

Parenting and Children's Adjustment in Families Living in Supportive Housing

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Dedication

This dissertation is dedicated to the Horbach women who taught me that family is more than blood and biology, strength is more than muscle and mass, and home is more than bricks and mortar.

Abstract

The purpose of this paper was to examine parenting and children's adjustment in the under-researched population of families living in supportive housing. The impact of specific dimensions of observed parenting on teacher-reported school-aged children's internalizing and externalizing symptoms were examined between two time points one year apart. Data from 77 families enrolled in the Early Risers: Healthy Families prevention study were used. Higher observed parenting dimensions of skill encouragement and positive involvement at baseline were associated with lower children's externalizing scores at one-year follow-up. However, higher observed problem solving was associated with higher children's internalizing scores at one-year follow-up. These findings offer evidence that positive parenting practices have the potential to impact externalizing symptoms over time, while the relationship between parenting and internalizing symptoms may be more complex.

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According to the National Coalition for the Homeless (2008), the prevalence of homelessness is difficult to estimate. The best approximation available is that 3.5 million people, of whom 39% are children, are likely to experience homelessness each year (National Law Center on Homelessness and Poverty, 2004). The impacts of homelessness on families and children are far-reaching, including increased risk for parental substance abuse and mental illness (Bassuk, Weinreb, Buckner, Browne, Bussuk, Dawson, et al., 1996; Buckner, Bassuk, Weinrub, & Brooks, 1999) as well as child hunger, school disruption, and exposure to violence and maltreatment (Anooshian 2005; Gewirtz & Edleson 2007). Homeless families are also more likely to experience family disruption. In the 2004 study by the U.S. Conference of Mayors, 56% of homeless families across 27 cities reported they had to break-up in order to enter emergency shelters (U.S. Conference of Mayors, 2004). Overall, children who have experienced homelessness are at a high risk for developing emotional distress, depressive symptoms, and behavioral problems (Buckner, et al., 1999; Schteingart, Molnar, Klien, Lowe, & Hartmann, 1995).

Homelessness and Children's Adjustment

As is common in child development research (Eamon, 2000), this study classifies children's psychopathology into externalizing and internalizing problems. Both internalizing and externalizing problems can lead to difficulties in school, peer relationships, and long-term mental health (Aunola & Nurmi, 2005; Roeser, Eccles, & Stobel, 1998). Homeless children are more likely to have higher scores and scores in the clinical range on both internalizing and externalizing behavior scales than the normative population (Buckner et al., 1999; Masten, Miliotis, Graham-Bermann, Ramirez, &

Neemann, 1993; Vostanis et al., 1998). Similarly, drawing from the same sample as the current study, both Gewirtz, DeGarmo, Plowman, August, and Realmuto (2009) and Lee, August, Gewirtz, Klimes-Dougan, Bloomquist, and Realmuto (2010) found that formerly homeless children had higher levels of maladjustment than the normative population, but the latter study found similar levels of adjustment problems as a matched community sample of children who had been identified as “early aggressive” by teachers. Gewirtz, Hart Shegos, and Medhanie (2008) examined psychosocial survey data from case managers and parents of children living in the same supportive housing sites that are included in the present study. They found that over 20% of the children were reported to seem depressed or anxious (Gewirtz et al., 2008).

Not only have homeless children been shown to have greater internalizing and externalizing behaviors than normative populations, but they have also been shown to fare worse than low-income housed children. When comparing homeless children to low-income housed children, Vostanis et al. (1998) found that there were significantly more homeless children with clinical-range externalizing and internalizing scores than low-income housed children. Vostanis et al. also determined that homeless children had significantly higher internalizing and externalizing scores than low-income housed children. Buckner et al. (1999) found that homeless children had significantly higher externalizing and internalizing scores than low-income housed children as well; however, homeless children were more likely than low-income housed children to score in the clinical range only in internalizing, not in externalizing behaviors. According to Buckner et al. (1999), children who experienced persistent homelessness tended to be above normative levels for internalizing problems, even after experiencing a decrease in

internalizing symptoms. In Buckner et al.'s (1999) study, homeless children had higher levels of externalizing symptoms than low-income housed children, though the difference was not significant, and both groups had significantly higher levels of externalizing symptoms than the general population.

Children who became rehoused after experiencing homelessness tended to show a decrease in disruptive behaviors (Karim, Tischler, Gregory, & Vostanis, 2006). However, even after becoming more stably housed, children still had mental health and behavioral problems (Karim et al., 2006). These findings are similar to those of Vostanis, Grattan, and Cumella (1998), in which rehoused children had significantly higher levels of mental health issues one year after a bout of homelessness than low-income, stably housed children. These two studies demonstrate that children remain vulnerable to risk factors even after some stabilization. This finding may be associated with the continued likelihood of future mobility for families who have already experienced homelessness (Karim et al., 2006). Although there are parallels between children living in poverty and children who are homeless in terms of risk for internalizing and externalizing problems, the context of homelessness provides unique stressors that require additional research to better understand.

Supportive Housing

In the face of the tremendous risks associated with parents and children being homeless, family supportive housing has recently emerged as a possible solution to family homelessness. Family supportive housing is subsidized housing that provides support services and longer-term care to homeless families. These support services are important because families who are simply rehoused tend to be poorly integrated into

their new communities (Vostanis et al., 1998) and experience sustained levels of mental health needs (Karim et al., 2006). Karim and colleagues (2006) attribute these persistent issues with the fact that, even when families are securely housed, the underlying issues that led to their homelessness are not resolved, which leads to continued detrimental effects on families. Gewirtz and Medhanie (2008) found in a descriptive study that families in supportive housing have high rates of exposure to multiple risk factors and challenges to children's adjustment, which echo the literature pertaining to homelessness and children's adjustment. In addition, families living in supportive housing are more likely to have long histories of homelessness, mental health, and substance use problems than low-income housed families (Bassuk et al., 2006). These risk factors make this population particularly important to study (Gewirtz et al., 2009). By specifically studying families living in supportive housing, promising practices and better understanding of psychosocial functioning can potentially be extended to other homeless or low-income housed families (Gewirtz et al., 2009).

Factors Influencing Homeless Children's Adjustment

Certain demographic or environmental characteristics have been shown to influence children's adjustment. Achenbach and colleagues (1991) found that, as children get older, internalizing problems tend to increase, while externalizing problems tend to decrease. These findings have been replicated over time (i.e., Gilliom & Shaw, 2004; Ollendick & King, 1994). Gilliom and Shaw (2004) hypothesized that, as children get older, they are better able to verbally process aggression and have been taught to self-regulate, which decreases externalizing, while at the same time they tend to remember and anticipate negative events, which increases internalizing. Specifically in the context

of homelessness, high levels of externalizing problems were reported for all ages of homeless children, but internalizing problems were greater among younger girls (Masten et al., 1993). School-age homeless girls had the most behavioral and emotional problems overall, while, in a comparable low-income housed sample, adolescent girls had the most problems. This is contrary to Buckner et al.'s (1999) study in which age was not associated with internalizing behaviors among homeless children, but it was associated with externalizing behaviors in which older children had more aggressive behaviors than younger children.

Time is another factor that has the potential to impact children's adjustment. Overall, studies tend to support the notion that internalizing and externalizing scores remain stable over time (Aunola & Nurmi, 2005; Denham, Workman, Cole, Weissbrod, Kendziora, & Zahn-Waxler, 2000; Jones & Forehand, 2003). This stability allows for changes in children's adjustment, but, overall, adjustment tends toward stability. Jones and Forehand (2003) found that there was a slight decrease in internalizing symptoms shortly after a significant life event, although symptoms did, eventually, become stable. When internalizing and externalizing problems have been shown to change, they tend to change together over time (Gilliom & Shaw, 2004; Keiley, Bates, Dodge, & Pettit, 2000). However, in a study of children staying in, and subsequently leaving, a domestic violence shelter, authors found that externalizing scores showed greater stability over a 16-month period than internalizing scores showed (Ware, Jouriles, Spiller, McDonald, Swank, & Norwood, 2001). This suggests that stressful life events, such as staying in a shelter or experiencing domestic violence, may result in a more rapid change in internalizing symptoms than in externalizing symptoms.

Parenting and Children's Adjustment

One specific factor that has been shown to strongly influence children's adjustment is parenting. Families are meant to provide a source of stability and cohesiveness for children (Bretherton, Walsh, Lependorf, & Georgeson, 1997; Cummings, Davies, & Campbell, 2000). Family support tends to be related to resilience in youth (Forehand, Wierson, Thomas, Aristeid, Kempton, & Neighbors, 1991; Garnezy, 1993; Masten & Coatsworth, 1998; Seifer, Sameroff, Baldwin, & Baldwin, 1992; Wyman, Cowen, Work, Hoyt-Myers, Magnus, Fagen, et al., 1999). Family support has been shown to be a protective factor in which the quality of family interactions lowers youth externalizing and, to a lesser extent, internalizing symptoms (Rietz et al., 2006). However, it has also been shown that the relationship between family support and internalizing symptoms was only apparent when risk was relatively low (Li, Nussbaum, & Richards, 2007).

Both parent-child relationships and specific parenting practices have been found to have robust associations with youth adjustment (Kazdin, 1987; Loeber & Stouthamer-Loeber, 1986). In particular, negative parenting behaviors, such as hostility, rejection, poor monitoring, and harsh discipline, have been linked to externalizing behaviors (see McKee et al., 2008, for a review; Patterson, 1982). Conversely, positive parenting behaviors, such as constructive discipline, warmth, support, and consistent behavior control, have the potential to lower the risk for mental health issues and increase socio-emotional adjustment in families experiencing stressful life events (Eamon, 2000; Stern, Smith, & Joon Jang, 1999). Patterson, Forgatch, and DeGarmo (in press) have found that

decreases in coercive parenting and increases in positive parenting can have separate, albeit related, influences on children's adjustment over time.

Forgatch, Patterson, and DeGarmo (2005) describe five core parenting skills that collectively embody the concept of positive parenting in the context of the Social Interaction Learning model described in the Theoretical Frameworks section of this paper. The core skills include: skill encouragement, or scaffolding and contingent positive reinforcement; effective discipline; monitoring; problem solving; and positive involvement, or warmth. It is important to examine these specific parenting behaviors in order to fully understand the impact of parenting on children's adjustment (Jones, Forehand, Rakow, Colletti, McKee, & Zalot, 2008). The role of specific, discrete parenting skills may be more proximal to child outcomes than general parenting, and, thus, they may have a more direct effect (Martinez & Forgatch, 2001). Examining the specificity of parenting is an emerging need within the parenting literature (McKee, Forehand, Rakow, Reeslund, Roland, Hardcastle, et al., 2008). McKee and colleagues (2008) contend that parenting is most effectively studied through the examination of each individual dimension of parenting, particularly when exploring the role of parenting in children's adjustment.

In their study of parenting and children's adjustment, McLeod, Weisz, and Wood (2007) conducted a meta-analysis of 45 studies to provide an estimate of the strength of the relationship between parenting and childhood internalizing. They found a medium effect and that parenting, whether negative or positive, explains about 8% of the variation in childhood internalizing. The authors assert that the internalizing symptoms are likely related to complex interactions between contextual influences, and negative parenting

could play a catalytic role among children vulnerable to distress for other reasons, such as adverse life events. An even more robust association between parenting and children's adjustment has been shown in children's externalizing behaviors, which were found to be associated with harsh and coercive parenting (Ackerman, Brown, & Izard, 2004; Keiley, Lofthouse, Bates, Dodge, & Pettit, 2003; Patterson, 1982). This link between parenting and externalizing problems has been shown when using both mother and teacher reports of children's externalizing behaviors (Dodge, Pettit, & Bates, 1994; Keiley, Howe, Dodge, Bates, & Pettit, 2001).

Parenting in the Context of Homelessness

Parenting itself is also impacted by homelessness. Because homeless families tend to have an accumulation of risk factors, parents are placed in a crucial role, as protectors of their children and conduits to mental health services. However, there have been just a small handful of studies to-date that assess parenting in the context of homelessness. Bassuk, Huntington, Amey, and Lampereur (2006) replicated the broader literature of parenting and children's adjustment, finding that, among homeless preschoolers, parenting practices were associated with adjustment. Also consistent with the broader literature in this area, Gewirtz and colleagues (2009) found that both parenting behaviors and parenting self-efficacy had strong effects on children's adjustment. Specifically, they found that more positive and less coercive parents had children who displayed fewer internalizing and externalizing behaviors. In this study, observed parenting was more proximal than parenting self-efficacy, and observed parenting mediated the relationship between parenting self-efficacy and child outcomes. These parenting behaviors have been found to be reduced in low-income parents in general (Conger, Conger, Elder,

Lorenz, Simons, & Whitbeck, 1992; Grant, O’Koon, Davis, Roache, Poindexter, Armstrong, et al., 2000; Trentacosta et al., 2008). Homeless mothers exhibiting even more challenging parenting behaviors leads to the conclusion that homeless children could be at a greater risk of negative outcomes as a result of parenting (Koblinsky, Morgan, & Anderson, 1997).

The literature on parenting in the context of homelessness is building upon a well-established body of literature pertaining to parenting in poverty. McLoyd’s (1990) largely cited literature review addresses how economic hardship independently, and cumulatively with other stressors, influences parenting behaviors. She describes the mechanisms by which poverty makes Black families more sensitive to additional stressors, especially those seen as outside of their control, by weakening their ability to cope. This process mirrors Conger and Elder’s (1994) Family Stress Model, which asserts that increased stress, and decreased coping ability, lowers the capacity of parents in poverty to be supportive, sensitive, and involved. Similar to McLoyd’s work, Trentacosta, Hyde, Shaw, Dishion, Gardner, and Wilson (2008) attributed the relationship between poverty and children’s adjustment to the challenges poverty poses to a parent’s capacity to provide positive, attentive care, nurturance, and involvement.

Although coercive parenting, especially in view of family stress, can be an additional risk to children’s mental health, positive parenting can function as a protective factor. Sameroff (2005) delineates positive parenting practices based on different circumstances. He argues that, in high stress situations, such as poverty or homelessness, parental control, monitoring, and warmth are protective. However, in less stressful situations, democratic decision-making and autonomy building may function as better

protective factors than control and monitoring. Grant and colleagues (2000) found that parent-child relationships have the potential to mediate the relationship between stressful life events and psychological symptoms. As a protective factor, parental discipline and monitoring, specifically, have been shown to mediate the relationship between poverty and externalizing behaviors in school-age children (Larzelere & Patterson, 1990).

Theoretical Framework

Human Ecology Theory (Bronfenbrenner, 1977, 1979) provides a theoretical framework for assessing the role of parenting in children's adjustment. The Human Ecology model is often depicted as a series of four concentric circles, each representing a different relative position to an individual. The center of this model is the micro level, which is the individual, followed by the meso or family level, the exo or community level, and macro or societal level. Bronfenbrenner's theory takes into account the impact of the larger community on the family and on the individual. It also includes the bi-directional influence from one level to another. The stress associated with living in supportive housing can be present in any level of the Human Ecology model, and the impacts can be found on both the individual and the family levels of the model. A child's adjustment is situated as a micro-level characteristic. However, parenting is situated at the meso-level. These levels of the theory help to describe processes occurring within individuals and families.

Stern et al. (1999) explain that, according to Human Ecology Theory, the same family processes that are associated with negative youth adjustment can be intensified by adversity the family is experiencing due to the complex intersections between ecological systems. Economic stress can disrupt parent-child relationships and parenting skills,

which can then impact the child's adjustment (McLeod & Shanahan, 1993; Stern et al., 1999). Belsky has also applied the Human Ecology Theory to stressful parenting (1984) and child maltreatment (1981). In both articles, he describes how outside societal factors, such as stress, poverty, and isolation, can impact both the parent and the child as individuals and can also influence the parent-child relationship. Belsky suggests that parents and children have individual characteristics and life experiences, the family unit has shared characteristics and experiences, and these are inherently connected.

Belsky (1984) further argues that, based on the ecological model, if one determinant is lacking, strengths in another can buffer the entire system from negative consequences. Belsky also believes that positive parenting is one of the most salient buffers for negative child outcomes. If a parent can offer positive parenting skills, this attribute can be more powerful than either contextual subsystems or child characteristics for child outcomes. For instance, parenting can serve as a buffer between external stressors associated with being formerly homeless and the child's internalizing and externalizing behaviors.

To operationalize this systemic model, Patterson's (1982) proposed Social Interaction Learning model (SIL) explains how adverse life events impact parenting behaviors and child outcomes. The Social Interaction Learning model emphasizes the importance of including context in examinations of parent-child relationships. Homelessness is an extreme context that has the potential to alter the relationship between parenting and child outcomes. Patterson asserted that coercion in families was particularly associated with children's behavior problems, and that stressful life events often lead to coercive parenting by increasing a family's dysfunctional patterns. Positive

parenting behaviors can help supplant coercive parenting to promote positive child outcomes (Gewirtz et al., 2009). Increases in positive parenting, and decreases in coercive parenting, are associated with more positive child adjustment outcomes. In both the Human Ecology Model and the Social Interaction Learning model, parenting functions as an important mechanism through which the context of former homelessness impacts children.

Research Problem

While there is a large body of literature about the influence of parenting on children's internalizing and externalizing behaviors, there is a significant lack of research specifically focusing on the context of current or former homelessness (Gewirtz et al., 2009). As Human Ecology Theory demonstrates, context can have an important impact on how relationships function within that context. Gewirtz and colleagues (2009) highlight the immense need for further knowledge of parenting in homeless families, specifically among those living in supportive housing. They describe how there is a limited number of studies focusing on parenting in homeless families, and only their study to date has examined parenting in families living in supportive housing. Homelessness inherently limits a parent's ability to parent effectively (Gewirtz et al., 2009), and even after being rehoused, formerly homeless families are still at great risk (Karim et al., 2006; Vostanis et al., 1998), which makes it an important population to continue to investigate. To help address these gaps in the existing literature, the current study will explore the association between observed parenting and children's adjustment over time in a formerly homeless sample. The following hypotheses will be examined to facilitate this exploration:

- 1) School-aged children's internalizing and externalizing problems will be moderately stable between baseline and one-year follow-up.
- 2) More effective observed parenting at baseline will be associated with lower school-aged children's internalizing and externalizing problems at one-year follow up.
- 3) More effective observed parenting at baseline will be associated with a differential decrease in internalizing and externalizing problems between baseline and one-year follow-up.

Methods

Procedures

Participants were drawn from the first wave of the Early Risers: Healthy Families prevention study (August, Gewirtz, & Realmuto, 2005). The prevention study consisted of 253 children and their families recruited through 16 supportive housing sites in the Minneapolis/Saint Paul metropolitan area. The sites were randomly assigned into either control (services as usual) or treatment (Early Risers) sites. In both types of sites, case managers identified families who had at least one child between the ages of 5 and 12 years. Control site families were recruited by project interns while treatment site families were recruited by paid family advocates; all families were assessed by trained undergraduate and graduate students.

Families were visited in their homes for data collection both at baseline and approximately one year later. At both time points, parents provided informed consent for both themselves and permission for their children to participate in the study. In the presence of their mothers, children then assented to participate in the study. Parents and children who chose to join the study were interviewed separately in as private of spaces

as the living arrangements allowed. Detailed questionnaires were administered verbally to parents and children in order to ensure participant understanding. Babysitting was provided by undergraduate interns for any siblings present in the home at the time of data collection, to prevent disruption and protect confidentiality. Once the questionnaires were completed, parent and child were reunited to complete observation tasks. These observation tasks included a series of games, puzzles, and problem solving discussions. The tasks were videotaped in order to be coded for parenting behaviors. Parents were given \$50 gift certificates, and children were given small toys for their participation in the assessments.

Measures

Child Adjustment

Child adjustment was measured using the teacher-report internalizing and externalizing scales of the Behavior Assessment System for Children, Second Edition (BASC-2; Reynolds & Kamphaus, 2004). Teachers were identified by parents as the children's primary teachers at the time of recruitment. Both the internalizing and externalizing scales derive t-scores, in which a descriptive label of very low (30 and below), low (31-40), average (41-59), at-risk (60-69), and clinically significant (70 and above) is given to a child's converted raw scores on each scale and composite. A t-score is calculated to determine how far the raw score is from the norm-group means for an individual child.

The BASC-2 Teacher-Rating Scale (TRS) is a 148-item questionnaire that measures teachers' perceptions of children's positive and negative emotions and behaviors. The internalizing composite is created by combining the Anxiety, Depression,

and Somatization scales of the measure. The externalizing composite consists of the Hyperactivity, Aggression, and Conduct Problems scales. The internalizing scale of the TRS has an internal consistency of .91, the externalizing scale has an internal consistency of .95, and the TRS has a test-retest reliability of .90 (Reynolds & Kamphaus, 2004).

Observed Parenting

Trained coders coded videotaped parent-child interaction tasks to evaluate parenting effectiveness. The interaction tasks were drawn from prior observational parenting studies and demonstrate convergent validity and external validity (Forgatch & DeGarmo, 1999; Weinfeld, Egeland, Hennighausen, Lawrence, Carlson, Meyer, et al., 1995). The videotaped tasks were coded using validated ratings of skill encouragement, positive involvement, problem solving outcome, and good discipline. Trained coders assigned Likert-type ratings that corresponded with tasks targeted at each key parenting practice (see Table 1). Forty (24%) of the observation tasks were coded by two or more coders to ensure inter-rater reliability. Based on these double-coded tapes, intra-class correlation coefficients (ICCs) ranged from .54 to .88. Specific information about each parenting subscale is included below.

Effective parenting construct. The effective parenting construct was an overall composite score created by averaging the four key parenting practice scores below. The overall effective parenting construct score ranged from 1 to 5, with 5 signifying effective parenting behaviors. Cronbach's α is 0.75.

Skill encouragement. Skill encouragement was assessed from nine items rating the mother's ability to promote children's skill development through encouragement and clear directions. This skill was observed during the games played between mother and

child. Items on this scale included: *breaks task into manageable steps, reinforces success, prompts, and corrects appropriately*. Items were rated on a 5-point scale. Cronbach's α is 0.54.

Positive involvement. Positive involvement was assessed from 26 items selected from all of the tasks. Items on the positive involvement scale included ratings of mothers' *warmth, empathy, encouragement, affection, acceptance, and respect of child*. Items were rated on a 5-point scale. Cronbach's α is 0.88.

Problem solving. Problem solving was assessed with 34 scales based on the problem solving discussions. Items in this scale included: *solution quality, extent of resolution, apparent satisfaction, and likelihood of follow through*. Items were rated on a 5-point scale. Cronbach's α is 0.72.

Good discipline. Discipline was derived from 11 scales from across all tasks. Items on the scale measured inept discipline and included: *mother was... overly strict, authoritarian, erratic, inconsistent, oppressive, and used nagging or nattering to get compliance*. Items were rated on a 5-point scale. This scale was reverse-coded so that a high number was indicative of good discipline. Cronbach's α is 0.69.

Caregiver Mental Health

The Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982) is a 18-item questionnaire that assesses the primary caregiver's overall distress and psychopathology. The caregiver was instructed to indicate how distressed he or she has felt by each symptom (e.g., "poor appetite," or "feeling inferior to others") during the past 7 days. An overall Global Severity Index was derived by averaging the responses provided on each item. The BSI has demonstrated good internal consistency (alpha reliability for the nine

sub-scales ranged from 0.71 to 0.85), test-retest reliability (.90), and convergent and discriminate validity (Derogatis & Spencer, 1982).

Demographic Characteristics

Characteristics of the children and the family were collected from parents using a brief biographical survey during recruitment into the study and as needed during subsequent data collection periods. Child age was derived from the child's birth date and the date of recruitment into the study. Child gender was a dichotomous variable provided by parents. Family income was calculated based on the parents' report of each source of income the household received annually, including from social services, paid work, child support, other adult contributors, or untaxed income. Family mobility was assessed as a dichotomous variable indicating whether or not a family moved residence between recruitment and the second wave of data collection. Some families may have moved multiple times within that period, but only the presence or absence of a move was collected.

Participants

Identification of Target Children

The sample of the larger prevention study includes any children in a family between the ages of 5 and 12, which means that siblings are included in the sample. It was important to identify one target child for each family for this particular study because parenting is a family-level variable that would violate the assumption of independence if it was included for multiple siblings. The first step in data analysis for this study was, therefore, to select these target children and remove any siblings from the dataset. In order to do this, children within sibling groups were randomly selected by assigning all

children numbers based on their position in the family and randomly generating one number for each family that corresponded with one of the children in that family.

Overall, there were 253 children in this study; after selecting target children, there were 156 children remaining.

Missing Data

Because of high rates of mobility and difficulty in engaging teachers and families for data collection, particularly observational data collection, this study had a high rate of missing data. Based on current literature, using a reliable imputation method such as expectation maximization (EM) to recover missing data is preferable to case deletion when data are missing at random (Enders, 2004; Schafer & Graham, 2002). T-test and chi-square comparisons between families with complete data and families missing any data showed no statistically significant differences on any of the dependent, independent, or demographic variables included in this study. Specific variables tested include: child age, child gender, child ethnicity, baseline and follow-up internalizing scores, and baseline and follow-up externalizing scores. Based on this evidence, the data were eligible for data imputation (Schafer & Graham, 2002). We used EM (SPSS 14.0, SPSS Inc, 2004) to estimate values for missing data. All of the missing data were imputed, with the exception of the data for the participants missing all of the parenting and adjustment variables ($n = 28$) or participants missing the baseline adjustment scores ($n = 51$); these participants were completely eliminated from the final data set. After this case deletion and imputation, the final sample size for continuous variables was 77 families. Of these 77 families, approximately 48% had at least some data imputed.

Participant Characteristics

The final sample of 77 children in this study ranged in age from 5 to 12 years of age ($M = 7.52$, $SD = 2.07$), and just under half were female (45.5%). The children were identified by their parents as being Black (45.5%), White (23.4%), Multiracial (22.1%), Native American (6.5%), Hispanic (1.3%), or of another race (1.3%). Ninety-two percent of the households were reported to be single-parent households. Family income ranged from no income to \$29,000 in the previous year ($M = \$10,936.12$, $SD = \$5,662.68$). The number of dependents parents identified ranged from 1 to 7 ($M = 3.24$, $SD = 1.18$). Ninety percent of the households in the study were considered below the poverty line. This sample was also highly mobile with 8% of the 77 target families included in this study reporting moving out of the supportive housing facility prior to their participation in the baseline assessment, and 51% reporting moving between the baseline and one-year follow-up assessments. These moves did not disqualify the families from participating in the intervention or the study.

Data Analysis

The first two hypotheses were tested by examining bivariate correlations between parenting and adjustment variables (see Table 3). A series of ten regression equations were then used to test the third hypothesis, one for each parenting dimension, and one for each child outcome (see Tables 4 and 5). Adjustment at one-year follow-up was the dependent variable. The baseline internalizing or externalizing score that corresponded with the dependent variable was entered as the first step of the regression equations. This first step allowed for the unique contribution of baseline adjustment on one-year follow-up adjustment to be detected and controlled for in later steps of the regression. The next

step of the regression was to add the following demographic control variables: child age, family income, and caregiver mental health. Additional demographic characteristics, specifically child gender, family mobility, and control/intervention role, were not significantly associated with any of the adjustment or parenting variables and were therefore excluded from further analyses. Also included in the second step were the baseline and follow-up scores for the co-occurring form of adjustment, for exemplifying when the dependent variable was internalizing, the co-occurring adjustment variable of externalizing was entered in the second step. Finally, the specific parenting scales were entered individually as the third step in the corresponding regression equations. The variance explained by each of these variables over and above the contribution of the baseline adjustment scores, demographics, and the co-occurring adjustment scores served to test the third hypothesis.

Caron, Weiss, Harris, and Catron (2006) asserted that the unique effect between a parenting variable and a child outcome can only be specified if co-occurring parenting dimensions and child outcomes are controlled for in the equation. The current study was unable to assess parenting specificity while including multiple parenting dimensions in the equations because of high levels of multicollinearity among the parenting dimensions. However, the data did allow the co-occurring child outcomes to be controlled. Caron and colleagues (2006) operationalized this approach of examining whether a specific parenting behavior has a disparate relation with two child outcomes, such as internalizing and externalizing symptoms, as assessing “differential” effects. Jones and colleagues (2008) replicated this analytic approach but included the element of time, as is included in the current study. In their analysis, Jones and colleagues controlled for both baseline

and follow-up scores of the co-occurring child outcome they were measuring in order to control for variability accounted for by the co-occurring child outcome over time. In replication of their methodology, the current study also includes both time points for the co-occurring child adjustment scores.

Results

Hypothesis 1: School-aged children's internalizing and externalizing problems will be moderately stable between baseline and one-year follow-up.

Correlation coefficients demonstrated that there was a statistically significant relationship between baseline and follow-up scores for both teacher-reported internalizing ($r = .36, p = .001$) and externalizing ($r = .54, p < .001$) problems (see Table 3). For both internalizing and externalizing symptoms, there was a moderate level of stability between baseline and one-year follow-up. However, there was a stronger relationship between baseline and follow-up externalizing than there was between baseline and follow-up internalizing. These findings support the hypothesis that there is stability between baseline and follow-up scores; however, the magnitude of the relationship between baseline and follow-up scores differed between internalizing and externalizing.

Hypothesis 2: More effective observed parenting at baseline will be associated with lower internalizing and externalizing problems at follow up.

The bivariate correlations demonstrate a significant relationship between some of the baseline parenting constructs and one-year follow-up of children's adjustment variables (see Table 3). First, there was a highly significant relationship between the problem solving ($r = .33, p = .003$) and skill encouragement ($r = -.32, p = .004$) parenting

dimensions at baseline and children's internalizing at follow up. In both cases, parenting accounted for approximately 10% of the variance in one-year follow-up internalizing scores. It should be noted, though, that higher observed skill encouragement was associated with fewer teacher-reported internalizing problems, while higher problem solving was associated with greater teacher-reported internalizing problems. The latter finding was contrary to the hypothesized direction of this relationship.

For children's externalizing scores, there was a significant negative relationship between the baseline parenting dimensions of positive involvement ($r = -.31, p = .005$) and skill encouragement ($r = -.35, p = .002$) and follow-up externalizing; as hypothesized, higher levels of effective skill encouragement, and positive involvement, were associated with lower levels of externalizing problems. There was also a significant negative relationship between follow-up externalizing scores and the overall parenting construct at baseline ($r = -.26, p = .022$). Positive involvement accounted for about 10% of the variance, skill encouragement accounted for roughly 12% of the variance, and overall parenting accounted for approximately 7% of the variance in teacher-reported externalizing scores.

Hypothesis 3: More effective parenting will be associated with a differential decrease in internalizing and externalizing problems between baseline and follow-up.

Of the ten regression equations controlling for baseline parenting, demographic characteristics, and the other problem scores, parenting was a statistically significant predictor in four models (see Tables 4 and 5). Only problem solving significantly contributed to one-year follow-up internalizing problems after controlling for baseline internalizing problems and externalizing problems. Only positive involvement, skill

encouragement, and the overall parenting construct significantly contributed to follow-up externalizing problems after controlling for baseline externalizing problems and internalizing problems. In each of the ten regression equations, both the baseline adjustment scores that correspond with the dependent variable and the co-occurring problem scores both at baseline and follow-up significantly contributed to the models ($p < .001$ for each variable in each model).

For teacher-reported internalizing, problem solving accounted for approximately 4% of the variance in follow-up adjustment ($\beta = .207, p = .014$) after 13% of the variance was accounted for by baseline adjustment, and 40% of the variance was accounted for by demographics and externalizing scores (see Table 4). Similar to the correlation matrix, in the regression analysis, greater problem solving was associated with greater teacher-reported internalizing problems, which was contrary to what was hypothesized. It should be noted that this equation was the only equation in which both parenting and at least one of the demographic variables contributed significantly to the model. In this equation, child's age at recruitment into the study was significantly associated with internalizing ($\beta = .206, p = .018$) in that the older the children were at recruitment, the greater their internalizing problems were at one-year follow-up, even after controlling for baseline internalizing problems.

For teacher-reported externalizing, positive involvement accounted for about 3% of the variance ($\beta = -.177, p = .039$), skill encouragement accounted for approximately 8% of the variance ($\beta = -.313, p = .000$), and overall parenting accounted for roughly 3% of the variance ($\beta = -.182, p = .033$) in externalizing problems (see Table 5). The variance accounted for by the parenting dimensions was above and beyond the 29% of

variance accounted for by baseline externalizing problems and the 24% of variance accounted for by demographics and internalizing scores. In both of these regression equations, greater observed parenting skills were associated with fewer externalizing behaviors at one-year follow-up, which supports the third hypothesis.

In order to compare the correlation coefficients for these three regression models, a post hoc analysis was conducted. The inferential statistic used was a t-test for comparing non-independent correlation coefficients (Howell, 2002). Based on this test, there was no statistically significant difference between the correlation coefficients derived from any pairs of equations: skill encouragement and positive involvement ($t = -.529, p = .598$), skill encouragement and overall parenting construct ($t = .521, p = .604$), or positive involvement and overall parenting construct ($t = -.033, p = .974$). This result indicates that there was not a significant difference in the strengths of the relationships between each of these parenting dimensions and externalizing problems.

Another set of post hoc analyses was also conducted to further investigate the relationship between problem solving and child internalizing. Individual behaviors observed during the problem solving tasks in the coding protocol were examined in a correlational matrix with one-year follow-up internalizing scores. Some of the coded behaviors were included in the larger problem solving construct while others were coded as potential contextual factors rather than as part of any of the specific parenting constructs used in the current study. When examining the variables that were coded, but not included in the four parenting constructs, it appears that the caregiver being distant or detached ($r = .276, p = .033$), the caregiver being down ($r = .300, p = .019$), the caregiver being withdrawn ($r = .273, p = .035$), and the caregiver being hopeless ($r = .298, p =$

.020) during the problem solving conversations were all related to children's internalizing problems at one-year follow-up. When examining the specific behaviors included in the problem solving construct, if the children were more likely to suggest solutions to the problems ($r = .315$, $p = .015$), and the mother was coded as acting immature during the problem solving task ($r = .278$, $p = .031$), the children were more likely to experience internalizing problems at one-year follow-up. These additional variables help to create a context for the counter-intuitive relationship between problem solving and internalizing.

Discussion

Stability of Children's Adjustment over Time

The findings from the current study support the first hypothesis regarding stability of teacher-reported internalizing and externalizing scores between baseline and one-year follow-up. For both internalizing and externalizing problems, the higher the scores were at baseline, the higher they were at one-year follow-up. The stability of children's adjustment scores is consistent with previous studies examining adjustment over time (Aunola & Nurmi, 2005; Denham et al., 2000; Jones & Forehand, 2003). The current study's findings indicating stronger stability of externalizing than internalizing scores are consistent with those of Ware et al. (2001). The differential stability of internalizing and externalizing symptoms may be due to child internalizing being more reactive to change than child externalizing. DeGarmo, Patterson, and Forgatch (2004) found in a sample of young boys that changes in internalizing behaviors preceded and mediated changes in externalizing behaviors shortly after a parental divorce. In their study, distress dissipated more quickly than behavior problems, and the changes in distress predicted the later changes in behavior problems.

Parenting and Children's Adjustment

When examining the role of parenting in predicting children's adjustment, the second and third hypotheses were only supported with regard to teacher-reported externalizing, but not internalizing, problems. Similar results have been found in other studies as well (e.g., Li et al., 2007; Reitz, Dekovic, & Meijer, 2006). Reitz et al. provided two possible rationales for why parenting had a greater impact on externalizing than internalizing in their study.

First, the dimensions of parenting studied may be more important for externalizing problems than internalizing problems. The parenting constructs measured in this study stem from Patterson's Social Interaction Learning model (1982), which focuses primarily on the emergence and growth of externalizing problems. This conceptual basis indicates that other elements of parenting, such as parental emotional control of the child (Barber, Olsen, & Shagle, 1994), may have a greater association with child internalizing problems.

Second, externalizing is a more visible problem, and parenting may be more responsive to it (Reitz et al., 2006). In addition to these two possible rationales, the fact that this study relied on teacher reports of children's adjustment may also have impacted the findings. It is possible that externalizing is a more visible problem, as Reitz and colleagues (2006) stated, and, therefore, teachers were more sensitive to or accurate in their assessment of children's externalizing problems than in their assessment of children's internalizing problems.

Good Discipline

Discipline was not found in this study to impact children's adjustment either in the correlation matrix or in the series of regression equations. In this study, baseline observed discipline was not correlated with teacher reports of either internalizing or externalizing problems at one-year follow-up. It was also not associated with either dimension of children's adjustment over time controlling for baseline adjustment, demographics, and the co-occurring form of adjustment. This lack of relationship was somewhat surprising given that discipline is a commonly researched parenting trait (see McKee et al., 2008, for a review) and that prior studies using these same parenting constructs have found longitudinal associations between observed ineffective discipline and child externalizing problems (DeGarmo et al., 1999; DeGarmo et al., 2004). However, there are several possible reasons for this lack of relationship. First, McKee and colleagues (2008) proposed that discipline may be indirectly related to children's adjustment through other parenting characteristics, such as parental warmth. They posit that discipline is moderated by other parenting variables in that discipline alone does not impact adjustment specifically, but only when combined with other parenting traits. When examining the unique role of discipline, these indirect relationships would not be detected. Second, it may be that the families living in supportive housing are a higher-stress population and, thus, discipline may function differently in these families than in lower-stress families (Sameroff, 2005). This second explanation is related to a third potential explanation that the coding scheme used in this study to assess observed discipline was not adjusted for such a high stress population.

Although the coding scheme has been well validated (Forgatch & DeGarmo, 1999), its use has not been tested with formerly homeless families, such as those included in this study. Forgatch and DeGarmo (1999) have tested the observation coding on single mothers, who are experiencing stress, but not likely to the same extent as formerly homeless families. It may be that different discipline techniques are more effective in extremely high stress families, as Sameroff (2005) asserted, but that the coding system used in this study is not sensitive to these differences or to what is considered “effective” within different contexts. This idea reinforces Human Ecology Theory’s emphasis on the importance of considering context when examining family relationships.

Positive Involvement

Positive involvement was shown to impact teacher-reported externalizing problems at one-year follow-up but not teacher-reported internalizing problems. This was the case both in the correlation matrix that tested simple linear relationships and in the regression equation, which tested the influence of positive involvement after controlling for baseline internalizing, demographics, and externalizing. The way that positive involvement is operationalized in this current study includes rating the levels of parental warmth, empathy, encouragement, affection, acceptance, and respect for child. Although the term “positive involvement” is used in this study, the construct is similar to that of “warmth,” which is a more common term in the parenting literature. When employing a similar method as was used in the current study to detect impacts of parenting differentially on children’s adjustment, Jones et al. (2008) also found that parental warmth was more strongly associated with decreases in externalizing than internalizing symptoms. A recent review by McKee et al. (2008) demonstrated that low

levels of parental involvement or warmth are commonly associated with greater externalizing problems. The authors provide a theoretical explanation of this common finding. They propose that low levels of parental warmth may interfere with children's ability to modulate and self-regulate arousal, which may make children less aware of the consequences of their actions and less able to refrain from displaying externalizing behaviors. However, based on the Human Ecology Theory, parents and children have the potential to impact each other over time. If positive involvement decreases children's externalizing behaviors over time, this is likely to create positive outcomes for parents over time as well, thus perpetuating a cycle of positive involvement between parent and child.

Problem Solving

Previous literature has demonstrated that better parent-child problem solving tends to be associated with positive outcomes for children (Baumrind, 1991; Forgatch, 1989; Vuchinich, Angelelli, & Gatherum, 1996). Vuchinich and colleagues (1996) believe that children learn behavioral strategies, ways of framing situations, and ways of self-regulating from watching and participating in problem solving with their parents. However, in this current study, this relationship between problem solving and positive outcomes was not found.

Problem solving in this study impacted teacher-reported internalizing problems at one-year follow-up but not externalizing problems. Problem solving was shown to directly impact internalizing at one-year follow-up and to differentially impact internalizing over time above and beyond any impact on externalizing problems. In this equation, age also significantly contributed to the model in that, the older children were at

recruitment, the greater their internalizing problems. In fact, problem solving was the only dimension of parenting in this study that was significantly related to internalizing problems in the regression equations, and this occurrence was the only instance in which both a parenting variable and a demographic variable significantly contributed to adjustment over time. However, the relationship between problem solving and internalizing problems was in the opposite direction from what was hypothesized. In this study, greater observed problem solving skills between parents and children were associated with greater teacher-reported internalizing problems over time. The relationship between age and children's internalizing has been found in other studies as well (Gilliom & Shaw, 2004; Ollendick & King, 1994; Shaw & Emery, 1987). Studies suggest that, as children get older, internalizing symptoms become more common, while externalizing symptoms become less common (Achenbach et al., 1991). This connection may also provide some insight into the counter-intuitive findings regarding the direction of the relationship between problem solving and children's adjustment. Forgatch (1989) found that, when problem solving tasks similar to those completed in the current study were completed with older boys versus younger boys, families with older boys tended to select topics for discussion that were less conflictual or personal. Forgatch proposed that, as children get older, families learn to inhibit negative emotions in order to remain "on-task." If this phenomenon was replicated in the current study, it may have demonstrated greater emotional avoidance in the tasks rather than greater problem solving skills. Additionally, age in and of itself may be a moderating variable that accounts for the relationship. For instance, it might simply be that older children are more likely to have

internalizing problems, as the literature would support, and that older children tend to experience better parent-child problem solving.

While this relationship between problem solving and internalizing symptoms was contrary to what was expected, there are some possible reasons for this finding. First, this study may not have been able to differentiate contingent or context-specific problem solving behaviors. Perhaps when given the appropriate resources to problem solve, such as time or space without interruptions, a family is highly skilled at problem solving, but in daily life, this skill is under-utilized, or perhaps even used in a destructive way through coercive parenting, which would elicit negative responses based on the Social Interaction Learning Model (Patterson, 1982).

Second, the coding scheme was intended to measure the presence or absence of problem solving skills; however it did not necessarily capture the tone of the interaction. Although tone was not included in any of the parenting composite scores, there is some evidence in the observational coding data to suggest that caregiver detachment, sadness, withdrawal, and hopelessness during the conversation were all related to children's internalizing problems at one-year follow-up. These characteristics should be investigated further in relation to problem solving to better determine ways in which tone can potentially undermine positive problem solving skills.

A third potential explanation for this finding is that the way problem solving in this study was measured did not distinguish between whether the parent or the child was the catalyst for the positive problem solving. It may have been that some of the best-skilled families were rated highly because the child has taken on the role of problem solver through parentification and that this role was then associated with greater

internalizing problems. Fish, Belsky, and Youngblade (1991) found that, when children are triangulated into caregiver problems, they are often treated as confidants or even primary problem solvers. Bowen (1978) argues that, when children are placed in these roles, their needs are often sacrificed in order to help stabilize the family unit. This negative bi-directional relationship between parent and child could eliminate any potential buffering from adverse life events provided by parents under the Human Ecology Model, and, instead, could place children in a role of buffering the impacts on their parents. When examining the individual items that contributed to the problem solving composite/dimension, it tended to be the child behavior items that were associated with greater internalizing problems at one-year follow-up. This connection was evident in that the children suggesting solutions to the selected problems and mothers acting immature during the problem solving task were both associated with teacher-reported internalizing problems at one-year follow-up. Both of these could be indications of parentification occurring during the problem solving task. The role of age in this equation may provide additional support for the parentification theory. It may be that older children are more likely to take on the role of problem solving in their families.

Finally, it could be the case that there is a third moderator variable that was not measured or assessed in the current study that accounts for this relationship. Additional research in this area and replication of this finding will be necessary to better identify why greater parent-child problem solving may be associated with greater child internalizing symptoms within families living in supportive housing.

Skill Encouragement

In testing the relationship between baseline skill encouragement and one-year follow-up adjustment, skill encouragement was significantly correlated with both teacher-reported internalizing and externalizing problems. However, when testing the role of skill encouragement in differential adjustment over time, skill encouragement only impacted externalizing problems after controlling for baseline externalizing, demographics, and internalizing problems. These findings are not surprising given the overall lack of support for hypotheses related to internalizing problems in this study and accounts of stronger relationships between parenting and externalizing problems in previous literature (Rietz et al., 2006). However, the strength of the relationship between skill encouragement and adjustment is notable. This element is the only parenting variable related to both internalizing and externalizing problems in the correlation matrix, and the only parenting variable whose correlational relationship to internalizing was in the expected direction.

The way that skill encouragement was operationalized in this study included two primary foci: positive reinforcement and scaffolding behaviors. The role of positive reinforcement in children's adjustment, particularly in children's externalizing symptoms, has a strong theoretical basis in Patterson's (1982) Social Interaction Learning model. In this model, Patterson asserted that coercion in families was particularly associated with children's behavior problems and that stressful life events often lead to coercive parenting by increasing a family's dysfunctional patterns. Positive reinforcement, particularly when contingent upon children's positive behaviors, has been described as an effective parenting practice that is especially contrary to coercive parenting (Patterson,

1989). While coercive parenting depends upon non-contingent and inappropriate reinforcement of children's behaviors and harsh discipline for negative behaviors to promote dysfunctional cycles in problem behaviors between parents and children, contingent-positive reinforcement can teach children positive behaviors while avoiding harsh discipline for negative behaviors. According to the Social Interaction Learning model (Patterson, 1982), this positive parenting practice can be even more beneficial when provided within the context of adverse life events, such as former homelessness.

Scaffolding is also an important component of skill encouragement in this study. Bruner (1986) defined scaffolding as an instructional interaction with the purposes of building knowledge, increasing task simplicity, and transferring task responsibility, all within the context of emotional support. This term stems from Vygotsky's (1978) sociocultural theory that children internalize thoughts, behaviors, and experiences from teaching interactions with others that help the children move beyond their capacity to learn alone. Research has demonstrated the connection between parental scaffolding and children's self-regulation (Neitzel & Stright, 2003; Pianta, Smith, & Reeve, 1991; Stright et al., 2001). In particular, Neitzel and Stright (2003) asserted that, during scaffolding interactions, children are able to gain important tools that pertain to academic self-regulation. This ability to increase academic self-regulation may be particularly relevant for the current study in which teacher reports of children's adjustment were used.

Similarly, DeGarmo, Forgatch, and Martinez (1999) note that skill encouragement may be the parenting construct with the most direct link to the school environment. Because we relied on teacher reports of children's adjustment, it may be that the children whose parents provided high levels of skill encouragement were the most behaved in the

classroom setting, and, thus, were rated lower on the adjustment problem scales. Also, skill encouragement is one of the most tangible behavioral parenting dimensions measured in this study. Perhaps the behavioral nature of it makes it more proximal, which increases its impact on children's adjustment and makes it more straightforward to assess in observations. Both of these factors together could contribute to the strength of this construct's impact on children's adjustment.

Overall Parenting Construct

The overall parenting construct was associated with externalizing problems both in the correlation equation and in the more complex regression equation that controlled for baseline externalizing, demographics, and internalizing problems. In this study, the overall parenting construct is comprised of each of the four parenting dimensions described above, all weighted equally. The finding that the overall parenting construct is significantly associated with externalizing, but not internalizing, is likely due to the unique impacts of each of the separate parenting dimensions. In the case of externalizing, there were two dimensions negatively correlated with externalizing scores, positive involvement and skill encouragement. These two dimensions likely accounted for the majority of the impact of overall parenting on externalizing problems. For teacher-reported internalizing, problem solving was positively correlated, and skill encouragement was negatively correlated with internalizing scores. The opposing directions of influence for these two variables likely offset each other, thus negating the overall impact of the parenting construct.

The finding that more effective observed parenting predicted fewer externalizing problems has been previously documented in many studies (see McKee et al., 2008, for a

review). However, as we have seen in looking at the influence of specific parenting behaviors, the relationship between parenting and internalizing symptoms appears to be more complicated. For instance, Li and colleagues (2007) found that higher quality family interactions decreased externalizing symptoms, and, to a lesser extent, internalizing symptoms in youth. However, the impact of the parent-child relationship on internalizing symptoms in their study was only present when risk was relatively low, which may provide insight into why overall parenting was not a significant predictor of internalizing in the very high-risk population included in the current study. Alternatively, it may be that changes in internalizing symptoms occur over a shorter period of time than is captured in most longitudinal studies. For instance, Gewirtz and Medhanie (2008) found that observed parenting predicted the trajectory of child internalizing over a four-month period after an acute incident of domestic violence. Perhaps there are more immediate changes in internalizing problems that are being missed in studies like the current one, which use a one-year follow-up assessment.

Parenting Predictor Comparison

After identifying positive involvement, skill encouragement, and the overall parenting construct as significant predictors of teacher-reported externalizing problems, this study sought to compare the strength of the influence of each of these parenting variables. A similar comparison was not required for predictors of internalizing problems, because only one parenting dimension significantly contributed to internalizing scores in the regression analyses. The coefficient comparison revealed that there was not a significant difference in the strength of any of the predictors of externalizing problems. Although the amount of variance in adjustment each parenting dimension accounted for

differed slightly, the differences were not statistically significant. This result indicates that positive involvement, skill encouragement, and overall parenting are all equally strong predictors of externalizing problems and should all be explored further in research and practice.

This finding emphasizes the importance of both positive involvement and skill encouragement in children's externalizing problems. Of all of the parenting dimensions measured in this study, positive involvement and skill encouragement are the two that explicitly require emotional support and positivity from parents. This positive parental affect is a common link between the only two parenting dimensions that significantly predicted children's adjustment in the hypothesized direction in this study. As Gewirtz and colleagues (2009) emphasized, positive parenting behaviors can help supplant the destructive coercive parenting described in the Social Interaction Learning model (Patterson, 1982) to promote positive child outcomes.

This study supports the idea that the power of positive interactions between parents and children cannot be underestimated. Foster, Garber, and Durlak (2008) described the recent emphasis on parenting positivity in relation to children's adjustment, particularly externalizing problems. The current study demonstrates that these positive parent-child interactions could be keeping these children functioning in the face of crisis. According to the Human Ecology Theory, if one determinant in the ecological model is lacking, strengths in another can buffer the entire system (Belsky, 1984). This study provides support for the notion that positive parent-child interactions can be a strength that is able to buffer the family, and in particular the child, from the negative impacts of adverse life events. Also, because the Human Ecology Theory emphasizes the bi-

directional relationships between levels of the system, positive parenting is likely to have positive impacts not only on the children but also on the larger macro- and exo-systems in which the parent and children are embedded. Positive parenting may help to increase positive interactions with others situated within the larger ecological system, which has the potential to create positive outcomes for the family.

Limitations

This study had some important limitations to note. The largest was the presence of missing data, which significantly decreased the sample size from 156 children to 77 children. Although these data proved to be missing at random, it could have important implications for the generalizability of these findings. While EM is a reliable method for dealing with missing data and much of the missing data was able to be recovered using imputation, there was no way of knowing how those who do not have data would have answered certain questions. This may have been especially true of the participants for whom data could not be imputed. The use of teacher data to capture children's adjustment is also a potential limitation. It is common in child development literature to use teacher report for children's adjustment (e.g., Dodge, Pettit, & Bates, 1994; Keiley et al., 2001), but teachers are only able to report on what they are able to observe within the classroom setting, which may not reflect the full scope of the children's adjustment, particularly children's internalizing symptoms. Finally, although the observational parenting measure used has been well-validated among other populations (Forgatch & DeGarmo, 1999), this study provides the first opportunity for this coding scheme to be tested longitudinally on homeless or formerly homeless families. This unique context may challenge the operationalization of effective parenting captured with the coding

process used in this study. As the body of literature about formerly homeless families expands, the methods for assessing these families may need to be refined.

Implications and Future Directions

By examining the relationship between parenting and children's adjustment in formerly homeless families, we can begin to build a framework for better serving these high-stress families. There is a significant lack of literature focusing on formerly homeless families, particularly literature pertaining to parenting or children's adjustment. Families living in supportive housing are an important population to study because of their unique position as experiencing recent crisis but currently having relative housing stability. Families in supportive housing are in a transition period between being homeless and permanently housed. As was shown in the families in this study, even this relative stability is often temporary, and most of the families remained highly mobile after their stay in supportive housing. This population is therefore a captive audience for services but only for a limited period of time, which makes interventions not only more accessible but also more urgent.

Much of the literature about parenting and children's adjustment has examined broad parenting, rather than specific dimensions of parenting. Only recently have the impacts of specific dimensions of parenting on children's adjustment been assessed (Caron et al., 2006). By examining specific dimensions of parenting within high-risk families, interventions can be better tailored to meet the needs of families. This focus is especially important when families are likely to be accessible for limited amounts of time, and they are receiving a myriad of other services. By focusing on specific areas

that are likely to have greater impact on children's adjustment, practitioners can help to make parenting services more efficient.

Future research is needed to further investigate the findings of this study. In particular, additional exploration of how specific dimensions of parenting impact internalizing problems in children over time will need to be explored. This study emphasized the complexity of parenting and child internalizing, which requires continued investigation. In order to help facilitate this investigation, observational parenting tools that better assess domains of parenting relevant to internalizing problems need to be established. This may include systems for coding concepts such as parentification or role reversal, task tone, and emotional control. By better understanding the way in which parenting can affect both internalizing and externalizing problems in children, more holistic approaches to parenting interventions can be developed.

Conclusion

Overall, this study offers a foundation for supportive housing professionals and researchers to start from in their work with this under-researched population. By finding that externalizing symptoms can be impacted by specific dimensions of parenting, such as skill encouragement and positive involvement, further practice and research can be directed toward understanding the mechanisms for this impact and helping to encourage positive changes within the family system. In particular, the emphasis in this study on the powerful role of parental positive reinforcement and involvement can help to provide a framework for working with families and fostering a sense of hope. There is a great need for further studies to better understand the role of parenting in children's internalizing symptoms in formerly homeless families and, by further exploring the role

of parenting in children's internalizing scores, we can better determine ways in which parenting can serve as a protective factor as opposed to an additional risk factor.

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Tables

Table 1: Parenting coding domains

Domain	Task	Coding Scale	Scoring Range
Discipline	Global	Overly strict, authoritarian, oppressive	Doesn't Fit - Definitely Perfect Fit
		Seems in good control of target child	Doesn't Fit - Definitely Perfect Fit
		Threatens or uses physical punishment	Doesn't Fit - Definitely Perfect Fit
		Erratic, inconsistent, haphazard	Doesn't Fit - Definitely Perfect Fit
		Even-handed, appropriately firm when necessary	Doesn't Fit - Definitely Perfect Fit
		Seems to track child too closely; hover	Doesn't Fit - Definitely Perfect Fit
		Uses nagging or nattering to get compliance	Doesn't Fit - Definitely Perfect Fit
		Expresses anger/hostility while disciplining	Doesn't Fit - Definitely Perfect Fit
		Seems tentative, indecisive, or unsure of self when disciplining target child	Doesn't Fit - Definitely Perfect Fit
		Seems to discipline target child well	Doesn't Fit - Definitely Perfect Fit
		Threatens unlikely disciplines (e.g. consequences that are hard to enforce)	Doesn't Fit - Definitely Perfect Fit
Positive Involvement	Global	Child seemed to be friendly and pleasant	Never - Very Often
		Child seemed generally accepting	Never - Very Often
		Child was affectionate with mother	Never - Very Often
		Mother was affectionate with child	Never - Very Often
	Games	What is your impression of the extent to which the mother maintained good eye contact and interactive body posture	Never - Very Often
		What is your impression of the extent to which the mother treated the child with respect	Never - Very Often
		Rate the family members' interaction on the following adjectives - Mother	Very Tense/ Tight/Rigid - Very Relaxed/ Loose/Flexible
		Rate the family members' interaction on the following adjectives - Mother	Very Humorless - Very Humorous/ Pleasant/Humor Used
		Rate the family members' interaction on the following adjectives - Mother	Very Obstructive - Very Helpful
		Rate the family members' interaction on the following adjectives - Mother	Very Openly Angry/Irritable/Hostile - Very Composed/ Calm/Pleasant

Domain	Task	Coding Scale	Scoring Range
Positive Involvement (continued)	Games	Rate the family members' interaction on the following adjectives - Mother	Very Cold - Very Warm
		Rate the family members' interaction on the following adjectives - Mother	Very Rude - Very Polite
		Rate the family members' interaction on the following adjectives - Mother	Very Unpleasant - Very Pleasant
		Rate the family members' interaction on the following adjectives - Mother	Very Critical - Very Encouraging
		Rate the family members' interaction on the following adjectives - Mother	Very Uninvolved - Very Involved
		Rate the family members' interaction on the following adjectives - Mother	Very Uncooperative - Very Cooperative
	PS	What was your impression of the involvement of the mother in interaction (e.g. participation, attentiveness, questioning, active listening, body posture)	Uninvolved - Involved
		What was your impression of the involvement of the mother in interaction (e.g. participation, attentiveness, questioning, active listening, body posture)	Uninvolved - Involved
		Mother seemed to be comfortable talking about problems	Untrue - True
		What is your impression of how often this family engages in discussions like this at home	Never - Very Often
		What is your impression of the extent to which the child treated the mother with respect	Never - Very Often
		Rate how family members appeared on the following adjectives - Mother	Very Tense/ Tight/Rigid - Very Relaxed/ Loose/Flexible
Problem Solving	PS	Whose issue is this – Issue A	Child's - Mother's
		The mom suggested at least one reasonable and feasible solution - A	Untrue - True
		The child suggested at least one reasonable and feasible solution - A	Untrue - True
		What was your impression of the involvement of the child in interaction (e.g. participation, attentiveness, questioning, active listening, body posture) - A	Uninvolved - Involved
		The child expressed his/her thoughts or feelings about the problem - A	Untrue - True
		Rate how family members appeared on the following adjectives - Mother	Very Unpleasant - Very Pleasant
Rate how family members appeared on the following adjectives - Mother	Very Uncooperative/ Obstructive - Very Cooperative/ Helpful		
Rate how family members appeared on the following adjectives - Mother	Very Openly Angry/Irritable/Hostile - Very Composed/Calm/ Pleasant		
Rate how family members appeared on the following adjectives - Mother	Very Cold - Very Warm		

Domain	Task	Coding Scale	Scoring Range
Problem Solving (continued)	PS	The child appeared intimidated by mom - A	Untrue - True
		Rate your impression of child's apparent satisfaction with progress or outcome of the discussion - A	Extremely Dissatisfied - Extremely Satisfied
		Rate your impression of mother's apparent satisfaction with progress or outcome of the discussion - A	Extremely Dissatisfied - Extremely Satisfied
		Rate your impression of coder's apparent satisfaction with progress or outcome of the discussion - A	Extremely Dissatisfied - Extremely Satisfied
		How was the problem initially stated or defined - A	Very Negative - Very Positive
		What was the extent of the problem resolution - A	Little or No Attempt to Solve the Problem - Family Members Agreed Upon Solution
		There was a wide range of solutions suggested - A	Untrue - True
		The family proposed at least one realistic or feasible solution - A	Untrue - True
		The family discussed the advantages and disadvantages of at least one proposed solution - A	Untrue - True
		The family worked together as a team - A	Untrue - True
		A plan was developed (e.g. proposal(s) made, details pinpointed, and execution elaborated) - A	Untrue - True
		The family seems likely to follow through with a plan that was discussed - A	Untrue - True
		Whose issue is this – Issue B	Child's - Mother's
		The mom suggested at least one solution - B	Untrue - True
		The child suggested at least one solution - B	Untrue - True
		What was your impression of the involvement of the child in interaction (e.g. participation, attentiveness, questioning, active listening, body posture) - B	Uninvolved - Involved
		The child expressed his/her thoughts or feelings about the problem - B	Untrue - True
		The child appeared intimidated by mom - B	Untrue - True
		Rate your impression of child's apparent satisfaction with progress or outcome of the discussion - B	Extremely Dissatisfied - Extremely Satisfied
		Rate your impression of mother's apparent satisfaction with progress or outcome of the discussion - B	Extremely Dissatisfied - Extremely Satisfied

Domain	Task	Coding Scale	Scoring Range
Problem Solving (continued)	PS	Rate your impression of coder's apparent satisfaction with progress or outcome of the discussion - B	Extremely Dissatisfied - Extremely Satisfied
		How was the problem initially stated or defined - B	Very Negative - Very Positive
		What was the extent of the problem resolution - B	Little or No Attempt to Solve the Problem - Family Members Agreed Upon Solution
		There was a wide range of solutions suggested - B	Untrue - True
		The family proposed at least one realistic or feasible solution - B	Untrue - True
		The family discussed the advantages and disadvantages of at least one proposed solution - B	Untrue - True
		The family worked together as a team - B	Untrue - True
		A plan was developed (e.g. proposal(s) made, details pinpointed, and execution elaborated) - B	Untrue - True
		The family seems likely to follow through with a plan that was discussed - B	Untrue - True
Skill Encouragement	Games	During the interaction, the mother broke down the tasks into smaller steps as necessary	Applies Sometimes - Applies All of the Time
		What was the level of successfulness the child seemed to be experiencing	None or Very Little - Very Much
		During the interaction, the mother encouraged the child to be self-directed/work independently in Tangoes	Applies Sometimes - Applies All of the Time
		During the interaction, the mother provided appropriate guidance/corrections when the task became difficult	Applies Sometimes - Applies All of the Time
		During the interaction, the mother followed up on corrections	Applies Sometimes - Applies All of the Time
		During the interaction, the mother was positively responsive to the child's questions/utterances	Applies Sometimes - Applies All of the Time
		During the interaction, the mother provided reinforcement for correct responses	Applies Sometimes - Applies All of the Time
		During the interaction, the mother provided reinforcement for on task behavior	Applies Sometimes - Applies All of the Time
		During the interaction, the mother used an appropriate level of reinforcement given the difficulty of the task	Applies Sometimes - Applies All of the Time

PS – Problem solving discussion; Games – Labyrinth, guessing games, Tangoes; Global – Overall global impression

Table 2: Descriptive Data for Key Variables

	Minimum	Maximum	Median	Mean	Standard Deviation
BASC- Internalizing T1	41.00	99.00	53.67	56.01	10.93
BASC- Internalizing T2	41.00	78.33	54.00	55.22	8.40
BASC- Externalizing T1	41.67	106.33	58.67	60.27	13.34
BASC- Externalizing T2	34.46	92.97	56.76	58.33	10.85
T1 parenting - Good discipline	1.65	4.90	3.66	3.53	0.72
T1 parenting - Positive involvement	1.75	4.96	3.41	3.40	0.69
T1 parenting - Problem solving	0.80	4.33	1.72	1.90	0.84
T1 parenting - Skill encouragement	1.20	3.78	2.00	2.12	0.64
T1 parenting - Effective parenting	1.65	4.38	2.71	2.74	0.55

Table 3: Correlations between Key Variables

	2	3	4	5	6	7	8	9
1. BASC- Internalizing T1	0.36**	0.43**	0.06	-0.19	-0.12	0.06	-0.10	-0.11
2. BASC- Internalizing T2	-	-0.19	0.17	-0.32**	-0.12	0.33**	0.02	0.00
3. BASC- Externalizing T1		-	0.54**	-0.03	-0.16	-0.13	-0.17	-0.17
4. BASC- Externalizing T2			-	-0.35**	-0.31**	-0.03	-0.13	-0.26*
5. Parenting - Skill encouragement				-	0.44**	-0.06	0.19	0.48**
6. Parenting - Positive involvement					-	0.57**	0.76**	0.92
7. Parenting - Problem solving						-	0.58**	0.74**
8. Parenting - Good discipline							-	0.85**
9. Parenting - Effective parenting								-

* p < .05, ** p < .01

Table 4: Hierarchical Regression Analyses Predicting Change in Child Internalizing

	B	SE	β	R ² Δ	Adj R ²	F
T1 Internalizing	.455	.075	.593**	.131		
Demographic Characteristics						
Child Age	.957	.358	.236*			
Family Income	-.000	.000	-.007	.403	.487	11.315**
Caregiver Mental Health	.029	.075	.033			
T1 Externalizing	-.423	.076	-.671**			
T2 Externalizing	.386	.080	.498**			
Good Discipline	.295	.973	.025	.001		
T1 Internalizing	.456	.076	.593**	.131		
Demographic Characteristics						
Child Age	.962	.357	.237*			
Family Income	-.000	.000	-.006	.403	.487	11.294**
Caregiver Mental Health	.028	.075	.032			
T1 Externalizing	-.425	.076	-.674**			
T2 Externalizing	.388	.083	.501**			
Positive Involvement	.158	1.071	.013	.000		
T1 Internalizing	.433	.073	.563**	.131		
Demographic Characteristics						
Child Age	.835	.346	.206*			
Family Income	-.000	.000	-.040	.403	.530	13.224**
Caregiver Mental Health	.040	.072	.045			
T1 Externalizing	-.402	.073	-.638**			
T2 Externalizing	.375	.076	.484**			
Problem Solving	2.070	.823	.207*	.039		
T1 Internalizing	.459	.078	.598**	.131		
Demographic Characteristics						
Child Age	.976	.363	.241*			
Family Income	-.000	.000	-.008	.403	.487	11.305**
Caregiver Mental Health	.032	.076	.036			
T1 Externalizing	-.430	.079	-.682**			
T2 Externalizing	.394	.089	.509**			
Skill Encouragement	.311	1.297	.024	.000		
T1 Internalizing	.460	.075	.599**	.131		
Demographic Characteristics						
Child Age	.952	.354	.235*			
Family Income	-.000	.000	-.024	.403	.496	11.703**
Caregiver Mental Health	.032	.074	.037			
T1 Externalizing	-.426	.075	-.676**			
T2 Externalizing	.405	.081	.523**			
Overall Parenting Construct	1.551	1.332	.101	.009		

* $p < .05$, ** $p \leq .001$

Table 5: Hierarchical Regression Analyses Predicting Change in Child Externalizing

	B	SE	β	R ² Δ	Adj R ²	F
T1 Externalizing	.698	.084	.859**	.290		
Demographic Characteristics						
Child Age	.064	.489	.012			
Family Income	-.000	.000	-.037	.235	.478	10.962**
Caregiver Mental Health	-.110	.097	-.096			
T1 Internalizing	-.492	.106	-.495**			
T2 Internalizing	.655	.136	.507**			
Good Discipline	-.723	1.266	-.048	.002		
T1 Externalizing	.671	.083	.825**	.290		
Demographic Characteristics						
Child Age	.036	.475	.007			
Family Income	-.000	.000	-.012	.235	.508	12.190**
Caregiver Mental Health	-.090	.095	-.078			
T1 Internalizing	-.481	.103	-.485**			
T2 Internalizing	.621	.133	.480**			
Positive Involvement	-2.760	1.313	-.177*	.029		
T1 Externalizing	.703	.083	.864**	.290		
Demographic Characteristics						
Child Age	.078	.488	.015			
Family Income	-.000	.000	-.028	.235	.482	11.102**
Caregiver Mental Health	-.116	.097	-.101			
T1 Internalizing	-.493	.106	-.497**			
T2 Internalizing	.689	.141	.533**			
Problem Solving	-1.033	1.159	-.080	.005		
T1 Externalizing	.683	.077	.839**	.290		
Demographic Characteristics						
Child Age	-.227	.453	-.043			
Family Income	.000	.000	.016	.235	.564	15.057**
Caregiver Mental Health	-.136	.089	-.119			
T1 Internalizing	-.497	.097	-.500**			
T2 Internalizing	.558	.127	.432**			
Skill Encouragement	-5.262	1.408	-.313**	.080		
T1 Externalizing	.681	.082	.837**	.290		
Demographic Characteristics						
Child Age	.030	.474	.006			
Family Income	-.000	.000	-.004	.235	.510	12.290**
Caregiver Mental Health	-.112	.094	-.098			
T1 Internalizing	-.493	.103	-.496**			
T2 Internalizing	.657	.131	.509**			
Overall Parenting Construct	-3.612	1.658	-.182*	.031		

* $p < .05$, ** $p \leq .001$

Appendix

Dissertation Proposal

According to the National Coalition for the Homeless (2008), the prevalence of homelessness is difficult to estimate. The best approximation available is that 3.5 million people, of whom 39% are children, are likely to experience homelessness each year (National Law Center on Homelessness and Poverty, 2004). This estimate is based on service provider reports throughout the country on two different dates in 1996. This finding is likely an under-representation since not all homeless people access services (Urban Institute, 2000), but it still represents about 1% of the U.S. population and, concurrently, 10% of the population in poverty (National Coalition for the Homeless, 2008). For families with children experiencing homelessness, the duration of homelessness is 5.7 months on average, which is one month longer than singles or unaccompanied children (U.S. Conference of Mayors, 2007). In a study of 50 cities, virtually every city had a much greater number of homeless people than shelter or transitional housing spaces available (National Law Center on Homelessness and Poverty, 2004). This finding makes the prevalence of homeless people much more difficult to measure, and it also indicates that families are forced to find alternative shelter due to the lack of accessible space.

The impacts of homelessness on families and children are far-reaching. Homeless families are at an increased risk for parental substance abuse and mental illness (Bassuk, Weinreb, Buckner, Browne, Bussuk, Dawson, et. al., 1996; Buckner, Bassuk, Weinrub, & Brooks, 1999) as well as child hunger, school disruption, and exposure to violence and maltreatment (Anooshian, 2005; Gewirtz & Edleson, 2007). Homeless families are also

more likely to experience family disruption. In the 2004 study by the U.S. Conference of Mayors, 56% of homeless families across 27 cities reported they had to break-up in order to enter emergency shelters (U.S. Conference of Mayors, 2004). Harburger and White (2004) found that families who are homeless or impoverished are at an increased risk for coming into contact with the child welfare system. They also determined children in homeless families are significantly more likely to be placed in foster care than poor, housed children. Overall, children who have experienced homelessness are at a high risk for developing emotional distress, depressive symptoms, and behavioral problems (Buckner, Bassuk, Weinrub, & Brooks, 1999; Schteingart, Molnar, Klien, Lowe, & Hartmann, 1995).

In the face of the tremendous risks associated with parents and children being homeless, family supportive housing has recently emerged as a possible solution to family homelessness. Although housing is a basic need, achieving housing stability has economic, psychological, and symbolic significance (Collard, 2007). Family supportive housing serves families that have experienced chronic homelessness, as defined by 12 consecutive months of homelessness or four episodes of homelessness in three years, and associated risks through domestic abuse, substance abuse, or mental illness. Family supportive housing can offer children a reprieve from the chaos of housing instability. Families living in supportive housing have inherently experienced adversity due to the eligibility criteria for admittance. Gewirtz and Medhanie (2008) found in a descriptive study that families in supportive housing have high rates of exposure to multiple risk factors and challenges to children's adjustment. These risk factors, and the inherent diversity, make this population particularly important to study (Gewirtz et al., 2009).

Despite the potential protective factors associated with rehousing homeless families, there is evidence that simply providing housing is insufficient. Families who are simply rehoused tend to be poorly integrated into their new communities (Vostanis et al., 1998) and tend to experience sustained levels of mental health needs (Karim et al., 2006). Karim and colleagues (2006) attribute these persistent issues with the fact that, even when families are securely housed, the underlying issues that led to their homelessness are not resolved, which leads to continued detrimental effects on families.

In order to address this need beyond subsidized housing, support such as case management services and access to health care may be provided to families living in supportive housing (Corporation for Supportive Housing, 2008). However, these support services may create new challenges for families. For example, in some supportive housing sites, there are restrictions like maintaining sobriety, curfews, or mandatory participation in services (Bassuk, Huntington, Amey, & Lampereur, 2006). These support services are important for protecting children and maintaining family unity, and they have been shown to increase independence and accountability, but there is some evidence that they make supportive housing more temporary (Bassuk et al., 2006).

There are not only differences in the environments in which supportive housing families live but also in populations in supportive housing and other tenuous or stressful housing situations. Families living in supportive housing are more likely to have long histories of homelessness, mental health, and substance use problems than low-income housed families. Also, parents in supportive housing tend to be older and more educated than shelter families, but this increased age and education is not associated with increased

employment. As a result, parents in supportive housing, like shelter parents, tend to remain unemployed and extremely poor (Bassuk et al., 2006).

Therefore, one needs to take into account that families living in supportive housing are in a unique living situation. They have experienced chronic homelessness but now find themselves in secure housing. Gewirtz, HartShegos, and Medhanie (2008) acknowledge that there is a lack of literature addressing the psychosocial functioning of children in this exclusive context of living in supportive housing. Because of this deficiency of existing research, families living in supportive housing are usually discussed as a sub-sample of homeless families. In this study, families in supportive housing will be specifically referred to as “formerly homeless” families, in order to better differentiate them from homeless families.

Further research on families living in supportive housing is important, as this under-studied population has the potential to offer valuable insights into effective treatment practices. Families in supportive housing are a captive audience for services, and they are in a transition period between being homeless and permanently housed. By studying families living in supportive housing, promising practices and better understanding of psychosocial functioning can potentially be extended to other homeless or low-income housed families (Gewirtz et al., 2009).

Because of the dearth of literature about homeless and formerly homeless families, a review of studies that address families in the context of poverty will supplement findings from the few studies that assess homeless families and will provide background for the current study. Comparing families in poverty to families experiencing homelessness echoes a set of assumptions made by Masten, Miliotis, Graham Bermann,

Ramirez, and Neeman (1993). These researchers hypothesized that homelessness and poverty exist on a continuum of risk, with homelessness as a greater risk. On this continuum of risk, homelessness tends to be associated with greater poverty and more recent adversity. Despite these assumptions that link poverty with homelessness, it is important to remember that homelessness is one of many risks associated with poverty (Buckner et al., 1999) and that homelessness bears its own additional risks (Masten et al., 1993). While it is important to examine poverty in light of the lack of resources specifically focused on homelessness, the additional burden of homeless families necessitates additional research.

The current study examines the impacts of parenting on children's internalizing and externalizing problems in the context of former homelessness. In order to build a foundation for the current study, existing literature on parenting, children's adjustment, and the relationship between parenting and adjustment will be examined, both within the context of homelessness, when literature is available, and the context of poverty, to supplement the limited resources focusing on homelessness. In this study, the role of parenting in children's adjustment will be examined both concurrently and over time, with baseline parenting predicting children's adjustment at one-year follow-up, as well as the change in adjustment between these two time points. Parenting and children's adjustment in families experiencing homelessness is a significant gap in the current literature. This study will help to develop a fundamental understanding of these two important aspects of family functioning in an extremely high-stress context.

Homelessness, Poverty, and Children's Adjustment

This section discusses the role of poverty and homelessness in children's adjustment to provide a context for examining these constructs alongside parenting. As is common in child development research (Eamon, 2000), this study classifies children's psychopathology into externalizing or internalizing problems. Externalizing behaviors include uninhibited behaviors (Kovacs & Devlin, 1998), in which negative emotions are directed outwardly through expressions of anger, aggression, and frustration (Roeser et al., 1998). Conversely, internalizing problems include withdrawal, inhibition, anxiety, depression, and the tendency to direct negative emotions inwardly at one's self (Roeser et al., 1998). Both internalizing and externalizing problems can lead to difficulties in school, peer relationships, and long-term mental health (Aunola & Nurmi, 2005; Roeser et al., 1998).

Children from lower income families tend to have more internalizing and externalizing symptoms than children from high income families (Achenbach, Howell, Quay, & Conners, 1991; Keiley, Bates, Dodge, & Pettit, 2000; Nottelman & Jensen, 1995). Stressful life events that co-occur with poverty tend to lead to both internalizing and externalizing behaviors (Keiley, Lofthouse, Bates, Dodge, & Pettit, 2003). Poor children are impacted not only by experiencing the effects of poverty on their families but also their own poverty-related stress (Wadsworth et al., 2008). Internalizing and externalizing behaviors tend to occur simultaneously in children experiencing poverty-related stress (Grant, Katz, Thomas, O'Koon, Meza, DiPasquale, et al., 2004; Achenbach et al., 1991).

The stress of urban poverty, in particular, has been shown to be associated with rates of externalizing and internalizing symptoms that surpass rates in normative samples (Achenbach, Howell, McConaughy, & Stanger, 1995; Conger, Conger, Elder, Lorenz, Simons, & Whitbeck, 1993). In their studies of low-income urban youth, Grant and colleagues (Grant et al. , 2004; Grant et al., 2000), found that low-income urban children were significantly more likely to score at clinical levels than normative samples in internalizing and externalizing behavior scales.

Eamon (2000) uncovered similar findings that children who come from low income families are more likely to experience problems including internalizing and externalizing behaviors. Furthermore, she contends that these internalizing and externalizing behaviors that children experience early in life have the potential to generate problems in disrupting peer relations, school problems, and delinquency. The longer children live in poverty, the greater their feelings of anxiety, unhappiness, and stress as well as a greater focus on the limited financial resources as the primary determinant of family strain (McLeod, & Shanahan, 1993). Masten (1994) found that externalizing symptoms were directly related to chronic stressors associated with poverty and that externalizing symptoms may have a link to more long-term family problems, stressors, and dysfunction than internalizing symptoms. Wadsworth and colleagues (2008) argue that living in persistent poverty is damaging to children's mental, physical, and educational health. The authors further claim that the effects of poverty-related stress can later contribute to deviant behaviors, such as teenage pregnancy, dropping out of school, and substance abuse, all of which can have long-term negative consequences.

Similarly, Keiley et al.'s (2003) study of parent and teacher reports of low-income children's adjustment revealed that both mothers and teachers rated children from lower SES backgrounds as having greater externalizing problems than children from higher SES backgrounds. However, of the two groups of reporters, only teachers reported that lower SES children had higher internalizing symptoms and greater internalizing-externalizing composite scores than higher SES children. Parents, on the other hand, tended to underestimate their children's internalizing. The authors attributed teachers' increased likelihood to rate lower SES children with higher symptoms to the idea that teachers are more aware of the effects of SES on children's adjustment.

A school-based community sample of low-income children and families revealed that parents had significantly more positive ratings of their children's adjustment than teachers reported (Lee, August, Gewirtz, Klimes-Dougan, Bloomquist, & Realmuto, 2010). However, in the same study, a matched sample of families living in supportive housing revealed no significant differences between parent and teacher reports of children's adjustment, and parents tended to report slightly greater problems. Lee and colleagues (2010) attributed the higher parent ratings in the community sample and the lack of significance in the supportive housing sample, to the fact that better-adjusted parents in the community sample have more positively biased views, especially with regard to their own children. This finding is in contrast to the sample group of parents living in supportive housing, who were shown to have experienced more emotional distress and are less likely to have a positive bias in their reports of their children's behaviors.

Homeless children in particular have been shown to have scores well above those of the general population on both internalizing and externalizing behavior scales (Buckner et al., 1999; Masten et al., 1993; Vostanis et al., 1998). Homeless children are also more likely to score in the clinical range on internalizing and externalizing scales than the normative population (Masten et al., 1993). Similarly, drawing from the same sample as the current study, both Gewirtz, DeGarmo, Plowman, August, and Realmuto (2009) and Lee et al. (2010) found that formerly homeless children had higher levels of maladjustment than the normative population, but the latter study found similar levels of adjustment problems as a matched community sample of children who had been identified as early aggressive by teachers. Gewirtz, Hart Shegos, and Medhanie (2008) examined psychosocial survey data from case managers and parents of children living in the same supportive housing sites that are included in the present study. They found that over 20% of the children were reported to seem depressed or anxious, findings that mirror similar findings from children living in poverty (Gewirtz, et al., 2008).

When comparing homeless children to low-income housed children, though, Vostanis et al. (1998) found that there were significantly more homeless children with clinical-range externalizing or internalizing scores than low-income housed children. Vostanis et al. also determined that homeless children had significantly higher internalizing and externalizing scores.

In contrast, Buckner et al. (1999) established that homeless children had significantly higher scores than low-income housed children and were more likely to score in the clinical range only in internalizing, not in externalizing behaviors. In Buckner et al. (1999)'s study, homeless children had higher levels of externalizing

symptoms than low-income housed children, though the difference was not significant. Both groups, though, had significantly higher levels of externalizing symptoms than the general population.

According to Buckner et al. (1999), there is a curvilinear relationship between internalizing problems and the duration of homelessness in which children experiencing fewer than eight weeks, or more than 16 weeks, of homelessness demonstrated fewer internalizing symptoms than children experiencing 10 to 15 weeks of homelessness. It should be noted, nonetheless, that children who experienced persistent homelessness tended to be above normative levels for internalizing problems, even after experiencing a decrease in symptoms.

Children who become rehoused after experiencing homelessness tend to show a decrease in disruptive behaviors (Karim, Tischler, Gregory, & Vostanis, 2006). However, even after becoming more stably housed, children still had mental health and behavioral problems (Karim et al., 2006). These findings are similar to those of Vostanis, Grattan, and Cumella (1998), in which rehoused children had significantly higher levels of mental health issues one year after a bout of homelessness than low-income, stably housed children. These two studies demonstrate that children remain vulnerable to risk factors even after some stabilization. This finding may be associated with the continued likelihood of future mobility for families who have already experienced homelessness (Karim et al., 2006). These findings demonstrate that, although there are parallels between children living in poverty and children who are homeless in terms of risk for internalizing and externalizing problems, the context of homelessness provides unique stressors that require additional research to better understand.

Factors Influencing Homeless Children's Adjustment

Certain demographic or environmental characteristics have been shown to influence children's adjustment in the context of homelessness or poverty. High levels of externalizing problems were reported for all ages of homeless children, but internalizing problems were greater among younger girls (Masten et al., 1993). Younger homeless girls had the most behavioral and emotional problems overall, while, in a comparable low-income housed sample, adolescent girls had the most problems. This is contrary to Buckner et al, (1999)'s study in which age was not associated with internalizing behaviors among homeless children, but it was associated with externalizing behaviors in which older children had more aggressive behaviors than younger children.

Time is another factor that has the potential to impact children's adjustment. Overall, studies tend to support the notion that internalizing and externalizing scores remain stable over time (Aunola, & Nurmi, 2005; Denham et al., 2000; Jones, & Forehand, 2003). This stability does allow for changes in children's adjustment, but overall, adjustment tends toward stability. Jones and Forehand (2003) found that there was a slight decrease in internalizing symptoms early although symptoms did, eventually, become stable. When internalizing and externalizing problems have been shown to change, they tend to change together over time (Gilliom, & Shaw, 2004; Keiley, Bates, Dodge, and Pettit, 2000)

Parenting and Children's Adjustment

One specific factor that has been shown to strongly influence children's adjustment is parenting. Families are meant to provide a source of stability and cohesiveness for children (Bretherton, Walsh, Lependorf, & Georgeson, 1997;

Cummings, Davies, & Campbell, 2000). Family support tends to be related to resilience in youth (Forehand, Wierson, McCombs, Aristead, Kempton, & Neighbors, 1991; Garnezy, 1993; Masten & Coatsworth, 1998; Seifer, Sameroff, Baldwin, & Baldwin, 1992; Wyman, Cowen, Work, Hoyt-Myers, Magnus, Fagen, et al., 1999). Family support has been shown to be a protective factor in which the quality of family interactions lowers youth externalizing and, to a lesser extent, internalizing symptoms. The relationship between family support and internalizing symptoms was only apparent when risk was relatively low (Li, Nussbaum, & Richards, 2007).

Both parent-child relationships and specific parenting practices have been found to have robust associations between family processes and youth adjustment (Kazdin, 1987; Loeber & Stouthamer-Loeber, 1986). In particular, negative parenting behaviors, such as hostility, rejection, poor monitoring, and harsh discipline, have been linked to externalizing behaviors. Conversely, positive parenting behaviors, such as constructive discipline, warmth, support, and consistent behavior control, have the potential to lower the risk for mental health issues in families experiencing stressful life events (Stern, Smith, & Joon Jang, 1999). Socio-emotional adjustment can be supported by warm, responsive, engaged, consistent parenting (Eamon, 2000).

Forgatch, Patterson, and DeGarmo (2005) describe five core parenting skills that collectively embody effective parenting in the context of the Social Interaction Learning model described in the Theoretical Models section of this paper. The first is skill encouragement, which includes breaking exercises into small, manageable steps, prompting appropriate behaviors, and using positive reinforcement to promote pro-social development. The next skill, known as effective discipline, or limit setting, is done

through the use of mild sanctions, such as privilege removal or time out. Third, monitoring, or supervision, includes tracking children's behaviors, friends, and activities. The fourth skill, problem-solving, is used to settle family disagreements, establish rules, and identify consequences for breaking rules. Finally, the last skill, identified as positive involvement, involves displaying warmth and loving attention toward the child. Martinez and Forgatch (2001) expand upon this conceptualization to explain that effective parenting not only includes these five domains but also incorporates the lack of coercive parenting, which is defined as negative reinforcement, negative reciprocity, and inept discipline.

Parenting can impact not only a child's behavior in the home but also in school. Parents can improve school success by teaching children positive social, behavioral, and problem solving skills (DeGarmo, Forgatch, & Martinez, 1999). Parents who have good problem solving skills can instill these abilities in their children. This transfer of problem-solving and reasoning skills has been shown to have a stronger impact on children's adjustment than either parental education or occupational status (Blechman & McEnroe, 1985). Strong family problem solving tends to improve children's behavior both at home and at school (Forgatch & DeGarmo, 1997; Forgatch, Patterson, & Ray, 1996). Skill-building activities in the home helped to shape the school achievement of boys of single mothers and mediated the relationship between maternal education and occupational attainment and the boys' academic success (DeGarmo, Forgatch, and Martinez, 1999).

It is important to examine these specific parenting behaviors in order to fully understand the impact of parenting on children's adjustment. DeGarmo, Forgatch, and

Martinez (1999) found that a more specific dimension of parenting, structuring home to encourage school success, mediated the relationship between general parenting and academic achievement. The role of specific, discrete parenting skills may be more proximal to child outcomes than general parenting, and, thus, they may have a more direct effect (Martinez & Forgatch, 2001). Examining the specificity of parenting is an emerging need within the parenting literature (McKee, Forehand, Rakow, Reeslund, Roland, Hardcastle et al., 2008). McKee and colleagues (2008) contend that parenting is most effectively studied through the examination of each individual dimension of parenting, and how these dimensions influence each other, particularly when exploring the role of parenting in children's adjustment.

However, it must be noted that parenting can have either a negative or positive impact on children's adjustment, depending on the context and the parenting behaviors demonstrated. Parenting difficulties influence internalizing and externalizing symptoms in children (Forman & Davies, 2003). McLeod, Weisz, and Wood (2007) conducted a meta-analysis of 45 studies to provide an estimate of the strength of the relationship between parenting and childhood internalizing. They found a medium effect and that parenting, whether negative or positive, explains about 8% of the variation in childhood internalizing. The authors assert that the expression of distress is likely related to complex interactions between contextual influences, and negative parenting could play a catalytic role among children vulnerable to distress for other reasons, such as adverse life events. Children's externalizing behaviors were found to be associated with harsh and coercive parenting (Ackerman, Brown, & Izard, 2004; Keiley et al., 2003; Patterson, 1982), which has been shown when using both mother and teacher reports of children's

externalizing behaviors (Dodge, Pettit, & Bates, 1994; Keiley, Howe, Dodge, Bates, & Pettit, 2001). Children's age may also influence the impact of parenting on children's adjustment. Eamon (2000) describes how parenting may have a stronger influence on younger children than older children because, as children age, their socialization experiences occur increasingly out of the home.

Parenting in Poverty and Homelessness

Parenting itself is also impacted by poverty and homelessness. Although homelessness and poverty are not synonymous, both are forms of adverse life events that are inherently connected. The lack of literature about parenting in the context of homelessness, or former homelessness, necessitates exploration of parenting in poverty to provide a basic groundwork to understand parenting. Because families in poverty tend to have an accumulation of risk factors, parents are placed in a crucial role, as protectors of their children and conduits to mental health services. However, when families experience adverse life events, including homelessness and poverty, parents are less likely to express warmth or positive parenting behaviors (Forman & Davies, 2003).

McLoyd (1990) wrote a powerful literature review, which is still largely cited today, about poverty's effect, specifically on black families. In this review, McLoyd addresses how economic hardship independently, and cumulatively with other stressors, influences parenting behaviors. She describes the mechanisms in which poverty makes black families more sensitive to additional stressors by weakening their ability to cope. The negative consequences of this additive stress are particularly salient if the stressors are perceived as being outside of a family's control. According to the Family Stress Model (Conger & Elder, 1994), which is described in greater detail in the Theoretical

Models section of this paper, this increased stress, and decreased coping ability, lowers the capacity of parents in poverty to be supportive, sensitive, and involved.

Similar to McLoyd's work, Trentacosta, Hyde, Shaw, Dishion, Gardner, and Wilson (2008) attribute the relationship between poverty and children's adjustment to the challenges poverty poses to a parent's capacity to provide positive, attentive care, nurturance, and involvement. Emotional responsiveness, such as verbally replying to children, conveying positive emotions, and showing affection, are less common among recently poor mothers than mothers who are not poor (Eamon, 2000). In addition, children in recently poor families are less likely to be engaged in cognitive skill development activities with their parents, including learning the alphabet, colors, or shapes. This unresponsiveness and lack of stimulating activities with a parental figure contribute to the relationship between poverty and children's adjustment (Eamon, 2000).

To further this point, McLoyd asserts that poor parents are more likely to use physical punishment and unexplained commands and, conversely, are less likely to use rewards and child input in decisions. These statements have been supported by studies such as McLeod and Shanahan's 1993 study in which poor mothers were found to use physical punishment on their children more than non-poor mothers and this discipline contributes to the relationship between poverty and children's mental health.

Although negative parenting, especially in view of family stress, can be an additional risk to children's mental health, positive parenting can function as a protective factor. Sameroff (2005) delineates positive parenting practices based on different circumstances. He argues that, in high stress situations, such as poverty or homelessness, parental control, monitoring, and warmth are protective. However, in less stressful

situations, democratic decision-making and autonomy building may function as better protective factors than control and monitoring. Grant and colleagues (2000) found that parent-child relationships have the potential to mediate the relationship between stressful life events and psychological symptoms. As a protective factor, parental discipline and monitoring, specifically, have been shown to mediate the relationship between poverty and externalizing behaviors in school-age children (Larzelere & Patterson, 1990).

Although the existing literature tends to focus on poverty rather than current or former homelessness, these two subjects are inherently interconnected. Both of these topics serve as severe forms of family stress, so one would expect that the ideas posed here, that pertain to poverty, would be valid in regard to homelessness as well.

There have been just a small handful of studies to date that assess parenting in the context of homelessness. Bassuk, Huntington, Amey, and Lampereur (1997) replicated the broader literature of parenting and children's adjustment, finding that, among homeless preschoolers, parenting practices are associated with adjustment. Also consistent with the broader literature in this area, Gewirtz and colleagues (2009) found that both parenting practices and parenting self-efficacy had strong effects on children's adjustment. Specifically, they found that more positive and less coercive parents had children who displayed fewer internalizing and externalizing behaviors. In this study, observed parenting was more proximal than parenting self-efficacy, and observed parenting mediated the relationship between parenting self-efficacy and child outcomes. A study by Koblinsky, Morgan, and Anderson (1997), which compared homeless and low-income housed mothers of young children, found that homeless mothers provided less structure, warmth, and acceptance than low-income housed mothers. These

parenting behaviors have been found to be reduced in low-income parents in general (Conger et al., 1993; Grant et al., 2000; Trentacosta et al., 2008). Homeless mothers exhibiting even more challenging parenting behaviors leads to the conclusion that homeless families could be at a greater risk of negative outcomes associated with parenting.

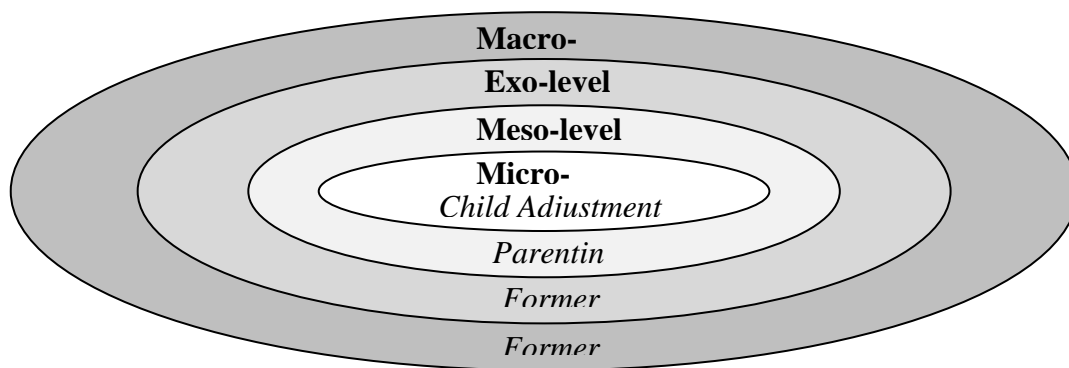
Theoretical Models of Parenting and Children's Adjustment

Three frameworks collectively help to explain the mechanisms by which parenting is associated with children's adjustment in the context of homeless or formerly homeless families. Bronfenbrenner's Human Ecology Model provides an overarching theoretical framework in which parenting, children's adjustment, and homelessness can be viewed. In support of the Human Ecology Model, Patterson's Social Interaction Learning methods identify the specific role of parenting in children's adjustment and Conger and Elder's Family Stress Model demonstrate the how poverty impacts both of these concepts.

Human Ecology Theory (Bronfenbrenner, 1977, 1979) provides a theoretical framework for assessing the role of adverse life parenting in children's adjustment. Bronfenbrenner's (1977, 1979) theory takes into account the impact of the larger community on the family and on the individual. It also includes the bi-directional influence from one level to another. The Human Ecology model is often depicted as a series of four concentric circles, each representing a different relative position to an individual. The center of this model is the micro level, which is the individual, or, in this case, the child. Parenting is on the next level, the meso level of the Human Ecology model, and is impacted by the micro (individual level) and the exo and macro

(community and societal levels). The stress associated with living in supportive housing can be present in any level of the Human Ecology model, and the impacts can be found on both the individual and the family levels of the model. A child's adjustment is situated as a micro-level characteristic. However, parenting is situated at the meso-level. These levels of the theory help to describe processes occurring within individuals and families.

Figure 1. Human Ecology Model



Stern et al. (1999) explain that, under the Human Ecology Theory, the same family processes that are associated with negative youth adjustment can be intensified by adversity the family is experiencing due to the complex intersections between ecological systems. Economic stress can disrupt parent-child relationships and parenting skills, which, then, can have an impact on the child's adjustment (McLeod & Shanahan, 1993; Stern et al., 1999). Martinez and Eddy (2005) used the Human Ecology Theory to examine the role of parenting in children's adjustment in the context of family stress. In their study, they focused on the interrelationship between the four levels of the ecological model and how family stress stemming from immigration impacts youth adjustment, both directly and indirectly, through impacts on the other levels of the model. Belsky has also applied the Human Ecology Theory to stressful parenting (1984) and child maltreatment

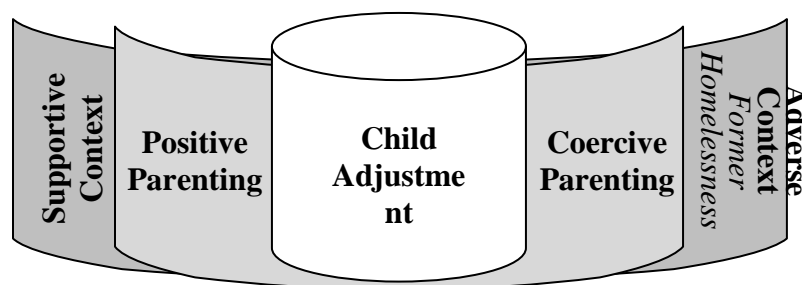
(1981). In both articles, he describes how outside societal factors, such as stress, poverty, and isolation, can impact both the parent and the child as individuals and can also influence the parent-child relationship. Belsky believes that parents and children have individual characteristics and life experiences, the family unit has shared characteristics and experiences, and each of these is inherently connected.

Belsky (1984) argues that, under the ecological model, if one determinant is lacking, strengths in another can buffer the entire system from negative consequences. Belsky also believes that positive parenting is one of the most salient buffers for child outcomes. If a parent can offer positive parenting skills, this attribute can be more powerful than either contextual subsystems or child characteristics for child outcomes. Parenting can serve as a buffer between external stressors associated with being formerly homeless and the child's internalizing and externalizing behaviors.

To operate this systemic model, Patterson's (1982) proposed Social Interaction Learning model (SIL) explains how adverse life events impact parenting practices and child outcomes. The Social Interaction Learning model emphasizes the importance of including context in examinations of parent-child relationships. Homelessness is an extreme context that has the potential to alter the relationship between parenting and child outcomes. Patterson asserted that coercion in families was particularly associated with children's behavior problems, and that stressful life events, including poverty and homelessness, often lead to coercive parenting by increasing a family's dysfunctional patterns. Positive parenting behaviors can help supplant coercive parenting to promote positive child outcomes (Gewirtz, et al., 2009). Increases in positive parenting and decreases in coercive parenting are associated with more positive child adjustment

outcomes. In both the Human Ecology Model and the Social Interaction Learning model, parenting functions as an important mechanism through which the context of former homelessness impacts children.

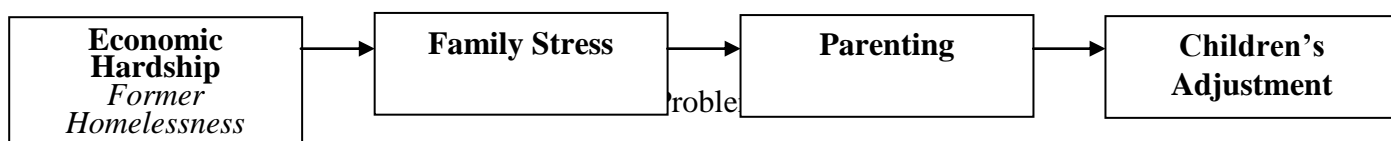
Figure 2. Social Interaction Learning Model



To further examine the role of financial strain, which is a core component of homelessness, on the family, Conger and Elder (1994) developed the Family Stress Model of economic hardship that captures how economic stress affects families and children. In this model, low family income leads to economic pressure, which impacts parental mood and relationship. The impacts on parental mood and relationship create more irritable and less supportive interactions with partners and children. These patterns of behavior disrupt effective parenting practices and can lead to developmental problems, such as depressed mood. Conger et al. (1993) contend that, first, stressful life events negatively impact parental mental health, thus limiting parental warmth and support and increasing hostility, which, in turn, influences children's mental health. Parents are simultaneously experiencing similar stressful life events to what their children are experiencing, including major life events and daily hassles (Grant, et al., 2000). When these stressors increase the parent's mental health symptoms, the parent is less able to protect the child from the same set of stressors. Similar to the Social Interaction Learning model, it is the context, which in this case is financial stress, which impacts parenting,

which in turn impacts children. While the Social Interaction Learning model focuses specifically on the role of parenting, the Family Stress Model of economic hardship focuses specifically on the role of financial strain. Both of these models demonstrate the ways in which former homelessness impacts the relationship between parenting and children's outcomes.

Figure 3. Family Stress Model



It is important to identify the risks associated with child adjustment because of the impact internalizing and externalizing behaviors can have throughout the lifespan (Trentacosta et al., 2008). This examination of risks is especially important for children experiencing homelessness (Wadsworth et al., 2008). While there is a large body of literature about the influence of parenting on children's internalizing and externalizing behaviors, there is a significant lack of research specifically focusing on the context of current or former homelessness (Gewirtz et al., 2009). As the theoretical models included in this paper demonstrate, context can have an important impact on how all relationships within that context function. Former homelessness, as a particularly high-stress context, can impact parenting, children's adjustment, and the relationship between the two to the extent that they function differently than they would in families experiencing lower stress. Gewirtz and colleagues (2009) highlight the immense need for further knowledge of parenting in homeless families, and specifically among those living in supportive housing. They describe how there is a limited number of studies focusing on parenting in homeless families, and only their study to date has examined parenting in

families living in supportive housing. The authors argue that homelessness inherently limits a parent's ability to parent effectively, which makes it an important population to continue to investigate.

Assessing the impacts of parenting on children's adjustment over time allows for stronger evidence of the causal relationship between these two variables (McKee et al., 2008). Gewirtz et al. (2009) argue that the lack of longitudinal studies assessing parenting and child adjustment limits our understanding of how baseline parenting can impact adjustment over time. While the Gewirtz et al. article demonstrates that there is a concurrent relationship between baseline parenting and baseline children's adjustment problems, what is missing in their study is the time dimension that is present in the current study. Examination of children's adjustment longitudinally is important for both research and practice (Jones & Forehand, 2003).

Another important approach that is under-utilized in this body of research is the use of observational parenting measures. No studies to date have used observational methods to assess parenting practices in homeless or formerly homeless families, with the exception of the study completed by Gewirtz et al. (2009), which is drawn from the same sample as the present study. Observational parenting assessments have been shown to be a valid source of parenting data (Aspland & Gardner, 2003). Observational measures of parenting can help to increase the confidence with which conclusions about the role of parenting can be drawn (McLeod, Weisz, & Wood, 2007). Observational measures allow for a unique opportunity to examine how parents interact with their children as opposed to how they believe they interact with their children (Aunola & Nurmi, 2005).

To help address these gaps in the existing literature, the current study will explore the association between observed parenting and children's adjustment over time in a formerly homeless sample. The following hypotheses will be examined to facilitate this exploration:

- 1) School-aged children's internalizing and externalizing problems will be moderately stable between baseline and one-year follow-up.
- 2) More effective observed parenting at baseline will be associated with lower school-aged children's internalizing and externalizing problems at one-year follow up.
- 3) More effective observed parenting at baseline will be associated with a differential decrease in internalizing and externalizing problems between baseline and one-year follow-up.

Methods

Participants

Participants will be drawn from the first wave of the Early Risers: Healthy Families prevention study (Gewirtz, 2007). The prevention study consists of 236 children and their families recruited through 16 supportive housing sites in the Twin Cities metropolitan area. The sites were randomly assigned into either control (services as usual) or treatment sites. In both types of sites, case managers identified families who had at least one child between the ages of 5 and 12 years. Control site families were recruited by project interns while treatment site families were recruited by paid family advocates; all families were assessed by trained undergraduate and graduate students.

Siblings were included in this larger study. However, because the current study examines parenting, which is family level data, the inclusion of siblings will lead to

replicated data and bias. Therefore, target children were identified by assigning each child within a family a number and then randomly selecting one child from each family by their number. The 156 target children in this study ranged in age from five to 12 years of age ($M = 7.51$, $SD = 1.854$), and just under half were female (49.1%). The children were identified by their parents as being Black (34.6%), White (14.1%), Multiracial (14.1%), Native American (3.2%), Hispanic (1.9%), of another race (1.3%), or undisclosed (31%). Eighty-seven percent of the households were reported to be single-parent households. Family income ranged from no income to \$36,000 in the previous year ($M = \$10,970.01$, $SD = \$5,845.73$). The number of dependents parents identified ranged from 1 to 7 ($M = 3.24$, $SD = 1.18$). Ninety percent of the households in the study were considered below the poverty line. This sample was also highly mobile with 10% of the 156 target families included in this study reporting moving out of the supportive housing facility prior to their participation in the baseline assessment, and 44% reporting moving between the baseline and one-year follow-up assessments. These moves did not disqualify the families from participating in the intervention or the study.

Procedures

Families were visited in their homes for data collection both at baseline and approximately one year later. At both time points, parents provided informed consent for both themselves and permission for their children to participate in the study. In the presence of their mothers, children then assented to participate in the study. Parents and children who chose to join the study were interviewed separately in as private of spaces as the living arrangements allowed. The interviewers were undergraduate and graduate students or professionals in psychology or related areas who received training on standardized administration, research ethics, and working with traumatized parents and children. Pilot

administrations were used to train interviewers and to test inventories to make sure that they were appropriate for our population and would be understood by our youngest participants.

Detailed questionnaires were administered verbally to parents and children in order to ensure participant understanding. Any siblings present in the home at the time of data collection were watched by an undergraduate intern to prevent disruption and protect confidentiality. Once the extensive questionnaires were completed, parent and child were reunited to complete observation tasks. These observation tasks included a series of games, puzzles, and problem solving discussions. The tasks were videotaped in order to be coded for parenting skills. Parents were given \$25 gift certificates and children were given small toys for the participation in the assessments.

Measures

Child Adjustment

Child adjustment was measured using the teacher-report internalizing and externalizing scales of the Behavior Assessment System for Children, Second Edition (BASC-2, Reynolds & Kamphaus, 2004). Both the internalizing and externalizing scales derive t-scores, in which a descriptive label of very low (30 and below), low (31-40), average (41-59), at-risk (60-69), and clinically significant (70 and above) is given to a child's converted raw scores on each scale and composite. A t-score is calculated to determine how far the raw score is from the norm-group means for an individual child.

The BASC-2 Teacher-Rating Scale (TRS) is a 148-item questionnaire that measures teacher's perceptions of children's positive and negative emotions and behaviors. Teachers respond to items of observed behaviors by answering never (0), sometimes (1), often (2), or always (3). The internalizing composite is created by combining the Anxiety, Depression, and Somatization scales of the measure. The

externalizing composite consists of the Hyperactivity, Aggression, and Conduct Problems scales. The internalizing scale of the TRS has an internal consistency of .91, the externalizing scale has an internal consistency of .95, and the TRS has a test-retest reliability of .90 (Reynolds & Kamphaus, 2004).

Parenting

Trained coders coded videotaped parent-child interaction tasks to evaluate parenting effectiveness. The interaction tasks were drawn from prior observational parenting studies and demonstrate convergent validity and external validity (Forgatch & DeGarmo, 1999; Weinfeld et al., 1995). The specific tasks that were observed included: discussion of a difficult issue parents chose and a difficult issue children chose; a guessing game in which parents and children took turns providing clues to help the other guess specific words or pictures; a modified Labyrinth board game that was played both cooperatively and competitively; and a series of Tangoes puzzles that parents were instructed to help children complete. The videotaped tasks were coded using validated ratings of skill encouragement, positive involvement, problem solving outcome, and good discipline. Trained coders assigned Likert-type ratings that corresponded with tasks targeted at each key parenting practice. Forty (24%) of the observation tasks were coded by two or more coders to ensure inter-rater reliability. Based on these double-coded tapes, intra-class correlation coefficients (ICCs) ranged from .54 to .88. Specific information about each of parenting subscales is included below.

Effective parenting construct. The effective parenting construct was an overall composite score created by averaging the four key parenting practice scores below. The

overall effective parenting construct score ranged from 1 to 5, with 5 signifying effective parenting behaviors. The intra scale correlation is 0.79.

Skill encouragement. Skill encouragement was assessed from 9 items rating the mother's ability to promote children's skill development through encouragement and clear directions. This skill was observed during the games played between mother and child. Items on this scale include: *breaks task into manageable steps, reinforces success, prompts, and corrects appropriately.* Items were rated on a 5-point scale. Cronbach's α is 0.54.

Positive involvement. Positive involvement was assessed from 31 items selected from all of the tasks. Items on the positive involvement scale included ratings of mothers' *warmth, empathy, encouragement, affection, acceptance, and respect of child.* Items were rated on a 5-point scale. Cronbach's α is 0.88.

Problem solving outcome. Problem solving was assessed with a 9-item scale based on the problem solving discussions. Items in this scale included: *solution quality, extent of resolution, apparent satisfaction, and likelihood of follow through.* Items were rated on a 5-point scale. Cronbach's α is 0.72.

Good discipline. Discipline was an 11-item scale score derived from scores across all tasks. Items on the original scale measuring inept discipline scale included: mother was... *overly strict, authoritarian, erratic, inconsistent, oppressive, erratic, and used nagging or nattering to get compliance.* Items were rated on a 5-point scale. This scale was then reverse coded so that a high number was indicative of good parenting. Cronbach's α is 0.69.

Caregiver Mental Health

The Brief Symptom Inventory (Derogatis & Spencer, 1982) is a 53-item questionnaire that assesses the primary caregiver's overall distress and psychopathology. The caregiver was instructed to indicate how distressed he or she has felt by each symptom (e.g., "poor appetite," or "feeling inferior to others") during the past 7 days. The response choices were "not at all (0)," "a little bit (1)," "moderately (2)," "quite a bit (3)," and "extremely (4)." An overall Global Severity Index was derived by averaging the responses provided on each item. The BSI has demonstrated good internal consistency (alpha reliability for the nine sub-scales ranged from 0.71 to 0.85), test-retest reliability (.90), and convergent and discriminate validity (Derogatis & Spencer, 1982).

Demographic Characteristics

Characteristics of the children and the family were collected from parents using a brief biographical survey during recruitment into the study and as needed during subsequent data collection periods. Child age was derived from the child's birth date and the date of recruitment into the study. Child gender a dichotomous variable provided by parents. Family income was calculated based on the parents' report of each source of income the household received, including from social services, paid work, child support, other adult contributors, or untaxed income. Family mobility was assessed as a dichotomous variable indicating whether or not a family moved residence between recruitment and the second wave of data collection. Some families may have moved multiple times within that period, but only the presence or absence of a move was collected.

Data Analysis

Identification of Target Children

The sample of the larger prevention study includes any children in a family between the ages of 5 and 12, which means that siblings are included in the sample. It was important to identify one target child for each family for this particular study because parenting is a family-level variable that would violate the assumption of independence if it was included for multiple siblings. The first step in data analysis for this study was, therefore, to select these target children and remove any siblings from the dataset. In order to do this, children within sibling groups were randomly selected by assigning all children numbers based on their position in the family and randomly generating one number for each family that corresponded with one of the children in that family. Overall, there are 253 children in this study; after selecting target children, there are 156 children remaining.

Missing Data

Missing data is evenly distributed between variables, but the patterns of this missing data vary across participants. Eighteen percent of families had all of the key variables missing, and seven percent only have parenting scores. An additional seven percent only have baseline adjustment scores, and 21% of families only have follow-up adjustment scores. Four percent of families are only missing their baseline adjustment scores, and 18% are only missing their follow-up adjustment scores. Finally, four percent have all of their adjustment scores but are missing their parenting data. Because this missing data decreased the sample drastically, imputation was used for the analyses rather than list-wise deletion.

Based on current literature, using a reliable imputation method such as expectation maximization (EM) to recover missing data is preferable to case deletion when data is missing at random (Enders, 2004; Schafer & Graham, 2002). T-test and chi-square comparisons between families with complete data, and those populations with missing data, showed no statistically significant differences on any of the dependent, independent, or demographic variables included in this study. Specific variables tested include: child age ($t[150] = -1.928, p=.056$), child gender ($X^2(1, N = 108) = .176, p=.749$), child ethnicity ($X^2(6, N = 108) = 2.244, p=.896$), baseline ($t[106] = -.798, p=.427$) and follow-up ($t[74] = 2.655, p=.109$) internalizing scores, and baseline ($t[107] = -1.230, p=.222$) and follow-up ($t[74] = -.680, p=.499$) externalizing scores. Based on this evidence, the data were eligible for data imputation (Schafer & Graham, 2002). We used EM (SPSS 14.0, SPSS Inc, 2004) to estimate values for missing data. All of the missing data was imputed, with the exception of the data for the participants missing all of the parenting and adjustment variables ($n = 28$) or participants missing the baseline adjustment scores ($n = 51$), making the final sample size for continuous variables 77 participants.

Hypothesis Testing

Once the final sample is established, the first two hypotheses will be tested by examining bivariate correlations between parenting and adjustment key variables. A series of ten regression equations will then used to test the third hypothesis, one for each parenting dimension, and one for each child outcome (see Table 3). Adjustment at one-year follow-up will be the dependent variable. The baseline internalizing or externalizing scores that correspond with the dependent variable will be entered as the first step of the

regression equations. This allows for the unique contribution of baseline adjustment on one-year follow-up adjustment to be detected and controlled for in later steps of the regression. The next step of the regression will be to add other demographic control variables of child age, family income, and caregiver mental health. Additional demographic characteristics, such as child gender and family mobility were tested, but did not were not significantly associated with any of the adjustment or parenting variables, and will therefore be excluded from further analysis. Also included in the second step will be the baseline and follow-up score for the opposite form of adjustment from the form serving as the dependent variable. Caron, Weiss, Harris, and Catron (2006) asserted that the unique effect between and parenting variable and a child outcome can only be specified if a co-occurring child outcome is controlled for in the equation. The authors operationalized this approach of examining whether a specific parenting behavior has a disparate relation with two child outcomes, such as internalizing and externalizing symptoms, as assessing “differential” effects. Finally, the specific parenting scales will be entered individually as the third step in the corresponding regression equations. The significance of each these variables over and above the contribution of the baseline adjustment scores and the alternative adjustment scores serve to test the third hypothesis.

Assumption Testing

Before testing the hypotheses, descriptive data was examined for each variable addressed in this study. Key variables that will be tested for normality and any other applicable statistical assumptions are: each of the four key parenting scores; the overall effective parenting construct score; teacher report of child internalizing at baseline and

follow-up; and teacher report of child externalizing at baseline and follow-up (see Tables 1 and 2). Each of the key variables appears to adequately meet the assumption of normality.

There are five primary assumptions that must be met in linear regression (Howell, 2002). These are: a) linearity of the relationship between dependent and independent variables; b) no range restriction/truncation; c) homoscedasticity; d) no outliers; and e) adequate sample size. The scatterplots (Figures 1 and 2), show support for linearity and homoscedasticity, as well as a lack of truncation and serious outliers. The sample size for this study, after imputation, is 77 families, which is adequate for nine predictors and a large effect size (53 participants is required; Cohen, 1988).

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Table 1: Descriptive data for key variables

	Minimum	Maximum	Median	Mean	Standard Deviation
BASC- Internalizing Baseline	41.00	99.00	53.67	56.01	10.93
BASC- Internalizing Follow-up	41.00	78.33	54.00	55.22	8.40
BASC- Externalizing Baseline	41.67	106.33	58.67	60.27	13.34
BASC- Externalizing Follow-up	34.46	92.97	56.76	58.33	10.85
Baseline parenting - Skill encouragement	1.20	3.78	2.00	2.12	0.64
Baseline parenting - Positive involvement	1.75	4.96	3.41	3.40	0.69
Baseline parenting - Problem solving	0.80	4.33	1.72	1.90	0.84
Baseline parenting - Good discipline	1.65	4.90	3.66	3.53	0.72
Baseline parenting - Effective parenting	1.65	4.38	2.71	2.74	0.55

Table 2: Correlations between key variables

	2	3	4	5	6	7	8	9
1. BASC- Internalizing Baseline	0.36**	0.43**	0.06	-0.19	-0.12	0.06	-0.10	-0.11
2. BASC- Internalizing Follow-up	-	-0.19	0.17	-0.32**	-0.12	0.33**	0.02	0.00
3. BASC- Externalizing Baseline		-	0.54**	-0.03	-0.16	-0.13	-0.17	-0.17
4. BASC- Externalizing Follow-up			-	-0.35**	-0.31**	-0.03	-0.13	-0.26*
5. Parenting - Skill encouragement				-	0.44**	-0.06	0.19	0.48**
6. Parenting - Positive involvement					-	0.57**	0.76**	0.92
7. Parenting - Problem solving						-	0.58**	0.74**
8. Parenting - Good discipline							-	0.85**
9. Parenting - Effective parenting								-

* p < .05, ** p < .01

Table 3. Steps in hierarchical regression equations predicting follow-up children's adjustment

Steps in Equation	Internalizing Equation	Externalizing Equation
Step 1	Baseline Internalizing	Baseline Externalizing
Step 2	Child Age	Child Age
	Family Income	Family Income
	Caregiver Mental Health	Caregiver Mental Health
	Baseline Externalizing	Baseline Internalizing
	Follow-up Externalizing	Follow-up Internalizing
Step 3	Parenting Dimension	Parenting Dimension

Figure 1. Chart of Standardized Residuals – Internalizing

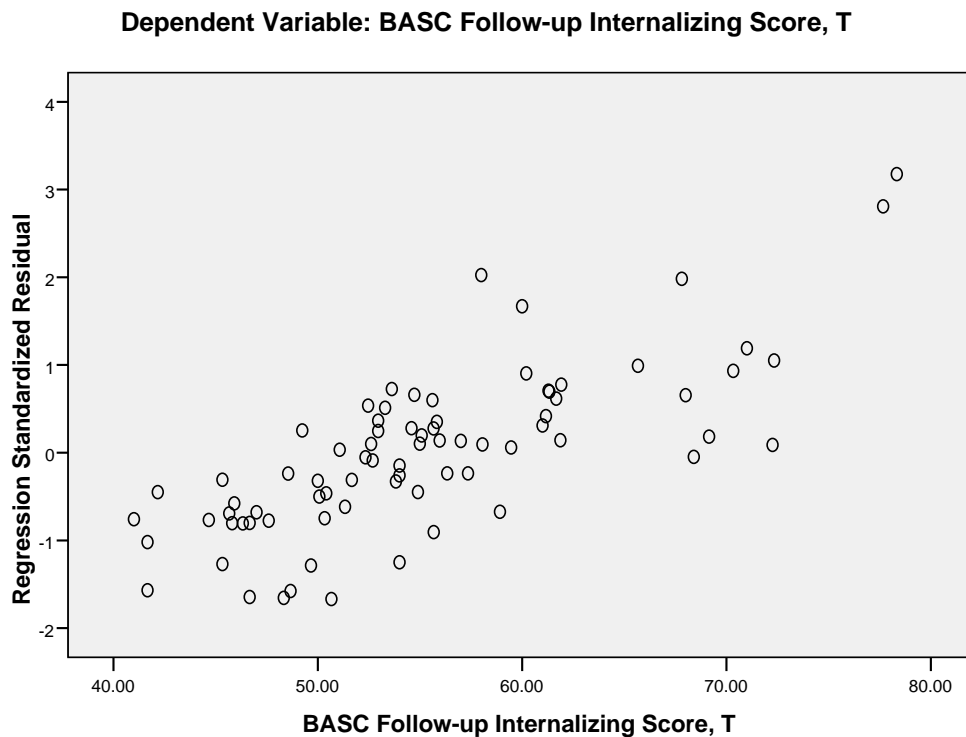


Figure 2. Chart of Standardized Residuals – Externalizing

