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Child Maltreatment and Psychosocial Functioning in the Context of Foster Care: Self-Concept as a Mediator and a Moderator

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CHILD MALTREATMENT AND PSYCHOSOCIAL FUNCTIONING IN THE CONTEXT OF FOSTER CARE: SELF-CONCEPT AS A MEDIATOR AND A MODERATOR

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ABSTRACT

Youth in foster care experience high prevalence rates of emotional and behavioral problems (Burns et al., 2004; Clausen et al., 1998; Fernandez, 2009; Orton et al., 2009; see McWey et al., 2010; see Pilowsky, 1995) due to a range of risk factors they encounter. Exposure to maltreatment can generally lead to increased internalizing problems (e.g., Avery et al., 2000; Carlson et al., 1997; see McWey et al., 2010), externalizing behaviors (e.g., Prino & Peyrot, 1994; McWey et al., 2010), social problems (e.g., Bolger & Patterson, 2001; Bolger et al., 1998), and poor self-perceptions or self-worth (see Arata et al., 2005; Bolger et al., 1998). Self-concept has been examined with respect to how it may affect youth's emotional, behavioral, and social functioning in the general population. Research has shown that self-perception can help explain underlying pathways to adaptive or maladaptive outcomes (e.g., Mann et al., 2004). Negative self-concept or self-esteem can mediate the relationship between the experience of stressors and the development of psychopathology. Studies also suggest positive self-concept may buffer against the adverse effects of maltreatment. Positive self-perceptions of competence have been found to promote healthy development and protect against negative outcomes, regardless of the accuracy of the self-perceptions (e.g., Kim & Cicchetti, 2003, 2004; Patterson et al., 1990). However, these effects of self-concept have not been examined among foster youth. The present study sought to examine the mediating and moderating effect of self-concept in the relation between maltreatment and psychosocial functioning (i.e., internalizing problems, externalizing problems, and social problems) during the first year of children and adolescents' placement in

the child welfare system.

CHAPTER ONE

INTRODUCTION

Youth who enter foster care are often victims of child maltreatment (e.g., physical abuse, sexual abuse, neglect; US DHHS, 2003). These youth represent a vulnerable group, and their susceptibility to a range of social, emotional, and behavioral difficulties, such as aggression, delinquency, depression, anxiety, substance use, relational difficulties, and school failure, are well documented (e.g., Burns, Phillips, Wagner et al., 2004; Cicchetti & Manly, 2001; Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; Fernandez, 2009; Guibord, Bell, Romano, & Rouillard, 2011; Horwitz, Widom, McLaughlin, & White, 2001; Lansford, Dodge, Pettit, Bates, Crozier, & Kaplow, 2002; Leslie et al., 2000; Oswald, Heil & Goldbeck, 2010).

High prevalence rates of emotional and behavioral problems as well as adaptive functioning deficits found among youth in foster care (Burns et al., 2004; Clausen et al., 1998; Fernandez, 2009; Landsverk & Garland, 1999; Newton, Litrownik, & Landsverk, 2000; Orton, Riggs, & Libby, 2009; see McWey, Acock, & Porter, 2010; see Pilowsky, 1995) are not surprising given the range of risk factors they encounter, such as separation from biological parents, loss of significant attachments, placement disruptions, and living in poverty. Undoubtedly, one of the most studied traumatic stressors that foster care youth experience is child maltreatment, which is what brings them into foster care in the first place, (e.g., Clausen et al., 1998; Garland et al., 1996; Holtan, Rønning, Handegård, & Sourander, 2005). Exposure to maltreatment can generally lead to increased internalizing problems, such as anxiety and

depression (e.g., Avery, Massat, & Lundy, 2000; Carlson, Furby, Armstrong, & Shlaes, 1997; Staudt, 2001; see McWey et al., 2010), externalizing behaviors, such as aggression and delinquency (e.g., Prino & Peyrot, 1994; McWey et al., 2010; Smith & Thornberry, 1995), and social problems (e.g., Bolger & Patterson, 2001; Bolger, Patterson, & Kupersmidt, 1998).

In addition to deficits in emotional, behavioral, and social functioning, maltreatment can also have negative effects on children's self-perceptions or self-worth (see Arata, Langhinrichsen-Rohling, Bowers, & O'Farrill-Swails, 2005; Bolger et al., 1998; see Hecht & Hansen, 2001; Loos & Alexander, 1997). For example, past research has shown that maltreated children are more likely to be rated by themselves or teachers as having low self-esteem and demonstrate less positive self-concepts in comparison to non-maltreated children (e.g., Bolger et al., 1998; Cicchetti & Rogosch, 1997). Theoretically, the negative self-perception of maltreated youth may be explained by a disturbance in the sense of self (Cole & Putnam 1992; Toth, Cicchetti, Macfie, & Emde, 1997; see Ji, Trickett, & Negriff, 2010). Children typically develop a sense of the world as dependable and trustworthy, as well as a sense of themselves as competent and lovable based on secure attachments with caregivers (Bowlby, 1982). Maltreated children, however, often have difficulty experiencing the benefits of a secure attachment relationship because maltreating parents are unresponsive or respond inappropriately to children's needs. Children whose caregivers are neglectful or excessively harsh with physical punishments may be more likely to develop perceptions of themselves as unworthy and ineffective (Kim & Cicchetti, 2006). Research on self-esteem in foster care has often been limited to examining the construct as an outcome (e.g., Salahu-Din & Bollman, 1994; Ahrens, DuBois et al., 2008; Schofield &

Beek, 2009). In the general population, self-concept has been examined with respect to how it may affect youth's emotional, behavioral, and social functioning. For example, low self-esteem or self-concept is related to internalizing problems, such as depression, anxiety, and ineffective coping skills (e.g., Cole, Martin, & Powers, 1997; see Dumont & Provost, 1999; Byrne, 2000; Seiffge-Krenke, 1995), and social problems, such as poor prosocial skills and conflictual peer relations (e.g., Bolger et al., 1998; Bolger & Patterson, 2001). Research also suggests that poor self-concept is associated with externalizing problems, such as delinquency and aggression (e.g., Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; see Kim & Cicchetti, 2004; see Leary, Schreindorfer, & Haupt, 1995), although this link is not as consistent as with other outcomes (e.g., Kim & Cicchetti, 2003).

Researchers suggest self-perception can help explain underlying pathways to adaptive or maladaptive outcomes (e.g., Mann, Hosman, Schaalma, & De Vries, 2004). In fact, psychological constructs (e.g., self-blame, response style) have long been considered as mediational pathways between stressful environmental, social, or biological factors and mental health problems (see Kinderman, Schwannauer, Pontin, & Tai, 2013; Kinderman, 2005). Research within the general population has demonstrated that negative self-perceptions or evaluations can mediate the relationship between the experience of stressors and the development of psychopathology. For example, self-esteem can mediate the relationship between childhood abuse and negative outcomes in adults (e.g., Ji et al., 2010; Stein, Leslie, & Nyamathi, 2002) or mental health problems in adolescents (Arslan, 2016; Greger et al., 2017; Soler et al., 2013; Suzuki & Tomoda, 2015; Turner, Shattuck, Finkelhor, & Hamby, 2015). In addition, studies suggest positive self-concept may buffer against the adverse effects of maltreatment. Not

all maltreated youth experience negative outcomes, and self-concept is considered a prominent protective factor among maltreated youth (Heller, Larrieu, D'imperio, & Boris, 1999; Masten, 2006). Positive self-perceptions of competence have been found to promote healthy development and protect against negative outcomes, regardless of the accuracy of the self-perceptions (e.g., Kim & Cicchetti, 2003, 2004; Patterson, Kupersmidth, & Griesler, 1990). Tram and Cole (2000) suggest that meditational and moderational processes are not mutually exclusive, and that both are useful for examining underlying processes of how self-concept affects psychosocial functioning among youth. Of note, these models have not been examined or compared within the foster care population.

Despite a growing body of research on foster youth's psychological and social adjustment, a number of limitations remain in the extant literature. Although there is evidence for the mediating and moderating role of self-concept in studies of stress and psychosocial functioning in the general population, a construct such as self-concept may operate differently within the foster care population (Pears, Kim, & Leve, 2012). Moreover, no direct comparisons of these two models (moderation versus mediation) of the role of self-concept have been made in the foster care literature. More research is needed to expand on the current literature and examine potential mediating and moderating effects of self-concept in the association between maltreatment and psychosocial outcomes among youth in foster care.

The present study sought to address the limitations described above by examining the mediating and moderating effect of self-concept in the relation between maltreatment and psychosocial functioning (i.e., internalizing problems, externalizing problems, and social problems) during the first year of children and adolescents' placement in the child welfare

system. Specifically, this study examined whether the negative effects of maltreatment on psychosocial outcomes among foster youth could be explained by a decline in self-concept. The study also sought to test whether self-concept moderates the association between maltreatment and outcomes among foster youth, thereby serving as a protective variable. Following the specificity matching principle, different domains of self-concept were examined depending on the outcome being assessed (e.g., perceived social competence predicting social functioning). Applying a multi-informant approach, the study compared DCFS workers' and foster parents' reporting of youth's psychosocial functioning.

CHAPTER TWO

MENTAL HEALTH AND WELL-BEING AMONG YOUTH IN FOSTER CARE

Child Welfare Statistics

Children and adolescents commonly enter foster care after experiencing any of the four main types of maltreatment, including neglect, physical abuse, sexual abuse, and psychological maltreatment (US DHHS, 2003). Child welfare systems are commissioned to remove abused and neglected children from their homes to integrate them into long-term stable caregiving arrangements through reunification, adoption, subsidized guardianship, or emancipation. In recent years, the child welfare system has assumed the additional goals of helping children recover from the physical or psychological effects of abuse and neglect to promote their well-being (Mennen & O'Keefe, 2005; Doyle, 2007). As of the end of fiscal year 2015, over 400,000 children were in foster care, 52% of whom were male and 48% female; the mean age of foster care youth was 8.7 (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2015). Young children (i.e., ages 1–11) compared to older children (i.e., ages 12–18) are more likely to come to the attention of child welfare services for abuse and neglect (USDHHS, 2007). Child welfare systems also represent a racially/ethnically diverse body; racial and ethnic minority youth constitute 40-50% of the foster care population on average (Lu, Landsverk, Ellis-Macleod, Newton, Ganger, & Johnson, 2004; Hines, Lemon, Wyatt, & Merdinger, 2004; Garland et al.,

2000). Research suggests that most children in foster care come from families with low socioeconomic status, and these families often encounter multiple challenges, such as chronic poverty, familial stresses, unstable housing, employment issues, lack of parenting skills, and poor education (Barth, Wildfire, & Green, 2006; Leslie, Landsverk, Ezzet-Lofstrom, Tschann, Slymen, & Garland, 2000).

Psychological and Social Maladjustment among Youth in Foster Care

Youth in foster care represent a vulnerable group, susceptible to a range of social, emotional, and behavioral difficulties, such as aggression, delinquency, depression, anxiety, substance use, relational difficulties, and school failure (e.g., Burns et al., 2004; Cicchetti & Manly, 2001; Clausen, Landsverk, Ganger, Chadwick, &Litrownik, 1998; Fernandez, 2009; Guibord, Bell, Romano, & Rouillard, 2011; Horwitz, Widom, McLaughlin, & White, 2001; Lansford, Dodge, Pettit, Bates, Crozier, & Kaplow, 2002; Leslie et al., 2000; Oswald, Heil & Goldbeck, 2010). For example, a multi-site study, examining children between the ages of 4 and 16 in California counties, found that 75 to 80% of children entering foster care met clinical or borderline criteria on one or both of the behavioral problem and social competence domains on the Child Behavior Checklist (Clausen et al., 1998). Other studies have found that foster care youth generally show elevated scores on the CBCL scales, with 48% to 61% of youth reaching scores over the cut-off for social, emotional, or behavioral problems (Burns et al., 2004; see Oswald et al., 2010). Using the self-report measure, children in foster care (age 6-17) were found to report more attention problems, social problems, delinquency, aggression, anxiety, and depression compared to a community comparison group (Sawyer, Carbone, Searle, & Robinson,

2007; Oswald et al., 2010). A study of 1,618 foster care youth (age 6-18) showed that 54% of youth met criteria for at least one psychiatric disorder, including attention deficit/ hyperactivity disorder (50%), disruptive disorders (50%), anxiety disorder (10%), and mood disorder (7%) (Garland, Hough, McCabe, Yeh, Wood, & Aarons, 2001). Cross and Bruhn (2010) suggest that the prevalence rates of mental health and behavioral problems among youth in foster care in Illinois are comparable to the national foster care samples.

Moreover, such high prevalence rates of emotional and behavioral problems as well as adaptive functioning deficits found among youth in foster care are substantially higher than that of youth in the general population (Burns et al., 2004; Clausen et al., 1998; Fernandez, 2009; Landsverk & Garland, 1999; Newton, Litrownik, & Landsverk, 2000; Orton, Riggs, & Libby, 2009; see McWey et al., 2010; see Pilowsky, 1995). Clausen and colleagues (1998) suggested that youth in foster care are about 2.5 times more likely to have emotional and behavioral problems compared to the general population. Previous studies have also reported that up to 85 percent of children entering foster care have significant mental health problems, compared with rates of 11 percent to 25 percent among community samples (see Leslie et al., 2000).

In addition to emotional and behavioral problems as well as other mental health concerns, youth in foster care or with history of maltreatment are also susceptible to experiencing difficulty with social functioning (see Leve, Fisher, & DeGarmo, 2007 for review). For example, a study found that over 65% of foster youth scored in at least the borderline range of functioning in the social competence domain on the CBCL (Clausen et al., 1998). Specifically, children in foster care were found to show social deficits, such as having fewer friends, significantly younger friends,

more conflictual peer relations, and difficulty making and maintaining friends. They were also found to exhibit problems with social behavior, such as nonreciprocal or indiscriminate interpersonal behavior, suggestive of insecure relationships (see Oswald et al., 2010).

While the prevalence rate of emotional, behavioral, and social problems are high among youth in foster care, it is important to note that there may be some age effects (e.g., Grogan-Kaylor, Ruffolo, Ortega, & Clarke, 2008). Children who are older at entry into foster care have been found to report a greater number of anxiety symptoms and emotional problems, engage in more delinquent behaviors, and their caseworkers rate them less positively on health, adjustment, and satisfaction with the placement compared to younger children (Fernandez, 2009). Such effects may be explained by the longer exposure of older children to adversity prior to coming into care.

Adverse Experiences and Risk Factors among Youth in Foster Care

The high prevalence rates of mental health problems for youth in foster care are not surprising, considering the number of traumatic experiences they experience prior to entering foster care and the additional trauma of foster care placement (Clausen et al., 1998; Garland et al., 1996; Holtan et al., 2005). Although foster care is intended to protect youth from any further harm, the experience of traumatic stressors does not cease upon being placed in out-of-home care (see Taussig, 2002). Entry into foster care can present a considerable psychological challenge, where children are faced with a unique combination of issues: the traumatic events that precipitated their entry into foster care, removal from family and familiar environments, and adjustment to new families as well as living situations (see Leslie et al., 2000).

Child Maltreatment

Undoubtedly, one of the most prominent traumatic stressors that foster care youth experience is what brings them into foster care in the first place, namely child abuse and neglect (e.g., Clausen et al., 1998; Garland et al., 1996; Holtan et al., 2005). In 2014, 70.5% of victims of child maltreatment were neglected, 17.0% physically abused, 8.3% sexually abused, and 6.8% other types of maltreatment nation-wide (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2016). There is a substantial body of literature documenting the short term as well as long-term negative effects of child maltreatment, such as greater internalizing behaviors (e.g., depression and anxiety), externalizing behaviors (e.g. aggressive and acting out behaviors), and social problems (Arata, Langhinrichsen-Rohling, Bowers, & O'Farrill-Swails, 2005; see Hecht & Hansen, 2001). While there is a clear association between maltreatment and behavior problems, it is important to note that the rates of these mental health disorders may vary with age, socioeconomic status, family characteristics, and severity of abuse (Kaplan, Pelcovitz, & Labruna, 1999).

While the experience of child maltreatment is a risk factor for a wide range of problems in functioning and various forms of psychopathology, there are few differences in the adjustment problems associated with each type of maltreatment (Higgins & McCabe, 1998; Kamsner & McCabe, 2000; Mills et al., 2013). There is a lack of specificity in the relationships between maltreatment types and particular adjustment problems (Higgins & McCabe, 2003). Instead, studies suggest that the severity and frequency of maltreatment are associated with the degree of

maladjustment among maltreated youth. For example, a study of 235 families with children ages 5 to 11 years (Manly, Cicchetti, & Barnett, 1994) found that the higher severity and frequency of maltreatment predicted poorer social competence and greater behavior problems among maltreated children. Wind and Silvern (1994) compared adjustment problems in women with two different types of child abuse (i.e., sexual abuse and physical abuse), and found almost identical outcomes for both. Another study found that physical and sexual abuse both led to post-traumatic psychological problems (Briere & Elliott, 2003). Research suggests that it is the experience of overall multi-type maltreatment (i.e., multiple types of maltreatment occurring within the same family), as well as severity that are related to the poor levels of adjustment or mental health problems, not the specific type of maltreatment (Arata, Langhinrichsen-Rohling, Bowers, & O'Brien, 2007; Trickett, Negriff, Ji, & Peckins, 2011; Trickett & McBride-Chang, 1995; Higgins & McCabe, 2003; Mills, et al., 2013).

Internalizing Behaviors. Exposure to maltreatment or violence can generally lead to increased depression, lowered self-esteem, identity disturbances, feelings of guilt and shame, and social isolation (e.g., Avery, Massat, & Lundy, 2000; Carlson, Furby, Armstrong, & Shlaes, 1997; Staudt, 2001; see McWey et al., 2010). Previous research has demonstrated that child maltreatment is associated with internalizing symptoms, such as depression, suicidality, and low self-esteem (see Arata et al., 2005). For example, a study with a sample of 167 children and adolescents (age 7 - 18) in the general population found that maltreatment has a negative impact on a child's outlook on life, enjoyment of living, and hopes for the future (Ney, Fung, & Wickett, 1994). In a longitudinal study, Brown and colleagues (1999) found that children and adolescents

with a history of abuse or neglect were three times more likely to exhibit depressive symptoms and suicide attempts compared to non-maltreated individuals. Youth with a history of sexual abuse were found to be at much greater risk of becoming depressed or suicidal during adolescence and young adulthood compared to those without sexual abuse history. Similarly, a study comparing college students with a history of psychological and physical maltreatment compared to those without any history of abuse found that any level of past maltreatment or victimization was associated with increased rates of suicidal behaviors (Langhinrichsen-Rohling, Monson, Meyer, Caster, & Sanders, 1998).

Moreover, Arata and colleagues' study of college students found that individuals with multi-maltreatment were more depressed, had lower self-esteem, and were more likely to have past suicidal thoughts compared to individuals with no abuse history. Moreover, previous research indicates that severity of physical neglect, particularly when it occurred during the preschool period, is associated with internalizing symptomatology and withdrawn behavior (Manly, Kim, Rogosch, & Cicchetti, 2001). Overall, child maltreatment has been repeatedly linked to internalizing behaviors, such as depression (Guibord et al., 2011; Orton et al., 2009; Cohen, Brown, & Smailes, 2001), anxiety disorders (Boney-McCoy & Finkelhor, 1996; Cohen et al., 2001).

Externalizing Behaviors. In addition to internalizing behaviors, a substantial body of research has also established associations between child maltreatment and externalizing behaviors, such as aggression (Caspi et al., 2002; Jaffee, Caspi, Moffitt, & Taylor, 2004), attention-deficit hyperactivity disorder, oppositional disorder, posttraumatic stress disorder

(Famularo, Kinscherff, & Fenton, 1992), antisocial personality disorder (Jaffee et al., 2007; Famularo et al., 1992), and future delinquency and criminal activity (Widom, 2000; Zingraff, Leiter, Johnsen, & Myers, 1994). For example, previous studies have found that youth with histories of abuse, including sexual abuse, exhibited greater substance use compared to non-maltreated peers (Harrison, Fulkerson, & Beebe, 1997; Rotheram-Borus, Mahler, Koopman, & Langabeer, 1996). Prino and Peyrot (1994) also found that children who were physically abused exhibited greater amount of aggression and hostility compared to children who were neglected but not physically abused, as well as children without any history of maltreatment. Girls with a history of sexual and physical abuse were found to exhibit greater truancy compared to peers without any history of abuse (Green, Russo, Navratil, & Loeber, 1999). Individuals with sexual abuse histories are much more likely to engage in sexual risk-taking activities, resulting in higher rates of teenage pregnancy and sexually transmitted diseases, unprotected sexual behaviors, and higher rates of consensual sexual activity, compared to those without sexual abuse histories (e.g., Fergusson, Horwood, & Lynskey, 1997). Moreover, youth who are persistently maltreated in childhood and adolescence are at significantly greater risk of delinquent behaviors and violent behaviors, resulting in higher rates of incarceration, arrests, or criminal activity, compared to those who were never maltreated (see Taussig, 2002; Thornberry, Huizinga, & Loeber, 2004).

The review of the literature also shows that severity of maltreatment is associated with externalizing behaviors such that more extensive maltreatment with higher severity, frequency, and duration, is associated with higher rates of delinquency (McWey et al., 2010; Smith & Thornberry, 1995). Manly and colleagues' study (2001) of 814 children (age 5.5-11.5; 492 were

maltreated) showed that the severity of physical abuse during the preschool period predicted greater aggression and other externalizing behaviors, as measured by the Teacher Rating Form (Achenbach, 1991).

Social Competence. In addition to externalizing and internalizing behavior problems, maltreatment has also been associated with subsequent social problems, such as having problems in peer relationships or being the victim or perpetrator of violence in relationships (Bolger & Patterson, 2001; Bolger, Patterson, & Kupersmidt, 1998; Cicchetti, Lynch, Shonk, & Manly, 1992; Kim & Cicchetti, 2010; see Lansford et al., 2007 for review; see Shield, Cicchetti, & Ryan, 1994). Prior research indicates that younger maltreated children (e.g., toddlers, preschoolers) tend to be less socially skillful, likely to have more negative peer interactions, cause distress among peers, and less likely to initiate interactions with unfamiliar peers in comparison to their non-maltreated peers (see Shield et al., 1994). Older maltreated children also show maladaptive social problems, such as displaying less positive affect, being less interactive, and being more likely to be rejected by peers compared to non-maltreated youth.

Maltreated children are often perceived by adults and peers as being less socially competent and are more likely to have greater social problems, such as peer rejection or difficulty initiating as well as maintaining peer relationships compared to non-maltreated children (e.g., Bolger & Patterson, 2001; Bolger et al., 1998). A number of studies have also shown that children who have been maltreated are at increased risk for unpopularity among their peers (e.g., Bolger et al., 1998; Cicchetti et al., 1992). The review of the literature also suggests that the severity and chronicity of maltreatment is positively associated with social problems. For

example, Bolger and colleagues' (1998) longitudinal study of 314 children in grades 2 to 4 found that children who experienced chronic maltreatment were less popular with peers compared to non-maltreated children; the more chronic the maltreatment, the less popular a child was likely to be. Children (ages 8-10) who were chronically maltreated were also found to be more likely to be rejected by peers repeatedly across several years from childhood to early adolescence (Bolger & Patterson, 2001). Manly and colleagues (1994), using a sample of children between the ages of 5 and 11, also found that the chronicity, frequency, and severity of maltreatment predicted children's social competence and behavior problems, such that children who were more severely and more frequently abused exhibited lower social competence and more behavior problems compared to those who experienced less severe and frequent abuse.

Moreover, the review of the literature in this area indicates that poor parenting and other family dysfunctions in maltreating families are associated with maltreated children's difficulty with attachment relationships as well as poor-quality representations of caregivers, which in turn are associated with difficulties in peer relationships (Shields, Ryan, & Cicchetti, 2001; see Shonk & Cicchetti, 2001 for review). These adverse experiences as well as maladaptive representations of caregivers can provide a filter through which maltreated children process information about social contexts, and trigger emotional arousals even in neutral or friendly peer contexts (Shields et al., 2001). For example, maltreated children are more likely to develop biased and inadequate methods of processing social information compared to non-maltreated children, such that maltreated children tend to miss social cues, make more hostile interpretations of behaviors of others, and show poor social skills to solve interpersonal problems (e.g., Dodge, Pettit, & Bates,

1994; see Levendosky, Okun, & 1995, for review). These maladaptive defensive styles could negatively affect children's ability to manage their dysregulated emotions and behaviors in social contexts and peers, in turn, may respond to them with "avoidance, rejection, and even victimization" (Shields et al., 2001, pp. 331). On the other hand, positive representations of caregivers, family relationships, and secure attachment relationships are related to prosocial behavior, peer preference, and competent peer relationships among children.

Self-Concept/Self-Perception. Prior research has also documented the negative effects of maltreatment on children's self-perceptions or self-worth (see Arata et al., 2005; Bolger et al., 1998; see Hecht & Hansen, 2001; Loos & Alexander, 1997). In addition to examining self-esteem as an aspect of mental health or an outcome, researchers suggest that self-esteem can help explain the underlying pathways to adaptive or maladaptive outcomes. For example, poor self-esteem may influence the development of an array of psychological and social problems while positive self-esteem may buffer the impact of negative influences (Mann et al., 2004). In fact, psychological processes or constructs have long been considered as mediational pathways between stressful environmental, social, or biological factors and mental health problems (see Kinderman, Schwannauer, Pontin, & Tai, 2013; Kinderman, 2005). For example, while risk factors (e.g., stressful life events, familial risk, and social circumstances) were direct predictors of mental health problems (e.g., depression, anxiety), Kinderman and colleagues (2013) found that the inclusion of psychological processes (e.g., self-blame, response style) as mediators in the relationship between the risk factors and mental health significantly improved the overall fit of the model. The following chapter reviews the literature on the relationship between maltreatment

and self-concept, as well as the literature supporting its role as both a mediator and moderator in the relationship between maltreatment and outcomes.

CHAPTER THREE

SELF-CONCEPT AMONG YOUTH IN FOSTER CARE

Self-Concept

The literature generally defines self-concept as a composite view of oneself (Bong & Skaalvik, 2003). Self-concept can be considered to be developmental because it becomes more differentiated from early childhood to adulthood (see Crain & Bracken, 1994; e.g., Harter, 1983). Children encounter a broader range of experiences, environments, and relationships as they age, and begin to develop differentiated, domain-specific self-concepts as they acquire new experiences and evaluate their own behaviors. Differentiation of domains of self-concepts begins during early childhood, increases during adolescence, and continues throughout adulthood as individuals come into contact with new environments.

It is important to note two main issues related to terminology. First, there is a lack of a universally accepted definition of self-concept, and it is used interchangeably with other terms, such as self-esteem (see Burtler & Gasson, 2005; Crain & Bracken, 1994; Swann, Chang-Schneider, & McClarty, 2007). Previously, self-concept and self-esteem were distinguished by viewing the former as a cognitive view of self that organizes self-relevant information and the latter as a global self-reflexive or affective view that addresses how one feels about self. However, there is not enough empirical support for such categorical distinctions (see Burtler & Gasson, 2005; Campbell, 1990; Craven & Marsh, 2008; Marsh & Craven, 2006; Shavelson, Hubner, & Stanton 1976; Swann et al., 2007). Swann and colleagues (2007) argued that self-

concept and self-esteem both have cognitive as well as emotional elements. Thus, Swann and colleagues (2007) suggest that both concepts be included in a self-view category, referring to both thoughts and feelings about the self.

Another important issue concerns the conceptualization of self-concept. Historically, research on self-concept has taken a unidimensional approach and focused on the global view of the self (see Marsh, 1990; see Bong & Skaalvik, 2003). However, the global nature of self-concept has since been criticized as it overlooks important distinctions children make across different domains of activities (Harter, 1982; see Bong & & Skaalvik, 2003; Marsh & Craven, 2006). After decades of research on general or global view of self, the field has been emphasizing the multidimensional aspect of self-concept, such as children's self-concept in different domains (e.g., intellectual abilities, physical appearance, social competence; Marsh, 1993; Marsh & Martin, 2011). Self-concept is believed to be formed through experiences with the environment, and is influenced by environmental reinforcements and significant others (Marsh, 1990; Shavelson et al., 1976). Thus, the more closely self-concept is related to specific situations, the closer the link is between self-concept and behavior in the particular situation. Of note, measures of global self-worth remain highly stable over time in contrast to measures of domain-specific self-concept (Butler & Gasson, 2005 ; Granleese & Joseph, 1994).

Given that self-concept is a multidimensional construct, Swann and colleagues (2007) suggest applying the specificity matching principle to research on the self. According to this principle, a specific self-concept (e.g., self-perceived reading ability) should be used as a predictor when predicting specific self-relevant domains or outcomes (e.g., reading proficiency),

and global self-esteem for global outcomes (e.g., combination of several outcomes). Sowislo and Orth (2013) provide theoretical justifications for using global measures of self-esteem when studying psychological adjustment. They state that global self-esteem appears to have predictive ability for outcomes measured at a global level (e.g., combination of several outcomes), while domain-specific self-esteem seems to have predictive ability for outcomes at a specific level (e.g., academic self-esteem predicts academic outcomes). In fact, they provide three reasons for focusing on global self-esteem rather than domain-specific self-esteem when examining the relation between self-esteem and psychological adjustment. First, most of the theories linking self-esteem to psychological adjustment use global self-esteem, not domain-specific self-esteem. Second, most studies on self-esteem and psychological adjustment have used measures of global self-esteem (e.g., Orth, Robins, & Meier, 2009; Orth, Robins, & Roberts, 2008). Third, indicators of psychological adjustment (e.g., depression, anxiety) are relatively global constructs that combine a number of different symptoms (Swann et al., 2007). Thus, it is reasonable and consistent with the specificity-matching framework to use global self-concept when examining its relation to psychological adjustment. In accordance with these views, the following review will focus on global self-concept in regard to internalizing and externalizing problems, and domain-specific self-concepts in regard to social competence.

Child Maltreatment and Self-Concept

An extensive range of literature demonstrates that maltreated children show deficits in the self-system, including low self-esteem and poor perceptions of competence (see Arata et al., 2005; Toth, Manly, & Cicchetti, 1992; Bolger et al., 1998; Cicchetti & Rogosch, 1997; Kim &

Cicchetti, 2004, 2006; Toth, Cicchetti, Macfie, Maughan, & Vanmeenen, 2000; see Cicchetti, 2016). For example, past research has shown that maltreated children are more likely to be rated by themselves or teachers as having low self-esteem, and demonstrate less positive self-concepts in comparison to non-maltreated children (e.g., Bolger et al., 1998; Cicchetti & Rogosch, 1997). Studies using maltreated toddlers also show that maltreated children express more negative affect on visual self-recognition and talk about themselves less compared to non-maltreated children (Beeghly & Cicchetti, 1994; Schneider-Rosen & Cicchetti, 1991). Using narrative data, studies have also shown that maltreated preschool-age children display more negative representations of self (Toth et al., 2000).

Theoretically, the negative self-perception of maltreated youth may be explained by a disturbance in the sense of self (Cole & Putnam 1992; Toth et al. 1997; see Ji et al., 2010). The development of an integrated sense of self typically begins during the toddler years as individuals learn to regulate emotions and form secure attachment relationships. Early caregiving experiences serve as a foundation for the development of representational models of the attachment figure, the self, and the self in relation to others (see Cicchetti, 2016). Children typically develop a sense of the world as dependable and trustworthy, as well as a sense of themselves as competent and lovable based on secure attachments with caregivers (Bowlby, 1982). Maltreated children, however, often have difficulty experiencing the benefits of a secure attachment relationship because maltreating parents are unresponsive or inappropriately responsive to children's needs. Children whose caregivers are neglectful or excessively harsh with physical punishments may also be more likely to develop perceptions of themselves as

unworthy and ineffective (Kim & Cicchetti, 2006). Arata and colleagues (2005) found that emotional abuse and neglect can lead to feelings of inadequacy as well as a sense of worthlessness in youth due to perceiving parents as not considering their emotional and physical needs. Indeed, maltreated children may not have received the parental support or care necessary to develop a positive sense of self (Harter, 1998). These difficulties in attachment relationships may lead to the development of negative view of self as well as others in relationships, based on early attachment relationships. According to Navarre (1987), the sense of self and individuation are negatively affected when children experience abuse from adults in their lives, because such abuse conveys an idea to children about how others value them lowly. Since the experiences that abused children have with their surroundings are often negative, they may overestimate the degree of adversity in their life and underestimate their self-worth (Briere & Elliott, 1994; see Ji et al., 2010). As such, the literature suggests that the negative effect of maltreatment on self-esteem may be due to the internalization of negative messages from abusive and/or neglectful experiences (see Taussig, 2002 for review).

Self-Concept and Negative Outcomes among Foster Care Youth

The literature demonstrates the negative effects of maltreatment on behavioral, emotional, and social behaviors, as well as self-concept. Not surprisingly, poor self-concept is also associated with behavioral, emotional, and social problems among maltreated youth or those in foster care. Given that the literature on foster care youth is limited regarding the relationship between self-concept and outcomes, the review will also include studies of maltreated youth who are not in foster care.

Internalizing Behavior Problems

Research has demonstrated that low self-esteem is related to depression, anxiety, and ineffective coping skills (e.g., Cole, Martin, & Powers, 1997; see Dumont & Provost, 1999; Byrne, 2000). The vulnerability model hypothesizes that low self-esteem is a risk factor for depression, especially in the face of significant life stressors (see Orth, Robins, & Robins, 2008). Research suggests that low self-esteem might contribute to internalizing problems through both interpersonal and intrapersonal pathways (see Orth et al., 2008). For example, individuals with low self-esteem may excessively seek reassurance about self-worth from others, thereby increasing the risk of experiencing social rejection and depression, or they may seek negative feedback from others to validate their negative self-concept. Individuals with low self-esteem may have increased social avoidance, thereby receiving low social support, or they may be more sensitive to rejection or perceive others' behavior more negatively.

Though limited, studies within the foster care population have found similar patterns of results. A cross-sectional study of 220 adolescents (age 14-17) residing in out-of-home care found that general self-esteem was negatively correlated with self-reported level of anxiety and emotional distress (Legault, Anawati, & Flynn, 2006). This negative association between youth's general self-esteem and anxiety remained significant, even after controlling for interpersonal factors, including youth's perceived relationship with female caregivers and with friends, demographic variables, and negative life events.

Results from longitudinal studies also provide support for an association between foster youth's self-esteem and internalizing behavior problems. Milan and Pinderhughes' study (2000)

of racially/ethnically diverse foster care youth (age 9 – 13) showed that youth's perceptions of themselves upon entry into foster care were negatively associated with the degree of internalizing behavior problems assessed 9 to 11 weeks after entry into care. In this study, self-representations were measured by a composite of global self-worth, perceived social acceptance, self-efficacy, and future expectations (beliefs about the positive nature of their future). While the majority of studies have focused on a global view of self, Taussig (2002) included specific domains of youth's perceived self-competence in six domains (i.e., Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, Behavioral Conduct, and Global Self-Worth) in a study of predictors of risk behaviors, as measured by the Total Behavior Problems scale on the CBCL (Achenbach, 1991) among foster care youth (ages 7-12). This study found that youth's self-concept in the domain of behavioral conduct predicted greater involvement in risk behaviors, such as self-destructive behaviors, substance use, sexual behaviors, and delinquency. Other domains of self-concept (e.g., physical appearance, scholastic competence), on the other hand, were not related to these risk behaviors, supporting the specificity matching principle.

Externalizing Behavior Problems

In contrast to internalizing problems, empirical findings on the association between self-esteem and externalizing behavior problems are inconsistent (e.g., Kim & Cicchetti, 2003). In the general population, some researchers have found low self-esteem to be associated with aggression, criminal behavior, delinquency, substance use, and teenage pregnancy (Donnellan, Trzesniewski, Robins, Moffitt, Caspi, 2005; see Kim & Cicchetti, 2004; see Leary,

Schreindorfer, & Haupt, 1995). For example, Kim and Cicchetti's study (2004) of school-aged children (both maltreated and non-maltreated children) found that children with lower self-esteem demonstrated an increase in externalizing behavior problems over time. Specifically, higher maltreatment at Time 1 was found to be related to lower self-perception of social competence at Time 1, which then predicted greater externalizing and internalizing problems at Time 2. A cross-sectional study of foster care youth in Canada demonstrated that general self-esteem was negatively associated with physical aggression, even after controlling for youth's gender, age, and relationships with female caregiver and friends (Legault, Anawati, & Flynn, 2006).

However, Dubois and colleagues' study (1994) of 215 youth (grades 7-9) showed that self-esteem mediated the effects of socio-environmental experiences (social support and stressful life events) on youth's internalizing problems, but failed to do so for youth's externalizing problems. Kim and Cicchetti's cross-sectional study (2003) of maltreated and non-maltreated children also found that higher levels of perceived social self-efficacy in conflictual peer interactions were related to lower levels of internalizing behavior problems, but not externalizing behavior problems. Similarly, Milan and Pinderhughes' study (2000) showed that internal representations of self (i.e., a combination of perceived social acceptance, global self-worth, beliefs about the future, and self-efficacy) assessed upon entry into care were not significantly associated with externalizing behaviors while they were with internalizing behaviors among foster youth. They reasoned that children with high externalizing problems often have inflated or idealized views of self and relationships (Patterson, Kupersmidt, & Griesler, 1990), or that the

presence of maltreatment history is associated with generally elevated externalizing behaviors.

Taussig's longitudinal study (2002) of youth in foster care (ages 7-12) examined specific domains of self-concept, and showed that self-concept in the area of behavioral conduct was negatively associated with delinquency, substance use, risky sexual behaviors, and total risk behaviors (i.e., a combination of subscales of delinquency, substance use, sexual behaviors, suicidality, and self-destructive behaviors). Social acceptance, on the other hand, was positively associated with risk behaviors, such as delinquency and substance use. This may be possibly due to youth's affiliation with deviant peers (Taussig, 2002). Self-perception of one's physical appearance was found to be negatively associated with just risky sexual behaviors. Scholastic competence, athletic competence, and physical appearance domains of self-concept were not related to delinquency, substance use, or total behavior problems. Similarly, a study of girls in foster care showed that self-competence at school (e.g., feeling that one is doing well on schoolwork, is smart as her peers, can complete work quickly) was not related to aggression towards peers over time (Pears, Kim, & Leve, 2012). This finding is not surprising given that girls' views of their academic competence may not be related to aggression, a non-academic behavioral outcome. These results support the notion of applying the specificity matching principle when examining the association between youth's perceptions of their behavior and their actual behavioral outcomes. Overall, given the mixed results regarding the effect of self-concept, global or specific domains, on externalizing behaviors, the mechanism of how self-esteem affects behavioral problems among youth in foster care is worthy of examination.

Social Problems

Research generally suggests that children's self-perceptions of social competence affect their interpersonal behaviors and the quality of peer relations (see Kim & Cicchetti, 2003). For example, a study of children (age 7-12) in the general population showed that negative self-representation in the context of peer relationships, such as perceived social competence and evaluation of social self-worth or ability to be a good friend, was correlated with peer rejection (Rudolph, Hammen, & Burge, 1995). This finding is supported by Dekovic and Meeus's study (1997) of older youth, between ages 12 and 18. This study found that adolescents with low self-esteem appeared to lack specific interpersonal competencies (e.g., initiating conversations and relationships, appropriately disclosing personal information, appropriately providing emotional support to friend) and were more likely to have difficulties in establishing and keeping friendships.

Drawing from the maltreatment literature, Kim and Cicchetti (2003) suggested that maltreated children are at higher risk for experiencing poor peer relationships as well as behavioral maladjustment, possibly due to deficits in the self-system, such as low self-esteem and impaired self-perceptions of competence. Expanding on Kim and Cicchetti's (2003) findings, Cicchetti (2016) suggests that maltreated children develop negative views of the self and others, as well as a concept of relationships that involves victimization and coercion as a result of acquiring negative relational patterns in a maltreatment environment. These internalizations can lead to heightened withdrawal from peer interactions or aggression towards peers, resulting in lower social competence compared to non-maltreated youth. Bolger and

Patterson (2001) also explained that caregivers' harsh and punitive parenting resulting in abuse or neglect is likely to contribute to children's coercive or aggressive behaviors in interactions with others, which may be linked to children being disliked or rejected by peers. Overall, lower levels of perceived self-concept or self-efficacy in peer interactions can result in having greater difficulties in relationships among maltreated children (see Kim & Cicchetti, 2003). However, the effect of self-perceptions of competence on social functioning has not been examined closely among youth in foster care.

The Role of Self-Concept in the Effect of Child Maltreatment on Adjustment

The literature review thus far has demonstrated that maltreatment influences youth's psychosocial outcomes (e.g., internalizing, externalizing, and social problems), as well as self-concept, which can also drive the outcomes. Yet to be explored in greater detail are the processes, such as the moderating or mediating role of self-concept, that contribute to maladaptive and adaptive development in maltreated children (e.g., Drapeau, Saint-Jacques, Lepine, Bégin, & Bernard, 2007; Rutter, 1990; Tram & Cole, 2000). The existing literature on how self-concept or self-esteem mediates and buffers the negative effects of maltreatment on psychological and social outcomes will be reviewed further.

Self-Concept as a Mediator of the effect of Child Maltreatment on Well-Being

DuBois and Tevendale's (1999) meditational model of self-esteem states that various environmental and psychosocial factors influence self-esteem, which in turn affects psychological and behavioral adjustment during childhood and adolescence. Supporting this model, self-esteem has been found to mediate the relation between ecological risks and

depressive symptoms among urban youth, such that as exposure to ecological risks increased, youth had less positive evaluations of their worth, which in turn, were associated with more depressive symptoms (Prelow, Weaver, & Swenson, 2006). Self-esteem was also found to mediate the effects of stressful events on parentally bereaved children's mental health problems, such that stress had a negative effect on internalizing problems, through a decline in self-esteem (Haine, Ayers, Sandler, Wolchik, & Weyer, 2003). Other studies have demonstrated the mediating effects of self-esteem on the relations between everyday stressors and mothers' postpartum depressive symptoms (Hall, Kotch, Browne, & Raynes, 1996), loneliness and life satisfaction among adolescents (Civitci & Civitci, 2009), as well as perceived discrimination and depressive symptoms among Latino adolescents (Umana-Taylor & Updegraff, 2007).

Negative self-concept has also been proposed to mediate the relationship between the experience of abuse and the development of psychopathology, such as depression and substance abuse. (e.g., Ji et al., 2010; Stein, Leslie, & Nyamathi, 2002). For example, Turner and colleagues (2010) examined whether changes in self-concept help to explain the effects of victimization (i.e., peer/sibling victimization, non-sexual child maltreatment, sexual victimization) on symptoms of depression, using a longitudinal, national sample of 11- to 18-year-old youth from the Developmental Victimization Survey. The results from this study found that the influence of sexual victimization on depressive symptoms was mediated by a decline in self-esteem. Similarly, adolescents' self-esteem or a sense of having one's life chances under one's own control had mediating effect on the relation between poly-victimization and psychological distress symptoms (Turner et al., 2015). Soler et al. (2013) found that self-liking or

self-evaluation of worth as a social being mediated the effect of victimization and internalizing and externalizing symptoms, more than self-competence did. A study of adolescents from Turkey also showed that self-esteem partially mediated relationships between psychological maltreatment and emotional and behavioral problems (Arslan, 2016). In addition, Shonk and Cicchetti's cross-sectional study (2001) of socioeconomically disadvantaged children, including both maltreated and non-maltreated children between the ages of 5 and 12, reported that the effects of maltreatment on behavioral maladjustment were fully mediated by social competencies (e.g., prosocial skills, peer relations, conflict resolution) rated by teachers and camp counselors. That is, maltreated youth showed significantly lower levels of social competence compared to non-maltreated children, and deficits in social competencies, in turn, were associated with their behavioral maladjustment.

Other studies have also examined the role of self-esteem as a mediating mechanism in the link between relational risks (e.g., parent-child relationship, social support) and children's maladjustment among maltreated youth (e.g., Kim & Cicchetti, 2003, 2004; DuBois, Felner, Sherman, & Bull, 1994). For example, Dubois et al. (1994), using a cross-sectional sample of adolescents in grades seven to nine in the general population, examined whether self-esteem mediates the effects of socio-environmental experiences (e.g., social support, stressful events) on adolescents' internalizing and externalizing problems. This study found that self-esteem mediated the association between stressful environmental experiences and internalizing problems, but not externalizing problems, suggesting that mediational processes involving self-esteem may be different for internalizing and externalizing problems. Kim and Cicchetti's (2004)

study, using a longitudinal sample of maltreated and non-maltreated children, found that low self-perceptions of social competencies predicted greater internalizing and externalizing symptoms. Self-esteem was found to not fully mediate the effects of maltreatment on internalizing and externalizing symptoms, while it did mediate the link between the quality of the mother-child relationship and the impact of maltreatment on child's behavioral outcomes. Youth with greater insecurity with their mothers were found to exhibit lower self-esteem, which, in turn, was predictive of later internalizing and externalizing problems for both maltreated and non-maltreated children. Despite the demonstrated mediating role of self-concept described up to this point, the maltreated foster care population is in need of greater scholarly attention in this area (e.g., Turner, Finkelhor, & Ormrod, 2010), given the greater severity of maltreatment they experience compared to the general population.

Self-Concept as a Moderator of the effect of Child Maltreatment on Well-Being

Resilience Framework. Foster youth represent a vulnerable group due to the complexity and severity of problems in their family of origin along with the adverse social and economic conditions they experienced (e.g., poverty, underprivileged community, lack of access to resources) prior to coming into care. Despite these factors that put foster youth at an elevated risk for emotional, behavioral, and social problems (Oswald et al., 2010), there are children who are able to demonstrate resilience (Jaffee et al., 2007; Luthar, Cicchetti, & Becker, 2000; McGloin & Widom, 2001; Masten, 2006; Masten & Coatsworth, 1998; Zielinski & Bradshaw, 2006). Resilience refers to a "dynamic process including positive adaptation within the context of significant adversity" (Luthar, Cicchetti, & Becker, 2000, p. 1), or "good outcomes in spite of

serious threats to adaptation and development" (Masten, 2001, p. 228). Resilient children have been commonly defined as those who achieve normative developmental tasks or positive adaption and functioning despite their experiences of significant adversity (Luthar et al., 2000; Heller, Larrieu, D'imperio, & Boris, 1999; Masten, 2006). Within the maltreatment literature, resilience is often defined as low frequencies or limited negative symptoms of internalizing (e.g., depression) and externalizing (e.g., conduct, substance use) behaviors or competence (see Guibord et al., 2011). A resiliency perspective provides a framework for understanding the complicated relationships between youth risk factors, promotive factors, and outcomes at different levels of systems (e.g., individual, family, community and child welfare system).

There is a growing body of research demonstrating substantial numbers of children and adolescents who exhibit resilience within specific domains of functioning, such as emotional and behavioral functioning, and social competence (see Bell, Romano, & Flynn, 2013). A study of 5- to 9-year-old Canadian children in out-of-home care reported high rates of children exhibiting normative levels of emotional problems (71% of girls and 66% of boys) as well as conduct problems (55% of boys and 45% of girls) (Bell et al., 2013). A longitudinal study of a nationally representative sample of youth (8-16 year olds) in child protection showed that 37-49% of children demonstrated resilience, as determined by normative scores, in mental health, academic, or social domains at any of the three time points (Jaffee & Gallop, 2007). However, only 19% were consistently resilient within the mental health domain across all three time points. Studies have reported that 46-61% of youth in child welfare exhibit adequate levels of social competence or normative levels of prosocial behaviors (Bell et al., 2013; Jaffee & Gallop, 2007). However,

the stability of resilience was lower, with only 11-14% of youth consistently demonstrating resilience in mental health, social competence, and academic achievement across all time points (Jaffee & Gallop, 2007). While the prevalence of resilience within specific domains appears relatively high, the rates of youth simultaneously exhibiting resilience across multiple domains of functioning are lower, possibly because resilience in one domain does not imply competence in other domains (Luthar, Cicchetti, & Becker, 2000).

Grounded in a resilience-based framework, protective factors that foster resilience include individual, environmental, and family factors (see Drapeau et al., 2007; Masten, 2006). According to Masten's (2006) framework of resilience for systems of care, protective factors at the individual level include the ability to self-regulate (e.g., self-control of attention, emotions, impulses), learn and problem-solve, intelligence, positive outlook on life (e.g., beliefs that life has meaning, faith, hopefulness), and a positive view of oneself and one's abilities (i.e., self-worth and self-efficacy). Of note, high self-esteem has been identified as a prominent protective resource that individuals can use against adverse life events to reduce their effect as risk factors (Dumont & Provost, 1999; see Legault, Anawati, & Flynn, 2006).

Protective Effect of Self-Concept in the Association between Maltreatment and Outcomes. Prior research suggests that maltreated children's elevated self-perceptions of their competence may serve as a protective role, buffering against the deleterious effects of child maltreatment. High self-esteem has been found to help individuals persist in the face of failure or hardships (Baumeister, Campbell, Krueger, & Vohs, 2003; see Trzesniewski et al., 2006), translating into greater resilience or adaptation despite challenging situations. For example, Bulat

(2010) found that higher self-esteem or a more positive self-image is related to a decrease in the depressiveness of youth in foster care in Croatia. A longitudinal study on adults (above age 50) also found that self-esteem moderated the relationship between childhood abuse (physical, emotional, and sexual) and internalizing disorders, such that childhood abuse had more negative effects on those with lower self-esteem compared to those with higher self-esteem (Sachs-Ericssona et al., 2010). Similarly, a cross-sectional study of 345 school-aged children (maltreated and non-maltreated children) found that younger maltreated children with higher levels of self-perceived social competence showed significantly fewer internalizing behaviors compared to those with lower levels of self-efficacy in conflictual peer interactions (Kim & Cicchetti, 2003). For older children, higher levels of perceived social self-efficacy were associated with fewer internalizing behaviors regardless of maltreatment status. This study suggested that maltreated children's elevated social self-efficacy in conflictual situations is a protective-enhancing factor against internalizing problems, such that those who feel greater self-efficacy for their prosocial skills in conflictual peer relationships are less likely to experience internalizing symptoms. This finding supports the notion that positive or overrated self-perceptions of competence could promote healthy development and protect against negative outcomes, regardless of the accuracy of the self-perceptions (e.g., Kim & Cicchetti, 2003, 2004; Patterson et al., 1990). Positive appraisals of oneself may help maltreated children maintain a positive internal representational model of oneself and avoid internalization of negative self-perceptions as a result of their maltreatment experiences (Kim & Cicchetti, 2003, 2004).

Studies have offered a wealth of insight as to why self-esteem may serve as an effective

protective factor. Youth with positive self-esteem may view themselves as having more control and feel more confident in using adaptive skills to react constructively to their environment (Dumont & Provost, 1999). Maltreated children with high self-esteem, in particular, may be able to avoid internalization of negative self-perceptions by engaging in differential attribution processes regarding the reasons for the maltreatment they receive (see Cicchetti, Rogosch, & Lynch, 1993). Supporting this view, Drapeau and colleagues' qualitative study (2007) of 12 youth between the ages of 14 and 17 in foster care, found that higher perceived self-esteem or self-efficacy is one of the most important processes that lead to resilience (i.e., showing competence in three of the five domains: scholastic participation, relationships with peers, relationships with adults, personal characteristics, behavior). This study suggested that foster youth can experience an increase in perceived self-efficacy by developing a greater sense of accomplishment and success as they overcome obstacles and reflect on their adverse experiences; youth learn to view themselves as more competent with an increased sense of control over the situation (also see Rutter, 1990; Harvey & Delfabbro, 2004).

Overall, research suggests that positive self-concept is an important protective factor that promotes resilience among youth with history of maltreatment or life stress (e.g., Cicchetti et al., 1993; Drapeau et al., 2007; Legault et al., 2006; Southall & Roberts, 2002). Positive appraisals of oneself may help children to resist or overcome negative self-perceptions that they may form via their maltreatment experiences (see Cicchetti et al., 1993). However, studies that have examined the role of children's perceived self-competence as a buffering factor in the link between child maltreatment and behavioral adjustment are limited (e.g., Kim & Cicchetti, 2003),

especially among foster youth. Studies on the mediating effects of domain-specific self-concept among foster youth are also limited (Dubois & Tevendale, 1999; Tram & Cole, 2000).

Both meditational and moderational processes are not mutually exclusive (Tram & Cole, 2000). They are both useful models that deepen the field's understanding of underlying processes related to the development of mental health problems and have important implications for interventions (e.g., Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997). Thus, future studies need to examine the processes of how self-concept affects adjustment among foster youth. It will also be important to examine the role of self-perception by considering different components of self-system, such as overall feelings of self-worth and domain-specific self-concept (e.g., Dubois & Tevendale, 1999; Tram & Cole, 2000; Sachs-Ericssona et al., 2010).

Limitations of Previous Research

As the preceding review demonstrates, the existing literature supports the conclusion that child maltreatment is negatively associated with emotional, behavioral, and social difficulties, with self-concept serving as a mechanism that accounts for these relations. An additional line of research supports the hypothesis that self-concept may act as a protective factor, buffering the relationship between maltreatment and negative functioning outcomes. Nevertheless, the literature pertaining to the effect of self-concept on psychological adjustment among youth in foster care has a number of noteworthy limitations.

First, despite extensive literature on risk and protective factors among youth in foster care, few studies have focused on the possible moderating or mediating role that self-concept may play in the putative association between maltreatment and outcomes (see Drapeau et al.,

2007; Mann, Hosman, Schaama, & de Vries, 2004; Taussig, 2002). Research on self-esteem in foster care has been limited to examining the construct as an outcome (e.g., Salahu-Din & Bollman, 1994; Ahrens, DuBois et al., 2008; Schofield & Beek, 2009) or a predictor of outcomes (e.g., Vondra et al., 1989; Garrison et al., 1983), rather than a moderator or a mediator of behavioral outcomes. Despite the fact that statistical models of self-concept and self-esteem as either a moderator or a mediator have been compared within the same study for model fit among youth in the general population (e.g., Tram & Cole, 2000), no such comparison has been made among youth in foster care. Given that foster children represent a unique population with complex needs, findings from community samples may not be generalized to the foster care population. It is possible that the mediating or moderating effects of self-esteem may differ in this population relative to non-foster care youth (see Pears et al., 2012) due to considerable variation in emotional, behavioral, and social problems, as well as self-esteem (e.g., Moran & DuBois, 2002). Longitudinal studies that explicitly address the potential mediating and moderating effects of self-esteem in the associations between maltreatment and psychological as well as social adjustment are still needed (e.g., Turner, Finkelhor, & Ormrod, 2010; Milan & Pinderhughes, 2010), especially among youth in foster care.

Another area in need of greater research attention are comparisons of children's self-perception of competence to foster parent's perceptions of children's competence when studying the effect of self-concept among youth in foster care. Studies in the general population have demonstrated a phenomenon of maltreated children exhibiting inflated self-esteem, overrating their competence compared to others' ratings of them. However, this notion of inflated self-

esteem has not been examined among foster youth who experience maltreatment severe enough to be removed from home. Moreover, the literature in the general population is mixed regarding whether inflated self-esteem is beneficial or harmful in the long term. Future studies examining the effect of the correspondence between child self-ratings and foster parent-ratings on children's competence are needed. Of note, researchers (e.g., Kim & Cicchetti, 2004) recommend using multiple informants (e.g., caregivers, teachers) to preclude possible biases resulting from shared method variance and strengthen the validity of the findings. Supporting this multi-informant approach, there is a need to examine whether children's perceptions of competence and adult ratings of children's competence are differentially related to psychological constructs and youth adjustment.

Moreover, studies on the effects of domain-specific self-concept (e.g., the effect of self-concept in social competence on social functioning) among foster youth are limited (e.g., Taussig, 2002; Dubois & Tevendale, 1999; Tram & Cole, 2000). Further studies are needed to examine the role of self-esteem by considering different components of self-system, such as overall feelings of self-worth and domain-specific self-evaluations, such as social competence (e.g., Dubois & Tevendale, 1999; Tram & Cole, 2000; Sachs-Ericssona et al., 2010).

The Present Study

The overarching goal of the present study is to examine self-concept as a mediator and moderator of associations between maltreatment and psychosocial functioning (i.e., internalizing problems, externalizing problems, and social problems) during the first year of children and adolescents' placement in the child welfare system. The present study will first examine direct relations between severity of maltreatment and psychosocial outcomes as well as self-concept.

This study will also test the effects of self-concept on psychosocial outcomes. Then, the study will examine potential mediating effects of domain-specific self-concepts and global self-worth in the association between maltreatment and outcomes, such that the negative effects of maltreatment on psychosocial outcomes among foster youth will be explained by a decline in self-concept. The study also seeks to test whether self-concept moderates the association between maltreatment and the outcomes among foster youth, thereby serving as a protective variable. Following the specificity matching principle, different domains of self-concept will be examined depending on the outcome being assessed (e.g., perceived social competence predicting social functioning).

Hypotheses

The hypotheses and research questions of the present study are as follows:

1) Hypothesis One: Time 1 (T1) maltreatment will be positively associated with Time 3 (T3) internalizing problems.
2) Hypothesis Two: T1 maltreatment will be positively associated with T3 externalizing problems.
3) Hypothesis Three: T1 maltreatment will be positively associated with T3 social problems.
4) Hypothesis Four: T1 maltreatment will be negatively associated with T2 global self-concept.
5) Hypothesis Five: T1 maltreatment will be negatively associated with T2 behavioral and social domains of self-concept (behavioral conduct and social acceptance).
6) Hypothesis Six: T2 global self-concept will be negatively associated with T3 psychosocial outcomes (i.e., internalizing, externalizing, and social problems).

7) Hypothesis Seven: T2 behavioral self-concept will be negatively associated with T3 psychological outcomes (i.e., internalizing and externalizing problems).
8) Hypothesis Eight: T2 social self-concept will be negatively associated with T3 social outcome (i.e., social problems).
9) Hypothesis Nine: T2 self-concept in domains of behavioral conduct and social acceptance, as well as global self-worth will mediate the relation between T1 maltreatment and T3 internalizing and externalizing problems, such that self-concept may explain the potential relationship as a causal factor (see Figure 1).
10) Hypothesis Ten: T1 self-concept will moderate the impact of T1 child maltreatment on foster youth's subsequent psychosocial adjustment (T3), such that higher self-concept will predict less psychosocial problems (see Figure 2).

Figure 1. Proposed Model of Mediation, Testing the Indirect Effect of Maltreatment on Outcomes through Self-concept.

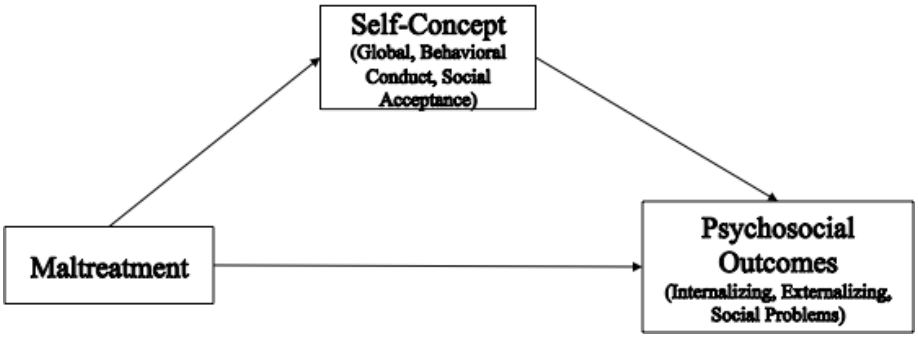
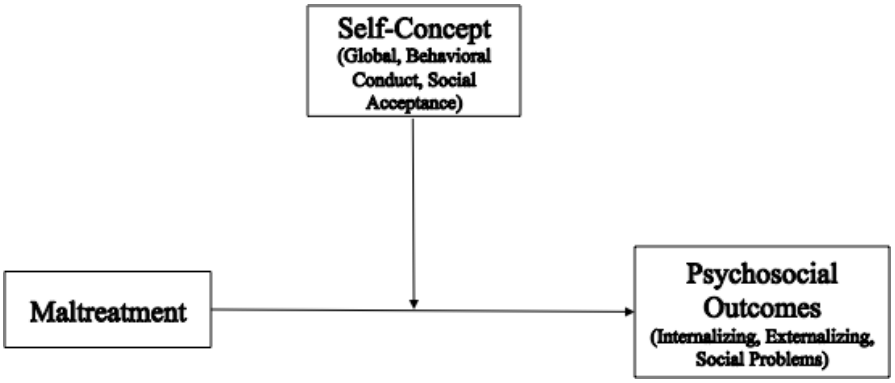


Figure 2. Proposed Model of Moderation, Testing the Moderating Effect of Maltreatment on Outcomes through Different Levels of Self-concept.


Self-Concept
(Global, Behavioral Conduct, Social Acceptance)
Maltreatment
Psychosocial Outcomes
(Internalizing, Externalizing, Social Problems)

CHAPTER FOUR

METHOD

Participants

Data for this study were collected as a part of the Recruitment and Kin Connections Project (RKCP). The RKCP was conducted in conjunction with the Illinois Department of Child and Family Services (DCFS) to expand upon traditional child welfare practices by identifying and engaging relatives, fictive kin, and community supports of youth who enter foster care. The participants were children and adolescents between the ages of 8 and 13 who entered the care of Illinois DCFS in Cook and Will counties between October 1st, 2011 and June 1st, 2014. These foster youth's substitute caregivers (i.e., traditional foster parents, kinship caregivers) or staff from congregate care placements (e.g., shelter, group homes) also participated in the study.

Procedure

Once Illinois DCFS provided a list of eligible participants for the study, research assistants at Loyola University Chicago obtained demographic information and contact information for the participants' caregivers from the Illinois DCFS Statewide Automated Child Welfare Information System (SACWIS) database.

The participants and their substitute caregivers or staff members at congregate care placements were invited to participate in home visits approximately six weeks, six months, and twelve months since entry into the temporary custody of the Illinois DCFS. Youth who returned to the care of their biological parents or legal guardians prior to any of these time points were

not eligible to participate in subsequent home visit assessments. Youth with cognitive delays, intellectual disability, or pervasive developmental disorder were excluded from participation in home visits. In cases where a visit could not be completed in person, measures were administered over the phone. Staff members (e.g., case managers) at congregate care facilities were also allowed to submit completed measures by mail. All the measures were available in both English and Spanish.

Measures

Demographic Information

The RKCP Kin Identification and Level of Engagement Form was completed by research assistants at Loyola University Chicago after reviewing files on the Illinois DCFS SACWIS database for each participant. The form collected information on youth's race/ethnicity, gender, age, and reason for entry into foster care.

Self-Concept

Children and adolescents completed the Self-Perception Profile for Children (SPPC; Harter, 1985), which is a measure of children's self-evaluations of personal competence. This self-report measure contains six subscales: a global self-worth scale and five competence scales, including social acceptance, behavioral conduct, scholastic competence, physical attractiveness, and athletic competence. For each item, children select one of two self-descriptive statements that better describes them (e.g., "Some kids are very *happy* being the way they are" versus "Other kids wish they were different"), and then rate the accuracy of the selected statement (i.e., "Really true for me" or "Sort of true for me"). Items are scored on 4-point rating scales such that

higher ratings indicate more positive views of the self. The global self-worth, social acceptance, and behavioral conduct scales will be used in this study. The social acceptance scale includes items that refer to knowing how to make friends, having the skills to be liked by others, knowing how to be accepted by others, and understanding what it takes to become popular.

The behavioral conduct scale assesses the degree to which children like the way they behave, do the right thing, act the way they are supposed to act, and avoid getting into trouble. The global self-worth scale measures the extent to which children feel good about themselves and are happy with how they are leading their lives. This scale measures one's general perception of the self, in contrast to the domain-specific evaluations of competence in specific areas (e.g., behavioral conduct or social acceptance scales). Mean scores will be calculated for each of these scales. Three-month test-retest reliabilities are high (.70 to .87: Harter, 1982). The global self-worth, social acceptance, and behavioral conduct have demonstrated adequate test-retest reliability (Muris, Meesters, & Fijen, 2003). Among children and adolescents in an urban, low-income neighborhood, Cronbach's alphas were found to range from 0.67 to 0.83 for global self-worth, from 0.46 to 0.73 for social acceptance, and from 0.68 to 0.82 for behavioral conduct across different racial/ethnic groups (Michaels, Barr, Roosa, & Knight, 2007).

Maltreatment

The severity of child maltreatment was evaluated using the Child and Adolescent Needs and Strengths (CANS; Lyons et al., 2008). The CANS was completed as a part of the Integrated Assessment (IA) during the first 45 days of youth coming into DCFS care through Temporary Custody, and was conducted by DCFS workers, who establish a reliability of 85% rating accuracy (State of Illinois DCFS). This structured instrument assesses the needs and strengths of

a youth across multiple domains (e.g., traumatic stress symptoms, child strengths, life domain functioning, behavioral or emotional needs, risk behaviors) as well as the needs and strengths of a caregiver. The CANS helps guide a treatment plan for youths with emotional and behavioral health needs, and assists with a case plan (e.g., placement decision making).

The CANS consists of 105 questions, and assesses seven areas of youth functioning, including Trauma Experience, Traumatic Stress Symptoms, Youth Strengths, Life Domain Functioning, Acculturation, Youth Behavioral/Emotional Needs, and Youth Risk Behaviors. For each item on the CANS, severity ratings are reported on a four-point Likert scale of "0" to "3", where a score of "0" indicates no evidence of any needs or strengths, a score of "1" indicates a need for monitoring or preventive activities, a score of "2" indicates a need for addressing the problem, and a score of "3" indicates a need for immediate or intensive action. The CANS manual provides a detailed description of what each numerical rating constitutes for the specific dimension items. For the severity of maltreatment, the following items were selected: sexual abuse, physical abuse, emotional abuse, and neglect. Ratings of these selected items were summed to represent a composite score maltreatment, reflecting the severity of maltreatment, such that higher numbers indicate greater severities of maltreatment.

Psychosocial Adjustment

Foster parents or staff at congregate care settings completed the Child Behavior Checklist for Ages 6 to 18 (CBCL; Achenbach & Rescorla, 2001) to assess children's and adolescents' internalizing, externalizing, and social problems. The CBCL can be completed by foster parents and by staff members in institutional settings (Achenbach & Rescorla, 2001; Albrecht, Veerman, Damen, & Kroes, 2001). The CBCL is a widely used instrument for screening emotional,

behavioral, and social problems in 4 to 18-year-old children and adolescents. For each of the 120 items, a primary caregiver rates on a Likert scale of "0" to "2" where a score of "0" means not true, a "1" means somewhat true, and a "2" means very true. The internalizing scale is comprised of the withdrawn, somatic complaints, and anxious/depressed syndrome scales. The externalizing scale is consisted of the Delinquent Behavior and Aggressive Behavior subscales. Lastly, the social problems sale consists of items assessing how well a child gets along with others, gets teased, is not liked by others, is too dependent, is jealous, is accident-prone, has speech problems, is clumsy, or experiences conflicts with others. The CBCL was normed on a sample of 2,368 non-handicapped youth from the age of 4 to 18 (Achenbach, 1991). In the normative sample of 338 boys and 262 girls, inter-parent correlations for the behavior problems were high, ranging from .65 to .75. Internal consistency reliability (alpha) for the eight subscales was also high, ranging from .62 to .92 for boys (age 4 to 11) and from .66 to .92 for girls (Age 4 to 11). Based on the author's recommendations, raw scores were used instead of standardized scores (Achenbach & Rescorla, 2001). Items were summed to calculate total internalizing, externalizing, and social problems scores, with higher scores indicating more behavior problems. Given the emphasis on using multi-informant approaches, the results of the internalizing and externalizing scales on CBCL were compared to those on CANS to check for consistency between these two measures.

IA screeners or licensed mental health professionals in the DCFS (henceforth referred to as DCFS workers) also completed the CANS on foster youth's internalizing, externalizing, and social problems as part of the IA, an in-person interview, within 45 days of youth coming into DCFS care through Temporary Custody. After the initial entry into care, foster youth's

caseworkers completed the CANS every three months. Through a principal components analysis, items from the CANS were selected to represent internalizing and externalizing problems. The internalizing problems scale included items such as depression, anxiety, somatization, traumatic grief/separation, and adjustment to trauma. The externalizing problems scale included the following behaviors: oppositional behavior, conduct, attention deficit/impulse control, anger control, danger to others, and delinquency. Cronbach's alpha coefficients for all of these scales were examined per Nunnaly's (1978) criterion for acceptable internal consistency. In a previous study, the internal consistency estimates for internalizing and externalizing behavior problems, as determined by Cronbach's alpha, were .71 and .74, respectively (Jhe et al., 2016).

Statistical analyses

Descriptive statistics were calculated for demographic variables and for all of the study variables. Values three standard deviations below and above the mean were excluded from the data (Howell, 1998; Miller, 1991).

Design effect. The present study included sibling-group data (i.e., siblings from the same family entering foster care and participating in the study), which would violate the assumption of independence (Guo, 2010). When the assumption of independence is violated, the tests of statistical significance are biased. If a significant portion of the data is from the same cluster, then multilevel models are needed because grouped data violate the assumption of independence of all observations (Maas & Hox, 2005). The amount of dependence can be expressed as the intraclass correlation (ICC), and the size of the ICC may affect the accuracy of the statistical finding*s* (see Maas & Hox, 2005). However, researchers suggest that it is not the size of the ICC that is at issue in multilevel modeling, but it is the size of the *design effect*, which is an

assessment of how "clustered" the data are; it is a function of the ICC and the average cluster size (Maas & Hox, 2005). Thus, it is important to look at the design effect to determine whether researchers should use multilevel modeling with group data. In cluster samples, the design effect is approximately equal to 1+ (average cluster size - 1) x ICC (Kish, 1965; see Maas & Hox, 2005). Here, the average cluster size refers to the number of people within each cluster. For example, if the average cluster size is 50, then an intraclass correlation of .03 would yield a design effect of approximately 2.47. In multilevel modeling, a design effect greater than two indicates that the clustering in the data needs to be taken into account in analyses because it will lead to biased estimates (Muthen & Satorra, 1995; see Maas & Hox, 2005). A design effect of two or less, on the other hand, is considered small and thus, it is acceptable to treat the data at a single-level. Since the sibling-group in the present study consisted of a low number of siblings (a range of 1 to 4; average number of siblings was 1.41) in each family and the ICC was .926, the design effect was small (1.379).

Hypotheses 1-3. A series of multiple regression analyses were conducted in order to test Hypotheses 1 through 3, all of which predicted a direct effect of child maltreatment on a series of psychosocial outcomes (internalizing, externalizing, and social problems). Each regression tested an analysis of the main effect of maltreatment on T3 outcomes, controlling for previous levels of each outcome variable, age, gender, and race/ethnicity.

Hypotheses 4-5. A series of multiple regression analyses were conducted to test Hypotheses 4 and 5 by testing the main effect of maltreatment, after controlling for self-concept from Time 1 as well as demographic variables.

Hypotheses 6-8. A series of multiple regression analyses were conducted in order to test the negative main effect of self-concept on a series of psychosocial outcomes. Each regression controled outcome variables from previous time points, in addition to demographic variables (i.e., age, gender, race/ethnicity).

Hypothesis 9. To examine the mediating function of self-concept (see Figure 1), bootstrapping was used with the PROCESS macro for the SPSS (Hayes, 2009, 2012; Shrout & Bolger, 2002). Bootstrapping is a valid and powerful method for testing mediation models, as it does not make any assumptions about the shape of the sampling distribution of the indirect effect, and the inference is based on an estimate of the indirect effect itself (Hayes, 2009). The Sobel test (Sobel, 1982), on the other hand, relies on an assumption of a normal sampling distribution (see Hayes, 2009). Bootstrapping generates "an empirical representation of the sampling distribution of the indirect effect" by building a new sample size of *n* after resampling cases from the original sample with replacement (Hayes, 2009, p. 412). After the resample is made, then the process of estimating the path coefficients for *a* and *b* (*a*= between X and M; *b*=between M and Y) is repeated for a total of *k* times, resulting in *k* estimates of the indirect effect. Afterwards, an inference is made about the size of the indirect effect of the population sampled by using the *k* estimates to generate a confidence interval (Hayes, 2009). Indirect effects are considered significant at $p < .05$ for the 95% bootstrap confidence intervals, and the lower and upper bounds of the confidence interval do not include a zero. As recommended by Mallinckrodt and colleagues (Mallinckrodt, Abraham, Wei, & Russell, 2006), 10,000 bootstrap iterations was performed for each analysis.

Hypothesis 10. Hypothesis 10 hypothesized that a child's self-concept (T1) will moderate the relation between maltreatment (T1) and outcomes (T3); see Figure 2. This hypothesis was tested using hierarchical ordinary least squares regressions. Variables were entered into two blocks. In the first block, maltreatment, T1 self-concept, T1 outcome variables, and demographic variables will be entered simultaneously. In the second and final block, an interaction term (self-concept x maltreatment) will be entered. If there is a significant interaction, then simple slopes analyses will be conducted using Holmbeck's (1997) recommendations.

CHAPTER FOUR

RESULTS

The results are presented in five steps. First, descriptive information is provided, including zero-order correlations for continuous study variables and frequencies for dichotomous study variables. Second, the results of regression analyses demonstrating whether the severity of child maltreatment is related to psychosocial outcomes as well as youth's self-concept are provided. Third, the effect of foster youth's self-concept, including global, behavioral, and social domains, on psychosocial outcomes is also discussed. Fourth, mediation analyses on the indirect effect of foster youth's self-concept on the relation between child maltreatment and psychosocial outcomes are provided. Lastly, a series of regression analyses demonstrating the potential moderating effect of self-concept in the association between maltreatment and foster youth's psychosocial outcomes are also provided.

Descriptive Analyses and Correlational Analyses

Descriptive statistics were computed for the overall sample (n=137) used in the analyses (see Table 1). Youth ranged from 7.85 to 13.94 years old, with a mean age of 10.92 years (SD=1.75), with a relatively even gender distribution where females comprised 53.3% of the sample. The majority of the youth were African-American (62.0%), followed by Latino (19.7%) and Caucasian (8.8%). For the initial foster care placement, about a half of the sample was in kinship foster placement (55.9%) while the rest were in other types of placements, including traditional or non-kinship placement, including traditional or non-kinship placement, shelter, and

hospital.

The descriptive statistics for the primary study variables, including self-concept scales (i.e., global, behavioral, and social domains), CANS scales (i.e., Child Maltreatment, Internalizing and Externalizing Behavior Problems), and CBCL scales (i.e., Internalizing, Externalizing, and Social Problems) are also presented in Table 1. The results suggest that the scales varied in their rated severity. Regarding child maltreatment, neglect (M= 1.62, SD=.81) and physical abuse (M=1.04, SD=.93) were, on average, the items rated highest. In terms of behavioral problems, CANS completed by IA screeners or licensed mental health professionals in the DCFS showed that foster youth generally exhibited greater internalizing behaviors compared to externalizing behaviors. On the other hand, CBCL completed by foster parents indicated that youth showed greater externalizing behaviors than internalizing behaviors across three time points.

Table 1. Descriptive Statistics for Variables Used in Analyses.

Variable	*N*	%	Mean (*SD*)	Min/Max
Demographics				
Age	137		10.92(1.75)	7.85/13.94
Gender (male)	64	46.7		
Gender (female)	73	53.3		
African American	85	62.0		
Latino	27	19.7		
Caucasian	12	8.8		
Child Maltreatment	127		3.84 (1.91)	0/8
Physical Abuse	127		1.04 (0.93)	0/3
Emotional Abuse	127		0.79 (0.79)	0/3
Neglect	127		1.62 (0.81)	0/3
Sexual Abuse	127		0.39 (0.84)	0/3
Harter Global Self-Concept (T1)	131		18.24 (4.42)	7/24
Harter Global Self-Concept (T2)	104		19.20 (4.04)	6/24
Harter Global Self-Concept (T3)	91		18.95 (4.16)	6/24
Harter Behavioral Self-Concept (T1)	136		16.67 (4.39)	6/24

Harter Behavioral Self-Concept (T2)	105	17.13 (4.07)	6/24
Harter Behavioral Self-Concept (T3)	92	16.93 (4.30)	6/24
Harter Social Self-Concept (T1)	134	17.16 (4.18)	7/24
Harter Social Self-Concept (T2)	101	17.55 (4.49)	6/24
Harter Social Self-Concept (T3)	90	17.33 (4.27)	6/24
CANS Internalizing Behaviors (T1)	125	5.22 (2.07)	1/11
CANS Internalizing Behaviors (T2)	57	3.93 (2.66)	0/11
CANS Internalizing Behaviors (T3)	77	3.22 (2.48)	0/11
CANS Externalizing Behaviors (T1)	118	2.35 (2.50)	0/10
CANS Externalizing Behaviors (T2)	55	2.07 (2.84)	0/13
CANS Externalizing Behaviors (T3)	73	2.37 (2.74)	0/10
CBCL Internalizing Behaviors (T1)	123	6.21 (6.59)	0/32
CBCL Internalizing Behaviors (T2)	101	6.80 (6.85)	0/30
CBCL Internalizing Behaviors (T3)	88	5.85 (6.34)	0/28
CBCL Anxious/Depressed (T1)	123	2.80 (3.55)	0/18
CBCL Anxious/Depressed (T2)	101	2.98 (3.11)	0/16
CBCL Anxious/Depressed (T3)	88	2.51 (3.12)	0/16
CBCL Withdrawn (T1)	123	2.34 (2.91)	0/11
CBCL Withdrawn (T2)	101	2.58 (2.85)	0/13
CBCL Withdrawn (T3)	88	2.13 (2.46)	0/12
CBCL Externalizing Behaviors (T1)	123	9.22 (10.23)	0/47
CBCL Externalizing Behaviors (T2)	101	10.50 (10.34)	0/47
CBCL Externalizing Behaviors (T3)	88	9.64 (9.85)	0/37
CBCL Delinquent Behavior (T1)	123	3.08 (3.48)	0/16
CBCL Delinquent Behavior (T2)	101	3.33 (3.37)	0/15
CBCL Delinquent Behavior (T3)	88	3.48 (3.65)	0/15
CBCL Aggressive Behavior (T1)	123	6.14 (7.24)	0/31
CBCL Aggressive Behavior (T2)	101	7.17 (7.52)	0/32
CBCL Aggressive Behavior (T3)	88	6.16 (6.65)	0/26
CBCL Social Problems (T1)	123	2.84 (3.21)	0/17
CBCL Social Problems (T2)	101	2.98 (3.30)	0/16
CBCL Social Problems (T3)	88	3.36 (3.82)	0/16

Note. CANS = Child and Adolescent Needs and Strengths. CBCL = Child Behavior Checklist.

Correlational analyses were conducted on all continuous variables, including Time 1 and Time 2 predictors and Time 3 outcome variables, and can be seen in Table 2. The correlations ranged from small (.00 for the relationship between child maltreatment and youth's behavioral self-concept) to moderate (.42 for youth's behavioral and social self-concept). High correlations

were observed between total behavioral scale and subscales, such as CBCL Internalizing and Anxious/Depressed, or CBCL Externalizing and Aggressive Behaviors.

Correlational analyses revealed that child maltreatment (T1) was positively correlated with CANS Internalizing (T1, T3) and CANS Externalizing (T1), but negatively associated with CBCL Internalizing (T3), Anxious/Depressed (T3), Externalizing (T3), Aggressive Behaviors (T3), and Social Problems (T3). Global perception of self-concept/self-worth (T1) was positively correlated with the other domains of self-concept and negatively associated with CBCL Externalizing (T1) and Aggressive Behaviors (T1); Global self-worth (T2) was negatively associated with CBCL Social Problems (T3). Behavioral self-concept (T1) was positively associated with behavioral self-concept (T2) and negatively associated with Social self-concept (T1), CBCL Externalizing (T1), Delinquent (T1), and Aggressive Behaviors (T1); Behavioral self-concept from Time 2 was negatively associated with CBCL Internalizing (T3), Anxious/depressed (T1), Withdrawn (T3), Externalizing (T3), Delinquent (T3), Aggressive Behaviors (T3), and Social Problems (T1, T3). Social self-concept (T1) was positively associated with Social self-concept at Time 2, while it was negatively associated with CBCL Internalizing (T1), Anxious/depressed (T1), CBCL Externalizing (T1), Aggressive (T1), and Social Problems (T1); Social self-concept at Time 2 was not significantly associated with any outcomes.

With regard to outcome variables, CANS Internalizing and Externalizing Behaviors were positively correlated with each other. CANS Internalizing Behaviors was also positively correlated with CBCL Withdrawn (T1) and Aggressive Behaviors (T1), but not with any other CBCL outcomes across different time points. CANS Externalizing Behaviors were positively correlated with CBCL outcomes at Time 1, including Anxious/Depressed, Withdrawn,

Externalizing, Aggressive Behaviors, and Social Problems, but they were not significantly associated with CBCL outcomes at Time 3. CBCL outcome variables at Time 1 and 3 were significantly associated with each other.

Hypotheses 1-3

A series of multiple regression analyses was conducted to test Hypotheses 1 through 3, all of which predicted a direct positive effect of child maltreatment on a series of psychosocial outcomes (internalizing, externalizing, and social problems). Each regression tested the main effect of maltreatment (T1) on T3 outcomes, controlling for previous levels of each outcome variable, age, gender, and race/ethnicity (African American).

There was a significant main effect of child maltreatment on T3 internalizing behaviors, but in the opposite direction than expected. Despite the cross-sectional associations that are positive in their trend, results indicated that greater child maltreatment at T1 was associated with less internalizing behavior problems at T3 (CBCL), rated by foster parents (β=-.215, p=.033). More specifically, T1 child maltreatment was negatively associated with T3 anxious/depressed symptoms (β=-.256, p=.02), but not withdrawn/depressed symptoms (β=-.096, p=.352). Inconsistent with predictions, analyses using the CANS revealed no significant predictive effects of child maltreatment on T3 internalizing behaviors rated by the DCFS workers (β = .114, p = .088); while this finding is not significant, it is important to note that the direction of the effect of maltreatment is positive. Of note, a cross-sectional association between child maltreatment and CANS internalizing behaviors (T1) was significantly positive (β=.354, p<.001). Hypothesis 1 is presented in Tables 3 and 4.

Table 2. Intercorrelations Among Continuous Study Variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Child Maltreatment (T1)	--	--	--	--	--	--	--	--	--	--	--	--
2. Global Self-worth (T1)	-.03	--	--	--	--	--	--	--	--	--	--	--
3. Global Self-worth (T2)	-.17	.42**	--	--	--	--	--	--	--	--	--	--
4. Behavioral Self-concept (T1)	.00	.54**	.26**	--	--	--	--	--	--	--	--	--
5. Behavioral Self-concept (T2)	.00	.32**	.45**	.39**	--	--	--	--	--	--	--	--
6. Social Self-concept (T1)	-.02	.48**	.31**	-.31**	.07	--	--	--	--	--	--	--
7. Social Self-concept (T2)	-.05	.48**	.49**	.14	-.14	.58**	--	--	--	--	--	--
8. CANS Internalizing (T1)	.37**	-.08	-.02	-.06	-.09	.00	.12	--	--	--	--	--
9. CANS Internalizing (T3)	.25*	-.08	-.06	-.01	-.12	.04	.03	.25*	--	--	--	--
10. CANS Externalizing (T1)	.25**	-.14	.09	-.13	-.15	-.11	.06	.35**	.25**	--	--	--
11. CANS Externalizing (T3)	.08	-.17	-.08	-.22	-.24	-.19	-.04	.01	.53**	.51**	--	--
12. CBCL Internalizing (T1)	.08	-.12	-.05	-.14	-.20	-.19*	-.04	.15	.20	.39**	.28*	--
13. CBCL Internalizing (T3)	-.29*	.00	-.12	-.02	-.22*	.00	-.12	.16	.04	-.11	-.08	.44**
14. CBCL Anx/Dep (T1)	.14	-.14	-.07	-.11	-.22*	-.22*	-.07	.13	.17	.49**	.30*	.90**
15. CBCL Anx/Dep (T3)	-.32**	-.01	-.07	.02	-.10	.01	-.11	.19	.00	-.08	-.02	.33**
16. CBCL Withdrawn (T1)	.07	-.08	-.01	-.11	-.11	-.12	-.05	.19*	.25*	.25**	.24	.88**
17. CBCL Withdrawn (T3)	-.15	-.07	-.18	-.10	-.39**	-.01	-.09	.04	.19	-.08	.06	.41**
18. CBCL Externalizing (T1)	.10	-.21*	-.06	-.24**	-.20	-.19*	-.09	.19*	.15	.40**	.40**	.61**
19. CBCL Externalizing (T3)	-.23*	-.10	-.18	-.15	-.41**	.03	-.08	.09	-.02	.02	.05	.28*
20. CBCL Delinquent (T1)	.06	-.19*	-.04	-.26**	-.19	-.17	-.06	.15	.22	.36**	.32*	.55**
21. CBCL Delinquent (T3)	-.19	-.13	-.15	-.15	-.33**	-.02	.10	.15	.01	-.01	.01	.25*
22. CBCL Aggressive (T1)	.11	-.21*	-.07	-.21*	-.19	-.19*	-.10	.19*	.10	.39**	.42**	.60**
23. CBCL Aggressive (T3)	-.23*	-.07	-.19	-.13	-.42**	.03	.06	.05	.03	.04	.07	.29*
24. CBCL Social (T1)	.15	-.18	-.07	-.05	-.20*	-.23**	-.05	.16	.03	.35**	.19	.72**
25. CBCL Social (T3)	-.24*	-.16	-.25*	-.12	-.31**	-.07	-.10	.13	.02	-.02	.03	.31**

	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
1. Child Maltreatment (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
2. Global Self-worth (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
3. Global Self-worth (T2)	--	--	--	--	--	--	--	--	--	--	--	--	--
4. Behavioral Self-concept (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
5. Behavioral Self-concept (T2)	--	--	--	--	--	--	--	--	--	--	--	--	--
6. Social Self-concept (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
7. Social Self-concept (T2)	--	--	--	--	--	--	--	--	--	--	--	--	--
8. CANS Internalizing (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
9. CANS Internalizing (T3)	--	--	--	--	--	--	--	--	--	--	--	--	--
10. CANS Externalizing (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
11. CANS Externalizing (T3)	--	--	--	--	--	--	--	--	--	--	--	--	--
12. CBCL Internalizing (T1)	--	--	--	--	--	--	--	--	--	--	--	--	--
13. CBCL Internalizing (T3)	--	--	--	--	--	--	--	--	--	--	--	--	--
14. CBCL Anx/Dep (T1)	.37**	--	--	--	--	--	--	--	--	--	--	--	--
15. CBCL Anx/Dep (T3)	.90**	.29**	--	--	--	--	--	--	--	--	--	--	--
16. CBCL Withdrawn (T1)	.47**	.66**	.35**	--	--	--	--	--	--	--	--	--	--
17. CBCL Withdrawn (T3)	.79**	.32**	.55**	.46**	--	--	--	--	--	--	--	--	--
18. CBCL Externalizing (T1)	.30**	.63**	.31**	.49**	.22	--	--	--	--	--	--	--	--
19. CBCL Externalizing (T3)	.55**	.25*	.44**	.22*	.55**	.36**	--	--	--	--	--	--	--
20. CBCL Delinquent (T1)	.28*	.56**	.31**	.48**	.23*	.91**	.38**	--	--	--	--	--	--
21. CBCL Delinquent (T3)	.51**	.25*	.44**	.18	.48**	.37**	.92**	.41**	--	--	--	--	--
22. CBCL Aggressive (T1)	.28*	.62**	.28*	.46**	.20	.98**	.32**	.80**	.34**	--	--	--	--
23. CBCL Aggressive (T3)	.53**	.24*	.41**	.23*	.55**	.32**	.98**	.35**	.81**	.29**	--	--	--
24. CBCL Social (T1)	.37**	.78**	.28*	.53**	.35**	.76**	.31**	.65**	.33**	.76**	.28*	--	--
25. CBCL Social (T3)	.63**	.28*	.53**	.28*	.54**	.44**	.77**	.43**	.68**	.42**	.78**	.48**	--

Note. *p<.05, **p<.01; CANS = Child and Adolescent Needs and Strengths. CBCL = Child Behavior Checklist.

In contrary to prediction that maltreatment would predict higher externalizing behaviors longitudinally, there was no significant main effect of maltreatment (T1) on T3 externalizing behaviors, rated by foster parents (β=-.136, p=.196). More specifically, analyses did not reveal any significant predictive effects of child maltreatment on delinquent behaviors (β = -.108, p = .302), and aggressive behavior (β = -.137, p = .200). In addition, analyses revealed no significant predictive effects of child maltreatment on T3 externalizing behaviors rated by the DCFS workers (β = .094, p = .135). Of note, child maltreatment and CANS externalizing behaviors (T1) was associated positively (β=.262, p=.006).

Moreover, inconsistent with predictions regarding foster youth's social behaviors, analyses revealed that maltreatment was not significantly associated with social problems, rated by foster parents (β = -.179, p = .059). While this finding is not significant, the direction of the effect of maltreatment is notable for being negative.

Table 3. Multiple Regression Summary Table: Maltreatment (T1) Predicting CBCL Internalizing Behaviors (T3).

	B	***SE B***	***β***	***t***	***p***
T1 CBCL Int	.404	.085	.457	4.78	.000
Maltreatment	-.795	.367	-.215	-2.167	.033
Gender	-.258	1.27	-.02	-.203	.84
Age	-.571	.356	-.155	-1.604	.113
African American	2.478	1.327	.192	1.867	.066

Note. R^2 = .323.

Table 4. Multiple Regression Summary Table: Maltreatment (T1) Predicting CBCL Anxiety/Depression (T3).

	B	***SE B***	***β***	***t***	***p***
T1 Anx/Dep	.283	.092	.317	3.078	.003
Maltreatment	-.486	.204	-.256	-2.381	.02
Gender	-.026	.706	-.004	-.037	.971
Age	-.339	.198	-.180	-1.711	.091
African American	.757	.74	.114	1.024	.309

Note. R^2 = .204.

Hypotheses 4-5

To test Hypotheses 4 and 5, which posited that child maltreatment at T1 would be negatively associated with global self-worth, as well as behavioral and social domains of self-concept at T2, a series of multiple regression analyses was conducted. Each regression tested the effect of T1 maltreatment on T2 self-concept, controlling for previous levels of each outcome variable and demographic data.

As predicted, child maltreatment at T1 was negatively associated with foster youth's self-perceived global self-worth at T2 (β=-.216, p=.028); see Table 5. In contrast to the prediction, analyses revealed no significant predictive effects of child maltreatment on foster youth's self-perception of their behaviors (β=-.012, p=.903), as well as their social competence (β=-.036, p=.679).

Table 5. Multiple Regression Summary Table: Maltreatment (T1) Predicting Global Self-Worth (T2).

	B	***SE B***	***β***	***t***	***P***

T1 Behavioral	.37	.084	.403	4.420	.000
Maltreatment	-.447	.200	-.216	-2.236	.028
Gender	1.071	.749	.133	1.429	.157
Age	.036	.211	.016	.172	.864
African American	.625	.850	.074	.735	.464

Note. R^2 = .256.

Hypotheses 6-8

A series of multiple regression analyses was conducted in order to test Hypotheses 6 through 8, which predicted a direct negative effect of foster youth's self-concept on a series of psychosocial outcomes (internalizing, externalizing, and social problems). Each regression allowed for an analysis of the main effect of foster youth's self-concept (T2) on T3 outcomes, controlling for previous levels of each outcome as well as self-concept variable and demographic variables. Following the specificity matching principle, it was predicted that the behavioral domain of self-concept at Time 2 would negatively predict the internalizing and externalizing behavioral problems at Time 3. It was also predicted that a higher level of self-concept in the social domain would predict less social problems at Time 3. Global self-worth was also examined in relation to all of the psychosocial outcomes and was predicted to be negatively related to the outcomes.

In contrast to the prediction, analyses revealed that foster youth's global self-worth at T2 was not negatively associated with T3 internalizing problems (β=.025, p=.863) and externalizing problems rated by DCFS workers (β=-.115, p=.382). Moreover, T2 global self-worth did not predict T3 internalizing problems rated by foster parents (β=-.017, p=.886), while age and

race/ethnicity did (*β*=-.224, *p*=.04; *β*=.3, *p*=.007, respectively). While T2 global self-worth was not associated with T3 anxious/depressed problems (*β*=.013, *p*=.919) and withdrawn/depressed problems (*β*=-.096, *p*=.416) rated by foster parents, race/ethnicity was for both outcomes (*β*=-.232, *p*=.047; *β*=.313, *p*=.005, respectively). T2 global self-worth was also not associated with T3 externalizing problems (*β*=-.106, *p*=.385), delinquent behaviors (*β*=-.067, *p*=.580), and aggressive behaviors rated by foster parents (*β*=-.122, *p*=.323), while race/ethnicity was (*β*=.285, *p*=.015). Lastly, global self-worth also did not predict social problems at T3 (*β*=-.071, *p*=.517), while age and race/ethnicity did (*β*=-.215, *p*=.034; *β*=.241, *p*=.019, respectively).

As predicted, foster youth's self-concept in the behavioral domain (i.e., how they view their behavioral conduct) at T2 was negatively associated with T3 externalizing behavioral problems (*β*=-.295, *p*=.012), delinquency problems (*β*=-.263, *p*=.029), and aggressive behavior problems rated by foster parents (*β*=-.295, *p*=.012), as well as race/ethnicity (*β*=.28, *p*=.011); see Tables 6-8. Consistent with the prediction, T2 behavioral self-concept was also negatively associated with T3 withdrawn/depressed problems rated by foster parents (*β*=-.313, *p*=.005), but not anxious/depressed problems (*β*=-.039, *p*=.759) or internalizing behavioral problems rated by foster parents (*β*=-.145, *p*=.207); see Table 9. In contrast to the prediction, analyses revealed no significant predictive effects of T2 foster youth's behavioral self-concept on T3 internalizing behavioral problems (*β*=-.097, *p*=.502) and T3 externalizing behavioral problems rated by DCFS workers (*β*=-.175, *p*=.184).

Table 6. Multiple Regression Summary Table: Behavioral Self-concept (T2) Predicting Externalizing Behavior Problems (T3).

	B	***SE B***	***β***	***t***	***P***

T1 Externalizing	.247	.086	.306	2.859	.006
T1 Behavioral Conduct	-.146	.238	-.071	-.614	.541
T2 Behavioral Conduct	-.678	.263	-.295	-2.58	.012
Gender	.999	1.899	.056	.526	.601
Age	-.381	.544	-.074	-.702	.485
African American	3.887	1.942	.216	2.001	.049

Note. R^2 = .303.

Table 7. Multiple Regression Summary Table: Behavioral Self-concept (T2) Predicting Delinquent Behavior Problems (T3).

	B	***SE B***	***β***	***t***	***P***
T1 Delinquency	.332	.103	.356	3.22	.002
T1 Behavioral Conduct	-.022	.093	-.029	-.24	.811
T2 Behavioral Conduct	-.229	.103	-.263	-2.227	.029
Gender	.125	.744	.018	.168	.867
Age	-.193	.21	-.1	-.918	.362
African American	.621	.757	.091	.821	.415

Note. R^2 = .259.

Table 8. Multiple Regression Summary Table: Behavioral Self-concept (T2) Predicting Aggressive Behavior Problems (T3).

	B	***SE B***	***β***	***t***	***P***
T1 Aggressive	.188	.079	.253	2.384	.02
T1 Behavioral Conduct	-.127	.156	-.094	-.818	.416
T2 Behavioral Conduct	-.447	.172	-.295	-2.593	.012

Gender	.874	1.245	.074	.702	.485
Age	-.225	.359	-.067	-.628	.532
African American	3.329	1.276	.28	2.609	.011

Note. R^2 = .309.

Table 9. Multiple Regression Summary Table: Behavioral Self-concept (T2) Predicting Withdrawn/Depressed Symptoms (T3).

	B	***SE B***	***β***	***t***	***P***
T1 Withdrawn/Dep	.355	.076	.45	4.661	.000
T1 Behavioral Conduct	.006	.057	.011	.108	.915
T2 Behavioral Conduct	-.187	.064	-.313	-2.94	.005
Gender	-.066	.458	-.014	-.144	.886
Age	-.14	.13	-.105	-1.077	.285
African American	1.148	.468	.245	2.456	.017

Note. R^2 = .398.

In addition, contrary to the prediction, foster youth's self-concept in the social domain (i.e., self-perception of social competence) was not significantly associated with T3 social problems rated by foster parents (β=-.117, p=.348), while race/ethnicity was (β=.213, p=.04).

Hypothesis 9

The present study also sought to determine the indirect (pathway from X to Y through M) effect of foster youth's self-concept between child maltreatment and subsequent internalizing, externalizing, and social problems. Specifically, the study hypothesized that foster youth's global self-concept would mediate the relation between child maltreatment (T1) and psychosocial outcomes (i.e., internalizing and externalizing behavioral problems, social problems at T3);

youth's self-perception of behavioral conduct would mediate the relation between child maltreatment (T1) on internalizing and externalizing behavioral problems (T3); and youth's self-perception of social competence would mediate the relation between child maltreatment (T1) on social problems (T3). The computational PROCESS bootstrapping procedure for SPSS (Hayes, 2012) estimated the total, direct, and indirect effects of Time 1 child maltreatment on Time 3 internalizing, externalizing, and social problems through Time 2 foster youth's self-concept. The simple indirect effect of child maltreatment (T1) on subsequent psychosocial outcomes (T3) through youth's self-concept (T2) was indicated by bootstrap-confidence intervals (CI) for these pathways that do not include zero. The estimate of the indirect effect of foster youth's self-concept on psychosocial outcomes was reflected in the ordinary least squares regression coefficient estimating youth's self-concept from child maltreatment (path a) as well as the ordinary least regression coefficient estimating psychosocial outcomes from youth's self-concept (path b). Path c' represents the direct effect of maltreatment on foster youth's psychosocial outcomes. Covariates included Time 1 behavioral and social problems, Time 1 self-concept, age, gender, and race/ethnicity in these models.

Behavioral self-concept. Regarding the mediating effect of foster youth's behavioral self-concept, analyses revealed that it did not mediate the pathway between child maltreatment (T1) and internalizing and externalizing behavior problems (T3) reported by the DCFS workers (see Tables 10 and 11, respectively).

Table 10. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CANS internalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CANS INTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	.334	.290	.254	*c'*	.229	.164	.170

M (Self-Concept)		-	-	-	*b*	-.073	.081	.371
constant	i_1	.033	1.691	.985	i_2	1.523	.943	.113
		$R^2 = .272$				$R^2 = .288$		
		$F(6, 48) = 2.983$, $p = .015$				$F(7, 47) = 2.717$, $p = .019$		

Table 11. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CANS externalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CANS EXTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	.351	.308	.261	*c'*	-.201	.162	.221
M (Self-Concept)		-	-	-	*b*	-.088	.078	.266
constant	i_1	-.05	1.277	.969	i_2	.585	.66	.113
		$R^2 = .236$				$R^2 = .439$		
		$F(6, 44) = 2.271$, $p = .054$				$F(7, 43) = 4.805$, $p = .001$		

Foster youth's behavioral self-concept was also not found to mediate the pathway between maltreatment (T1) and internalizing behavior problems (T3), including anxiety and withdrawn/depressed problems, as reported by foster parents (see Tables 12, 13, and 14). Of note, behavioral self-concept (T2) appeared to predict withdrawn/depressed behaviors at T3 (b = -.2, t(63)=-3.077, p=.003, respectively), but maltreatment was not found to predict behavioral self-concept (b = -.126, t(64)=-.498, p=.62; see Table 12).

Table 12. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CBCL internalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL INTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.117	.252	.386	*c'*	-1.143	.377	.004
M (Self-Concept)		-	-	-	*b*	-.277	.187	.143
constant	i_1	1.637	.939	.086	i_2	2.442	1.436	.094
		$R^2 = .229$				$R^2 = .403$		
		$F(6, 64) = 3.169$, $p = .009$				$F(7, 63) = 6.077$, $p = .000$		

Table 13. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CBCL anxiety/depression problems.

		Consequent

		M (Self-Concept)				*Y* (CBCL ANX/DEP)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.101	.254	.691	*c'*	-.663	.209	.002
M (Self-Concept)		-	-	-	*b*	-.055	.103	.595
constant	i_1	1.480	.932	.117	i_2	1.574	.783	.049
		$R^2 = .22$				$R^2 = .26$		
		$F(6, 64) = 3.043$, $p = .011$				$F(7, 63) = 3.155$, $p = .006$		

Table 14. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CBCL withdrawn/depressed problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL WITHDRAWN/DEP)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.126	.253	.62	*c'*	-.202	.132	.131
M (Self-Concept)		-	-	-	*b*	-.200	.065	.003
constant	i_1	1.522	.937	.109	i_2	.509	.498	.310
		$R^2 = .223$				$R^2 = .441$		
		$F(6, 64) = 3.068$, $p = .011$				$F(7, 63) = 7.111$, $p = .000$		

Moreover, foster youth's behavioral self-concept was not found to mediate the pathway between maltreatment (T1) and externalizing behavior problems (T3), including delinquent and aggressive behaviors, as reported by foster parents (see Tables 15, 16, and 17). Specifically, results indicated that the total effect of maltreatment on CBCL externalizing behavior problems (path c; $b = -1.221$, $t(64)=-2.264$, $p=.027$) and the effect of behavioral self-concept on the outcome (path b; $b = -.651$, $t(63)=-2.552$, $p=.013$) were significant. However, path a (i.e., the predictive effect of maltreatment (T1) on behavioral self-concept (T2)) was not significant, while path c' was significant (see Table 13). The same pattern was found for delinquent and aggressive behavior problems where the models did not reveal any mediation effect of behavioral self-concept due to a non-significant association between maltreatment (T1) and behavioral self-concept (T2).

Table 15. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CBCL externalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL EXTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.110	.253	.664	*c'*	-1.292	.518	.015
M (Self-Concept)		-	-	-	*b*	-.651	.255	.013
constant	i_1	1.417	.974	.151	i_2	3.358	2.021	.102
		$R^2 = .219$				$R^2 = .387$		
		$F(6, 64) = 2.994$, $p = .012$				$F(7, 63) = 5.683$, $p = .000$		

Table 16. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CBCL delinquent behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL DELINQUENT)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.116	.253	.648	*c'*	.452	.195	.023
M (Self-Concept)		-	-	-	*b*	-.203	.096	.039
constant	i_1	1.492	.995	.139	i_2	1.581	.777	.046
		$R^2 = .220$				$R^2 = .360$		
		$F(6, 64) = 3.013$, $p = .012$				$F(7, 63) = 5.062$, $p = .000$		

Table 17. Results of the mediation analysis of foster youth's behavioral self-concept in the relationship between child maltreatment and CBCL aggressive behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL AGGRESSIVE)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.110	.254	.667	*c'*	-.813	.350	.023
M (Self-Concept)		-	-	-	*b*	-.447	.172	.012
constant	i_1	1.375	.954	.155	i_2	1.846	1.336	.172
		$R^2 = .219$				$R^2 = .375$		
		$F(6, 64) = 2.986$, $p = .012$				$F(7, 63) = 5.399$, $p = .000$		

Social self-concept. While maltreatment (T1) predicted foster youth's social problems (T3) as rated by foster parents, the results did not support the mediation hypothesis, which predicted that the high level of maltreatment predicting worse social problems at Time 3 would be explained by a decrease in youth's social self-concept at Time 2. Specifically, maltreatment (T1) was not associated with foster youth's social self-concept (T2), which was also not associated with social problems at T3 (see Table 18).

Table 18. Results of the mediation analysis of foster youth's social self-concept in the relationship between child maltreatment and CBCL social problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL SOCIAL)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.266	.328	.419	*c'*	-.492	.189	.011
M (Self-Concept)		-	-	-	*b*	-.119	.071	.097
constant	i_1	-1.502	1.219	.222	i_2	.652	.707	.359
		$R^2 = .091$				$R^2 = .457$		
		$F(5, 66) = 1.328$, $p = .263$				$F(6, 65) = 9.119$, $p = .000$		

Global self-concept/self-worth. Regarding the mediating effect of foster youth's general self-concept or global self-worth, analyses revealed that it did not mediate the pathway between child maltreatment (T1) and internalizing and externalizing behavior problems (T3) reported by the DCFS workers (see Tables 19 and 20, respectively). Moreover, foster youth's global self-worth was not found to mediate the relation between child maltreatment (T1) and internalizing and externalizing behavior problems as well as social problems (T3) reported by foster parents (see Tables 21 to 27). Of note, maltreatment had a marginally significant predictive effect on global self-worth (T2), but not on the outcome variables (T3); global self-worth (T2) also did not predict the outcomes.

Table 19. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CANS internalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CANS INTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.443	.319	.172	*c'*	.222	.179	.222
M (Self-Concept)		-	-	-	*b*	.034	.081	.679
constant	i_1	-2.038	1.840	.274	i_2	1.307	1.029	.210
		$R^2 = .253$				$R^2 = .271$		
		$F(6, 47) = 2.648$, $p = .027$				$F(7, 46) = 2.448$, $p = .032$		

Table 20. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CANS externalizing behavior problems.

		Consequent

		M (Self-Concept)				*Y* (CANS EXTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.672	.334	.050	*c'*	-.304	.180	.099
M (Self-Concept)		-	-	-	*b*	-.107	.079	.182
constant	i_1	-2.117	1.280	.106	i_2	.355	.682	.605
		$R^2 = .274$				$R^2 = .462$		
		$F(6, 43) = 2.702$, $p = .026$				$F(7, 42) = 5.152$, $p = .000$		

Table 21. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CBCL internalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL INTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.510	.283	.076	*c'*	-.588	.394	.141
M (Self-Concept)		-	-	-	*b*	-.083	.171	.630
constant	i_1	-.037	1.053	.972	i_2	1.464	1.430	.310
		$R^2 = .236$				$R^2 = .309$		
		$F(6, 63) = 3.240$, $p = .008$				$F(7, 62) = 3.955$, $p = .001$		

Table 22. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CBCL anxiety/depression problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL ANX/DEP)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.525	.284	.069	*c'*	-.406	.231	.084
M (Self-Concept)		-	-	-	*b*	-.028	.099	.776
constant	i_1	-.088	1.039	.933	i_2	1.259	.821	.130
		$R^2 = .238$				$R^2 = .205$		
		$F(6, 63) = 3.275$, $p = .007$				$F(7, 62) = 2.286$, $p = .039$		

Table 23. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CBCL withdrawn/depressed behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL WITHDRAWN/DEP)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.502	.282	.080	*c'*	-.083	.129	.523
M (Self-Concept)		-	-	-	*b*	-.057	.056	.315
constant	i_1	-.195	1.039	.852	i_2	.059	.465	.899
		$R^2 = .242$				$R^2 = .321$		
		$F(6, 63) = 3.356$, $p = .006$				$F(7, 62) = 4.194$, $p = .001$		

Table 24. Results of the mediation analysis of foster youth's global self-worth in the relationship

between child maltreatment and CBCL externalizing behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL EXTERNALIZING)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.514	.282	.073	*c'*	-1.082	.607	.079
M (Self-Concept)		-	-	-	*b*	-.374	.265	.163
constant	i_1	-.301	1.079	.782	i_2	1.819	2.267	.425
		$R^2 = .243$				$R^2 = .306$		
		$F(6, 63) = 3.374$, $p = .006$				$F(7, 62) = 3.908$, $p = .001$		

Table 25. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CBCL delinquent behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL DELINQUENT)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.492	.283	.087	*c'*	-.307	.217	.162
M (Self-Concept)		-	-	-	*b*	-.102	.094	.282
constant	i_1	-.334	1.110	.763	i_2	.986	.832	.240
		$R^2 = .242$				$R^2 = .331$		
		$F(6, 63) = 3.359$, $p = .006$				$F(7, 62) = 4.378$, $p = .001$		

Table 26. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CBCL aggressive behavior problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL AGGRESSIVE)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.524	.282	.068	*c'*	-.739	.414	.079
M (Self-Concept)		-	-	-	*b*	-.267	.179	.143
constant	i_1	-.239	1.056	.821	i_2	.888	1.509	.558
		$R^2 = .243$				$R^2 = .281$		
		$F(6, 63) = 3.363$, $p = .006$				$F(7, 62) = 3.454$, $p = .004$		

Table 27. Results of the mediation analysis of foster youth's global self-worth in the relationship between child maltreatment and CBCL social problems.

		Consequent						
		M (Self-Concept)				*Y* (CBCL SOCIAL)		
Antecedent		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (Maltreatment)	*a*	-.522	.284	.071	*c'*	-.434	.203	.036
M (Self-Concept)		-	-	-	*b*	-.099	.088	.264
constant	i_1	-.056	1.040	.957	i_2	.632	.723	.386
		$R^2 = .237$				$R^2 = .438$		
		$F(6, 63) = 3.255$, $p = .008$				$F(7, 62) = 6.915$, $p = .000$		

Hypothesis 10

A series of multiple hierarchical regression analyses were conducted in order to test hypothesis 10, which predicted a moderating effect of foster youth's self-concept from T1 (i.e., global, behavioral, and social domains) on the relation between the severity of child maltreatment (T1) and internalizing and externalizing behavior problems as well as social problems (T3), as reported by IA workers and foster parents. The main effects, including child maltreatment and self-concept, as well as control variables (i.e., age, race/ethnicity, gender) were entered in Step 1 of the analyses. In Step 2, one interaction term created for maltreatment and a specific domain of self-concept was entered. This resulted in regression testing each of the outcomes and domains of self-concept separately. For significant interactions between child maltreatment and the psychosocial outcomes, simple slope analyses were conducted to determine the simple effects contributing to the significant interaction term identified (Holmbeck, 1997).

Behavioral self-concept. The model of foster youth's self-perception of their behavioral conduct (T1) moderating the effect of maltreatment (T1) on internalizing behavior problems (T3) reported by DCFS workers was not significant ($F(7, 63)=1.838$, $p=.095$; see Table 28). Foster youth's behavioral self-concept also did not moderate the effect of maltreatment on externalizing behavior problems (T3) reported by DCFS workers ($B=.034$, $\beta=.108$, $t(70)=.90$, $p=.372$). Maltreatment also did not have a main effect in this model $B=-.044$, $\beta=-.029$, $t(70)=-.246$, $p=.807$; see Table 29).

Table 28. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Internalizing Behavior Problems (CANS).

Variable	B	SE B	β
Child Maltreatment	.284	.169	.211
Behavioral Self-concept	.031	.066	.058

Gender	.124	.577	.025
Age	.275	.163	.204
African American	.848	.631	.164
Maltx X Beh self-concept	.034	.034	.121
T1 CANS Internalizing	.14	.142	.152

Note. R^2=.17, *p*=.095. *p<.05. **p<.01

Table 29. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Externalizing Behavior Problems (CANS).

Variable	B	SE B	*β*
Child Maltreatment	-.044	.178	-.029
Behavioral Self-concept	-.061	.074	-.101
Gender	1.162	.626	.21
Age	-.052	.181	-.033
African American	.245	.703	.04
Maltx X Beh self-concept	.034	.038	.108
T1 CANS Externalizing	.435	.128	.426**

Note. R^2=.295, *p*<.05. *p<.05. **p<.01

On the other hand, the moderating effect of behavioral self-concept (T1) was marginally significant for the relationship between maltreatment and internalizing behaviors, specifically anxious/depressed symptoms as reported by foster parents (*B*=-.175, *β*=-.188, *t*(76)=-1.892, *p*=.063; *B*=-.099, *β*=-.212, *t*(76)=-1.969, *p*=.053, respectively). For both of these moderating models, maltreatment significantly predicted the outcomes as well (*B*=-.891, *β*=-.243, *t*(76)=-2.410, *p*=.019; *B*=-.555, *β*=-.303, *t*(76)=-2.783, *p*=.007, respectively). However, the interaction between behavioral self-concept and maltreatment was not significant for withdrawn/depressed symptoms as reported by foster parents (*B*=-.027, *β*=-.079, *t*(76)=-.746, *p*=.458; see Table 30). The results are presented in Table 30-32.

Table 30. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Internalizing Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.891	.370	-.243*
Behavioral Self-concept	.015	.146	.010
Gender	-.783	1.232	-.062

Age	-.440	.353	-.121
African American	2.549	1.286	.201
Maltx X Beh self-concept	-.175	.092	-.188
T1 CBCL Internalizing	.363	.084	.421**

Note. R^2=.385, p<.001. *p<.05. **p<.01

Table 31. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Anxiety/Depressive Problems (CBCL).

Variable	B	SE B	β
Child Maltreatment	-.555	.200	-.303**
Behavioral Self-concept	.027	.079	.036
Gender	-.368	.662	-.059
Age	-.249	.189	-.137
African American	.787	.690	.124
Maltx X Beh self-concept	-.099	.050	-.212
T1 CBCL Anx/Dep	.228	.089	.272*

Note. R^2=.286, p<.01. *p<.05. **p<.01

Table 32. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Withdrawn/Depressive Problems (CBCL).

Variable	B	SE B	β
Child Maltreatment	-.100	.145	-.074
Behavioral Self-concept	-.037	.057	-.068
Gender	.345	.484	.075
Age	-.050	.138	-.037
African American	1.107	.505	.237*
Maltx X Beh self-concept	-.027	.036	-.079
T1 CBCL Withdrawn/Dep	.353	.083	.438**

Note. R^2=.303, p<.01. *p<.05. **p<.01

For marginally significant interactions between child maltreatment and youth's behavioral self-concept, simple slope analyses were conducted to determine the simple effects contributing to the interaction term identified (Holmbeck, 1997). This clarified the trend of the relation between maltreatment and internalizing behaviors as well as anxious/depressed problems at different levels (high vs. low) of youth's behavioral self-concept.

A series of simple slopes showed that maltreatment (T1) was significantly associated with internalizing behaviors (T3) for youth with higher level of self-perception of behavioral

conduct (*B*=-1.623, *β*=-.442, *t*(76)=-3.414, *p*=.001), but not for those with lower level of behavioral self-concept (*B*=-.16, *β*=-.043, *t*(76)=-.271, *p*=.787; see Figure 3). Similarly, child maltreatment was significantly associated with anxious/depressed behaviors at Time 3 for youth with high behavioral self-concept (*B*=-.968, *β*=-.529, *t*(76)=-3.805, *p*=.000), but not for those with low behavioral self-concept (*B*=-.143, *β*=-.078, *t*(76)=-.445, *p*=.658; see Figure 4).

Figure 3. Reported Internalizing Problems (CBCL) as a Function of Child Maltreatment and Youth's Behavioral Self-concept.

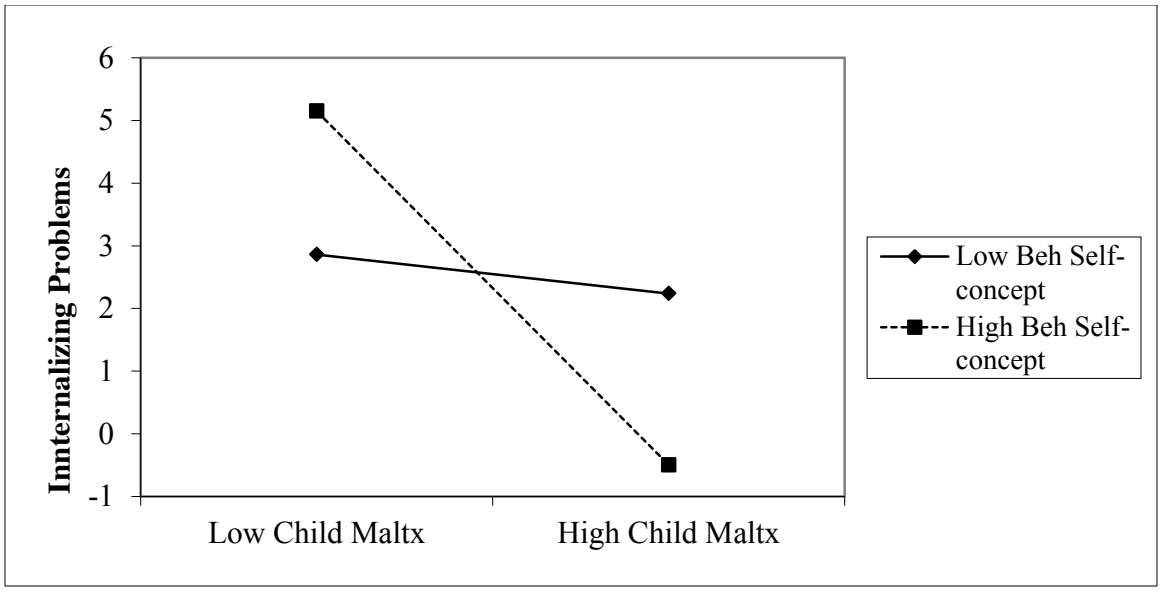
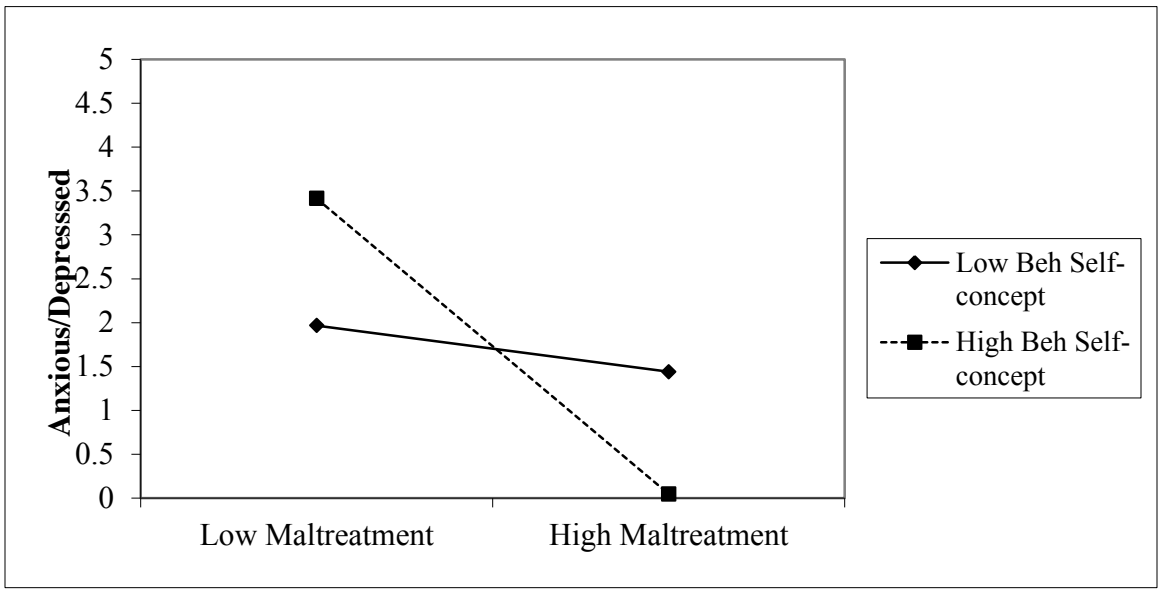


Figure 4. Reported Anxious/Depressed Problems (CBCL) as a Function of Child Maltreatment and Youth's Behavioral Self-concept.



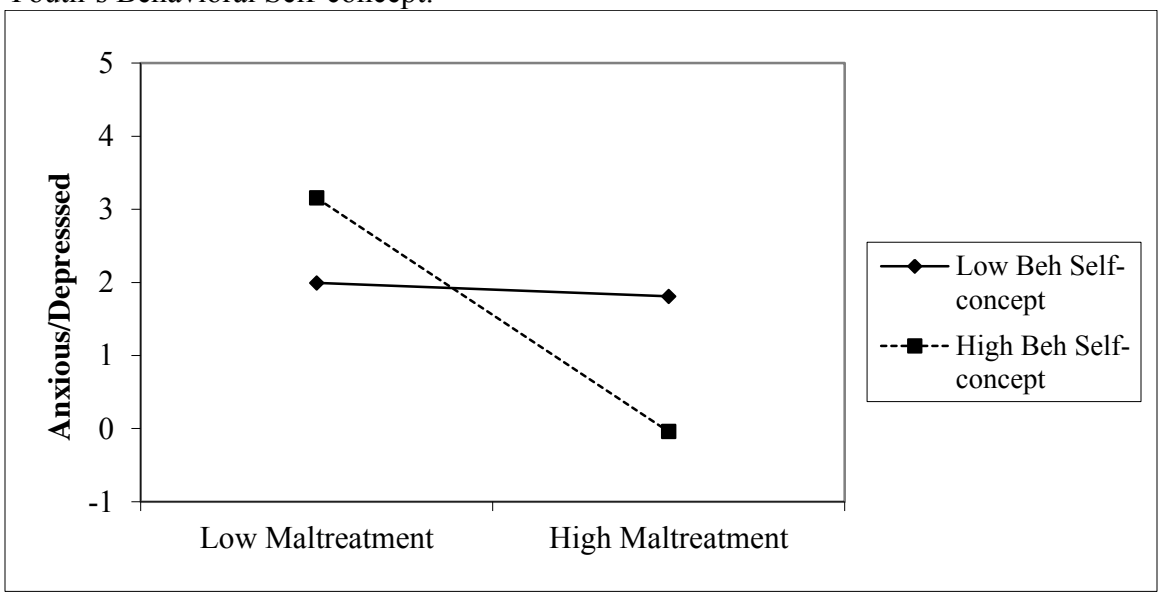
Regarding anxious/depressed symptoms as reported by foster parents, additional analyses were performed to examine the effect of behavioral self-concept, after controlling for community violence and family violence since these variables tend to co-occur with maltreatment (Cicchetti & Lynch, 1993; Lynch & Cicchetti, 1998). These analyses also controlled for a previous level of the outcome variable and demographic variables (see Table 33). The results showed that greater severity of child maltreatment was associated with less anxious/depressed problems (B=-.479, β=-.262, t(76)=-2.362, p=.021). Moreover, there was a significant interaction between maltreatment and youth's behavioral self-concept (B=-.105, β=-.226, t(76)=-2.104, p=.039). A simples slopes analysis revealed a significant negative relationship between child maltreatment and anxious/depressed problems for youth with high behavioral self-concept (B=-.0918, β=-.501, t(76)=-3.635, p=.001). On the other hand, there was no significant relationship between child maltreatment and anxious/depressed problems for foster youth with low behavioral self-concept (B=-.041, β=-.022, t(76)=-.126, p=.9). See Figure 5.

Table 33. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Anxiety/Depressive Problems (CBCL).

Variable	B	SE B	β
Model 1			
Child Maltreatment	-.585	.202	-.319**
Behavioral Self-concept	-.019	083	-.026
Gender	-.218	.669	-.035
Age	-.325	.194	-.179
African American	.543	.742	.086
Community Violence	.567	.602	.106
Family Violence	-.662	.377	-.204
T1 CBCL Withdrawn/Dep	.279	.089	.333**
Model 2			
Child Maltreatment	-.479	.203	-.262*
Behavioral Self-concept	-.016	.081	-.022
Gender	-.312	.654	-.05
Age	-.308	.189	-.17
African American	.419	.726	.066
Community Violence	.474	.589	.089
Family Violence	-.724	.369	-.223
Maltx X Beh self-concept	-.105	.05	-.226*
T1 CBCL Withdrawn/Dep	.244	.089	.291**

Note. R^2=.326, p<.05. *p<.05. **p<.01

Figure 5. Reported Anxious/Depressed Problems as a Function of Child Maltreatment and Youth's Behavioral Self-concept.



In terms of externalizing behavior problems reported by foster parents, the interaction between maltreatment and foster youth's behavioral self-concept was not significant (*B*=.01, *β*=.007, *t*(76)=.071, *p*=.944). Race/ethnicity had a significant effect in predicting externalizing behavior problems, such that African-American youth are more likely to exhibit externalizing behavior problems at T3 (*B*=4.534, *β*=.252, *t*(76)=2.344, *p*=.022). Similarly, the interactions between maltreatment and foster youth's behavioral self-concept for aggressive as well as delinquent behavior problems were not significant (*B*=.008, *β*=.01, *t*(76)=.092, *p*=.927; *B*=.005, *β*=.009, *t*(76)=.084, *p*=.933, respectively). Race/ethnicity was also a significant predictor of aggressive behavior problems (*B*=3.509, *β*=.299, *t*(76)=2.7633, *p*=.007), such that African-American youth are more likely to demonstrate behavioral problems at T3 (*B*=3.509, *β*=.299, *t*(76)=2.7633, *p*=.007). The results are presented in Tables 34-36.

Table 34. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Externalizing Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-1.065	.559	-.204
Behavioral Self-concept	-.302	.224	-.142
Gender	1.458	1.867	.082
Age	-.475	.530	-.092
African American	4.534	1.935	.252*
Maltx X Beh self-concept	.010	.139	.007
T1 CBCL Externalizing	.301	.086	.369**

Note. R^2=.309, *p*<.001. *p<.05. **p<.01

Table 35. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Delinquent Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.346	.219	-.172
Behavioral Self-concept	-.072	.089	-.088
Gender	.342	.741	.050
Age	-.249	.208	-.125
African American	1.106	.761	.159
Maltx X Beh self-concept	.005	.055	.009

T1 CBCL Delinquent	.408	.105	.424**

Note. R^2=.280, *p*<.01. *p<.05. **p<.01

Table 36. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Behavioral Self-Concept on Aggressive Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.691	.367	-.203
Behavioral Self-concept	-.232	.145	-.167
Gender	1.152	1.221	.099
Age	-.260	.348	-.077
African American	3.509	1.270	.299**
Maltx X Beh self-concept	.008	.091	.010
T1 CBCL Aggressive	.231	.078	.311**

Note. R^2=.302, *p*<.01. *p<.05. **p<.01

Social Self-concept. Inconsistent with the predictions, foster youth's social self-concept was not associated with social problems rated by foster parents (*B*=.016, *β*=.02, *t*(70)=.198, *p*=.844). The interaction between social self-concept and maltreatment was also not significant for social problems (*B*=-.003, *β*=.000, *t*(76)=.000, *p*=1.00). The results are presented in Table 37.

Table 37. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Social Self-concept on Social Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.380	.194	-.190
Social Self-concept	.016	.079	.020
Gender	.434	.668	.063
Age	-.375	.196	-.187
African American	1.419	.722	.203
Maltx X Beh self-concept	-.00003	.043	.000
T1 CBCL Social	.545	.095	.566**

Global self-concept/self-worth. In contrast to the predictions, the model of foster youth's global self-worth (T1) moderating the effect of maltreatment (T1) on internalizing behavior problems (T3) reported by DCFS workers was not significant (*F*(7, 64)=1.838, *p*=.095; see Table 38). Foster youth's self-perception of their overall competence also did not moderate the effect of maltreatment on externalizing behavior problems (T3) reported by DCFS workers

(*B*=.039, *β*=.097, *t*(66)=.842, *p*=.403). Maltreatment also did not have a main effect in this model (*B*=-.012, *β*=-.008, *t*(66)=-.062, *p*=.951; see Table 39).

Table 38. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Internalizing Behavior Problems (CANS).

Variable	B	SE B	*β*
Child Maltreatment	.269	.178	.193
Global Self-worth	.008	.071	.014
Gender	.232	.611	.047
Age	.161	.167	.118
African American	.802	.649	.153
Maltx X Beh self-concept	.006	.043	.018
T1 CANS Externalizing	.209	.148	.179

Note. R^2=.116, *p*=.315. *p<.05. **p<.01

Table 39. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Externalizing Behavior Problems (CANS).

Variable	B	SE B	*β*
Child Maltreatment	-.012	.201	-.008
Global Self-worth	-.092	.079	-.136
Gender	1.057	.655	.181
Age	-.069	.188	-.042
African American	.467	.739	.072
Maltx X Beh self-concept	.039	.046	.097
T1 CANS Externalizing	.534	.140	.472**

Note. R^2=.301, *p*<.01. *p<.05. **p<.01

In terms of internalizing behavior problems reported by foster parents, the moderating effect of foster youth's global self-worth was not significant (*B*=-.090, *β*=-.124, *t*(76)=-1.123, *p*=.265). Maltreatment did not have any main effect (*B*=-.509, *β*=-.147, *t*(76)=-1.396, *p*=.167). However, race/ethnicity was associated with CBCL internalizing behavior problems (T3), such that African-American youth were more likely to exhibit greater internalizing behavior problems (*B*=2.684, *β*=.227, *t*(76)=2.089, *p*=.040; Table 40). More specifically, the results showed that African-American youth were also more likely to exhibit withdrawn/depressive problems at Time 3 (*B*=1.122, *β*=.279, *t*(76)=2.499, *p*=.015). Maltreatment was not significantly associated

with withdrawn/depressive problems as well as anxiety/depressive at Time 3 (*B*=-.022, *β*=-.018, *t*(76)=-.169, *p*=.866; *B*=-.366, *β*=-.196, *t*(76)=-1.749, *p*=.085, respectively). The moderating effects of global self-worth were also not significant for anxiety/depressive and withdrawn/depressive problems (*B*=-.062, *β*=-.155, *t*(76)=-1.329, *p*=.188; *B*=-.001, *β*=-.005, *t*(76)=-.048, *p*=.962, respectively). The results are presented in Tables 41 and 42.

Table 40. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Internalizing Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.509	.365	-.147
Global Self-worth	-.129	.137	-.098
Gender	.390	1.233	.033
Age	-.577	.351	-.172
African American	2.684	1.284	.227*
Maltx X Beh self-concept	-.090	.081	-.124
T1 CBCL Internalizing	.324	.090	.387**

Note. R^2=.296, *p*<.01. *p<.05. **p<.01

Table 41. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Anxiety/Depressive Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.366	.209	-.196
Global Self-worth	-.085	.078	-.119
Gender	.176	.701	.028
Age	-.352	.199	-.193
African American	.915	.731	.143
Maltx X Beh self-concept	-.062	.046	-.155
T1 CBCL Anx/Dep	.228	.101	.258*

Note. R^2=.223, *p*<.05. *p<.05. **p<.01

Table 42. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Withdrawn/Depressive Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.022	.127	-.018
Global Self-worth	-.062	.048	-.138
Gender	.661	.431	.166
Age	-.049	.122	-.043
African American	1.122	.449	.279*
Maltx X Beh self-concept	-.001	.028	-.005

T1 CBCL Withdrawn/Dep	.277	.077	.386**

Note. R^2=.259, p<.01. *p<.05. **p<.01

In terms of externalizing behavior problems (T3) reported by foster parents, race/ethnicity had a main effect, such that African-American youth were more likely to exhibit externalizing behavior problems (*B*=4.507, *β*=.240, *t*(76)=2.187, *p*=.032). However, maltreatment did not have any main effect (*B*=-.704, *β*=-.128, *t*(76)=-1.201, *p*=.234). The moderating effect of global self-worth was also not significant for externalizing behaviors (See Table 43). More specifically, the moderating effect of global self-worth was not significant for both delinquent and aggressive behavior problems (*B*=-.047, *β*=-.106, *t*(76)=-.982, *p*=.330; *B*=-.117, *β*=-.154, *t*(76)=-1.419, *p*=.160, respectively). Maltreatment was also not significant for both outcomes (*B*=-.176, *β*=-.084, *t*(76)=-.795, *p*=.429; *B*=-.489, *β*=-.136, *t*(76)=-1.258, *p*=.213, respectively). Race/ethnicity was associated with aggressive behavior problems (*B*=3.492, *β*=.285, *t*(76)=2.561, *p*=.013), but not delinquent problems. The results are presented in Tables 44 and 45.

Table 43. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Externalizing Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.704	.586	-.128
Global Self-worth	-.210	.225	-.100
Gender	2.245	1.987	.121
Age	-.464	.559	-.087
African American	4.507	2.061	.240*
Maltx X Beh self-concept	-.164	.125	-.141
T1 CBCL Externalizing	.309	.092	.362**

Note. R^2=.285, p<.01. *p<.05. **p<.01

Table 44. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Delinquent Behavior Problems (CBCL).

Variable	B	SE B	*β*
Child Maltreatment	-.176	.221	-.084

Global Self-worth	-.079	.086	-.100
Gender	.686	.757	.097
Age	-.251	.212	-.124
African American	1.085	.781	.152
Maltx X Beh self-concept	-.047	.048	-.106
T1 CBCL Delinquent	.419	.107	.425**

Note. R^2=.288, p<.01. *p<.05. **p<.01

Table 45. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Aggressive Behavior Problems (CBCL).

Variable	B	SE B	β
Child Maltreatment	-.489	.389	-.136
Global Self-worth	-.132	.148	-.097
Gender	1.617	1.306	.133
Age	-.242	.370	-.069
African American	3.492	1.363	.285*
Maltx X Beh self-concept	-.117	.082	-.154
T1 CBCL Aggressive	.242	.085	.309**

Note. R^2=.270, p<.01. *p<.05. **p<.01

In terms of social problems rated by foster parents (T3), age and race/ethnicity had main effects, such that younger children and African-American youth are more likely to experience more conflicts in social relationships (B=-.416, β=-.214, t(76)=-2.241, p=.028; B=1.684, β=.246, t(76)=2.459, p=.016, respectively). The moderating effect of foster youth's global self-worth was not significant for social problems (B=-.039, β=-.092, t(76)=-.911, p=.366). The results are presented in Table 46.

Table 46. Hierarchical Regression Summary Table: Interactions Between Child Maltreatment and Global Self-worth on Social Problems (CBCL).

Variable	B	SE B	β
Child Maltreatment	-.270	.197	-.135
Global Self-worth	-.118	.074	-.154
Gender	.507	.659	.075
Age	-.416	.186	-.214*
African American	1.684	.685	.246*
Maltx X Beh self-concept	-.039	.043	-.092
T1 CBCL Social	.457	.098	.471**

Note. R^2=.406, p<.01. *p<.05. **p<.01

CHAPTER SIX

DISCUSSION

The present study's primary goal was to examine the effect of foster youth's self-perception of competence and worth on emotional, behavioral, and social outcomes. The study applied a risk and resilience framework to examine self-concept as a mediator and a moderator of associations between child maltreatment and three domains of psychosocial functioning (i.e., internalizing problems, externalizing problems, and social problems) during the first year of foster care placement. The present study first examined direct relations between the severity of maltreatment (T1) and foster youth's self-concept (T2) as well as psychosocial outcomes (T3). Then, the study examined mediating effects of domain-specific self-concept and global self-worth in the association between maltreatment and outcomes. It was predicted that the effects of maltreatment (T1) on the outcomes (T3) would be explained by a decline or increase in self-concept (T2). The study also examined whether foster youth's self-concept (T1) moderated the association between maltreatment (T1) and the outcomes (T3), thereby serving as a protective variable. Following the specificity matching principle, different domains of self-concept were examined depending on the outcome being assessed (e.g., perceived social competence predicting social functioning), in addition to global self-worth. The study also implemented a multi-informant approach by using DCFS workers' and foster parents' ratings of psychosocial functioning as well as foster youth's self-report of their self-concept in context of experiencing maltreatment, which has been predominantly studied in the general, non-child welfare

population. However, research on the associations between self-concept and psychosocial functioning among foster youth is limited. The present study sought to address this limitation and advance our current understanding of the role of domain-specific and global self-concept among foster youth by studying its mediating and moderating effects.

Inconsistent with predictions, the severity of child maltreatment was negatively associated with psychosocial outcomes, specifically anxious/depressed symptoms, as reported by foster parents. Consistent with predictions, a greater severity of maltreatment predicted lower global self-worth. Contrary to hypotheses, the study did not find mediational effects of self-concept on the pathway between maltreatment and psychosocial outcomes. Lastly, the study found a significant interaction between maltreatment and foster care youth's anxious/depressed symptoms, such that those with higher behavioral self-concept exhibited fewer anxious/depressed symptoms at a higher level of maltreatment. Lower behavioral self-concept, on the other hand, was not found to moderate the effect of maltreatment on anxious/depressed symptoms.

Direct Links between Child Maltreatment and Psychosocial Outcomes

The present study tested the longitudinal effect of the severity of child maltreatment on a series of psychosocial outcomes, including internalizing, externalizing, and social problems, as reported by both foster parents and DCFS workers. The results showed that the severity of child maltreatment was negatively related to foster parents' reporting of youth's internalizing behavioral problems, particularly anxious/depressed symptoms, such that greater severity of maltreatment predicted fewer anxious/depressed symptoms after the first year of foster care

placement. This finding was contrary to hypotheses, which posited that greater severity of maltreatment upon entering foster care would be associated more adjustment problems over a year in foster care. There are explanations for this unexpected finding.

First, youth who enter foster care with higher maltreatment may get more services from DCFS due to the assumption that they are in greater need of support and services. In fact, youth with greater severity of maltreatment are more likely to exhibit greater psychosocial problems (e.g., Briere & Elliott, 2003; Manly, Cicchetti, & Barnett, 1994; Wind & Silvern, 1994). The literature on education suggests that children with greater needs receive more services or support at school compared to those with fewer needs through policies, such as Individuals with Disabilities Education Act (IDEA) which mandates the provision of a free and appropriate public school education to children with disabilities that affect academic performance (see Alkahtani, 2016; Buell, Hallam, Gamel-Mccormick, & Scheer, 1999; Canter, 2004). Other policies, including Section 504 of the Rehabilitation Act and the Family Education Rights and Privacy Act of 1974, also allow proper special education provision for children with special needs. In fact, Wei and colleagues (2014) found that the severity of disability was associated with the rates of special education services received, such that students with greater impairment in communication skills had higher odds of receiving educational services. Similarly, the current child welfare delivery system emphasizes provision of services to youth who exhibit more serious problems, and less on preventive services for youth entering the child welfare system (Grogan-Kaylor et al., 2008). Although it is unclear which services were provided to foster care youth and caregivers in the present study, youth with greater distress or behavioral problems may have received additional DCFS services to assist with their adjustment.

Another explanation for the unexpected finding is that foster parents may have underreported youth's social-behavioral problems due to their concerns about losing their foster children to another placement. Although foster parents are aware that their relationships with foster youth may be temporary, they are still likely to experience significant grief when the child moves to another placement (Edelstein, Burge, & Waterman, 2001). They may consider themselves as the child's functional and psychological parents as they invest in the child in various ways, and consequently are concerned about the potential removal of the child from their care. Thus, their attitude toward their foster youth (e.g., fear of losing them or bias toward improvement) may affect their reporting of youth's behaviors. In fact, a study found that greater levels of behavioral problems (CBCL) reported by caregivers predicted placement changes among youth in the child welfare system (Aarons, James, Monn, et al., 2010). Previous studies also found that the length of the placement and the age of the child when first placed with the foster parent have been found to be some of the critical factors that affect foster parents' attitude toward losing their foster child (Edelstein, Burge, & Waterman, 2001; Fahlberg, 2012). The present study did not examine these contributing factors, but it will be important for future research to further examine the context of foster parents' underreporting youth's psychosocial problems. It is also important to note that foster parents are more likely to underreport youth's internalizing symptoms than externalizing symptoms because externalizing behaviors, such as aggression and delinquency can be observed more directly whereas internalizing behaviors, such as anxiety and depression, are less observable in nature (De Los Reyes et al., 2015; Ederer, 2004; Grills & Ollendick, 2002). In fact, disagreement between self and parental report of youth's internalizing behaviors is common, especially among adolescents (Achenbach, 2006; De Los

Reyes, 2013). Thus, when studying internalizing behaviors, future studies could also include foster youth's self-reporting of their internalizing behaviors.

Lastly, another explanation for greater severity of maltreatment predicting fewer internalizing behaviors in the present study is that the physical removal from immediate harm, for youth previously exposed to severe abuse or neglect, helps improve their internalizing behaviors over time. Maltreatment is a significant risk factor (e.g., see Arata et al., 2005; Guibord et al., 2011; Orton et al., 2009), and the child welfare system is commissioned to remove these abused and neglected children from their homes to integrate them into long-term stable caregiving arrangements. It is designed to be a protective intervention that ameliorates adverse family and environmental conditions that affect child development (Lawrence, Carlson, & Egeland, 2006; Mennen & O'Keefe, 2005; Doyle, 2007). In fact, research has demonstrated that foster youth who are safe from abuse or neglect, stay connected to siblings, have placement stability, have access to continuing support from caring adults (e.g., relatives, community support), and receive effective parenting are able to stay resilient despite the experience of maltreatment and entry into foster care (Barber & Delfabbro, 2003; Herrick & Piccus, 2005; Leathers, 2005; Rubin et al., 2004; Rubin et al., 2007; Taussig, 2002). These protective factors can increase foster youth's sense of security, self-esteem, and competence, which in turn, will promote their long-term resilience (Schofield & Beek, 2005). Foster care youth are embedded in several layers of complex systems, and future research should closely examine processes involved in youth's positive adjustment in foster care. While there is a vast body of research on the negative impact of maltreatment and foster care involvement on child development, it will be

important to understand the influences of various ecological factors that affect foster youth's long-term adjustment.

In contrast to the longitudinal effect of maltreatment reported by foster parents, the cross-sectional associations between the severity of child maltreatment and psychosocial problems reported by foster parents and DCFS workers were in a positive direction, but were not significant in its effect. The positive directions of these associations were consistent with the literature on the negative impact of child maltreatment on foster youth's psychosocial functioning, even though the effects were not significant. With a greater sample size, future studies should examine potential contributing factors to the change of direction between maltreatment and adjustment problems, reported by different informants.

Direct Links between Child Maltreatment and Foster Youth's Self-Concept

The present study tested the influence of maltreatment on foster youth's self-concept. As expected in light of the negative association between child maltreatment and maltreated youth's self-system (e.g., see Arata et al., 2005; see Cicchetti, 2016; Toth, Manly, & Cicchetti, 1992; Kim & Cicchetti, 2004, 2006), greater severity of child maltreatment at Time 1 predicted lower global self-worth at Time 2. This is in line with the notion that the experience of maltreatment causes disturbance in the sense of self (Cole & Putnam 1992; Toth et al. 1997; see Ji et al., 2010) as the experience of abuse or neglect by parents or caregivers can lead to feelings of worthlessness or inadequacy (Arata et al., 2005; Kim & Cicchetti, 2006). While maltreatment negatively predicted global self-worth, it was not associated with foster youth's self-perception of competence in specific domains, including behavioral conduct and social competence.

The finding that the experience of maltreatment has a unique, independent association with global self-worth, but not self-concept in specific domains can be explained by different conceptualizations of global self-worth/esteem and domain-specific self-concept. Global self-worth or esteem refers to an overall affective view of oneself while domain-specific self-concept refers to a cognitive view of the self in unique areas (Brown & Marshall, 2006; Craven & Marsh, 2008; Marsh & Craven, 2006; Pelham & Swann, 1989; Robins, Hendin, & Trzesniewski, 2001; Rosenberg et al., 1995; Swann et al., 2007). More specifically, global self-esteem emphasizes emotional processes, such as a feeling of affection for oneself or a sense of self-worth (Brown & Marshall, 2001, 2002). Self-concept in specific domains, on the other hand, refers to the way people evaluate their specific abilities, attributes (e.g. physical), and personality characteristics (Marsh, 1993; Shavelson, Hubner, & Stanton, 1976). From this perspective, people can have different levels of self-evaluations in different areas. For example, one may have high social self-concept with low behavioral self-concept, or high scholastic self-concept with low athletic self-concept (Brown & Marshall, 2006). Specific-domain self-concept and global self-worth do not always correlate with each other as they capture different aspects of self-perception (affective vs. cognitive view of oneself; Rosenberg et al., 1995).

It is also possible that maltreatment did not predict youth's self-evaluations of their behavioral conduct and social skills in peer context due to the nature of the stressful events they experience. Maltreatment causes a significant familial crisis and disruption in family's organization, such as separation from the parents and foster care placement (Tremblay, Hebert, & Piche, 1999), and it does not seem to be directly related to youth's self-perceptions of competence in specific domains of skills. On the other hand, the findings support the notion that

the experience of maltreatment affects youth's overall self-perception. Self-esteem is vulnerable to social feedback, as children's self-image may be affected by what their significant others think about them (e.g., Kools, 1997). The development of an integrated sense of self typically occurs during early childhood in context of developing relationships (Cicchetti, 2016), and children whose needs are met in context of predictable and trustworthy interactions with caregivers are able to develop models of the self as competent, lovable, and effective (Bolger et al., 1998; Bowlby, 1982). These children are able to develop a sense of security, knowing that they have a secure base, such as their parents. Maltreated children, on the other hand, are often not able to experience secure attachment because maltreating parents are inappropriately responsive or unresponsive to their needs (Bolger et al., 1998; Crittenden & Ainsworth, 1989). Children whose caregivers are neglectful or excessively harsh with physical punishments may be more likely to view themselves as unworthy, ineffective, inadequate, or worthless (Arata et al., 2005; Kim & Cicchetti, 2006). Moreover, foster youth's overall affective view of themselves may be related to the experience of maltreatment, which can induce heightened or intense emotions in children (e.g., shame, confusion, grief, pain, anger), as they lack cognitive skills to process these overwhelming feelings from severe maltreatment (e.g., Feiring, 2005; Kolk & Fisler, 1994; Morrow & Smith, 1995). The experience of maltreatment, even below the threshold of reportable childhood maltreatment, can also lead to significant changes in the brain's emotion-regulating circuitry by impairing the regulation of emotion and amplifying fear responses (e.g., Herringa et al., 2013; Pollack, 2008; Puetz & McCrory, 2015), further serving as a risk factor for poor global self-worth. In fact, the negative effects of maltreatment on general self-perceptions have been well documented. Prior studies have shown that physically abused, sexually abused, and

neglected children show elevated levels of shame or perceiving self as defective (e.g., Bennett et al., 2010; Cicchetti, 2016) and less positive self-perception (Okun, Parker, & Levendosky, 1994; Toth, Manly, & Cicchetti, 1992). Given that foster care youth experience a degree of maltreatment that is severe enough to be removed from caregivers, it is important that future studies continue to examine factors that promote different areas of youth's self-perceptions, including global self-worth as well as domain-specific self-concept, in context of foster care placement.

Direct Effect of Foster Youth's Self-concept on Psychosocial Outcomes

The present study examined the effect of domain-specific self-concept (i.e., behavioral and social domains) and global self-worth on foster youth's psychosocial outcomes, rated by foster parents and DCFS workers. Consistent with the specificity-matching framework, foster youth's self-concept in the behavioral domain negatively predicted foster parents' reporting of their delinquency, aggression, and withdrawn/depressed behaviors. Foster youth's social self-concept, on the other hand, did not predict their long-term social-behavioral problems. Global self-worth was also not associated with the psychosocial outcomes.

The present finding on foster youth's behavioral self-concept is consistent with Taussig's (2002) longitudinal study which showed that lower self-concept in the domain of behavioral conduct predicted greater involvement in risk behaviors among foster care youth. While some previous studies have found inconsistent associations between youth's self-concept and externalizing behaviors (e.g., Milan & Pinderhughes, 2000; Patterson et al., 1990), the present study's finding supports the notion that foster care youth are at higher risk for behavioral maladjustment if they hold inadequate or incompetent views of their ability to regulate their

behavior. In contrast to the specificity-matching framework, the present study did not find that foster care youth's self-concept in the social domain predicted their social problems, as rated by foster parents. This finding did not support previous studies, which have suggested that maltreated children's negative self-representation in the context of relationships (e.g., Kim & Cicchetti, 2003; Dekovic & Meesus, 1997) can lead them to withdraw from peer interactions or use aggression toward peers, resulting in increased peer rejection or problems (Cicchetti, 2016; Kim & Cicchetti, 2003). Maltreated children can view themselves as unlovable or unworthy, and perceive relationships to involve victimization or coercion as a result of the experience of negative relational patterns associated with maltreatment (Cicchetti 2016). The findings in the present study may be explained by a possible mismatch between the constructs measured in the study. Specifically, the measure used for social self-concept assessed youth's social competence in context of peer relationships (e.g., making friends, being liked by classmates, peer acceptance, popularity among peers), while foster parents' reporting of youth's social problems were not limited to peer contexts (e.g., being dependent on adults, lonely, easily jealous, clumsy, perceiving others to be out to get them). It will be helpful for future studies to use measures that assess the same constructs and compare foster youth's social competence in context of peer and adult relationships. Since children's self-esteem is susceptible to feedback they receive from their caregivers (e.g., Kools, 1997), it will also be important for future studies to also examine the type and extent of domain-specific feedback foster parents offer to youth when studying youth's self-evaluations or perceptions.

Moreover, the current study did not find significant associations between foster youth's global self-worth and their psychosocial outcomes. However, the literature has been inconsistent

about the longitudinal effect of self-esteem on psychosocial behaviors. The discrepant findings between the effect of foster youth's behavioral self-concept and global self-worth on the outcomes can be explained by the aforementioned conceptualizations of domain-specific and global self-worth. As stated previously, global self-worth refers to one's overall feelings about the self, and is conceptually unidimensional and explicitly not domain-specific. Therefore, this subjective self-perception is not necessarily linked to specific behaviors (Robins, Hendin, & Trzesniewski, 2001; Rosenberg et al., 1995). Global self-esteem is most relevant to overall positive versus negative feelings about the self while domain-specific self-concept is most relevant to specific behaviors (e.g., Brown & Marshall, 2006; Rosenberg et al., 1995).

Of note, the present study found that race/ethnicity was strongly correlated with the outcomes, such that foster parents rated African-American youth as having more externalizing behaviors, such as aggression and delinquency, as well as social problems, compared to youth of other races or ethnicities. Studies on racial/ethnic differences in the prevalence of problematic behaviors among foster youth have been inconsistent (e.g., Taussig, 2002), but studies in the general population have found a higher prevalence of psychopathology among ethnic minority youth (e.g., McLaughlin et al., 2007, Garrison et al., 1990, Lansford et al., 2007). The present study's finding may be due to foster parents' biases against African-American youth in reporting their psychosocial problems. It may also be due to African-American youth's exposure to additional systemic challenges. Lansford and colleagues' study (2002) on maltreated youth suggested that African American youth are more likely than European American youth to experience other problems, such as racism, community violence, and residential instability (Coard, Wallace, Stevenson, & Brotman, 2004). The negative impact of racism on child

development are well documented (e.g., Garcia et al., 1996). It may be that these multiple risk factors, rather than race alone, exacerbate the adverse effects of experiencing maltreatment and entering the child welfare system. Lansford et al. (2002) also suggest that maltreated African-American youth may be offered fewer supports or services for treating the effects of maltreatment compared to European-American youth. Overall, there is a need for greater attention to mechanisms through which race may operate in context of maltreatment and foster care placement. More importantly, it would be important for future research to examine psychological and social context variables that may help explain racial/ethnic differences found in the maltreatment or foster care literature.

Indirect Effect of Foster Youth's Self-concept

The results of Hypothesis 9 found that foster care youth's global or domain-specific self-concept did not mediate the pathway between the severity of child maltreatment and long-term psychosocial outcomes. This is inconsistent with previous studies, which found that as exposure to ecological risks or maltreatment increased, youth had less positive self-evaluations, which then predicted greater internalizing and externalizing behavior problems (e.g., DuBois, Felner, Sherman, & Bull, 1994; DuBois & Tevendale, 1999; Kim & Cicchetti, 2003, 2004; Prelow et al., 2006). The current study's finding may be explained by the potential involvement of other mediators or contributing factors that were not examined in the study. In addition to negative self-perceptions, stressful events, such as victimization exposure, can result in a decline in interpersonal support as well as a loss of trust and affection. These negative changes in the quality of one's social support network can, in turn, contribute to adjustment problems (Turner,

Finkelhor, & Ormrod, 2010). There may be multiple simultaneous pathways by which stressful events contribute to psychosocial problems.

Prior research suggests that social support is an important mediator of the effects of general life stress (e.g., Cohen, Gottlieb, & Underwood, 2000; see Runtz & Schallow, 1997). Research has repeatedly found a pattern where childhood maltreatment has a negative impact on perceptions of social support from family and friends, which in turn lead to negative mental health outcomes or problems with developmental achievement (first six of Erickson's eight psychosocial stages: trust, autonomy, initiative, industry, identity, intimacy) during adulthood (e.g., Runts & Schallow, 1997; Pepin & Banyard, 2006; Sperry & Widom, 2013). Studies have also found that supportive, warm, and comforting relationships with significant adult figures have a positive impact on maltreated children's self-perceptions and subsequent adjustment. For example, Tremblay, Hébert, & Piché's study (1999) of children referred to Child Protection Clinic due to alleged sexual abuse found that the more children feel supported by friends and parents, the higher they perceive their global self-worth and exhibit fewer behavior problems. According to the social pathway model on the relationship between the child abuse and long-term health problems (Kendall-Tackett, 2002; Springer, 2009), children with maltreatment often fail to develop positive or supportive relationships, and the absence of positive relationships can impair their ability to seek the help they need and take care of themselves effectively. Positive relationships with adults and peers can help maltreated children develop the skills needed for mental and physical well-being. In fact, research suggests that perceived support or subjective feelings towards the supportiveness of relationships during times of need is particularly important for resilience and coping. Individuals who feel there are enough resources and support

available to them during times of stress are more likely to believe they are able to cope with adverse circumstances (Lagdon et al., 2018; Haber, Cohen, Lucas, & Baltes, 2007).

Moreover, research suggests that coping strategies can also be mediators of adjustment following maltreatment or traumatic events (e.g., Bal, Van Oost, Bourdeauhuij, & Crombez, 2003; Merrill et al., 2001; Runtz & Schallow, 1997; Spaccarelli, 1994; Tremblay, Hebert, & Piche, 1999; Whiffen & MacIntosh, 2005). Studies of adolescent coping responses have found approach coping (i.e., cognitive and emotional activity oriented towards the stressor) to be predictive of fewer externalizing and internalizing problems and better functioning and adaptation while the use of avoidant coping strategies (i.e., cognitive and emotional activity oriented away from the stressor) has been associated with an increased risk of long-term negative outcomes (see Legault et al., 2006). The coping strategy that involves directly expressing one's feelings about a traumatic event or the use of cognitive and expressive means of coping have been found to be associated with positive psychological functioning among young adults with childhood maltreatment (Runtz & Schallow, 1997). On the other hand, self-defeating strategies, such as self-destructive behaviors (e.g., using substance, self-blame) and avoidant behaviors (e.g., trying to forget, ignoring feelings) increase risk of psychological symptoms among adolescent victims and adult survivors of childhood sex abuse (e.g., Johnson & Kenkel, 1991; Leitenberg, Greenwald, & Cado, 1992). A study of adolescent females with child sexual abuse showed that more severe sexual abuse was associated with greater use of avoidant and self-destructive coping strategies, which in turn were associated with more trauma symptoms (Merrill et al., 2001). Another study on adolescents demonstrated that the use of avoidant coping

strategies to cope with traumatic events was associated with anger, sexual problems, dissociative symptoms, and depression among adolescents (Bal et al., 2003).

The present study suggests that the pathway between child maltreatment and long-term psychosocial functioning is complex and cannot explained by the effect of foster youth's self-concept alone. Other mediators, such as youth's perceptions of social support and coping strategies, may help mediate the longitudinal association between maltreatment and outcomes. In addition, the majority of previous research on the mediating role of self-perceptions has been done on the general population, including at-risk urban and maltreated youth, whereas the present study focused on the foster care population. It is possible that foster care youth represents a uniquely vulnerable population given the experience of maltreatment severe enough to be removed from home as well as the exposure to additional child welfare system-related stressors (e.g., Turner, Finkelhor, & Ormrod, 2010). Due to the complex and uniquely vulnerable nature of the foster care population, more studies are needed to explain the mechanism by which self-perceptions function in context of maltreatment and foster care placement.

Interactive Effect of Foster Youth's Self-concept

Consistent with the notion that children's high self-perceptions of their competence may buffer against the adverse effects of child maltreatment among youth in the general population (e.g., Baumeister, Campbell, Krueger, & Vohs, 2003; see Trzesniewski et al., 2006), the present study found that foster care youth with higher self-concept in the behavioral conduct domain exhibited fewer anxious/depressed symptoms at a higher level of maltreatment than at a lower level of maltreatment. Low behavioral self-concept, on the other hand, did not buffer the deleterious effects of maltreatment on anxious/depressed symptoms. In other words, this study

has found behavioral self-concept to play a protective-enhancing role in the link between child maltreatment and longitudinal behavioral adjustment. In the conceptual scheme of Luthar, Cicchetti, and Becker (2000), a protective-enhancing factor has a moderating effect that enhances positive outcomes with increased risk. Protective factors are defined as having a direct ameliorating effect where the buffering effect functions operates at both high- and low-risk conditions.

The protective-enhancing effect of self-concept found in the present study is consistent with Kim and Cicchetti's (2003) findings where maltreated children (age 5 to under 8) with higher levels of self-perceived social competence in conflictual peer interactions showed significantly fewer internalizing behaviors. Of note, younger maltreated children (under age 8) showed significantly higher levels of social self-efficacy compared to non-maltreated children. For older maltreated children (between the ages of 8 and 11.56), higher levels of perceived social self-efficacy were associated with fewer internalizing behaviors regardless of maltreatment status. This study suggested that younger maltreated children in the general population demonstrated inflated levels of self-efficacy, and that this overestimation of social self-efficacy was protective-enhancing against internalizing behaviors, such that those who feel greater self-efficacy for their prosocial skills in conflictual peer relationships are less likely to experience internalizing symptoms. Moreover, this study demonstrated that positive self-perceptions of competence could promote healthy development, and ameliorate the manifestation of internalizing symptoms, regardless of the accuracy of their self-perceptions (e.g., Kim & Cicchetti, 2003, 2004; Patterson et al., 1990).

Kim and Cicchetti (2003) proposed that younger maltreated children in the general population may be likely to overestimate their self-perceived social skills due to defensive processing (e.g. overrate their ability to achieve their persuasive goal), impaired socio-emotional development as a result of insecure attachments (e.g., deny negative characteristics as adaptive defense mechanisms), or deficits in social information processing, (e.g., selectively attend and misinterpret social cues in interactions). It is possible that foster care youth may report high behavioral self-concept as part of using their adaptive defense mechanisms. It is also possible that foster care youth rate their behavioral self-concept highly due to their sense of resilience, fear of placement disruptions as a result of behavioral problems (e.g., awareness of the need to behave well for placement continuity), or engagement in effective DCFS services. Nonetheless, the present finding suggests that high self-concept in the behavioral conduct domain is protective against anxious/depressed symptoms in context of high level of maltreatment. This interaction may help explain the unexpected finding on the negative relationship between maltreatment and the internalizing symptoms, where high self-perception of behavioral conduct predicts fewer internalizing symptoms and greater resilience over time. In order to better understand the nature of the longitudinal effect of maltreatment as well as the protective-enhancing effect of behavioral self-concept on anxious/depressed symptoms, future studies should apply an ecological perspective to understand the impact of variables from different levels of systems (Bronfenbrenner, 1977, 1994; Hong et al., 2011). Considering how foster youth continue to be exposed to accumulative as well as additional risk factors (e.g., separation from biological parents, loss of significant attachments, placement disruptions, maltreatment; e.g., Holtan et al., 2005; Stanley et al., 2005), more research on cumulative risks and associated outcomes, as well

as resilience mechanisms is needed for effective and informed child welfare policies (Gleeson et al., 2011; Wildeman & Emanuel, 2014).

Summary and Conclusions

The present study found that greater severity of maltreatment at entry into foster care predicted fewer internalizing symptoms, particularly anxious/depressed symptoms, after a year of foster care placement possibly due to the benefit of removal from immediate harm, participation in DCFS services, and foster parents' underreporting children's psychosocial problems to prevent any changes in DCFS involvement (e.g., placement disruptions). Of note, the protective-enhancing effect of foster youth's behavioral self-concept may help explain the negative relation between maltreatment and internalizing symptoms, such that higher behavioral self-concept was found to buffer the adverse effects of maltreatment at a higher severity of maltreatment. Maltreatment was found to have a negative influence on youth's global self-worth or affective view of oneself, but not domain-specific self-concept or cognitive self-evaluations in specific domains. Global self-worth did not predict psychosocial problems, but behavioral self-concept predicted youth's externalizing and internalizing behavior problems. This finding is consistent with the specificity matching principle, which proposes that the domain of self-concept matches the behavior being assessed. Lastly, foster youth's self-concept did not mediate the association between maltreatment upon entry into foster care and psychosocial functioning after a year in foster care. This may be due to other possible mediators that were not assessed in the current study. For example, stressful events not only affect individuals' self-perceptions, but also their social support network, which, in turn, can affect their psychosocial adjustment.

Taken together, the results of the current study highlight the potential benefits of youth's self-concept in buffering the adverse effects of maltreatment on long-term outcomes. The present study findings also note the importance of assessing both global and domain-specific self-concept to find effective ways to promote foster youth's resilience. In addition, it is important to gather data from multiple informants, including DCFS caseworkers, foster parents, and youth, to determine youth's well-being and needs, instead of basing decisions solely on one informant. Moreover, the present study highlights the importance of specifying direct and indirect processes that contribute to resilience. Most importantly, the current study highlights the need to recognize foster care youth as a uniquely vulnerable population exposed to risk factors on different ecological levels (e.g., individual, family of origin, foster care placement, DCFS services, policies for contact with family-of-origin) when studying the pathway between maltreatment and psychosocial outcomes. Moreover, the present study finding confirms that the mediational and moderational processes are not mutually exclusive (Tram & Cole, 2000), and that both are useful for examining underlying processes of how self-concept affects psychosocial functioning among foster youth.

While the present study has several strengths, including its longitudinal design and inclusion of multiple informants, the present study is not without limitations. Mainly, the current study was not able to assess the effects of environmental factors, such as foster youth and caregivers' participation in types of DCFS services, placement type and history, placement disruptions, length of placement with the foster parent who completed the measures, perception of availability of social support, and youth's perception of support received from peers and adults. The study was also not able to assess foster youth's and caregiver's satisfaction with and

perception of support from caseworkers. Given that foster youth are embedded in various layers of the complex child welfare system, it will be important for future studies to be mindful of these ecological factors as they examine processes involved in youth's resilience.

Future work should continue to consider foster youth's continuing exposure to cumulative risk factors (e.g., separation from biological parents, loss of significant attachments, placement disruptions, maltreatment; e.g., Holtan et al., 2005; Stanley et al., 2005) and better understand moderating variables and mediational processes that buffer the deleterious effects of maltreatment. Expanding upon the current study's focus, future studies should continue to examine factors that affect long-term adjustment problems and different domains of youth's self-concept. Given that resilience is not a fixed attribute but a characteristic that can change over time (Drapeau et al., 2007), the provision of assessments and effective interventions that nurture positive self-concept in a continual manner among foster youth is crucial. According to Drapeau et al. (2007), the processes that contribute to resilience can be illustrated by the butterfly effect, which proposes that a small variation in one element can amplify and set off significant upheavals over time. Services or supports that may initially appear trivial can strengthen their resilience and positively shape their self-concept, resulting in a meaningful, positive impact on their long-term adjustment. Considering this illustration, it is important for the child welfare system to examine various mechanisms, involving personal and environmental factors, that contribute to positive self-concept as well as overall well-being.

Moreover, foster parents are in a unique position to improve the self-esteem of children in their care (Luke & Coyne, 2008). Foster parents are able to help raise children's self-esteem by providing general support and healthy attachments (e.g., offering physical and verbal expressions

of their love and affection, offering love and support despite children's early violent behaviors), as well as domain-specific support (e.g., helping with math homework or football training). If foster parents consistently offer positive messages of support and love, then youth will start to internalize a more positive self-concept. This support, in turn, may help the child revise their internal working model of identity in a more positive light, seeing themselves as someone who is worthy of love (Luke & Coyne 2008). Foster parents can lay a secure foundation to help children develop a positive self-esteem that will last (Denuwelaere & Bracke, 2007; Ackerman & dozier, 2005; Luke & Coyne, 2008). Further research is needed to examine how foster parents' feedback or support affect those currently living in foster families where the impact of foster parents' behaviors may be more immediate (Luke & Coyne, 2008). Overall, foster care youth represents a uniquely vulnerable population who continues to be exposed to various stressors prior to and during foster care placement. More research on the complex direct and indirect processes involved in promoting resilience will help uncover more opportunities to improve their psychosocial functioning.

APPENDIX A

MEASURES

Self-Perception Profile for Children (SPPC)

What I Am Like

Name_____ Age____ Birthday _____ ☐ Boy ☐ Girl
Month Day (check one)

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
			Sample Sentence				
a.	☐	☐	Some kids would rather play outdoors in their spare time	**BUT**	Other kids would rather watch T.V.	☐	☐
1.	☐	☐	Some kids feel that they are very good at their school work	**BUT**	Other kids worry about whether they can do the school work assigned to them	☐	☐
2.	☐	☐	Some kids find it hard to make friends	**BUT**	Other kids find it pretty easy to make friends	☐	☐
3.	☐	☐	Some kids do very well at all kinds of sports	**BUT**	Other kids don't feel that they are very good when it comes to sports	☐	☐
4.	☐	☐	Some kids are happy with the way they look	**BUT**	Other kids are *not* happy with the way they look	☐	☐
5.	☐	☐	Some kids often do not like the way they behave	**BUT**	Other kids usually like the way they behave	☐	☐
6.	☐	☐	Some kids are often unhappy with themselves	**BUT**	Other kids are pretty pleased with themselves	☐	☐
7.	☐	☐	Some kids feel like they are just as smart as other kids their age	**BUT**	Other kids aren't so sure and wonder if they are as smart	☐	☐
8.	☐	☐	Some kids know how to make classmates like them	**BUT**	Other kids don't know how to make classmates like them	☐	☐
9.	☐	☐	Some kids wish they could be a lot better at sports	**BUT**	Other kids feel they are good enough at sports	☐	☐
10.	☐	☐	Some kids are happy with their height and weight	**BUT**	Other kids wish their height or weight were different	☐	☐
11.	☐	☐	Some kids usually do the right thing	**BUT**	Other kids often don't do the right thing	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
12.	☐	☐	Some kids don't like the way they are leading their life	BUT	Other kids *do* like the way they are leading their life	☐	☐
13.	☐	☐	Some kids are pretty slow in finishing their school work	BUT	Other kids can do their school work quickly	☐	☐
14.	☐	☐	Some kids don't have the social skills to make friends	BUT	Other kids do have the social skills to make friends	☐	☐
15.	☐	☐	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might not do well at sports they haven't ever tried	☐	☐
16.	☐	☐	Some kids wish their body was different	BUT	Other kids like their body the way it is	☐	☐
17.	☐	☐	Some kids usually act the way they know they are supposed to	BUT	Other kids often don't act the way they are supposed to	☐	☐
18.	☐	☐	Some kids are happy with themselves as a person	BUT	Other kids are often not happy with themselves	☐	☐
19.	☐	☐	Some kids often forget what they learn	BUT	Other kids can remember things easily	☐	☐
20.	☐	☐	Some kids understand how to get peers to accept them	BUT	Other kids don't understand how to get peers to accept them	☐	☐
21.	☐	☐	Some kids feel that they are better than others their age at sports	BUT	Other kids don't feel they can play as well	☐	☐
22.	☐	☐	Some kids wish their physical appearance (how they look) was different	BUT	Other kids like their physical appearance the way it is	☐	☐
23.	☐	☐	Some kids usually get in trouble because of things they do	BUT	Other kids usually don't do things that get them in trouble	☐	☐
24.	☐	☐	Some kids like the kind of person they are	BUT	Other kids often wish they were someone else	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
25.	☐	☐	Some kids do very well at their classwork	**BUT**	Other kids don't do very well at their classwork	☐	☐
26.	☐	☐	Some kids wish they knew how to make more friends	**BUT**	Other kids know how to make as many friends as they want	☐	☐
27.	☐	☐	In games and sports some kids usually watch instead of play	**BUT**	Other kids usually play rather than just watch	☐	☐
28.	☐	☐	Some kids wish something about their face or hair looked different	**BUT**	Other kids like their face and hair the way they are	☐	☐
29.	☐	☐	Some kids do things they know they shouldn't do	**BUT**	Other kids hardly ever do things they know they shouldn't do	☐	☐
30.	☐	☐	Some kids are very happy being the way they are	**BUT**	Other kids wish they were different	☐	☐
31.	☐	☐	Some kids have trouble figuring out the answers in school	**BUT**	Other kids almost always can figure out the answers	☐	☐
32.	☐	☐	Some kids know how to become popular	**BUT**	Other kids do not know how to become popular	☐	☐
33.	☐	☐	Some kids don't do well at new outdoor games	**BUT**	Other kids are good at new games right away	☐	☐
34.	☐	☐	Some kids think that they are good looking	**BUT**	Other kids think that they are not very good looking	☐	☐
35.	☐	☐	Some kids behave themselves very well	**BUT**	Other kids often find it hard to behave themselves	☐	☐
36.	☐	☐	Some kids are not very happy with the way they do a lot of things	**BUT**	Other kids think the way they do things is fine	☐	☐

Child Behavior Checklist for Ages 6 to 18 (CBCL)

Below is a list of items that describe children and youths. For each item that describes your child ***now or within the past 6 months***, please circle the ***2*** if the item is ***very true or often true*** of your child. Circle the ***1*** if the item is ***somewhat or sometimes true*** of your child. If the item is ***not true*** of your child, circle the ***0***. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 1. Acts too young for his/her age
0 1 2 2. Drinks alcohol without parents' approval (describe):_____
_____
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. There is very little he/she enjoys
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys things belonging to his/her family or others
0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Breaks rules at home, school, or elsewhere
0 1 2 29. Fears certain animals, situations, or places, other than school (describe): _____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe): _____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe): ____
_____
_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy or lightheaded
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired without good reason
0 1 2 55. Overweight
56. Physical problems ***without known medical cause:***
0 1 2 a. Aches or pains (***not*** stomach or headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (***not*** if corrected by glasses) (describe): _____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____
_____
0 1 2 59. Plays with own sex parts in public
0 1 2 60. Plays with own sex parts too much
0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy
0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids
0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____
_____
0 1 2 67. Runs away from home
0 1 2 68. Screams a lot
0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe): _____
_____
_____
0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires
0 1 2 73. Sexual problems (describe): _____
_____
_____
0 1 2 74. Showing off or clowning
0 1 2 75. Too shy or timid
0 1 2 76. Sleeps less than most kids
0 1 2 77. Sleeps more than most kids during day and/or night (describe): _____
_____
0 1 2 78. Inattentive or easily distracted
0 1 2 79. Speech problem (describe): _____
_____
0 1 2 80. Stares blankly
0 1 2 81. Steals at home
0 1 2 82. Steals outside the home
0 1 2 83. Stores up too many things he/she doesn't need (describe): _____
_____
_____
0 1 2 84. Strange behavior (describe): _____
_____
0 1 2 85. Strange ideas (describe): _____
_____
0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot
0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe): _____
_____
0 1 2 93. Talks too much
0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much
0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking
0 1 2 99. Smokes, chews, or sniffs tobacco
0 1 2 100. Trouble sleeping (describe): _____
_____
0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy
0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud
0 1 2 105. Uses drugs for nonmedical purposes (***don't*** include alcohol or tobacco) (describe): _____
_____
_____
0 1 2 106. Vandalism
0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed
0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex
0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries
113. Please write in any problems your child has that were not listed above:
0 1 2 _____
0 1 2 _____
0 1 2 _____

Selection from The RKCP Kin Identification and Level of Engagement Form

Initial Case History

Evaluator Initials:_____ Youth Name:_____ DCFS ID:_____

Youth DOB:_____ Gender: M F Ethnic/racial background: □African/American □Latino or _____ □Caucasian □Asian-American □Multi-ethnic □Other:_____

Date of DCP disposition and removal: _____

Number of siblings:_____ Birth Order (e.g., 3/6)_____ Number of youth removed:_____

Date of Temporary Custody (TC) hearing:_____ Agency: _____

Re_TC? Yes No: Dates of Re-TC hearing:_____ Date of case assignment:_____
Reason for removal: □ Physical Abuse □Sexual Abuse □Neglect
Narrative (reason for removal):

_____

_____

Selection from the Child and Adolescent Needs and Strengths (CANS)

TRAUMA EXPERIENCES

These ratings are made based on lifetime exposure of trauma.

For Trauma Experiences, the following categories and action levels are used:
0 indicates a dimension where there is no evidence of any trauma of this type.
1 indicates a dimension where a single incident of trauma occurred or suspicion exists of trauma experiences.
2 indicates a dimension on which the child has experienced multiple traumas.
3 indicates a dimension which describes repeated and severe incidents of trauma with medical and physical consequence.

1. SEXUAL ABUSE
This rating describes child's experience of sexual abuse or the impact of the abuse on child's functioning.

0 There is no evidence that child has experienced sexual abuse.
1 Child has experienced single incident of sexual abuse with no penetration.
2 Child has experienced multiple incidents of sexual abuse without penetration or a single incident of penetration.
3 Child has experienced severe, chronic sexual abuse that could include penetration or associated physical injury.

2. PHYSICAL ABUSE
This rating describes the degree of severity of the child's physical abuse.

0 There is no evidence that child has experienced physical abuse.
1 There is a suspicion that child has experienced physical abuse but no confirming evidence. Spanking without physical harm or intention to commit harm also qualifies.
2 Child has experienced a moderate level of physical abuse and/or repeated forms of physical punishment (e.g. hitting, punching).
3 Child has experienced severe and repeated physical abuse with intent to do harm and that causes sufficient physical harm to necessitate hospital treatment.

TRAUMATIC STRESS SYMPTOMS

These ratings describe a range of reactions that children and adolescents may exhibit to any of the variety of traumatic experiences described above. Unlike the Trauma Experiences which are cumulative over the child's lifetime, these symptoms are rated based on how the child is doing over the past 30 days.

For Trauma Stress Symptoms, the following categories and action levels are used:
0 indicates a dimension where there is no evidence of any needs.
1 indicates a dimension that requires monitoring, watchful waiting, or preventive activities.
2 indicates a dimension that requires action to ensure that this identified need or risk behavior is addressed.
3 indicates a dimension that requires immediate or intensive action.

14. ADJUSTMENT TO TRAUMA

This item covers the youth's reaction to any of a variety of traumatic experiences -- such as emotional, physical, or sexual abuse, separation from family members, witnessing violence, or the victimization or murder of family members or close friends. This dimension covers both adjustment disorders and posttraumatic stress disorder from DSM-IV. This is a cause and effect item that describes how the child is adjusting to trauma experienced, in the present day.

0 Child has not experienced any significant trauma or has adjusted well to traumatic experiences.
1 Child has some mild adjustment problems to trauma. Child may have an adjustment disorder or other reaction that might ease with the passage of time. Or, child may be recovering from a more extreme reaction to a traumatic experience.
2 Child has marked adjustment problems associated with traumatic experiences. Child may have nightmares or other notable symptoms of adjustment difficulties.
3 Child has post-traumatic stress difficulties as a result of traumatic experience. Symptoms may include intrusive thoughts, hyper-vigilance, constant anxiety, and other common symptoms of Post Traumatic Stress Disorder (PTSD).

15. REEXPERIENCING

These symptoms consist of difficulties with intrusive memories or reminders of traumatic events, including nightmares, flashbacks, intense reliving of the events, and repetitive play with themes of specific traumatic experiences. These symptoms are part of the DSM-IV criteria for PTSD.

0 This rating is given to a child with no evidence of intrusive symptoms.
1 This rating is given to a child with some problems with intrusions, including occasional nightmares about traumatic events.
2 This rating is given to a child with moderate difficulties with intrusive symptoms. This child may have more recurrent frightening dreams with or without recognizable content or recurrent distressing thoughts, images, perceptions or memories of traumatic events. This child may exhibit trauma-specific reenactments through repetitive play with themes of trauma or intense physiological reactions at exposure to traumatic cues.
3 This rating is given to a child with severe intrusive symptoms. This child may exhibit trauma-specific reenactments that include sexually or physically traumatizing other children or sexual play with adults. This child may also exhibit persistent flashbacks, illusions or hallucinations that make it difficult for the child to function.

CHILD BEHAVIORAL/EMOTIONAL NEEDS

These ratings identify the behavioral health needs of the child or adolescent. While the CANS is not a diagnostic tool, it is designed to be consistent with diagnostic communication. In DSM-IV a diagnosis is defined by a set of symptoms that is associated with either dysfunction or distress. This definition is consistent with the ratings of '2' or '3' as defined by the action levels below:

For Behavioral/Emotional Needs, the following categories and symbols are used:
0 indicates a dimension where there is no evidence of any needs.
1 indicates a dimension that requires monitoring, watchful waiting, or preventive activities.
2 indicates a dimension that requires action to ensure that this identified need or risk behavior is addressed.
3 indicates a dimension that requires immediate or intensive action.

47. ATTENTION DEFICIT/IMPULSE CONTROL
Symptoms of Attention Deficit and Hyperactivity Disorder and Impulse Control Disorder would be rated here. Inattention/distractibility not related to opposition would also be rated here.

0 This rating is used to indicate a child with no evidence of attention/hyperactivity problems.
1 This rating is used to indicate a child with evidence of mild problems with attention/hyperactivity or impulse control problems. Child may have some difficulties staying on task for an age appropriate time period.
2 This rating is used to indicate a child with moderate symptoms of attention/hyperactivity or impulse control problems. A child who meets DSM-IV diagnostic criteria for ADHD would be rated here.
3 This rating is used to indicate a child with severe impairment of attention or dangerous impulse control problems. Frequent impulsive behavior is observed or noted that carries considerable safety risk (e.g. running into the street, dangerous driving or bike riding). A child with profound symptoms of ADHD would be rated here.

48. DEPRESSION
Symptoms included in this dimension are irritable or depressed mood, social withdrawal, and anxious mood; sleep disturbances, weight/eating disturbances, and loss of motivation. This dimension can be used to rate symptoms of the following psychiatric disorders as specified in DSM-IV: Depression (unipolar, dysthymia, NOS), Bipolar,

0 This rating is given to a child with no emotional problems. No evidence of depression.
1 This rating is given to a child with mild emotional problems. Brief duration of depression, irritability, or impairment of peer, family, or academic functioning that does not lead to gross avoidance behavior.

2 This rating is given to a child with a moderate level of emotional disturbance. Any diagnosis of depression would be coded here. This level is used to rate children who meet the criteria for an affective disorder listed above.

3 This rating is given to a child with a severe level of depression. This would include a child who stays at home or in bed all day due to depression or one whose emotional symptoms prevent any participation in school, friendship groups, or family life. Disabling forms of depressive diagnoses would be coded here. This level is used to indicate an extreme case of one of the disorders listed above.

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