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THE MODERATING EFFECTS OF SCHOOL BONDING: EXAMINING THE RELATIONSHIP BETWEEN FAMILY FUNCTIONING AND EXTERNALIZING OUTCOME BEHAVIORS IN CHILDREN OF SUBSTANCE ABUSING PARENTS.

This work and its defense approved by:

Chair: Ann Kathleen Burlew, Ph.D.

Shawn Moyo Bediako, Ph.D.

Laura Nabors, Ph.D.
THE MODERATING EFFECTS OF SCHOOL BONDING: EXAMINING THE
RELATIONSHIP BETWEEN FAMILY FUNCTIONING AND
EXTERNALIZING OUTCOME BEHAVIORS IN CHILDREN OF
SUBSTANCE ABUSING PARENTS

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Natasha D. Buchanan
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Abstract

The current study examined risk (family functioning) and protective (school bonding) factors associated with increased levels of externalizing behaviors, among six-to eight-year-old children of 143 substance-abusing parents. Family functioning, child externalizing behaviors, and child school bonding were assessed using items from The Family Functioning Scale, Parenting Practices Scale - Parent Version, Intake Form Mobility Measures, Parent Observation of Classroom Adaptation (POCA) – Revised, and the Child Rating Scale-School Interest Subscale, respectively. Results reveal a reciprocal relationship between one indicator of family functioning (i.e. parenting practices) and child externalizing behaviors. In addition, findings suggest an inverse relationship between school bonding and externalizing behaviors. However, school bonding did not moderate the relationship between family functioning and externalizing behaviors in children.
DEDICATION

To my mother and father. Thank you for modeling unconditional love and undying support. Your commanding presence in my life is a blessing that I will always cherish.
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**Introduction**

In the mid to late 1990’s, at least one out of ten American children, ages 0 to 17, lived in a household where one or both parents met the clinical standards for illicit drug or alcohol dependency (Huang, Cerbone, & Gfroerer, 1998). Recently, data indicates that more than 6 million children lived with at least one parent who abused or was dependent on alcohol or an illicit drug during the past year (Office of Applied Studies, 2003). These results are disturbing in light of literature which suggested that children of substance abusing parents (COSAPs) have elevated rates of behavioral problems, which may include aggressive, impulsive, and hyperactive behaviors (Dawe, Harnett, Staiger, & Dadds, 2000). While similar behavioral problems have been found in children who do not have substance abusing parents, COSAPs were documented in one study as having more elevated rates of behavioral problems (e.g. impulsivity, aggression, hyperactivity) as compared to children ages 6 to 17 that were not from substance abusing homes (Earls, F., Reich, Jung, & Cloninger, 1998).

It is possible that COSAPs may be at an increased risk for displaying such externalizing behaviors due to their frequent exposure to inadequate family functioning and lack of overall family stability, which El Guebaly & Offord (1997) report to be evident in families with substance abuse problems. Poor levels of parental support, monitoring, control, and lack of engagement in family traditions and rituals can characterize this inadequate family functioning. Other indicators of poor family stability and functioning have also been reviewed by Medway (1995) and Humke & Shaefer (1995). Their research characterized poor family functioning as being inclusive of frequent relocation and school mobility due to the effects mobility has on the child’s
behavior. In the pursuit of ways to reduce children's susceptibility to displaying externalizing behaviors, it may be important to understand that some children are able to surmount adverse family situations and display limited or age appropriate externalizing behaviors. In recent years, an emerging literature has begun to look at resilient children and determine what factors potentially protect them from displaying externalizing behaviors.

Resiliency has been described as the ability to rebound from adversity or those factors and processes that interrupt the path from risk to problem behavior or psychopathology and thereby result in adaptive outcomes even in the presence of challenging and threatening circumstances (Zimmerman & Arunkumar, 1994). Protective factors are factors that facilitate positive outcomes by operating as buffers between individuals and the factors impinging on their well being. Protective factors have been reported as leading to resilience (Garmezy, 1983). Another important contribution of prevention research during the 1980's was the identification of risk factors, which are influences in the individual, family or community that threaten positive adaptation outcomes. Such risk factors are thought to be associated with later psychosocial problems (e.g., alcoholism, drug abuse, teen pregnancy, delinquency/ negative behavioral outcomes, and dropping out of school) (Fraser, 1997; Jessor, 1993). Although less is known about protective factors and their operation than risk factors (Rutter, 1985), recent research suggests that the right combination of protective influences can outweigh the negative impact of exposure to multiple risk factors (Werner & Smith, 1992).

Those researchers focusing on the family as a protective factor (Gary, 1996; Dunst & Trivett, 1994) have identified similar factors that help children from very high
risk families to successfully avoid negative behavioral outcomes. The family contexts of resilient children are characterized by positive parent-child relationships, family cohesion, parental warmth, and parental monitoring (Wang, Haertel, & Walberg, 1997). Doll and Lyon (1998) contend that when family functioning is not inclusive of warm and supportive parents, schools can potentially be well positioned to take a vital role in prevention and intervention. The various preventive and protective roles school characteristics play in the lives of COSAPs have been explored in the research under the overarching category of school climate.

The literature has depicted school climate as “a relatively enduring quality of the entire school that is experienced by members, describes their collective perceptions of routine behaviors, and ultimately affects their attitudes and behavior” (Christenson, Sinclair, Lehr, & Godber, 2001). School climate also includes the sentiments that students have about their school environment and whether it is a place in which learning can occur (Christenson, Sinclair, Lehr, & Godber, 2001). While research conducted by Hoy & Hannum (1997) show that many aspects of a positive school climate can lead to improved student behavior, a child’s willingness to learn and their positive relationships with teachers have been specifically documented as improving student externalizing behaviors (Christenson, Sinclair, Lehr, & Godber, 2001). These characteristics of school climate are best categorized as school bonding or connectedness. School bonding can encompass the achievement motivation (Christenson, Sinclair, Lehr, & Godber, 2001) and the student-teacher relationships (Christenson, Sinclair, Lehr, & Godber, 2001) the child receives in their school environment. Christenson, Sinclair, Lehr, & Godber (2001), define student achievement motivation as the extent to which the child believes they can
learn and are willing to learn, while student-teacher relationships are characterized as the level of caring, respect, and trust that exists between the students and teachers in the school environment. Some research has shown that “school connectedness” or bonding can serve as protective factors against adolescent risk behaviors (Resnick, M., Harris, L. and Blum, R., 1993). Therefore it is possible that school bonding could potentially serve as a factor that moderates the relationship of poor family functioning on a child’s display of externalizing behaviors.

The present study is a secondary analysis of the baseline data for a study funded by the Centers for Substance Abuse Prevention focusing on children of substance abusing parents. This study will examine the relationship between child externalizing outcome behaviors, family functioning, and school bonding among six-to eight-year-old children of substance abusing parents. The objectives of the current study are to: (1) examine the role of family functioning as a potential risk factor for child behavioral outcome; and (2) to examine whether school bonding serves as a protective factor against poor family functioning (see figure 1). This study is guided by the Challenge Model of Human Psychology, which looks at how resilient children lead satisfying and productive lives in spite of having suffered due to risk factors such as family dysfunction (Wolin & Wolin, 1999). The following text takes a closer look at literature reviewing externalizing behaviors in children, particular family functioning characteristics making up the family structure that can affect these externalizing behaviors, and the protective and moderating capabilities of school bonding.
Literature Review

Substance Abuse Epidemic and Its Impact on Family Functioning

For decades, governmental and psychological research has shown an invested interest in exploring the impact that America’s substance abuse epidemic has had on individuals, families, and communities at large. A rise in studies on implications of substance abuse have been conducted in response to disturbing reports that there were approximately 10 million adult alcoholics, 500,000 heroin addicts, and between five and eight million regular cocaine users in the United States in the early 1990’s (Hayes & Emshoff, 1993). While substance abuse has been characterized in a variety of ways, it has often been used as a global term, which may encompass the use or abuse of a range of substances, such as alcohol, illicit drugs and prescribed drugs. The majority of studies incorporate those suffering from a chemical dependency diagnostically defined substance abuse as ‘the intermittent and progressive compulsive use of the drug or drugs (including alcohol) with loss of control’ (Hayes & Emshoff, 1993, p. 282). Substance abuse not only affects the individual user, but also has a profound effect on families. Illicit drugs, such as cocaine, crack, heroin, marijuana and LSD, have been considered to be causal agents in domestic violence and other forms of family violence (Flanzer, 1993).

In addition, a number of personality, behavioral, and family correlates of substance abuse have been identified (Hayes & Emshoff, 1993). These include hyperactivity, a 'difficult' temperament, impaired mother - child bonding, early sexual activity, criminal or runaway behavior, poor self-esteem, poor peer relations, social isolation and social deprivation, and moving frequently during childhood (Hayes & Emshoff, 1993). Other familial implications associated with substance abuse are: parental
inconsistency, poor limit setting, excessively harsh disciplinary measures, parental conflict, poor communication, parental absence or unavailability, and social isolation of the family (Hayes & Emshoff, 1993). Over all, the research has shown that substance abuse has had severe implications on the family unit and their ability to function reasonably well.

**Characteristics of Family Functioning**

Research has explored numerous aspects surrounding the traditional and non-traditional American family unit in order to better understand positive and negative family functioning. While many contrasting views of the concrete characteristics that assist or disable family functioning exist, research consistently shows that family organizational processes can be affected by poor parenting practices, low involvement in family attachment and rituals, and the family’s frequent geographic mobility. These family organizational processes have been shown to be positively correlated with parental substance abuse (Hayes & Emshoff, 1993),

Several parenting practices of parental substance abusers have been linked to poor family stability or functioning. Positive or affective involvement is the extent to which the family as a whole shows interest in and values the activities of individual family members (Epstein, Bishop, Ryan, Miller, & Keitner, 1993). Showing interest in and valuing the activities of other family members is essential for healthy family functioning (Epstein et al., 1993). Therefore, low levels of parental interest in their child’s activities can be indicative of poor family functioning. Research has also shown that families with a substance abusing parent often display low levels of parental warmth and are under-involved in the family unit (Stormshak, Bierman, McMahon, & Lengua, 2000). In
addition, it is becoming increasingly clear that parental monitoring is the foundation of positive family management (Dishion & McMahon, 1998). Therefore, when low levels of parental monitoring are existent in the family setting, this could be an indication of poor family functioning.

While several elements of the family structure seem to impact its negative functioning, the literature indicates pertinent characteristics of family rituals and traditions that can affect the behavioral elements of family members, especially children. Bossard and Boll (1950) perceived family rituals as frequent and repetitious experiences that centered on family living as it pertained to social and interaction styles. Bossard and Boll (1950) also acknowledged that family rituals have emotional impact on the family unit and its individual members. The literature also defines family rituals as symbolic events repeated in a systematic fashion over time that convey a sense of belonging among family members (Collins, Leonard, & Searles, 1990). Tavitian, Lubiner, Green, Grebstein, and Velicer (1987) suggest that family rituals are important in that they give the family a sense of cohesion, bonding, and unity. According to Patterson’s (2002) research on children with chronic health conditions, families consistently report that increased family cohesiveness is what helps them get through adversity. Conversely, it is also plausible that a lack of cohesiveness, indicated by a decrease of family participation in rituals and traditions, could hinder a family’s experience of an adverse situation, such as parental substance abuse.

Wolin & Bennet (1984) investigated how widely family rituals were practiced and how they were affected by the adverse situation of parental alcohol abuse. Family rituals were divided into three categories: family celebrations, family traditions, and patterned
family interactions. “Family celebrations” are inclusive of momentous occasions that are celebrated by family members such as a religious holiday like Christmas or a family member’s wedding. “Family traditions” are events that occur at certain times and depict practices that are important to family life and functioning. These traditions are representative of events like family reunions or vacations. “Patterned family interactions” can be seen in parent’s nightly rituals of helping their child with homework or even a family’s desire to eat dinner together on a regular basis. According to Fiese (1993), the family’s observance of rituals can negatively or positively contribute to its stability (Fiese, 1993). This idea was depicted in a study that examined the effects of substance abuse on family rituals. Fiese (1993) found that adolescents, who had a substance-abusing parent, associated less meaning with family rituals during dinnertime, weekends, and family vacations. This lack of meaning could be indicative of a lack of bonding and cohesiveness in the family unit.

A host of research has documented that poor family functioning is related to frequent family mobility (El Guebaly & Offord, 1997). In response to research that shows approximately 17% of American families relocate (Medway, 1995); researchers have been concerned with the impact of moving on children and family functioning (Goldsmith & Clark, 1987; Humke & Shaefer, 1995; Medway, 1995). Howard and associates (1989) spent years researching substance-abusing families and their young children. Their studies found that substance abusing parents are “unstable and move frequently” and that these characteristics negatively impact children living in substance-abusing families, while contributing to poor family functioning. Moreover, a study of ethnic high-risk families, Jones and DeMaree (1975) concluded that frequent family
moves are intricately interrelated with family functioning. More recently, research conducted by Hayes and Emshoff (1993) suggest that children who grow up in a mobile family (moving home frequently during childhood) can be correlated to parental substance abuse (Hayes and Emshoff 1993) and therefore indicative of poor family stability.

The Relationship Between Family Functioning and Child Externalizing Behaviors

Externalizing problems or behaviors (e.g. aggression, hyperactivity, impulsivity) manifested in children have been shown to correlate with family functioning characteristics in ways that can potentially yield poor behavioral outcomes in school age children (Stormont, 2002). In addition, other literature has reported that the roles of parenting and other family contextual factors have attributed to the onset and persistence of child behavioral problems (e.g., externalizing behaviors; Campbell, 1997; Greenberg, Speltz, & DeKlyen, 1993; Patterson, DeBaryshe, & Ramsey, 1989). This research is supportive of the idea poor family environments can potentially lead to negative child behavioral outcomes.

Child Externalizing Behaviors in COSAPs

Literature suggests that children of substance abusing parents may manifest increased behavior problems and impaired social functioning (El Guebaly & Offord, 1977; Jacob et al., 1978; Earls et al., in press.). COSAPs are at elevated risk for a variety of behavioral difficulties, most notably aggression, delinquency, and attention deficits (Loukas, Fitzgerald, Zucker, & von Eye, 2001). Collectively, these and other behaviors have been termed externalizing behaviors (Loukas et al., 2001). While many externalizing behaviors have been identified in the literature, the current study will define
externalizing behaviors as aggressive, hyperactive, and impulsive behaviors. In a study of recovered alcoholic parents and their children it was demonstrated that, compared to non alcoholic parents, children of recovered alcoholics showed continued impairment with more externalizing behaviors (DeLucia et al., 2001). A second study observing 339 children also showed that children born to substance-dependent parents had a high incidence of hyperactivity, inattention and behavioral problems (Ornoy, Michailevskaya, Lukashov, Bar-Hamburger, & Harel, 1996.) Through continuous exposure to dysfunctional family environments, it is possible that many COSAPs have maladapted in response to living in a poor functioning family.

*Future Implications of Externalizing Behaviours in COSAPs*

The literature describes many enduring effects of externalizing behaviors that COSAPs may experience as a result of poor family functioning. Various studies have shown that disruptive behaviors in childhood, including aggression, hyperactivity and other oppositional problems, are often stable and predictive of negative mental health outcomes in later life (Campbell & Ewing, 1990; Loeber & Dishion, 1983; West & Farrington, 1973). Other research has documented that preschool and kindergarten children with externalizing behaviors are at risk for having future behavior problems and difficulty with peer relationships (Egeland, Kalkoske, Gottesman, & Erickson, 1990; Vitaro, Tremblay, Gagnon, & Biovin, 1992; Vitaro, Tremblay, Gagnon, & Pelletier, 1994). Moreover, youngsters who are truly at risk for long-term problems appear to show co-occurring signs of both hyperactivity-impulsivity and aggressive-noncompliant behavior (Campbell et al., 1994; Loeber, 1988; Moffitt et al., 1996; Speltz et al., 1999).

In addition, research has documented that 67% of children with both hyperactivity and
aggression in their preschool years continued to have severe behavioral problems by the age of nine (Campbell & Ewing, 1990). Research suggests that risk for and protective factors against child aggressive behavior occur at multiple levels, including in a child's family environment (Leventhal & Brooks-Gunn, 2000). Therefore, the accumulation of such risk and protective factors determine long-term child outcomes (Leventhal & Brooks-Gunn).

**Family Functioning Effects on Child Externalizing Behaviors**

It is evident that adequate family functioning reduces the likelihood that children will engage in aggressive and other dysfunctional behaviors (Reese, Vera, Simon, & Ikeda, 2000). Thus, family functioning is among the most reliable predictors of risk for maladaptive behavior in children (Gorman-Smith, Tolan, & Henry, 1999). From the broader developmental psychology literature, it is known that parental socialization practices have important and enduring effects on the child (Maccoby & Martin, 1983) and that the types of emotional climate that parents create can have a significant impact on child outcomes (Darling & Steinber, 1993).

Parenting practices, involving inconsistency, have been associated with the development of disruptive problematic behaviours in children (Patterson, 1986; Patterson & Stouthamer-Loeber, 1984). Several aspects of the parent-child relationship have been proposed as important ingredients in the development of externalizing behavior in young children, including: maternal unresponsiveness (Martin, 1981; Shaw, Keenan, & Vondra, 1994) and lack of positive involvement (Gardner, 1987; Pettit, Bates, & Dodge, 1997). An extensive body of research has linked inconsistent parenting practices with the emergence of childhood oppositional and aggressive behaviors (Danforth, Barkley, &
Girnius-Brown, 1987). Warm and supportive parenting with appropriate levels of
parental monitoring and involvement in children’s lives predict low levels of behaviour
problems (Steinberg 2001). In fact, frequent communication and regular daily
involvement with children, are among the most important protective factors for child
resilience to aggressive behavior (Griffin et al., 1999). On the contrary, low levels of
parental warmth and involvement may be critical to the development of child aggressive
behavior (Stormshak, Bierman, McMahon, & Lengua, 2000). Research has also shown
that children who display impulsive behaviors may elicit these behaviors from
characteristics of parenting styles (Anderson, Lytton, & Romney, 1986; Campbell,
Pierce, March, & Ewing, 1991). In addition, parents of children with disruptive behavior
disorders have been observed as being less effective in managing their children’s
behavior and often engage in practices that actually contribute to, and sustain, their
children’s maladaptive behavior (McMahon & Wells, 1989; Patterson, 1984). Although
there is extensive empirical work linking parenting practices to child disruptive behavior
problems, few studies have tested models linking specific parenting practices such as
supervision and monitoring to specific child behaviors such as impulsivity, hyperactivity
and aggressive behaviors (Stormshak, Bierman, McMahon & Lengua, Conduct Problems
Prevention Research).

A relationship between family rituals and child externalizing behaviors has also
been explored. Wolin (1984) found that families with alcoholic members who retained
relatively stable patterns of behavior around everyday activities (e.g., meals) and special
events (e.g., birthdays) had offspring with fewer adjustment problems. In addition to
these findings, research conducted by Fiese, Tomcho, Douglas, Josephs, Poltrock, & Baker (2002) has shown that during infancy and preschool, children are healthier and their behavior is better regulated when there are predictable routines in the family.

Enduring effects of geographic mobility on the child’s behaviour have also been observed. The research of Hayes and Emshoff (1993) show that a number of behavioral correlates of substance abusing families have been identified as affecting COSAPs, including growing up in a mobile family, which can be characterized by frequent moves during childhood. The literature shows three large-scale studies that found negative correlations between geographic mobility and age school progress (Straits, 1987; Simpson & Fowler, 1994; Wood, Halton, Scarlata, Mewacheck, & Nessim, 1993), while other studies have failed to find significant differences between mobile and non-mobile children on various indices, one of which was behaviour problems (Norford & Medway, 2002). More recently, another study found that even one residential move had a negative impact on a combined measure of both academic and behavioral aspects of school performance (Tucker, Marx, & Long, 1998). While findings on mobility have been inconsistent due to the different ways researchers have quantified and defined “frequency” in mobility, the inconsistencies in the findings could also suggest that other factors may buffer the relationship between family functioning and behavioural problems in children. One such buffering factor could be school bonding.

School Bonding

There is a burgeoning body of literature on the power of the school to influence the outcomes for children from high-risk environments (Austin, 1991; Brook et al., 1989;
The areas of risk and resilience research exploring the influence of a child’s school environments have identified several positive findings suggesting that school does have an impact on children from adverse family environments and can potentially have an impact on their externalizing behaviors.

**The Relationship Between School Bonding and Family Functioning**

There has been evidence demonstrating that a child’s school climate can serve as a protective shield to help children withstand the multiple vicissitudes of a family environment devastated by alcoholism, drug dependency, mental illness, or from a poverty-stricken community environment (Garmezy, 1991). Just as in the family arena, the level of caring and support within the school is a powerful predictor of positive behavioral outcomes for youth (Werner, 1990). During the early school years, teachers might assume a parent-surrogate role with the children they teach (Hamilton & Howes, 1992). The teacher not only controls rewards and punishments in the classroom, evaluates student performance, and maintains control over the classroom. He or she might also "wipes runny noses and consoles hurt feelings, joining formal and nurturing responsibilities in a role peculiar to the elementary teacher” (Alexander, Entwistle, & Thompson, 1987, p.14). The child’s positive perception of the nurturing atmosphere that is provided by the school environment and teachers could potentially moderate the effects of poor family functioning on the child’s externalizing behavior. This has been explored in some studies that focus on children's descriptions of their relationships with teachers. Wentzel (1996) reported that middle school students with behavior problems benefited
from and improved due to relationships they had with teachers, which were characterized by open communication and a sense of closeness. This might suggest that these relationships may have protective capabilities for children beyond the early grades and preschool years (Lynch & Cicchetti, 1992).

The Relationship Between School Bonding and Child Externalizing Behaviors

Several studies have proposed clues to the relationship between school bonding and child externalizing behaviors. Studies conducted by Rutter (1979) showed that school characteristics such as fostering connectedness, high self-esteem, and the promotion of social and scholastic success had a strong relationship with a student’s decrease in displaying emotional and behavioral disturbances. Rutter (1979) also found that children in London displayed a decrease in behavioral disturbances when they had positive school components; even after controlling for family risk factors. More recent literature has explored the idea of school bonding as a characteristic of the overarching affects of school climate. While school climate has been defined in a variety of different ways in the literature, Hoy and Feldman (1999) eloquently define school climate as, “the enduring quality of the entire school that is experienced by its members, describes their collective perceptions of routine behavior, and affects their attitudes and behavior in the school.” Hoy & Hannum (1997) found that students could have improved behavior when their school climate is positive. In addition, the research of Kuperminc, Leadbeater, Emmons, & Blatt (1997) found that children who had positive perceptions of school climate, and therefore an invested bonding in school, tended to have fewer externalizing behaviors. Research has also reported that child-teacher relationships, a characteristic of school bonding, plays important roles in the child’s developing peer relations (Elicker,
Egeland, & Sroufe, 1992; Howes, Matheson, & Hamilton, 1994), emotional competence, and self-control (Denham & Burton, 1996), and school competencies such as attention, motivation, problem solving, and self-esteem (Birch & Ladd, 1996; Pianta & Harbers, 1996). While problematic relationships with adults have also been shown by the literature as contributing to the development of behavior problems (Campbell, 1994; Greenberg, Speltz, & DeKleyn, 1993; Toth & Cicchetti, 1996), these findings could be indicative that the opposite relationship may exist, providing clues to potential moderating effects of school bonding on the relationship between family functioning and child externalizing behavioral outcomes.

**School Bonding as a Moderator Variable**

According to the classic work of Baron and Kenny (1986), a moderator alters the pattern of association between two variables of bonding. Moderator variables demonstrate "a significant interaction with family history in predicting offspring adjustment" (Moser & Jacob, 1997). In a study of 44 children who were maltreated as preschoolers, the research found that they were able to overcome behavioral challenges due to various protective factors - including elements of their organized classroom environment (August & Hakuta, 1997). One such element that could potentially moderate the relationship between poor family functioning and externalizing behavioral outcomes is the child invested bonding in their school life and a belief that they have a bonded relationship with teachers and their school environments. This invested school bonding is shown in the literature to be a part of the child’s school climate. A review of 33 empirical studies of effective schooling for English language learners found that schools characterized by positive school climates promoted student/ family involvement
in the operations and activities of the child (August & Hakuta, 1997). This research could potentially provide clues to the moderating capabilities of school bonding on the relationship between family functioning and child externalizing behaviors.

In 1981 David Hawkins decided to focus on the way teachers teach and how parents and children relate to their schools in order to find a remedy to the pervasive problems - including behavioral problems - of the Seattle public school system. Hawkins and colleagues at the University of Washington defined this focus as "bonding.” Hawkins proposed that building a sense of belonging early on would bring about a child's success in school and that when young people developed a positive commitment, interest, and attachment to schooling, that bond could serve as a protective factor against the development of problem behaviors (Weis & Hawkins, 1981). Adversely, limited research has explored how the bond that a child has with their adult teachers and school environment can serve as a protective factor and moderate the relationship between poor family functioning and the child’s externalizing behavior outcomes. However, one study found that the empathetic and problem solving based instruction that is taught by teachers, aids in the reduction of aggressive behaviors (Feshbach, Feshbach, Fauvre, & Ballard-Campbe 1983) that could be a result of poor family functioning. When applied to the current study, problem behaviors such as aggressive, disruptive, hyperactive and impulsive behaviors could be highly related; these externalizing behaviors could share the common antecedent of poor family functioning; and prevention efforts displayed in school bonding could potentially moderate the relationship between poor family functioning and negative externalizing behaviors to potentially reduce problem behaviors.
Theoretical Explanations

Wolin & Wolin (1995) describe resilience as “the process of persisting in the face of adversity.” The overarching theme of resilience, initially proposed by Bronfenbrenner, has given birth to several theoretical variations and models. One of Bronfenbrenner applicable models to this study, the social-ecological view, shows that characteristics of a child’s environment (i.e., family and school) have the power to influence their behavioral development (Bronfenbrenner, 1979). These models often seek to explore the protective factors that assist children of substance abusing parents in overcoming adversity that could potentially be stimulated by risk factors within the family unit. While identifying risk factors (i.e. poor family functioning) is an important goal of resilience models, a growing research interested in moving beyond the identification of risk factors for the development of a problem behavior. In addition to just identifying risk factors, resilience models are now examining "protective" factors, which are those "traits, conditions, situations, and episodes, that appear to alter predictions of negative behavioral and social outcomes (Segal, 1986; Garmezy, 1991). These protective factors can potentially enable children to circumvent their life stressors (Segal, 1986; Garmezy, 1991). While different models of the resilience perspective exist, the current study is best represented by the Challenge Model of Human Psychology proposed by Steven Wolin, & Sybil Wolin.

The Challenge Model was cultivated from the research of Wolin & Wolin (1996), which studied people who lead satisfying and productive lives in spite of having suffered due to risk factors including family disruptions or substance abuse, violence, racism, poverty, neglect, abuse, or bitter divorce. The challenge model shows that troubles or risk factors are seen as a danger to children, but also as an opportunity. Wolin & Wolin
(1996) have shown in their research that children are susceptible to the influence of risk factors, but they are also challenged to rebound from harm by trying new things and creating their own resources. One such resource can be the bonding influences and relationship that they seek and appreciate at school. According to the challenge model, protective factors such as school bonding can explain the child’s resilience in overcoming adversity.

**The Current Study**

The objective of the study is to assess the influence of risky familial variables on externalizing behavioral outcomes in 6-8 year-old children of substance-abusing parents. Secondly, this study will investigate the relationship between school bonding and externalizing behavioral outcomes. One aim of the present study is to examine the role of family functioning as a potential risk factor for child behavioral outcomes. A second aim is to examine whether school bonding serves as a protective factor against poor family functioning when poor family functioning increases the risk for externalizing behavioral outcomes in children. Figure 1 presents a drawing of the proposed model being examined by the aforementioned study hypotheses.

![Figure 1. The model depicting the relationship among family functioning, child externalizing behavioral outcomes, and indicators of school bonding.](image-url)
Hypotheses

1. As the level of family functioning increases, externalizing behavior outcomes decrease.

2. As school bonding increases, externalizing behavior outcomes decrease.

3. As school bonding increases, the relationship between poor family functioning and negative externalizing behavior outcomes decreases.

Method

Participants

The current study is a secondary analysis of a sample recruited for a study on children of substance abusing parents (COSAPs). The original study was funded by the Centers for Substance Abuse and Prevention (protocol # 9902 2902 W, CSAP). One hundred and forty-three parents and their children, age six to eight years, participated in this study. The parents provided written consent for both their own participation, and for the participation of their youngest child. Sixty-one percent of the families that participated in this study were African American, 31 % were Caucasian, and 8 % represented other ethnicities. The majority of parents, mostly mothers (89.3%) had a median age of 35 years. Crack cocaine, alcohol, marijuana, and tobacco were the substances most commonly abused. Most parents were polydrug abusers, and a few were heroin users. Fifty percent of the child participants were male, 49.3 % were female, and .7 percent were unspecified. Sixty-five percent of the child participants were African American, 25.7 % were Caucasian, 2.9 % were Hispanic, 2.9 % were Native American, and 3.5 % were representative of other racial and/or ethnic backgrounds.
Instruments

The primary study included family, child, and community measures. For this secondary analysis, only the following measures will be included.

**Family Functioning Measures.** Family functioning will be assessed using a composite of three measures.

*The Family Functioning Scale (FFS)* (Tavitian, Lubiner, Green, Grebstein, Velicer, 1987). The family functioning scale is a 40-item questionnaire measuring family functioning. Each statement is rated on a likert scale, ranging from 1 (never) to 7 (Always). The FFS contains statements assessing family affect, family communication, family conflicts, family worries and family rituals/supports (Tavitian et al., 1987). The internal consistency for the FFS is fair, with alphas that range from .90 for the positive family affect subscale to .74 for the conflicts subscale. Correlations reveal good concurrent and discriminant validity (Tavitian et al., 1987). Only the 8-item *Family Rituals/Support Subscale* will be used to assess family support in the present study. This measure is a 5-point scale ranging from "always" to "never" (α=. 79).

*The Parenting Practices Scale - Parent Version* is an 8-item parent self-report questionnaire that was designed to identify effective parental skills and practices. The 8 items used on the *Parenting Practices Scale* were derived from the CSAP Predictor Variables Study. The Parenting Practices Scale is a 5-point scale ranging from "strongly agree" to "strongly disagree" (α=. 86) While the scale is composed of 8-items, items 6 and 7 will not be used in this study. Items 6 and 7 are based on parental response and inquire about the parents’ practices when the child has a curfew or the ability to go out
without parental supervision. These questions are more applicable to older children and do not have a significant relationship to the sample population of children ages 6-8.

*Mobility Family Measures* were taken from the intake. There was a one-item measure of family mobility based on parental response concerning the number of times the parent and the child moved in the past year. This measure was a 4-point scale ranging from “have not moved” to “three or more times.”

**Child Behavior Outcome Measures.** Child behavior outcome measures will be assessed using one measure.

*The Parent Observation of Classroom Adaptation (POCA) - Revised* is a measure of aspects of child problem behaviors (Kellam, Brown, Rubin, & Ensminger, 1983). POCA is grouped into scales that assess the following areas: Concentration Problems, Aggressive/Disruptive Behavior, Shy Behavior, Hyperactive, Impulsivity, and Depression. The 14-item *Aggressive/Disruptive Behavior Subscale* will be used to assess aggressive/disruptive behavior in the present study, the 3-item *Hyperactive Subscale* will be used to assess hyperactive behavior in the present study, and the 3-item *Impulsive Subscale* will be used to assess impulsivity in the present study. The measure, which was completed by parents, is a 4-point scale ranging from "almost never" to "almost always" (α=. 86). Psychometric analyses point to strong internal consistency for the factors of concentration problems, and aggressive behavior, shy behaviors. Test-retest correlations over a four month interval with different interviewers were .60 or higher (Kellam et al., 1983).

**School Bonding Measures.** School bonding outcome measures will be assessed using one measure.
Child Rating Scale-School Bonding Subscale is a measure of the child’s like or dislike of varying factors of the school environment (Hightower, Spinell, & Lotyczewsk, 1989). This 8-item measure was designed for use with first through sixth grade children. Items 1 through 6 assess the child’s bonding in school, while items 7 and 8 were items modified by the Steering Committee of revision of the scale and added to the Kentucky School Bonding Scale based on committee recommendations. The measure, which was completed by children, is a 3-point scale ranging from “usually yes” to “usually no” (α=.54). The Child Rating Scale is a 25-item measure, which has a 4-week retest reliability of .84 (Hightower et al., 1987).

Procedure

Baseline data was analyzed from a multi-site study on children of substance abusing parents. Participating families were recruited from substance abuse treatment sites throughout the greater Cincinnati, Ohio area including aftercare, outpatient groups, and long-term residential facilities. For a family to be eligible to participate in this study, at least one parent of each child had to have been enrolled in a substance abuse treatment program in the past 12 month period prior to data collection and the child needed to be between the ages of 6 and 8 years. Participants, who agreed to these terms, were asked to review and sign a written parental consent form. Child participants provided verbal assent. Participants were informed of their confidentiality rights and their rights to refuse and/or withdraw their consent.

Trained research assistants administered the questionnaires to the parents in a group setting. Trained research assistants administered questionnaires for the parents regarding the child’s treatment history, demographic information, mental health status,
and family and community functioning. Parents were also asked to report their perceptions about the participating child's behavior, relationships, and school performance.

Questionnaires were read aloud to children and administered individually or to two children at the same time. Children were asked to complete a battery of measures that gauged their perceptions about school, friends, family, and their attitudes toward substance use. Generally, the data collection required 1 to 1.5 hours for both parents and children to complete. Parents were compensated for their time with a monetary stipend.

**Design and Data Analysis**

Descriptive statistics will be computed and carefully examined for all of the variables examined in this study. The distributions will be examined to determine if any transformations need to be conducted. Tabachnick & Fidell’s (1996) criteria for determining the normality of the distribution will be utilized. These authors suggested the skewness index values less than 2 and greater than -2 and kurtosis values less than 4 and greater than -4 indicate normally distributed variables. Preliminary analysis will be conducted on each scale to examine the internal consistency (Cronbach Alphas). The standardization samples for several scales did not include African Americans. Therefore, when cronbach alphas are low, additional analyses will be performed to determine if the omission of one or more items will improve the reliability.

Structural Equation Modeling (SEM) will be used because SEM allows for simultaneous examination of multiple relationships in the same analyses. Goodness of fit indices, such as chi-square, will be performed to test the fit between the proposed model and the data. Based upon the guidelines developed by Garbing and Anderson (1988), the
analyses will be carried out in two stages. In stage one; confirmatory factor analyses will be conducted to test whether the data support the proposed relationships between latent variables and their indicators. In the second stage, AMOS will be used to examine the proposed relationships among the two latent variables and school bonding. A non-significant chi-square will be evidence that the data support the proposed model. Due to the influence of sample size on chi-square, other fit indices will be evaluated such as the Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), and Non-Normed Fit Index (NNFI).

**Results**

The Hypothesized Model

The hypothesized model was illustrated previously in *Figure 1*. The circle depicted represents the latent variable, child-externalizing behaviors. The measured variables, including family functioning, school bonding, hyperactivity, impulsivity, and aggression, are represented by rectangles. A line between two variables indicates the presence of a proposed relationship. Likewise, the absence of a line indicates that no proposed relationship exists. An interaction variable representing the product of family functioning and school bonding was added to the model in order to test for the presence of a moderator relationship.

Preliminary Analyses

Preliminary analyses were conducted using SPSS statistical package (10.0) in order to detect outliers, which might exist in the data, and to improve the reliability of any scale when feasible (Tabachnick & Fidell, 2001). Analyses in SPSS, looking at cook’s distance statistics and box plots, showed that no substantial outliers existed in the
data, therefore, requiring no need for improvement in the variables. Secondly, recommendations proposed by Tabachnik & Fidell (1996) were used to test skewness and kurtosis to determine univariate normality of the data. Tabachnik & Fidell (2001) suggest that normality within the data exists when the skewness index ranges from -2 to 2 and the kurtosis index ranges from -4 to 4. Analyses indicated that the data, ranging from -1.42 to 1.31 for skewness and from -0.636 to 2.30 for kurtosis, were normal and required no transformations.

Thirdly, an independent composite scale was created from three independent scales (parenting practices, family rituals, and family mobility) in order to make a comprehensive measurement of family functioning. This independent composite scale was created by making each scale weighted and therefore equally contributing to the total scale score. The composite scale was created to decrease the number of predictors due to the study’s small sample size. Next, the independent composite and moderator variables were centered based upon the recommendation of Aiken and West (1991), which proposes that problematic multicollinearity effects, which might exist between interaction terms and their product, are eliminated by centering the variables. In addition to these analyses, an interaction term was created to represent the moderator by taking the product of family functioning and school bonding. Further descriptive information including means, standard deviations, and ranges are listed in Table 1.

Main Analyses

Main analyses were performed using Structural Equation Modeling (SEM) to test proposed relationships among family functioning, school bonding, and child externalizing behaviors. This type of analysis is an effective way to examine the
moderating effects of factors due to its ability to test the degree of fit for a model after controlling for measurement error in the latent variable (Peyrot, 1996). Secondly, SEM permits estimation models of linear relations among latent variables comprised of multiple indicators of a particular construct. Thirdly, SEM techniques model measurement error directly, while differentiating between measurement error (i.e., reliability of measures and scales) and residual error (i.e. not accounted for by the analysis variables) (Bollen, 1989; MacCallum & Austin 2000). The AMOS 4.0 Statistical Package (Arbuckle & Worthke, 1999) was selected to conduct SEM on the proposed data due to its ability to effectively handle missing data.

In stage one; Confirmatory Factor Analysis (CFA) was used to test the relationship between a latent variable (Child Externalizing Behaviors) and three observed indicator variables (aggression, hyperactivity, and impulsivity) in an identified model. The Chi-square was not significant suggesting the existence of a good fit between the child externalizing behaviors and aggression, hyperactivity and impulsivity. Confirmatory Factor Analysis revealed that the model was indicative of a good fit; therefore, no adjustments were made.

In stage two, the complete hypothesized model, looking at the influences of school bonding, family functioning (composite scale), and the interaction between school bonding and family functioning on externalizing behaviors in children, was tested (see Figure 2). Results indicated a good fit between the model and the data. The Chi-square (6, N=143) = 6.01, p=. 42, for the structural model was non-significant, indicating evidence of a good fit. Due to the Chi-square’s sensitivity to sample size, other goodness of fit indices was calculated to support these findings. The low coefficient on the root
The mean square error of approximation (RMSEA = 0.00) was indicative of a good fit, in addition to high coefficients on the comparative fit index (CFI = 1.00) and the Tucker-Lewis Index (TLI = 1.00) (Arbuckle & Wothke, 1999) (see Table 2). While the hypothesized model was a good fit for the data, the critical ratios for proposed links failed to reveal a significant relationship between family functioning and child externalizing behavior or between school bonding and externalizing behaviors. In addition, the critical ratios for the proposed links also failed to reveal a significant moderating relationship of school bonding between family functioning and the child externalizing behaviors. Due to findings suggesting that the critical ratios were non-significant despite the good fit of the model to the data, analyses were conducted to determine if the model was mis-specified. Results revealed that the model was not mis-specified and that the hypothesized observed measures of children’s externalizing behavior were positively correlated with each other.

A second model was created to observe a potential effect of individual scales (parenting practices, family mobility, and family rituals), used to construct a composite scale of family functioning; on children’s externalizing behaviors (see Figure 3). Results for this structural model revealed that the model fit the data well. The Chi-square (10, N = 143) = 15.23, p = .12, for the structural model was non-significant, indicating evidence of a good fit. Due the Chi-square’s sensitivity to sample size, other goodness of fit indices were calculated to support these findings. The low coefficient on the root mean square error of approximation (RMSEA = .07) was indicative of a reasonably good fit, in addition to high coefficients on the comparative fit index (CFI = 1.00) and the Tucker-Lewis Index (TLI = .99) (Arbuckle & Wothke, 1999) (see Table 2). While the model fit the data well, the critical ratios revealed that no significant relationships were found.
After testing both the models, it was concluded that hypothesis one, which stated that as family functioning decreased then externalizing behaviors would increase; hypothesis two, as school bonding increased, externalizing behaviors will decrease; and hypothesis three, as school bonding increased, the direct relationship between family functioning and child externalizing behaviors would decrease, were not supported. Due to theoretical support of these relationships in the literature, additional analysis was conducted.

Additional Analysis

While parenting practices were initially hypothesized to have an effect on child externalizing behavior, the literature also reflects the possibility of a reciprocal relationship, which hypothesizes that parenting practices and a child’s externalizing behaviors affect one another (Rubin & Mills, 1992; Rubin et al., 1995). For this reason, an additional model was tested, which depicts parenting practices and externalizing behaviors as inversely dependent on each other, while still exploring the effects of family rituals, family mobility, school bonding, and the interaction between the original composite scale of family functioning and school bonding on child externalizing behavior (see Figure 4). Results for this structural model revealed that the model fit the data well. The Chi-square (17, N = 143) = 22.96, p = .15, for the structural model was non-significant, indicating evidence of a good fit. The low coefficient on the root mean square error of approximation (RMSEA=.05) was also indicative of a good fit, in addition to high coefficients on the comparative fit index (CFI = 1.00) and the Tucker-Lewis Index (TLI = .99) (Arbuckle & Wothke, 1999) (see Table 2). Two significant relationships emerged from these additional analyses. The relationship between school bonding and
externalizing behavior was significant, as indicated by the critical ratio (-1.98), and the relationship between parenting practices and externalizing behaviors were also significant, as indicated by the critical ratio (-4.46). These findings support the hypothesis that the presence of school bonding decreases externalizing outcome behaviors in children, however does not significantly affect the direct relationship between all characteristics of family functioning and externalizing behaviors. While all characteristics of family functioning do not significantly affect externalizing behaviors in children, this analysis yielded a significant reciprocal relationship between parenting practices and externalizing behaviors. The additional analysis did support the hypotheses that low levels of parenting practices cause child externalizing behaviors to increase, while also supporting that high rates of externalizing behaviors predict low levels of parenting practices.

Discussion

The purpose of the present study was to examine the relationship of family functioning and school bonding to externalizing behaviors in children of substance abusing parents. While three major hypotheses were proposed and tested, an additional model was also tested. The following is a discussion of the findings for each tested hypothesis and the additional analysis.

Counter to the proposed hypothesis, no apparent support was found for a direct relationship between family functioning and child externalizing behaviors. In addition to these findings, the study did not support child school bonding as a moderator of the direct relationship between family functioning and child externalizing behaviors among children of substance abusing parents. While it was disappointing that school bonding
did not present as a moderator, this was not unexpected, considering there was no significant relationship to moderate.

Contradictory to these findings, a body of research does support a relationship between certain family functioning characteristics and children’s externalizing behaviors. More specifically, some literature suggests that aspects of family functioning and externalizing behaviors in children may have reciprocal influences on each other (Knoester, 2003). Due to these findings, an additional analysis was conducted to determine the possibility of a reciprocal relationship between parenting practices and child externalizing behaviors for the data set used in the current study. After testing this relationship, findings revealed a reciprocal relationship between low levels of parenting practices and high levels of child externalizing behavior. This additional analysis also revealed that school bonding significantly moderated the relationship between family functioning and externalizing behaviors in children. This finding supported literature showing that poor parenting practices can lead to externalizing behaviors in children (Rubin & Mills, 1992; Rubin et al., 1995). Secondly, it also supports literature showing aggressive and externalizing behaviors, exhibited by children in preschool and early elementary school, tend lead to more negative parenting practices and behaviors (Rubin & Mills, 1992; Rubin et al., 1995). These findings were generalizable to and reinforced previous literature on COSAPs, in that aspects of negative family functioning, like poor parent practices, serve as risk factors for externalizing behaviors in childhood (Schinke, Brounstein, & Gardner, 2002).

The current study also revealed that high levels of school bonding were related to lower levels of externalizing behaviors, despite the presence of characteristics of poor
family functioning. This result adds to existing literature on resilience by supporting the protective capabilities of school bonding when poor parenting practices are present. This finding is generalizable to studies showing that school bonding acts as a protective factor for child resilience against problematic behaviors caused by poor family functioning (Schinke et al., 2002).

While these significant findings were a welcomed addition to an already existing body of literature, it was surprising that the initially proposed hypotheses did not support research that shows family functioning to be among the most reliable predictors of risk for maladaptive behavior in children (Gorman-Smith et al., 1999). More specifically, it was surprising that the hypotheses did not support literature that shows parenting practices causal relationship with disruptive problematic behaviors in children (Patterson, 1986; Patterson & Stoughamer-Loeber, 1984), without the presence of a reciprocal relationship between the two. These findings may not have reached significance due to the small sample size used in this study. The sample size of 143 participants was just below Bentler & Chou’s (1987) recommended ratio of cases per parameters when conducting structural equation modeling. Using a larger sample size might have yielded a significant relationship between poor family functioning and increased levels of externalizing behaviors in children. In turn, a larger sample size might also have yielded a significant relationship showing the moderating influence of school bonding on this proposed relationship. Another explanation of why a moderating relationship was not found is shown in research stating that “the detection of a moderator effect in non-experimental field studies is difficult” (Chaplin, 1991).
This study was unique in that it focused on the onset of specific externalizing behaviors of young children, while existing literature tends to fixate on adolescent behavioral outcomes (Knoester, 2003). In addition, this study explores the effects of poor family functioning on externalizing behaviors in a distinctive population of children who have substance-abusing parents. This study also diverted from the majority of existing literature surrounding this topic, in that it used structural equation modeling to explore the implications of a variety of family functioning factors and their effects on externalizing behaviors in children.

The current study, which explores early childhood externalizing problems, also has several relevant clinical implications. Externalizing behaviors are a common concern for parents of young children (Campbell, 1995) and when they begin at a young age, they are associated with increased risk for seriously antisocial outcomes (Moffitt, 1993). Examining the development of such problems before they are entrenched could help us to fashion effective interventions targeted towards treating the child and their families. In addition, exploring the bidirectional influence of poor parenting on child behaviors and vice versa helps to highlight the importance of conducting family therapy to treat these problems holistically. It may also be effective to use qualitative methods to examine this bidirectional relationship.

Although important findings were revealed in this study, limitations to the generalizability of the study results must be acknowledged. All families tested in this study were made up of substance abusing parents and their children. This may affect the ability to generalize these findings to other populations and should be done vigilantly. Furthermore it is not clear if these results will apply to older children of substance
abusing parents. As mentioned, the small sample size was also a limitation to the study. Using a larger sample size in future studies might yield results supporting the proposed hypotheses. Lastly, the measures used to test school bonding, family functioning, and externalizing behaviors in COSAPs were not normed on African Americans. Due to the majority of the sample being composed of African Americans, using measures normed on African Americans might yield the type of results hypothesized results for this study.

While this study contributes to the understanding of this area of research, further research in needed to determine other combinations of risk factors that can cause a family to have poor functioning, hence predicting poor externalizing behaviors in children of substance abusing families. Family functioning has been defined in numerous ways throughout existing literature, but this study used measures of parenting practices, family attachment and rituals, and the family’s geographic mobility to define family functioning. All of these family organizational processes have been shown to be positively correlated with parental substance abuse (Hayes & Emshoff, 1993). Future studies might benefit from examining several indicators of family functioning, in conjunction with family functioning factors already explored in this study.

Examining the relationship between family functioning on internalizing behaviors of children would also be beneficial in extending research focusing on the behaviors of at-risk youth. Significant relationships between family functioning and child behavior may also be found in research looking at internalizing behaviors in children. Poor parenting practices and other family functioning characteristics may serve as risk factors for the onset of internalizing behaviors.
Further exploration of parental and child gender affects on family functioning and externalizing behaviors is also needed. Some research has found that the risks of poor family structure may be limited to boys (Stephens & Day, 1979; Stevenson & Black, 1988). Numerous studies have also showed that fathers and mothers treated their girls and boys differently (Copeland, 1985; Jackson, 1993; Jenkins & Guidubaldi, 1997; Leve & Fagot, 1997; Mott, 1994; Seigal, 1987; Starrels, 1994).

It may also be important to compare the differences in family functioning on child externalizing behaviors in studies with multiple informants as opposed to one informant. There have been longitudinal studies including multiple informants, in which African American children had significantly lower behavioral problems than did children in studies with one informant. The results held up over a 4-year period for both older and younger siblings in the sample (Teachman et al., 1998). Research looking at whether COSAP studies with multiple informants have less behavioral problems than COSAP studies with one informant, may be beneficial.

In future studies, longitudinal analyses should be conducted on COSAP samples in order to examine the long-term effects of risk factors found within the family’s structure on child externalizing behaviors. Literature has advised researchers focusing on risk and resilience models to use longitudinal designs that directly manipulate risk and protective factors (Prevatt, 2003).
References


Figure 2. Standardized coefficients for Model 1

1 Latent constructs are shown in ellipses, and observed variables are shown in rectangles.

The displayed model shows the influences of school bonding, family functioning, and the interaction between school bonding and family functioning on externalizing behaviors in children (aggressive, hyperactive, and impulsive behaviors).

*p= 42.
Figure 3. Standardized coefficients for Model 2².

² Latent constructs are shown in ellipses, and observed variables are shown in rectangles.

The displayed model describes the influences of parenting practices, family mobility, family rituals, school bonding, and the interaction between school bonding and family functioning (composite) on externalizing behaviors in children (aggressive, hyperactive, and impulsive behaviors.) *p= 12.
Figure 4. Standardized coefficients for Model 3.3.

Table 1

3 Latent constructs are shown in ellipses, and observed variables are shown in rectangles.

The displayed model describes the influences of parenting practices, family mobility, family rituals, school bonding, and the interaction between school bonding and family functioning (composite) on externalizing behaviors in children (aggressive, hyperactive, and impulsive behaviors) and the influence of externalizing behaviors on parenting practices. *p= 15.
## Descriptive Statistics for Observed Variables and Sample Characteristics

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<td>Hyperactive Behavior</td>
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Table 2

Fit Statistics for Alternative Models

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</table>

Note. df= degrees of freedom; X²= chi-square; TFI= tucker-lewis index; CFI= comparative fit index; RMSEA= root mean square error of approximation. *p > .05