td>
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</tr>
<tr>
<td></td>
<td>0.003**</td>
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</tbody>
</table>

*Step 1

*Step 2 (PYD)*

*Step 3

*p < .05  **p < .01

### Table 23

**Predictors and PYD Variables Regressed on Delinquency**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
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</thead>
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<td></td>
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<tr>
<td></td>
<td>0.0001**</td>
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<td>1.008</td>
<td>1.636</td>
<td>4.592</td>
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<tr>
<td>Age</td>
<td>0.992</td>
<td>-</td>
<td>0.001</td>
<td>0.766</td>
<td>1.303</td>
<td>0.482</td>
<td>1</td>
<td>0.838</td>
<td>1.45</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>0.433</td>
<td>0.219</td>
<td>0.720</td>
<td>2.154</td>
<td>0.727</td>
<td>1.10</td>
<td>0.627</td>
<td>1.95</td>
<td>0.745</td>
</tr>
<tr>
<td>Total length of stay</td>
<td>0.003**</td>
<td>-</td>
<td>0.043</td>
<td>0.930</td>
<td>0.986</td>
<td>0.96</td>
<td>0.932</td>
<td>0.98</td>
<td>0.964</td>
</tr>
<tr>
<td>ICS Factor 4 (staff)</td>
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<tr>
<td></td>
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<tr>
<td>ICS Factor 3 (youth)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>0.0008**</td>
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<td>1.447</td>
<td>1.100</td>
<td>1.903</td>
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</tbody>
</table>

*Step 2 PYD

*p < .05  **p < .01
Extracurricular Activity Post Group Care

In the final model, binary logistic regression was used to regress sex, age, race (Black), and prior out-of-home care as predictors and ICS-S Factor Three “externalizing behavior” as a variable with an additive effect on extracurricular activity. Using a binary logit model, extracurricular activity = 1. Of the original sample (n = 400), 222 observations were used in the analyses; missing data were not imputed. The regression model had a good fit (Chi square = 14.928, df = 4, p = 0.005) with a percent concordant value of 60.8. Therefore, this suggests that the independent variables prior out-of-home care (p = 0.0003) and ICS-S Factor Three “externalizing behavior” (p = 0.047) predicted youths’ engagement in extracurricular activities in school or the community post group care. Youth with a history of prior out-of-home placement were more likely to engage in extra-curricular activities post discharge. Youth who perceive themselves as exhibiting externalizing behavior while in care were less likely to engage in extra-curricular activities post-care. When post-discharge living environments (i.e. foster care, group home, psychiatric hospital, or jail) were included in a post hoc regression model, restrictiveness of living environment did not significantly predict extra-curricular involvement (see Table 24).

Table 24

Extracurricular Activity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
<th>Sig.</th>
<th>Exp (B)</th>
<th>95% C.I. for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>0.837</td>
<td>0.916</td>
<td>0.530 - 1.673</td>
<td>0.966</td>
<td>0.988</td>
<td>0.563 - 1.733</td>
</tr>
<tr>
<td>Age</td>
<td>0.591</td>
<td>1.097</td>
<td>0.802 - 1.473</td>
<td>0.710</td>
<td>1.056</td>
<td>0.792 - 1.409</td>
</tr>
<tr>
<td>Race (Black)</td>
<td>0.923</td>
<td>0.979</td>
<td>0.522 - 1.802</td>
<td>0.765</td>
<td>1.097</td>
<td>0.598 - 2.014</td>
</tr>
<tr>
<td>Prior out-of-home care</td>
<td>0.001**</td>
<td>2.892</td>
<td>1.502 - 5.280</td>
<td>0.0006**</td>
<td>2.753</td>
<td>1.543 - 4.911</td>
</tr>
<tr>
<td>Step 2 (PYD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICS Factor 3 (youth)</td>
<td>0.047*</td>
<td>0.753</td>
<td>0.570 - 0.996</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER V: DISCUSSION

Introduction

This study was born out of the concern that greater focus at the organizational and system levels was placed on managing or extinguishing problem behaviors among at risk adolescents in group homes over bolstering their healthy development. This study sought to address concerns in the field about the viability of group home care as an effective intervention and what critical ingredients lead to youths’ success after group care. Thus, this exploratory project was designed to answer the question, through secondary data analyses: What contributes to positive outcomes among youth in group home care? What sets this study apart from those in existing literature is its attempt to understand group home functions and youth outcomes through the lens of empirically supported sociological theory, Positive Youth Development Framework (Roth & Brooks-Gunn, 2003; Bowers et al., 2010) and Social Capital Theory (Laser & Leibowitz, 2009).

As discussed in the review of literature, outcome data on youth exiting group home care is sparse at best. A strength of the data from the primary study is that it offered a wealth of information from multiple sources on youths’ psychosocial functioning, transitional adjustment, and adaptation post-care, as well as the group home environment and interactions. Such evidence was paired with a two-theory framework to create a conceptual model depicting the potential interaction effects of group home functions on youth outcomes. While the data available did not lend to a large-scale or long-range exploration, this secondary data analysis may address a gap in the literature about what happens in group homes, add empirical support to group home efficaciousness, and begin to counter the prevailing belief that group home care is an option of last resort due (Barth, 2002; James, 2011; Ringle et al., 2012; U.S. DHHS, 2010) to
speculation of negative iatrogenic effects for difficult-to-place youth (James, 2011; Lee & Thompson, 2008).

**Interpretation of Findings**

**Youth Outcomes**

From the start, this study sought to examine the influence of PYD factors and SC on a myriad of youth outcomes in the context of group home care: (1) psychosocial problem severity, (2) prosocial behavior, (3) living environment restriction, (4) school activity (enrollment and trouble in school), (5) employment, (6) delinquency, and (7) extracurricular activity. After conducting a series of regressions on each outcome, the presence of PYD factors or SC within group care influenced all outcomes, excluding school enrollment and employment. This is not to say that either was not valued among the sample. More than 86% of the sample (n = 228) was enrolled in school after leaving group home care. Youth not enrolled in school in the four months immediately following discharge from the group home were not significantly older than youth still enrolled in school, 15.89 years compared to 15.21 years. This may suggest that factors within the group home environment did not influence whether or not a youth was subsequently enrolled in school. More than 20% of the sample was employed in the four months following their group home stay. The average age of employed youth was 14.5 years compared to 15.14 years of unemployed youth. It seems atypical that younger youth would be employed, especially under the age of 16 years. This may suggest that employment was a nebulous construct. It could mean that tasks such babysitting or mowing lawns, responsibilities that younger youth are qualified and capable of taking on, were considered jobs. Regardless, youth engaging in any form of prosocial responsibility that leads to financial gain may be indicative of healthy preparation for adulthood (Rauscher, 2011).
In the systems of care literature, the environment to which youth transition from a group home is an outcome studied often (citations). In particular, level of restrictiveness of a living environment is indicative of youths’ functioning as well as the level of supervision and support needed to care for them. The present study examined living environment restrictiveness as an outcome of the interaction of PYD factors and/or social capital youth experience while in group care. It was considered that the post-care living environment might impact whether or not a youth was employed. However, a post hoc chi-square test showed not significant difference between employment and living environment restriction. This may suggest an underlying system-level influence not explored in this study.

Psychosocial problem severity, the extent to which youth experience emotional difficulties, conduct problems, hyperactivity, and/or peer problems as well as prosocial behavior were assessed using SDQ scores either while in group care (from initial interviews to final in-home interviews before discharge) or post-discharge (from final in-home interviews to interviews at four months post-discharge). The intent of examining the same outcomes at a different point in time was to determine if positive change would hold after youth left the group home environment. These outcomes were particularly meaningful to this study because youth who reside in group care often experience significant psychosocial challenges and limited prosocial behaviors that make functioning too difficult for them to reside in less restrictive settings (citations) or to perform well along other domains (e.g. educationally, socially, or occupationally). Therefore, an observed reduction in symptom severity and/or increase in desired behavior may improve youths’ chances of functioning better in domains examined in this study – living environment, school, work, and extracurricular activity. However, Black youth showed
less reduction in psychosocial problem severity than their peers. Prosocial behavior change post-discharge was inversely influenced by race as well.

**Influence of Demographics on Youth Outcomes**

The present study examined whether or not three demographic variables predicted positive youth outcomes – age, sex, and race. Results showed that no one demographic variable was a major predictor over another. Participants included in this study were at least 14 years of age but younger than 18 years. Younger adolescents were more likely to be enrolled in school post discharge (n = 228, mean = 15.21 years) and to exhibit behavioral problems in school than older adolescents (n = 73, mean = 14.93 years). While only a minority of youth reported being employed in the four months after discharge, they were significantly older (n = 50, mean = 15.70 years) than youth who reported not working. There were few differences between sexes on outcomes. Girls (n = 102, 21.52%) were significantly more likely to transition from group home care to a less restrictive living environment (i.e. independent or semi-independent living, home with parent/guardian, foster care, or treatment foster care) and to be enrolled in school (n = 116, 43.77%), which was congruent with the findings that boys were more likely to engage in delinquent or criminal behavior four months post-discharge (n = 79, 30.15%). Neither age nor sex was a significant predictor for change in psychosocial problem severity or prosocial behavior while youth were in group home care or after exiting.

Race, however, was a significant predictor for psychosocial problem severity and prosocial behavior change post-discharge. Black race, the target variable, predicted less positive change as indicated by the *Strengths and Difficulties Questionnaire* (SDQ) (Goodman et al., 1998). Race was not a predictor for post-care living environment, school activity, employment, delinquency, or extracurricular activity. As discussed in previous chapters, Black youth are
overrepresented in group homes due to a myriad of factors not explored in this study. Lack of significant reduction in psychosocial problem severity may indicate that the group home environment is not as beneficial to Black youth on some levels as it is to their peers.

**Influence of Background Characteristics on Youth Outcomes**

Select characteristics of youth were examined in this study – DSS custody status, history of out-of-home placement, length of stay in group care (at the start of the study and upon discharge), and psychosocial problem behavior at baseline (SDQ score). These specific variables were included in the overall analyses because they are indicative of the complexity and elevated risk level of this youth sample (Breland-Noble et al., 2005; Strack et al., 2007)

**DSS custody status.** The majority of participants were in the custody of DSS (n = 195, 53.72%). It is important to note that more than 5% of the observations were missing not at random on this variable (MNAR) (frequency missing = 37), and post hoc analyses showed that DSS custody status was correlated with Black race (r = 0.101, p = 0.043, n = 400), prior out-of-home placement (r = -0.126, p = 0.012, n = 391), and length of stay at first interview (r = 0.134, p = 0.007, n = 400). Therefore, DSS custody status appears linked to several other predictors. Even still, of all youth background characteristics, DSS custody status was the most frequent predictor of post-discharge outcomes. Youth in the custody of DSS while group home care were significantly less likely to have a reduction in psychosocial problem severity upon discharge and to transition from a group home to a less restrictive living environment. This may suggest that while in group care, youths’ DSS custody status has an adverse impact. However, youth in the custody of DSS were more likely to be enrolled in school and to be employed post-discharge. These findings about DSS custody status suggest that system involvement may be beneficial to youth because associated requirements and case management may ensure youth participate in
compulsory education and/or engage in gainful employment, two activities that promote adaptation to independent, adult living. As discussed in a previous chapter and in the literature, youth who enter and exit group homes are not systematically tracked (Lee et al., 2010; Strack et al., 2007 Lee, Chmelka, & Thompson, 2010; Strack et al., 2007). There is no standardized procedure within or between states that documents the source from which youth are referred to group homes, to include specific social service programs. What this study offers is a snapshot of the impact of system-involvement on outcomes that existing studies may not capture.

**Out-of-home placement history.** Next, history of out-of-home placement was analyzed to determine if it was a variable that predicted youth outcomes. Although the number and type of placement(s) was unknown, prior out-of-home placement (n = 56, 25.23%) was a significant predictor for extracurricular activity (in school or in the community) post-discharge. From a PYD standpoint, engagement in extracurricular activity is linked to successful transition toward adulthood (Catalano et al., 2004). Such activities may include sports, community service, clubs, or other prosocial endeavors. Prior out-of-home placement was not, however, a predictor for change in prosocial behavior as indicated by SDQ subscale scores. Therefore, these findings may suggest that youth with multiple out-of-home placements may be connected to adult supports, possibly case managers, that promote or require youths’ extracurricular involvement to some degree. Such supports may not influence prosocial interactions as assessed by the SDQ. Future research may examine the number, type, and specific impact that out-of-home placement history has on youth outcomes.

**Length of stay in group home care.** Youths’ stay in group home care was measured and analyzed at two points – at their initial interview (initial length of stay) and at discharge (total length of stay). Initial length of stay (mean = 4.47 months) was only a predictor for post-
discharge living restriction. Youth with a shorter length of stay in group care prior to the start of the primary study were significantly more likely to transition from group home care to less restrictive environments. Total length of stay (mean = 11.43 months) was a predictor for two youth outcomes – change in psychosocial problems severity while in group care and delinquent behavior post-discharge. Youth with longer total lengths of stay in group homes were more likely to have a reduction in psychosocial problem severity. Conversely, youth with shorter total lengths of stay were more likely to engage in delinquent behavior four months after exiting group care. Collectively, these findings suggest that longer group home stays may be efficacious, in some respects, for youth with behavior problems. Such evidence may counter prevailing arguments that lend to social service policies and/or health insurance payment guidelines around shorter group home stays for youth and/or utilizing group care as an option of last resort (Annie E. Casey Foundation, 2010). Additional post hoc analyses would be necessary to uncover the nature and strength of differences between youth in group home care for longer and shorter periods of time.

**Baseline psychosocial problem severity.** Youths’ baseline psychosocial problem severity as assessed by the SDQ was included in prediction models that analyzed post-discharge living environment restriction, school activity, employment, delinquency, and extracurricular activity. This variable had no significant impact on any of these models. This finding may suggest that youths’ problem severity at baseline is more complex than can be assessed by the SDQ alone. Operationalizing psychosocial problem severity with background characteristics not utilized in this study to create a composite variable (e.g. abuse history, presence of mental health disorder, or juvenile detention) or utilizing different or additional standardized scale(s) may more closely get at this construct.
Influence of Positive Youth Development Factors on Youth Outcomes.

The three constructs of interest for this study from the 5Cs Model of Positive Youth Development were *competence, confidence, and connection*. PYD theorists defined *competence* as a positive view of one’s actions across domains – social, cognitive, academic, health, and vocational. *Confidence* is conceptualized as one’s internal sense of overall positive self-worth and efficacy. *Connection* is described as youths’ positive bonds with others and/or institutions that are reflect in healthy exchanges with his/her peers, family, school, and community (Lerner, 2004; Roth & Brooks-Gunn, 2003). Although they only partly described the second order construct *positive youth development*, they were the three constructs most closely measured with the data available from the primary study.

**Competence.** As operationalized by the *Interpersonal Competence Scale – Teacher Version* (ICS-T), group home staff’s assessment youths’ competence influenced outcomes on three of the four dimensions uncovered in the factor analysis of this scale: 1) interpersonal and physical strengths, 2) externalizing behavior, and 3) prosocial skills. The ICS-T Factors One “interpersonal and physical strengths” and Four “prosocial skills” were more indicative of youths’ competence than Factors Two “externalizing behavior” and Three “negative internalizing mood”, which were more of an assessment of youths’ psychological and behavioral challenges.

The construct *competence* was the only PYD factor that interacted with predictors on the reduction in psychosocial problem severity while in group care, increase in prosocial behavior both upon discharge and four months post-discharge, transition from group home care to a less restrictive living environment, and reductions in trouble at school and delinquent behavior post-discharge. When group home staff perceived youth as having interpersonal and physical strengths, or competence, as measured by the ICS-T, a reduction in psychosocial problem
severity was observed while in group care. No other PYD factor, element of social capital, or individual-level characteristic measured in the study influenced this outcome. This may suggest that group home staff’s positive view of youths’ competence, particularly interpersonal and physical strengths, may impact youths’ psychosocial problem severity.

The dimension of the ICS-T that identified behavioral challenges was also related to outcomes. Staff’s perception of less externalizing behavior was related to positive change in psychosocial problem severity upon discharge and positive change in prosocial behavior at and post-discharge. Conversely, staff’s perception of greater externalizing behavior reflected less positive change in psychosocial problem severity post-discharge as well as greater delinquent behavior post-discharge. For example, while a very small portion of the variance was explained by the model ($\text{Adj R}^2 = 0.034$), there was a statistically significant reduction in psychosocial problem severity post-discharge among youth who home staff perceived as experiencing externalizing behavior while in group home care. Only Black race significantly but inversely predicted this outcome; no other variables were significant in the model. Therefore, youth who displayed greater externalizing behavior in group home care also expressed less psychosocial problem severity after leaving. It is unclear why or how staff’s perception of greater externalizing behavior while youth were in care would be indicative of greater positive change in psychosocial problem severity after exiting care. Among many possibilities, this finding could suggest a "ceiling effect". It appears that staff’s perception of youths’ negative behavior may have reached an apex, in some respects, while in care, and then begin to level out shortly after leaving group home care. Staff’s perception of youths’ competence had no impact on youths’ enrollment in school or employment post-discharge. Testing the possibility of a “ceiling effect” would be a reasonable goal for future research, potentially a case study design.
Confidence. Youths’ sense of self-confidence was operationalized using two measures – the Interpersonal Competence Scale – Self-report (ICS-S) and a seven-item composite measure. The confidence composite measure did not appear to relate to any positive youth outcomes. Two of three dimensions uncovered by the factor analysis of the ICS-S were reflected in youth outcomes: 1) interpersonal and physical strengths and 2) externalizing behavior. The dimension of the ICS-S that reflected youths’ confidence about their interpersonal and physical strengths was inversely related to change in prosocial behavior post-discharge and transition from group care to a less restrictive living environment. It appears that when youth were less “confident” that they exhibited greater positive change in prosocial behavior and transitioned to a less restrictive environment. These findings may suggest that the ICS-S, particularly the first dimension, was not a reliable measure of youths’ confidence and/or that confidence may not be a variable that influences youth outcomes in the context of group home care.

The third dimension of the ICS-S, externalizing behavior, was positively related to trouble in school and delinquent behavior post-discharge. When youth perceived themselves as experiencing externalizing behavior while in group care, they reported exhibiting problem behavior four-months after discharge. To add, youth who reported externalizing behavior while in the group home, reported less engagement extracurricular activities post-discharge. Therefore, the addition of these findings about the third dimension of the ICS-S may suggest that youth in group homes more accurately self-assess and report their negative behavior than their positive attributes.

Connection. A three-item composite measure was used to operationalize the PYD construct connection. It reflected youths’ perceptions of group home staff members as being caring, fair, and helpful. Overall, ratings were high on this measure (n = 385, mean = 2.621, sd =
0.441, range = 1-3). However, connection, as operationalized, did not the influence of youths’ individual characteristics on any outcome. This finding suggests that analyzing the influence of connection on outcomes may be better achieved with a different or more comprehensive measure.

**Influence of Social Capital on Youth Outcomes**

*Social capital* is the product of structural and functional resources youth have access to within various settings (Bassani, 2007). Social capital was conceptualized in this study as a combination of the resources and relationships group homes provide to youth. Group home resources were measured using multi-item observational data along three domains: group home staff teaching skills, group home structure, and group home environment. These data were obtained by the primary researchers; youth perceptions were not included. Composite variables of items from each domain were entered individually into each model. However, none showed to significantly influence any outcome. Among many possibilities, it could be that the variables used to operational social capital resources were weak on or invalid. It could also mean that observational data from the researchers’ perspectives were not as strong as data from youths’ perspective would have been.

Relationships with group home staff were measured from youths’ perspective. Youths’ perceptions were operationalized using two dichotomous items that describe whether or not youth spent time with staff (other than meals) and believed anyone looks out for them. A scaled measure, the *Trusting Relationships Questionnaire* (TRQ) was also utilized. Only the TRQ was a significant measure in any of the regression models. Youth who reported engaging in activities with staff, in addition to reporting less externalizing behavior (ICS-S) and staff perceiving them as exhibiting prosocial skills (ICS-T), were less likely to get into trouble at school post-discharge. Younger age was the only significant predictor in the same model. Higher scores on the TRQ,
coupled with staff’s perception of greater externalizing behavior (ICS-T), were related to positive change in prosocial behavior post-discharge. Therefore, this model suggests that even when youth exhibit troublesome behavior while in group care, if they experience a trusting relationship with an adult while in care, they are more likely to exhibit prosocial behaviors even after leaving group care. This finding also counters the previously discussed concern about deleterious effects of group homes, particularly for youth with externalizing behavior problems (Huefner & Ringle, 2012). According to the model, it is possible for youth with behavioral struggles to actually do better, in some respects, after a group home experience. Further research that quantitatively investigates the presence of characterological differences between youth with behavior problems in group care and those without and/or qualitative study of social capital from the perspective of youth with observed behavioral problems.

Implications for Research and Practice

As evidenced from this study and supported in the literature, youth with group home care experiences often struggle with a myriad of risks that make them vulnerable to psychosocial challenges in adulthood (Lee & Thompson, 2008; Lee et al., 2010; Lee et al., 2011). However, when the focus shifts to protective factors that buffer risks, many youths’ chances for success transitions toward adulthood increase (Jessor, Turbin, & Costa, 1998). While further inquiry is boundless, key findings from this exploratory study lend to four main implications for research and practice that may forward knowledge about the influence of PYD factors and social capital on outcomes for group home youth: 1) consideration for differences in care experiences for Black youth; 2) consideration for differences in care experiences among youth in DSS custody; 3) promotion of youths’ overall competence; and 4) the significance of adult-child relationships.
First, Black youth stand out as experiencing different outcomes than youth of other races. Black youth had significantly less reduction in psychosocial problems severity and less increase in prosocial behavior than their peers post-discharge. This suggests that differences may exist at the individual, organizational, and/or system levels that may hamper Black youths’ success post-group home care. Given that Black youth are higher utilizers of social services, relative to their prevalence in the general population, it may be worthwhile to consider if and how individual, organizational and/or systemic factors impact outcomes among Black youth. Such inquiry may warrant a different theoretical framework from that which was used in this study. Developing questions around service provision for Black youth, group home staff interactions with Black youth, and/or post-care follow-up may begin to uncover reasons or correlates for poorer psychosocial and prosocial outcomes for Black youth. Such research questions may be: (1) What group home factors lead to successful post-discharge outcomes for Black youth, or (2) What factors related to group home staff impact?

Secondly, DSS custody status appears to be a significant factor impacting a myriad of youth outcomes. Youth in the custody of DSS while in group care had less psychosocial improvement and were less likely to transition from a group home to a less restrictive living environment than youth not in DSS custody. Conversely, youth in the custody of DSS were more likely to be enrolled in school and to be employed post-discharge. At an individual level, findings from the present study raise the question about the experience of youth in DSS custody and cared for in group homes. A phenomenological or constructivist study may begin to uncover what (if any) individual-level or organizational circumstances are of concern to youth or impact their trajectories. Further, given that social service programs are managed and executed differently across states, findings may differ drastically in multi-state study.
Regarding the third and final points, Catalano et al. (2004) argued that PYD programs emphasize one or more of the following objectives: resilience, self-determination, spirituality, clear and positive identity, belief in the future, recognition of positive behavior or norms, self-efficacy, opportunities for prosocial involvement, competence, and/or bonding. Not all of these constructs were examined; however, findings from this study supported the presence and impact of the latter two in the context of group home settings—competence and bonding. Therefore, practices within group home models may parallel that positive youth development programs, particularly if they promote healthy bonds and youths’ competence.

Competence is a multi-dimensional (i.e. social, emotional, cognitive, behavioral, and moral) developmental asset that helps to prevent other negative outcomes from manifesting or intensifying (Catalano et al., 2004). Although this study’s measure of competence did not cross all domains, the dimension of competence, group home staff’s perception of youths’ interpersonal and physical strengths, was linked to a reduction in psychosocial problem severity during group care. From a practice perspective, group home efforts at promoting youths’ functional or interpersonal skills may be beneficial while in the group home, but not sufficient for positive change to hold post discharge. Therefore, additional research could examine what specific competence-building tasks youth engage in while in group care and how tasks differ post-care, what efforts group home staff make to bolster youths’ competence, and/or use of other or additional measures of competence that cross all domains.

Bonding encompasses the emotional attachment and commitment youth make to others. Particularly, positive interactions youth have with adult caregivers help to build the foundation for youths’ trust in self and others, capacity for adaptive responses to change, and healthy adult development (Catalano et al., 2004). Arguments from social capital theorists support this
perspective, “social capital directly influences well-being through the creation of social bonds in which trust, loyalty, security, and self-confidence are formed” (Bassani, 2007). Whether viewed through the lens of the PYD framework or social capital theory, adult-child bonds appear to be a critical element in the production of positive outcomes for youth. This study found that youth perceived by group home staff as exhibiting greater externalizing behavior than their peers, reported a post-discharge reduction in psychosocial problem severity if they also reported experiencing a trusting relationship with at least one group home staff member. Often, a goal for youth with behavioral problems in group care is to extinguish the problem behaviors (Lee et al., 2010). This finding implies that forging relationships with youth with marked behavioral challenges may be a therapeutic intervention in itself. However, further probing of the specific interactions between group home staff and youth are needed to better understand the nature of this finding.

Study Limitations

While conducting an exploratory study of secondary data has many benefits in general, there were five major limitations to this project: 1) little variance explained by the regression models; 2) lack of direct measures for constructs; 3) limited reliability of group home youth reporters; 4) lack of examination of youth with outlying data; and 5) limited post-discharge data. First, The OLS regression models in this study had R² values ranging between 0.03 and 0.15. Whether the model was significant or not, this means that only 15% or less of the variance was explained by any of the models. This suggests that more accurate prediction models (with a better model fit) would potentially include different constructs found in the PYD or social capital literature (e.g. personal character, contribution to community, trusting relationships with family and/or teacher) but not explored in this study. Second, the overarching goal of this study was to
understand if PYD factors *competence, confidence, and connection* as well as *social capital* were present in group homes and if an additive effect exists. However, the primary study was not designed to measure these constructs directly. As defined, it was difficult to operationalize these constructs with the data from the primary study. Therefore, this researcher operationalized each construct with the measures available in the primary study that approximated these constructs. Results showed that the composite measure used to assess *connection* as well as the three composite measures used to analyze *social capital resources* were not significant in any of the models. Additionally, the ICS-S, particularly the first dimension uncovered through factor analysis, may not have been a reliable measure of youths’ confidence and/or that confidence as operationalized does not have an additive effect on youth outcomes upon exiting group home care. Findings showed that when youth were less “confident”, they exhibited greater positive change in prosocial behavior and transitioned to a less restrictive environment. Intuitively, it would seem that more confident youth would have more positive outcomes. Among several possibilities, this contradictory finding may also be the result of the third major limitation – the unreliability of youth reporters. It is unknown if discrepancies in self-reporting are a result of the response bias leading to a skewed dimension of the ICS-S, “interpersonal and physical strengths”. Next, this study did not fully examine youth who appeared to be outliers, particularly those youth who were in group home care for 12 months or longer. Participants examined in this study had an average length of stay in group care of 11.43 months. It would be worthwhile to isolate these outliers to uncover characteristics and predict the outcomes of youth who had longer than average group home stays. Finally, the point in time used to analyze youth outcomes was only at four months post-discharge. While data were also captured at eight months post-discharge, the response rate decreased significantly due to the highly transient nature of the population.
Therefore, this researcher’s decision to use outcome data captured at four months post-discharge helped to decrease missing data but limited the extent to which assertions about outcomes could be made. At only four month post-discharge, any group home “effects” may still reasonably be present making it difficult to determine any long-range or lasting impact of PYD factors or social capital.

**Study Strengths**

Strengths of the present project are largely tied to the methodological rigor of the primary study: 1) large sample size; 2) multiple data sources and points; 3) direct interviews with youth; and 4) connection to established social science theories. The present study’s sample included 400 youth aged 14 to 17 years old drawn from the primary sample of 554 participants between the ages of 6 and 20 years. A sample of this size provided a broad range of youth characteristics and outcomes for analysis. Data analyzed from each of the 400 cases was obtained from case records, direct interviews, standardized measures, home observations, and collateral reports. The use of multiple data sources helped to offset the potential impact of response bias from any one source. Furthermore, data were captured and multiple points – at the start of the study and at four-month intervals subsequently (two years during group home care and eight months post-discharge). Direct interviews with youth added an element of youths’ voice not often found in the existing literature on group home care. Extensive youth interviews, which included the use of standardized measures, yielded the rich, youth-centered perspective essential to this study’s research question. Finally, this project was grounded in social science theory, PYD framework and Social Capital Theory, from the outset. Incorporation of both was an attempt to broaden the understanding of the group home population and offer a more a dynamic perspective of youths’ outcomes to the field.
Conclusion

There is no prior published literature or empirical data evidence on the influence of positive youth development factors and/or social capital on youth outcomes in the context of group home care. Findings from this project suggest four main points about youth outcomes in the context of group home care. First, when group home staff members perceive youth as more competent youth (as indicated by higher ICS-T ratings of interpersonal and physical strengths) exhibit less psychosocial problems and greater prosocial behavior both while in and after leaving the group home. However, this was not the case for post-discharge functioning among Black youth who had significantly less positive change in these areas. Thus, a second point to emphasize is that Black youth may require a different means of assessing their perceptions or experience of current group services and interactions. The current study may not have accurately captured the influence of predictors and/or additive variables on outcomes for Black youth. Thirdly, youths’ perceptions of trusting relationships with staff was related to positive, post-discharge change in prosocial behavior among youth characterized as exhibiting externalizing behavior while in group care. This suggests that group home staff’s relationships with more troubled youth may have a therapeutic effect. Finally, the nature of group home programing as operationalized is not an accurate proxy for social capital resources, should be operationalized from the perspective of youth in group care, or does not have an additive effect on youths’ outcomes.

Thus, what contributes to positive youth outcomes in group homes? As this exploratory study found, PYD factors and social capital, in part, have an additive effect along with youths’ individual characteristics on their outcomes in the context of group home care. Staff’s perception of youth as competent along interpersonal, physical, behavior, and social domains and youths’ experience of having a trusting adult-child relationship while in care all impact youths’
positive outcomes. Therefore, analyses from this study imply that PYD factors and social capital influence, to some degree, the viability of group home care as an intervention for some troubled youths.
References


Barth, R. P. (2002). *Institutions vs. foster homes: The empirical base for the second century of debate*. Chapel Hill: Annie E. Casey Foundation, University of North Carolina, School of


Transaction Publishers.


residential treatment as a stop-gap service for youth with emotional and behavioral disorders. *Behavioral Interventions, 19*, 137-158.


National Council of Juvenile and Family Court Judges. (2011). *Disproportionality rates for*
children of color in foster care. Retrieved from
http://www.ncjfcj.org/sites/default/files/Disproportionality%20TAB1_0.pdf

that promote positive youth development and prevent risky behaviors: An international


The structure and developmental course of positive youth development (PYD) in early
Psychology, 30(5), 571-584.

nationally representative sample of American adolescents involved with foster care.

and community organizations. Report prepared for The U. S. Department of Agriculture
Extension Services. Washington, DC: Center for Youth Development and Policy
Research.


Appendices

A. Strengths and Difficulties Questionnaire (SDQ)
B. Interpersonal Competence Scale – Teacher Assessment (ICS-T)
C. Interpersonal Competence Scale – Self Assessment (ICS-S)
D. Trusting Relationships Questionnaire (TRQ)
E. Restrictiveness of Living Environment Scale (ROLES)
F. Factor Analyses Scree Plots
Section: intro

SDQ and ICS for use with Intro Staff (SDQ-IS)  
(paper copies to be collected at the time of the initial staff interview)

Revision: [#System.ProjectRevision]  
Current Resp #: [#System.RespondentNum]  
Responses to Upload: [#System.NumStoredRecords]

Interviewer:

☐ Kelly Kelsey  
☐ Maureen Murray  
☐ Betsy Farmer  
☐ Kess Ballentine  
☐ Jaclyn Sappah  
☐ Ashley Morris

Enter date of interview

Section: Youths
6 Enter Youth ID as 4 digits with leading zeros.

7 Here is the information we have for Youth ID [#KidID]:

First Name [#TKidname] Gender [@KidGender] Interview Type [@KidType] Current Home Placement [@KidHome]

☐ OK, correct
☐ Wrong kid, I want to re-enter the ID
☐ Right kid, but I want to note some discrepancies in this information

8 Please record any discrepancies in name, gender, home, interview type that you have noticed so that the tracking system can be updated.

9 Enter Child ID

Answer: _______________________________________

11 Kid's interview type:

☐ Background
☐ Target
☐ Background Followup
☐ Target Followup
☐ Background Discharge
☐ Target Discharge
Current home placement is [@KidHome]:

- Phoenix Bridge Group Home - Bradley Street Home
- Phoenix Bridge Group Home - Mill Creek Home
- Phoenix Bridge Group Home - Yellow House Home
- Phoenix Bridge Group Home - Patillo Home
- Youth Quest Inc. - Quest
- Barium Springs Home for Children - Level III Girls Home: Nelson
- Barium Springs Home for Children - DSS Co-ed Home: Granis
- Barium Springs Home for Children - Level III Boys Home: Holland House
- Barium Springs Home for Children - Level II Boys Home: Howard
- Barium Springs Home for Children - Level II Girls Home: Sullivan
- Methodist - Level II Girls Home: North Hills Youth Home
- Boys and Girls Homes of North Carolina, Inc.- Civitan Boys Home
- Boys and Girls Homes of North Carolina, Inc - Lions Boys Home
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- Boys and Girls Homes of North Carolina, Inc - Stango Girls Home
- Boys and Girls Homes of North Carolina, Inc - Wakefield Girls Home
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- Youth Unlimited- Slane-Level III Boys Home
- Youth Unlimited - Hayworth-Level III Girls Home
- Phoenix Group Homes, Inc. - Phoenix Home for Boys
- Phoenix Group Homes, Inc - Phoenix Home for Girls
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- Woodbridge Alternative - Lake Trail Boys Home
- Woodbridge Alternative - Platinum Boys Home
- Woodbridge Alternative - Stoneykirk Girls Home
- 2nd II None - Level III Boys Home: Rockwood
- 2nd II None - Level III Boys Home: Bellflower
- 2nd II None - Level III Boys Home: Barnhart
- 2nd II None - Level III Girls Home: Hannah Court
- 2nd II None - Coming Soon: Stone Haven
- Nazareth Home for Children - Smith Cottage
- Nazareth Home for Children - Hedrick
- Nazareth Home for Children - Benge
- Nazareth Home for Children - Leonard
- Nazareth Home for Children - Swing/ACE
- Rainbow - Co-ed DSS Home: Templeton
- Rainbow - Level II Girls Home: Reflections
- Catawba - Level II Girls Home: Corner House I
- Catawba - Level II Boys Home: Corner House II
- Catawba - Level II Boys Home: Andrea’s Place
- Catawba - Level II Girls Home: Blevins
- Phoenix Bridge Group Home - Patillo #2
- Zinc Girls Home
- Rosehill Boys Home
- Childrens Home of Iredell - Dearman
- Childrens Home of Iredell - Doyle
- Childrens Home of Iredell - Eisele
- Baptist Home - Bunker Cottage
- Baptist Home - Blackwell Cottage
- Baptist Home - Bryant Cottage
- Baptist Home - Jones Cottage
Answer all items as best you can for youth [Tkidname] even if you are not absolutely certain

<table>
<thead>
<tr>
<th>Item</th>
<th>Answer Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considerate of other people's feelings</td>
<td>_</td>
</tr>
<tr>
<td>Restless, overactive, cannot stay still for long</td>
<td>_</td>
</tr>
<tr>
<td>Often complains of headaches, stomach-aches or sickness</td>
<td>_</td>
</tr>
<tr>
<td>Shares readily with other youth, for example books, games, food</td>
<td>_</td>
</tr>
<tr>
<td>Often loses temper</td>
<td>_</td>
</tr>
<tr>
<td>Would rather be alone than with other youth</td>
<td>_</td>
</tr>
<tr>
<td>Generally well behaved, usually does what adults request</td>
<td>_</td>
</tr>
<tr>
<td>Many worries or often seems worried</td>
<td>_</td>
</tr>
<tr>
<td>Helpful if someone is hurt, upset or feeling ill</td>
<td>_</td>
</tr>
<tr>
<td>Constantly fidgeting or squirming</td>
<td>_</td>
</tr>
<tr>
<td>Has at least one good friend</td>
<td>_</td>
</tr>
<tr>
<td>Often fights with other youth or bullies them</td>
<td>_</td>
</tr>
<tr>
<td>Often unhappy, depressed or tearful</td>
<td>_</td>
</tr>
<tr>
<td>Generally liked by other youth</td>
<td>_</td>
</tr>
<tr>
<td>Easily distracted, concentration wanders</td>
<td>_</td>
</tr>
<tr>
<td>Nervous in new situations, easily loses confidence</td>
<td>_</td>
</tr>
<tr>
<td>Kind to younger children</td>
<td>_</td>
</tr>
<tr>
<td>Often lies or cheats</td>
<td>_</td>
</tr>
<tr>
<td>Picked on or bullied by other youth</td>
<td>_</td>
</tr>
<tr>
<td>Often offers to help others (parents, teachers, children)</td>
<td>_</td>
</tr>
<tr>
<td>Thinks things out before acting</td>
<td>_</td>
</tr>
<tr>
<td>Steals from home, school or elsewhere</td>
<td>_</td>
</tr>
<tr>
<td>Gets along better with adults than with other youth</td>
<td>_</td>
</tr>
<tr>
<td>Many fears, easily scared</td>
<td>_</td>
</tr>
<tr>
<td>Good attention span, sees work through to the end</td>
<td>_</td>
</tr>
<tr>
<td>Involved in gang activities</td>
<td>_</td>
</tr>
<tr>
<td>Has problems with sexual or sexualized behaviors</td>
<td>_</td>
</tr>
<tr>
<td>Uses illegal drugs or other substances</td>
<td>_</td>
</tr>
</tbody>
</table>

ICS section for [Tkidname]:
15 Very Good at Sports / So-so / Not Good at Sports

<table>
<thead>
<tr>
<th>Very Good</th>
<th>So-So</th>
<th>Not Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

16 Never Argues / Sometimes / Always Argues?

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

17 Always gets in trouble / Sometimes / Never gets in trouble?

<table>
<thead>
<tr>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

18 Always smiles / Sometimes / Never smiles?

<table>
<thead>
<tr>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

19 Not popular with boys / So-so / Very popular with boys

<table>
<thead>
<tr>
<th>Not</th>
<th>So-so</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

20 Not shy / So-so / Very shy

<table>
<thead>
<tr>
<th>Not</th>
<th>So-so</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Question</td>
<td>Rating</td>
<td>Very Good</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>21  Very Good looking / So-so / Not Good looking?</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>22  Very Good at spelling / So-so / Not Good at spelling?</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>23  Always gets in a fight / Sometimes / Never gets in a fight?</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>24  Never Sad / Sometimes / Always Sad?</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>25  Not Good at Math / So-so / Very Good at Math?</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>26  Very popular with girls / So-so / Not popular with girls?</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Lots of friends / Some friends / No friends?</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lots</td>
<td>Some</td>
</tr>
<tr>
<td>27</td>
<td><img src="#" alt="Table" /></td>
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<td></td>
<td><img src="#" alt="Table" /></td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Never gets his/her own way / Sometimes / Always gets his/her own way?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>28</td>
<td><img src="#" alt="Table" /></td>
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<td><img src="#" alt="Table" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Never worries / Sometimes / Always worries?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>29</td>
<td><img src="#" alt="Table" /></td>
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<tr>
<td></td>
<td><img src="#" alt="Table" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Wins a lot / Sometimes / Never wins?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A lot</td>
</tr>
<tr>
<td>30</td>
<td><img src="#" alt="Table" /></td>
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<td></td>
<td><img src="#" alt="Table" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Never friendly / Sometimes / Always friendly?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>31</td>
<td><img src="#" alt="Table" /></td>
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<tr>
<td></td>
<td><img src="#" alt="Table" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Cries a lot / Sometimes / Never cries?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A lot</td>
</tr>
<tr>
<td>32</td>
<td><img src="#" alt="Table" /></td>
</tr>
<tr>
<td></td>
<td><img src="#" alt="Table" /></td>
</tr>
</tbody>
</table>

33 Section: endsection
End of SDQ/ICS data entry for [#TKidname].

Interviewer: Tap 'next'

Then select either:
-- New Case save this interview and continue to enter another kid
OR
-- Menu to save and exit when all kids have been entered.
1 **Section: intro**

2 Interview Kids (IK)
   (Initial interview and followups every three months while kid remains in home for background & target kids)

   Revision: [#System.ProjectRevision]
   Current Resp #: [#System.RespondentNum]
   Responses to Upload: [#System.NumStoredRecords]

3 Interviewer:
   - Kelly Kelsey
   - Maureen Murray
   - Betsy Farmer
   - Kess Ballentine
   - Jaclyn Sappah
   - Ashley Morris

4 Enter date of interview

5 Enter Youth ID (4 digits with leading zeros).
Here is the information we have for Youth ID [#KidID]:

First Name [#TKidname] Gender [@KidGender] Interview Type [@KidType] Current Home Placement [@KidHome]

Interviewer: If any of this information is incorrect, please report it to the project office.

Child ID

Answer: ________________________________

Gender:

☐ Female
☐ Male
☐ DK
☐ Refused

Interview type

☐ Background
☐ Target
☐ Background Followup
☐ Target Followup
☐ Background Discharge
☐ Target Discharge
☐ Non-study
Home reported during interview

- Phoenix Bridge Group Home - Bradley Street Home
- Phoenix Bridge Group Home - Mill Creek Home
- Phoenix Bridge Group Home - Yellow House Home
- Phoenix Bridge Group Home - Patillo Home
- Youth Quest Inc. - Quest
- Barium Springs Home for Children - Level III Girls Home: Nelson
- Barium Springs Home for Children - DSS Co-ed Home: Granis
- Barium Springs Home for Children - Level III Boys Home: Holland House
- Barium Springs Home for Children - Level II Boys Home: Howard
- Barium Springs Home for Children - Level II Girls Home: Sullivan
- Methodist - Level II Girls Home: North Hills Youth Home
- Boys and Girls Homes of North Carolina, Inc.- Civitan Boys Home
- Boys and Girls Homes of North Carolina, Inc - Lions Boys Home
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- Boys and Girls Homes of North Carolina, Inc - Stango Girls Home
- Boys and Girls Homes of North Carolina, Inc - Wakefield Girls Home
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- Youth Unlimited- Slane-Level III Boys Home
- Youth Unlimited - Hayworth-Level III Girls Home
- Phoenix Group Homes, Inc. - Phoenix Home for Boys
- Phoenix Group Homes, Inc - Phoenix Home for Girls
- Woodbridge Alternative - Cadmium Boys Home
- Woodbridge Alternative - Lake Trail Boys Home
- Woodbridge Alternative - Platinum Boys Home
- Woodbridge Alternative - Stoneykirk Girls Home
- 2nd II None - Level III Boys Home: Rockwood
- 2nd II None - Level III Boys Home: Bellflower
- 2nd II None - Level III Boys Home: Barnhart
- 2nd II None - Level III Girls Home: Hannah Court
- 2nd II None - Coming Soon: Stone Haven
- Nazareth Home for Children - Smith Cottage
- Nazareth Home for Children - Hedrick
- Nazareth Home for Children - Benge
- Nazareth Home for Children - Leonard
- Nazareth Home for Children - Swing/ACE
- Rainbow - Co-ed DSS Home: Templeton
- Rainbow - Level II Girls Home: Reflections
- Catawba - Level II Girls Home: Corner House I
- Catawba - Level II Boys Home: Corner House II
- Catawba - Level II Boys Home: Andrea’s Place
- Catawba - Level II Boys Home: Blevins
- Phoenix Bridge Group Home - Patillo #2
- Zinc Girls Home
- Rosehill Boys Home
- Childrens Home of Iredell - Dearman
- Childrens Home of Iredell - Doyle
- Childrens Home of Iredell - Eisele
- Baptist Home - Bunker Cottage
- Baptist Home - Blackwell Cottage
- Baptist Home - Bryant Cottage
- Baptist Home - Jones Cottage
11 This will be a [@KidType] interview.

[#Tmsg]

12 Thanks very much for talking with me today. I'm going to ask you some questions about you and about things here at [@KidHome].

13 First how old are you?

Interviewer: If no response, select reason for missing value on bottom toolbar.

Answer: ____________________________________________

14 Race (ask only if you are not sure)

☐ African American
☐ American Indian
☐ Asian
☐ Hispanic
☐ White
☐ Multi-racial
☐ Other  __________________________

15 How long have you been here at "[@KidHome]" (Months)

Interviewer: If no response, select reason for missing value on bottom toolbar.

Answer: _________________________________
16 Before you came here, where were you living?

☐ Independently with friends
☐ At home (with parents)
☐ Other relatives
☐ Foster care
☐ Treatment foster care
☐ Other group home
☐ Residential treatment center
☐ Hospital
☐ Correctional facility
☐ Run away/homeless
☐ Other _______________________
☐ DK _______________________
☐ Refused _______________________

17 Now, I'd like for you to tell me a little bit about yourself. I have some descriptions here, and I'd like for you to think about yourself in the past month and tell me how you'd describe yourself on these things.

[HAND LAMINATED INTERPERSONAL INVENTORY TO CHILD -- GET THEM TO POINT TO OR TELL YOU ANSWERS SO YOU CAN ENTER THEM.]

INTERVIEWER: THE "DON'T KNOW" and "REFUSED" RESPONSES FOR THIS SET OF QUESTIONS IS ON THE BOTTOM OF THE SCREEN

18 Eat ice cream A lot/Sometimes/Never?

<table>
<thead>
<tr>
<th></th>
<th>A lot</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

19 Very Good at Sports / So-so / Not Good at Sports

<table>
<thead>
<tr>
<th></th>
<th>Very Good</th>
<th>So-So</th>
<th>Not Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>
20  Never Argues / Sometimes / Always Argues?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

21  Always gets in trouble / Sometimes / Never gets in trouble?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

22  Always smiles / Sometimes / Never smiles?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

23  Not popular with boys / So-so / Very popular with boys

<table>
<thead>
<tr>
<th></th>
<th>Not</th>
<th>So-so</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

24  Not shy / So-so / Very shy

<table>
<thead>
<tr>
<th></th>
<th>Not</th>
<th>So-so</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

25  Very Good looking / So-so / Not Good looking?

<table>
<thead>
<tr>
<th></th>
<th>Very Good</th>
<th>So-So</th>
<th>Not Good</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>
### 26. Very Good at spelling / So-so / Not Good at spelling?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>1</td>
</tr>
<tr>
<td>So-So</td>
<td></td>
</tr>
<tr>
<td>Not Good</td>
<td>7</td>
</tr>
</tbody>
</table>

### 27. Always gets in a fight / Sometimes / Never gets in a fight?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Always</td>
</tr>
<tr>
<td>7</td>
<td>Never</td>
</tr>
</tbody>
</table>

### 28. Never Sad / Sometimes / Always Sad?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Never</td>
</tr>
<tr>
<td>7</td>
<td>Always</td>
</tr>
</tbody>
</table>

### 29. Not Good at Math / So-so / Very Good at Math?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not Good</td>
</tr>
<tr>
<td>7</td>
<td>Very Good</td>
</tr>
</tbody>
</table>

### 30. Very popular with girls / So-so / Not popular with girls?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Rating</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Not</td>
<td></td>
</tr>
</tbody>
</table>

### 31. Lots of friends / Some friends / No friends?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Rating</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lots</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
32  Never gets his/her own way / Sometimes / Always gets his/her own way?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

33  Never worries / Sometimes / Always worries?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

34  Wins a lot / Sometimes / Never wins?

<table>
<thead>
<tr>
<th></th>
<th>A lot</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

35  Never friendly / Sometimes / Always friendly?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

36  Cries a lot / Sometimes / Never cries?

<table>
<thead>
<tr>
<th></th>
<th>A lot</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

37  Now shifting topics a little...During the past month, were you in school?

- Yes
- No
- DK
- Refused
38 If NO: Why was that?

☐ Expelled/suspended
☐ Home schooled / Home bound
☐ Dropped out
☐ Graduated
☐ Summer vacation
☐ Other _______________________
☐ DK _______________________
☐ Refused _______________________

39 If YES OR if reason for "no" was summer vacation:
What school do you go to?

________________________________________________________________________
________________________________________________________________________

40 And what grade are/were you in?

Interviewer: If no response, select reason for missing value on bottom toolbar.

Answer: _______________________

41 Thinking about the past month, how well would you say things been going in school for you?

☐ Really well
☐ Pretty well
☐ OK, but not well
☐ Kind of badly
☐ Really badly
☐ DK
☐ Refused

42 What kinds of things have been happening that make you feel like it's going "[@howsschool]"?

________________________________________________________________________
________________________________________________________________________
Are you involved in any kind of extracurricular activities at school (like a sports team, choir, band, any clubs...)?

☐ Yes
☐ No
☐ DK
☐ Refused

If Yes, What are you involved in?

What about beyond school, are you involved in any activities like sports, choir, clubs, scouts, youth group, FFA, or anything?

☐ Yes
☐ No
☐ DK
☑ Refused

If Yes, What are you involved in?

Now I’m going to read you some statements that describe how kids might think about themselves and how they do things in general. For each sentence, please think about how you are in most situations. Then tell me which response best matches your answer. There is no right or wrong answer.

I think I am doing pretty well
I can think of many ways to get the things in life that are most important to me
I am doing just as well as other kids my age
When I have a problem I can come up with lots of ways to solve it
I think the things I have done in the past will help me in the future
Even when others want to quit, I know that I can find ways to solve the problem

Answer Scale:
1. None of the time
2. A Little of the time
3. Some of the time
4. A Lot of the time
5. Most of the time
6. All of the time
7. DK
8. Refused
48 Now, I'd like to ask you some questions about how things are going here at [@KidHome].

Enter lead staff names for insertion into questions:

49 Thinking about the past 24 hours (so that's since this time yesterday), about how much time would you say you spent with "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" -- that can be when all three of you were together, when it was just one of them with you, or when there were a group of kids with them? (Minutes)

   Interviewer: If no response, select reason for missing value on bottom toolbar.

   Answer: ____________________________

50 How much time did you spend with other kids without a staff member or other adult around? (Minutes)

   Interviewer: If no response, select reason for missing value on bottom toolbar.

   Answer: ____________________________

51 And, about how much time (before you were supposed to be in bed for the evening) would you say you spent in your room (without a staff member there)? (Minutes)

   Interviewer: If no response, select reason for missing value on bottom toolbar.

   Answer: ____________________________

52 Did you do any activities with "[#staffnames.Staff_1]" or "[#staffnames.Staff_2]" in the past 24 hours other than eat a meal? It can be something here at the house or somewhere else.

   ☐ Yes
   ☐ No
   ☐ DK
   ☐ Refused

53 If Yes, What did you do?
Now I'm going to read you a list of behaviors. I'd like for you to tell me if any of these occurred in the past 24 hours, so that's since [#System.Hour]:00 o'clock yesterday.

Since then, were there times when....

54 You were not following directions or not complying with adult expectations?

☐ Yes
☐ No
☐ DK
☐ Refused

55 If YES, did any of the staff members or anyone do anything about that?

☐ Yes
☐ No
☐ DK
☐ Refused

56 If YES, what did they do?

________________________________________________________________________________________
________________________________________________________________________________________

57 You lied?

☐ Yes
☐ No
☐ DK
☐ Refused
59 If YES, did any of the staff members or anyone do anything about that?

☐ Yes
☐ No
☐ DK
☐ Refused

60 If YES, what did they do?

________________________________________________________________________

________________________________________________________________________

61 You destroyed or vandalized property?

☐ Yes
☐ No
☐ DK
☐ Refused

62 If YES, did any of the staff members or anyone do anything about that?

☐ Yes
☐ No
☐ DK
☐ Refused

63 If YES, what did they do?

________________________________________________________________________

________________________________________________________________________
64 You got into a fight with any other kid?

☐ Yes
☐ No
☐ DK
☐ Refused

65 If YES, did any of the staff members or anyone do anything about that?

☐ Yes
☐ No
☐ DK
☐ Refused

66 If YES, what did they do?

___________________________________________________________________________

___________________________________________________________________________

67 Had a fight or disagreement with a staff member?

☐ Yes
☐ No
☐ DK
☐ Refused

68 If YES, did any of the staff members or anyone do anything about that?

☐ Yes
☐ No
☐ DK
☐ Refused
69 If YES, what did they do?

________________________________________________________________________________________

________________________________________________________________________________________

70 Ignored a staff member or stopped talking to them?

☐ Yes
☐ No
☐ DK
☐ Refused

71 If YES, did any of the staff members or anyone do anything about that?

☐ Yes
☐ No
☐ DK
☐ Refused

72 If YES, what did they do?

________________________________________________________________________________________

________________________________________________________________________________________

73 Set another kid up to get them in trouble?

☐ Yes
☐ No
☐ DK
☐ Refused
If YES, did any of the staff members or anyone do anything about that?

- Yes
- No
- DK
- Refused

If YES, what did they do?

Section: pdrend
Now, I’d like you to think about the past month and tell me the answer that best describes your relationship with "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]".

Do "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" identify things they like about you?

Do you talk to "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" about your problems?

Do "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" want to spend time with you?

Do "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" talk positively about you to others?

Do you seek out counseling or advice from "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]"?

Do "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" consider your point of view?

Do "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" tell you that they are sorry?

Do "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" tell you when something you have done has hurt them

Do you share things you like about "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" with them?

Do you tell "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" when you are sorry?

Do you talk with others in a positive way about "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]"?

Do you tell "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]" when they have done something to hurt you?

Do you enjoy spending time with "[#staffnames.Staff_1]" and "[#staffnames.Staff_2]?"

Do you consider "[#staffnames.Staff_1]'s" and "[#staffnames.Staff_2]'s" points of view?

Answer Scale:

1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Very frequently
6. DK/NA
7. Refused
Post Discharge Interview (PD)

Enter during phone interview

Revision: [#System.ProjectRevision]
Current Resp #: [#System.RespondentNum]
Responses to Upload: [#System.NumStoredRecords]

**Interviewer:**

- Kelly Kelsey
- Maureen Murray
- Betsy Farmer
- Kess Ballentine
- Jaclyn Sappah
- Ashley Morris
- Other

**Enter date of interview**

**Which post-discharge followup:**

- 4 months
- 8 months
6 Enter Youth ID as 4 digits with leading zeros.


7 Here is the information we have for Youth ID [#KidID]:

First Name [#TKidname] Gender [@KidGender] Interview Type [@KidType] Current Home Placement [@KidHome]

☐ OK, correct
☐ Wrong kid, I want to re-enter the ID
☐ Right kid, but I want to note some discrepancies in this information

8 Please record any discrepancies in name, gender, home, interview type that you have noticed so that the tracking system can be updated.


9 Enter Child ID

Answer: ____________________________

10 Gender of child:

☐ Female
☐ Male
☐ DK
☐ Refused
Interview type

☐ Background
☐ Target
☐ Background Followup
☐ Target Followup
☐ Background Post Discharge
☐ Target Post Discharge
Last recorded home placement is [@KidHome]:

- Phoenix Bridge Group Home - Bradley Street Home
- Phoenix Bridge Group Home - Mill Creek Home
- Phoenix Bridge Group Home - Yellow House Home
- Phoenix Bridge Group Home - Patillo Home
- Youth Quest Inc. - Quest
- Barium Springs Home for Children - Level III Girls Home: Nelson
- Barium Springs Home for Children - DSS Co-ed Home: Granis
- Barium Springs Home for Children - Level III Boys Home: Holland House
- Barium Springs Home for Children - Level II Boys Home: Howard
- Barium Springs Home for Children - Level II Girls Home: Sullivan
- Methodist - Level II Girls Home: North Hills Youth Home
- Boys and Girls Homes of North Carolina, Inc. - Civitan Boys Home
- Boys and Girls Homes of North Carolina, Inc - Lions Boys Home
- Boys and Girls Homes of North Carolina, Inc - Optimist Boys Home
- Boys and Girls Homes of North Carolina, Inc - Stango Girls Home
- Boys and Girls Homes of North Carolina, Inc - Wakefield Girls Home
- Youth Unlimited - Millis-Level II Boys Home
- Youth Unlimited- Slane-Level III Boys Home
- Youth Unlimited - Hayworth-Level III Girls Home
- Phoenix Group Homes, Inc. - Phoenix Home for Boys
- Phoenix Group Homes, Inc - Phoenix Home for Girls
- Woodbridge Alternative - Cadmium Boys Home
- Woodbridge Alternative - Lake Trail Boys Home
- Woodbridge Alternative - Platinum Boys Home
- Woodbridge Alternative - Stoneykirk Girls Home
- 2nd II None - Level III Boys Home: Rockwood
- 2nd II None - Level III Boys Home: Bellflower
- 2nd II None - Level III Boys Home: Barnhart
- 2nd II None - Level III Girls Home: Hannah Court
- 2nd II None - Coming Soon: Stone Haven
- Nazareth Home for Children - Smith Cottage
- Nazareth Home for Children - Hedrick
- Nazareth Home for Children - Benge
- Nazareth Home for Children - Leonard
- Nazareth Home for Children - Swing/ACE
- Rainbow - Co-ed DSS Home: Templeton
- Rainbow - Level II Girls Home: Reflections
- Catawba - Level II Girls Home: Corner House I
- Catawba - Level II Boys Home: Corner House II
- Catawba - Level II Boys Home: Andrea's Place
- Catawba - Level II Girls Home: Blevins
- Phoenix Bridge Group Home - Patillo #2
- Zinc Girls Home
- Rosehill Boys Home
- Childrens Home of Iredell - Dearman
- Childrens Home of Iredell - Doyle
- Childrens Home of Iredell - Eisele
- Baptist Home - Bunker Cottage
- Baptist Home - Blackwell Cottage
- Baptist Home - Bryant Cottage
- Baptist Home - Jones Cottage
- Other

____________________
13 Name of respondent


14 What is your relationship to [#TKidname]?

☐ Parent
☐ Other Relative
☐ Agency Employee
☐ Other

15 If Agency Employee, which agency?

☐ DSS
☐ Residential Setting
☐ Other _______________________________________

16 If "[@relationshiptochild]", please specify:

________________________________________________________________________
________________________________________________________________________

17 Is [#TKidname] currently living with you (or would you consider yourself a primary caregiver for [#UHIM HER])?

☐ Yes
☐ No
☐ DK
☐ Refused
18 If NO, how would you describe your role in [TKidname]'s life at the moment?

________________________________________________________________________

19 Where is [TKidname] currently living?
Interviewer: If obvious from above answer, just code - don't need to ask

☐ Independently/with friends
☐ At home (with parents)
☐ Other relatives
☐ Foster care
☐ Treatment foster care
☐ Other group home
☐ Residential treatment center
☐ Hospital
☐ Correctional facility
☐ Runaway / homeless
☐ Other ______________________
☐ Nowhere else ______________________
☐ Don't know ______________________
☐ Refused ______________________
Figure 1. Scree Plot of Eigenvalues of ICS Youth Data

2.5
2.0
1.5
1.0
0.5
0.0
-0.5

0       2       4       6       8      10      12      14      16      18
Number
Figure 2. Scree Plot of Eigenvalues of ICS Staff Data