

**ENGAGEMENT, PARENTING SKILLS, AND PARENT-CHILD RELATIONS AS
MEDIATORS OF THE RELATIONSHIP BETWEEN PARENTAL SELF-EFFICACY
AND TREATMENT OUTCOMES FOR CHILDREN WITH CONDUCT PROBLEMS**

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Submitted to the Graduate Faculty of Social Work
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

University of Pittsburgh

2006

UNIVERSITY OF PITTSBURGH
SCHOOL OF SOCIAL WORK

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PROBLEMS**

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Increasingly, behavioral health professionals are recognizing the need to involve parents and other significant family members in the treatment of children. However, often professionals and parents themselves may not feel comfortable with a more inclusive treatment approach. Parents' own level of self-efficacy may inhibit or enhance the behavioral health care. Self-efficacy is defined by Bandura as a person's belief about his or her own abilities to produce designated levels of performance that can serve to influence events that affect their lives. This study investigated the relationship between parental self-efficacy and treatment outcomes for children with conduct problems. Using a secondary analysis of the data collected in the REACH Project, the relationship of parental self-efficacy, parenting skills, engagement, and parent-child relations with child outcomes was assessed. Also examined were the effects of changes in child's behaviors on parental self-efficacy. Findings from the path analysis of two mediational models suggest that parental self-efficacy is not a predictor of child outcomes as expected but that the parent's level of engagement in treatment is predictive of the improvements children with conduct problems will make in treatment. Additionally, parental self-efficacy does not improve as a child's behavioral problems diminish although improvements in parenting skills are predictive of improvements in parental self-efficacy. Although this study has a number of limitations, it is a first step in identifying the relationships amongst parental characteristic and the outcomes of children's behavioral health services. Discussion about how parent's self-efficacy plays a role is offered.

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PREFACE

I want to sincerely acknowledge and thank my dissertation committee members, Dr. Gary Koeske, Dr. Edward Sites, Dr. David J. Kolko, and Dr. Esther Sales for your valuable guidance and mentorship. Your guidance and support have been instrumental to my completion of this degree. You have contributed to my growth both academically and professionally. I especially appreciate Dr. Kolko's generous sharing of his data for my dissertation research.

I also want to acknowledge past and current employers who have supported me through the years in my academic pursuits. Dr. Helen Cahalane was influential in making it possible for me to attend classes and was always ready with words of encouragement to keep me on the path to achieve this educational goal. Don Goughler and Stephen Christian-Michaels from Family Services of Western Pennsylvania have reinforced my educational and professional goals allowing flexibility in my schedule, not often seen in other work environments, to attend necessary classes and to complete projects.

To my family and friends who supported me through the many years of my education, I appreciate every one of you for your encouragement and immeasurable support. To my husband, Oscar, thank you for being an inspiration for me. You are so accomplished that I owe much to your wisdom and experience. Thank you for taking the time to support my own achievements. I appreciate all you have done for me.

CHILDREN WITH CONDUCT PROBLEMS

1.1 INTRODUCTION

Children and adolescents with conduct problems are a national concern due to the high rates of violence in our society and the associated costs of crime. In 2002, there were 494.6 offenses of violent crime reported; murder, manslaughter, forcible rape, robbery, and aggravated assault, per 100,000 in the U.S. population (Bureau of Justice Statistics - Data Online, 2003). In 2001, of all violent crimes committed, individuals under the age of 18 committed 24% of them (FBI, 2003). For the past 9 years the rate of violent crimes committed by youth offenders in comparison to all ages has ranged from 24% to 30%. Although a comparison of 2002 and 2003 data indicates that the number of arrests of juveniles for all offenses has shown a slight decrease, (-.04%), a public health issue still remains (FBI, 2004).

Our nation's schools are common environments where youth engage in crime, exposing many of American children to antisocial behaviors. Findings from *Indicators of School Crime and Safety: 2000* (DeVoe et al., 2000) show that students ages 12–18 were victims of about 1.8 million nonfatal crimes of violence or theft at school in 2002, with the majority (62%) of all victimizations at school being thefts. In 1999–2000, 71% of public schools experienced one or more

violent incidents perpetrated by a student. Additionally, 10% of all public schools experienced one or more serious violent crimes (defined as murder, rape or other type of sexual battery, suicide, physical attack or fight with a weapon, or robbery) during the 1996-97 school year (U.S. Department of Education, 1998).

The costs of crime to society lie partly in the direct costs of property destruction, vandalism, or arson and the indirect costs to victims and their families. Estimates for the costs of violence in the United States range up to more than \$300 billion per year. For juvenile crime alone, it is estimated that a typical crime committed results in \$16,600 to \$17,700 in costs to the victim and \$44,000 in costs to the criminal justice system (Krug et al., 2002; Sminkey, 2004). There are also associated costs for treatment and rehabilitation services for the offending youth and his or her family.

The necessity to curb the violence trend places a responsibility on mental health providers, as many of the juvenile offenders are youth with a diagnosable disorder. Treatment of this population is critical to halt the devastating effects of the disorders, which may result in antisocial personality disorders in adulthood. Merely locking up the offending youth, using a boot camp, or a “scared straight” approach have not been effective in arresting the symptoms of behavioral disorders and may actually have deleterious affects (Connor, 2002; Rutter, Giller, & Hagell, 1999). There are differing approaches in the field as to how best to address the problem. Some advocates, who focus more on societal factors, advocate for tighter firearm or drug control laws or programs to address poverty.

Others focus more on the individual and family factors that influence the youth's functioning in the home, school, and community.

This paper examines the impact of family variables on children with conduct problems while in a treatment setting. It is hypothesized that parental factors are critical for a child to benefit from treatment. Parents' belief in themselves as parents and their ability to parent their children are important predictors as to how well their children may actually do when in mental health treatment. Children are products of their home environments which provide the biggest influence on how they relate to others and function in life domains. This factor needs to be addressed in treatment of children with childhood disorders.

The goal when parents enter a child into mental health services is to alleviate the child's distress and to improve his or her overall functioning. Treatment outcomes are directly affected to a large degree by the type of therapy that is delivered. Clinicians need to choose the most appropriate treatment approach and be mindful of the child within the context of his or her environment, including family, school, and community during the treatment process. The trend in the field towards more family or multi-systemic approaches to treatment demonstrates the appreciation of the impact of interacting systems upon a child's functioning (Ringeisen, 2003). Systemic therapists attempt to understand the child from the viewpoint of the systems in which he or she exists. What may be missed however, are routine ways to identify or understand the other systems in a comprehensive manner. Often missed are the individual parental factors that may contribute either positively or negatively not only to the child's functioning

but also to a parent's ability to engage in treatment, effect parenting skills and the parent's relationship with his or her child. When these factors are not routinely explored and addressed directly as part of the therapeutic intervention, treatment efforts may be comprised.

1.2 PREVALENCE AND DESCRIPTION OF CONDUCT PROBLEMS

According to the Report of the Surgeon General (1999), approximately one in five children and adolescents experience the signs and symptoms of a disorder as described in the *Diagnostic Statistical Manual-IV* (DSM-IV) (American Psychiatric Association, 1994) during the course of a year. On average, approximately 2% of U.S. children suffer from a disabling mental health condition that affects their ability to fulfill social role activities (Halfon & Newacheck, 1999). In the National Health Interview Survey conducted in 1992-1994, the prevalence of a disabling mental health condition was higher for older children, males, children who come from low-income homes, single-parent families, and those with less education (Halfon & Newacheck, 1999).

In the child population, externalizing disorders comprise the most common diagnosis (Reid, 1993). Externalizing or disruptive behavior disorders, such as Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD), have been estimated to have a prevalence rate ranging from 2 to 16 percent, 6 to 16 percent for males and 2 to 9 percent for females, depending on the population sampled and the way the disorder was evaluated (Shaffer et al., 1996).

According to the DSM-IV-TR (American Psychiatric Association, 2000), ODD is diagnosed when a child displays a recurrent pattern of negativity, defiance, disobedience, and hostility toward various authority figures, including parents, teachers, and other adults and these behaviors interfere with normal functioning. ODD is characterized by the frequent occurrence of arguing with adults or other authority figures, being touchy or easily annoyed, and deliberately annoying or being spiteful or vindictive to others. Children who have ODD tend to show difficulties with losing their temper, arguing with adults, refusing to comply with requests or rules of adults, blaming others for their own mistakes, and often being angry and resentful. These behaviors cause significant difficulties with family and friends and at school or in the community (Weiner, 1997). In studies, the condition is more common in boys before puberty, but after puberty the rates appear equally for both genders. Oppositional defiant disorder is sometimes a precursor of Conduct Disorder (American Psychiatric Association, 2000).

According to the DSM-IV-TR (American Psychiatric Association, 2000), Conduct Disorder is the more severe behavioral condition of youth. CD is characterized by aggressive behaviors such as fighting, bullying, intimidating, physically assaulting, sexually coercing, and/or being cruel to people or animals. Deliberate destruction of property, such as vandalism, setting fires or smashing windows, is common, as are rule-breaking activities such as theft and truancy. CD is associated with early tobacco, alcohol, and substance use and abuse and precocious sexual activity. These behaviors interfere with performance at school

or work, so that the youth usually does not perform at his or her age level or as predicted by the IQ or age. Youths' relationships with peers and adults are often impaired. At school they have higher rates of suspensions and expulsions and in the community they have higher incidents of legal trouble and delinquency. Children with an early onset of the disorder, i.e., onset before age 10, are predominantly male. Those with early onset have a worse prognosis and are at higher risk for adult antisocial personality disorder (National Institute of Mental Health, 1999). It is also been determined that between a quarter and a half of children with a significant antisocial history will become antisocial adults as well (Hendren & Mullen, 1997; Rutter & Giller, 1984).

1.3 ETIOLOGY

There are different theories as to why conduct problems develop in children. A biopsychosocial model of illness, which addresses several processes including biological, psychological, and social factors, has been applied to aid in the understanding of how and why the disorders arise. This conceptual model explains that the emergence of a disorder is due to a combination of risk factors and their interactional effect. Biological risk may be due to genetics (Hendren & Mullen, 1997), neurological damage caused by birth complications or low birth weight, autonomic underarousal, and insensitivity to physical pain and punishment (Raine, Reynolds, Venables, Mednick, & Farrington, 1998). The

higher preponderance of males with delinquent behavior may be due to sex hormone level, activity level, and differential rates of physical development, but one cannot rule out the impact of sex role socialization (Yoshikawa, 1994).

Psychological factors include child cognitive styles and inconsistent attachment patterns that exist for these children (Hinshaw & Anderson, 1978; Lyon-Ruth & Melnick, 2004). Children with insecure attachment styles have been found to be at risk for developing and exhibiting higher levels of emotional and behavioral problems (Cunningham, Harris, Vostanis, Oyebode, & Blissett, 2004). Goldberg (2000) has also found the link between insecure-ambivalent attachment and externalizing problems in children. A child's temperament also plays a part in how a child is socialized into appropriate behaviors. Certain traits or tendencies of children, such as callousness or unemotionality, appear to affect the degree to which children are responsive to parents' socialization efforts (Kochanska, 1997; Oxford, Cavell, & Hughes, 2003; Schneider, Cavell, & Hughes, 2003; Wootton et al., 1997).

A child's cognitive processing appears to be another factor for children with behavioral disorders. Dodge (1991) has focused on aggressive children's deficient social information processing. He found that aggressive children appear to underutilize pertinent social clues, misattribute hostile intent to peers, generate fewer solutions to problems, and expect to be rewarded for aggressive responses.

Social factors which have proven to possess predictive significance for early-onset of conduct problems in children include large family size, crowding,

and poverty (Loeber & Stouthamer-Loeber, 1986). Children living in low-socioeconomic neighborhoods experience adverse effects on their mental health, especially for externalizing behaviors, acting out and aggression (Leventhal, & Brooks-Gunn, 2000). In urban settings, aggression seems to be a central aspect of the type of co-occurring pattern found among poor children with conduct problems (Tolan & Henry, 1996). Youth who are exposed to a high level of community violence themselves perpetrate high levels of violent behavior (Gorman-Smith, Henry, & Tolan, 2004). These same youth, however, perpetrated less violence if they lived in families that functioned well across multiple dimensions of parenting and family relationship characteristics than similar youth in less well-functioning families. Family variables such as parent substance abuse, inconsistent/ineffective discipline, and poor supervision are also contributors to the development of behavior problems (Loeber, Green, Keenan, & Lahey, 1995).

The biopsychosocial model of illness informs the field about how childhood disorders develop, but it also provides a framework to address interventions from several different processes. Where there exist risk factors, there may also exist the possibility of remediation to prevent or lessen the intensity of the disorder. Factors that impact the community, school, and family, such as economics and policies, are more complicated factors to influence and beyond the scope of this study. Instead, family factors will be the focus in this study. In mental health treatment, family issues tend to be more accessible to a social worker. Therefore, it is important to understand the family processes that

facilitate the child's functioning and behavioral stabilization to intervene in the most appropriate fashion.

1.4 PURPOSE OF THE STUDY

Treatment efforts with children and families affected by conduct problems need to focus on a multisystemic approach, with the greatest attention being given to the family unit. Research exists about the impact of various parental functioning factors on a child's conduct problems, but little is known about how the parent's self-efficacy and the role of family interventions such as engagement strategies, parenting skills and parent-child interactions relate to a child's behaviors. If parental factors such as self-efficacy are understood better from the viewpoint of their potential impact upon treatment, treatment efforts could focus on addressing the parent's belief system as it relates to the child's treatment. In addition, it appears relevant to focus the majority of the "child" treatment on the family as a whole to engage parents in treatment, improve family interactional patterns, parenting skills, and individual variables that inhibit or limit family functioning.

Within the past decade, therapists and social workers have begun to appreciate that child treatment must focus on the entire family with an integrated view of how family relations and child factors are intertwined. Systems theory provides a model to address the process of family interactions in clinical social work. General Systems Theory (GST) was proposed in the 1940's by the

biologist Ludwig von Bertalanffy. Systems theory is based on the concept of systems operating with separate parts that are connected to the whole. Any system may be analyzed in terms of its own internal functioning as well as how it relates to other systems (Helton & Jackson, 1997). The systems of the child expand outside of his or her immediate family and friends to incorporate formal systems of groups and communities and societal systems such as schools and juvenile justice (Payne, 1997).

In Ecological Systems Theory, Bronfenbrenner (1979), posits a child's development as occurring within the interactions between self and his or her environment among four major levels: the macrosystem, the outermost level that consists of societal and cultural belief systems, the exosystem consisting of community and neighborhood factors, the mesosystem consisting of family factors, and the microsystem level which contains the individual factors or the person's immediate environment. According to this theory, children are influenced by the external environments and these systems affect the functioning of the family. It is also believed that the personal characteristics of parents and children determine the positive or negative impact of the external environment on family processes and their developmental outcomes. Existing theory and research point to the importance for the child's development of the nature and strength of connections existing between the family and the various other settings that a young person enters during the first two decades of life. Of particular significance in this regard are the successive transitions a child makes

into day care, peer group, school, and subsequently into work (Bronfenbrenner, 1986).

Social workers may “effect” changes in systems by assisting individuals and families to improve relationships and by incorporating the evidence-based treatments for this special population into service delivery. The need is for a therapeutic perspective that incorporates the individuals of the family system with the other community systems in a more comprehensive system of care. Overall, social workers taking a double-pronged approach, both child and family focused, to mental health intervention, can more effectively enhance outcomes of children and families.

Examining the parent and family variables of interest (parental efficacy, parenting skills, parent-child relationships and engagement in treatment) that are hypothesized to influence the subsequent symptom change and functioning of children in mental health treatment will facilitate interventions that can aid in the establishment of quality family treatment that is more effective in assisting child conduct problems. In a time when community mental health budgets are declining, it becomes more critical for social workers to utilize efficacious treatments. If we can better understand the association between parental or family factors and child treatment outcomes, we may be better able to utilize the most appropriate treatments for successful outcomes. It is hoped this study will contribute new information to more effectively help the children and families affected by child behavioral disorders.

2.0 CHILDREN WITH CONDUCT PROBLEMS IN TREATMENT

Mental health conditions are reported to be the single most important reason for a decreased quality of life for children (Offord, 2000). When disorders are left untreated, they exact an increased cost to a child and his or her family and to society as a whole. Half of the lifetime cases of mental illness begin by the age of 14 and many children experience long delays between the first onset of the symptoms and the actual receipt of services (NIMH, 2005). Leaving conditions untreated or delaying treatment can lead to an increase in symptomatology, severity and debilitation from the condition, and the resistance of the condition to treatment. Disorders that start in youth and are left untreated are associated with school failure, teenage childbearing, unstable employment, early marriage, marital instability, and violence (NIMH, 2005).

For children with conduct problems the picture is even bleaker. A child untreated for mental health disorders is at risk for social and school adjustment problems and for utilizing social services or being involved in the juvenile justice system (U.S. Department of Health and Human Services, 1999). Individuals with childhood onset conduct disorder are more likely to commit violent and victim oriented offenses than individuals with adolescent onset conduct disorder (McCabe, Hough, Wood, & Yeh, 2001). Children untreated for conduct problems

can grow up to be adults who inflict serious damage on others (Woolgar & Scott, 2005) and may develop an adult personality disorder (Kazdin, 1995). They themselves often experience an impoverished adult life with many life domains negatively impacted by the condition (Woolgar & Scott, 2005). Untreated health problems place burdens on the family, school personnel, and communities who are also impacted by the child's unmet health needs.

2.1 BARRIERS TO TREATMENT

Barriers to mental health treatment are important issues in service delivery, especially for children with conduct problems and their families, due to the aforementioned costs to society. The ability to obtain treatment with an appropriate mental health professional is critical in decreasing symptoms and returning a child to full functioning. It is estimated that 4 out of 5 children and adolescents with a diagnosable mental health condition do not receive the needed treatment each year (NIMH, 2002).

Owens and associates (2002) suggest three types of barriers that hinder access to needed children's mental health services; structural, perceptions of mental health problems and perception about services. The structural barriers include lack of providers, long waiting lists, insurance problems, costs, transportation problems, and inconvenient services. Health insurance is one of the most important factors influencing access to mental health services according to the U.S. Department of Health and Human Services (1999). Barriers related

to perception of mental health problems include the inability to identify the child's need for services, denial of the severity of the problem, and the belief that the problem can be handled without treatment. Barriers related to the perception of mental health services include the lack of trust in or negative experiences with mental health providers, lack of child's desire to receive help and the stigma related to receiving help.

In managing children with conduct problems in mental health treatment, it becomes increasingly important to recognize the barriers that might exist for this group given the prevalence of the disorders in the population. Kazdin (1995) has reported that children with conduct problems are difficult to treat in traditional outpatient modalities and tend to be more resistant to treatment efforts with poorer prognosis noted. Parents of children with conduct problems also tend to not seek needed services despite the occurrences of significant behavior problems (Stouthamer-Loeber, Loeber, Van Kammen, & Zhang, 1995). In fact, the existence of difficulties in parenting is significantly associated with barriers to mental health treatment (Owens, et al., 2002).

However, there is good reason to persist in helping these families access services. Evidence exists that improving parenting skills through parent training programs can reduce the development and persistence of conduct problems as well as improve the quality of parent-child relationships (Kazdin, 1997; McMahon, 1999; Serketrich & Dernas, 1996; Tucker & Gross, 1997). Behaviorally difficult children can cause parents to feel stressed and less effective, which tends to reinforce ineffective parenting strategies and negative behavior in the child

(Gross, Fogg, Garvey, & Julion, 2004). Treatment is needed to break the cycle that reinforces destructive patterns of interactions.

Efficacious treatments, however, do not always make it from academic or research centers to community mental health sites. This represents another barrier to children and families who need behavioral health interventions. When clinicians are not aware of the effective models for interventions that exist for this population, they are apt to add to the frustration children and parents experience in their contacts with mental health providers. It has been demonstrated that many children and families receive care that is based on outdated practices and narrowly defined outcomes (Nahme-Huang & Espiritu, 2003). In addition, youth with behavior problems, although accounting for the majority of children receiving outpatient services, are often not receiving treatment that is evidence-based (Riley, 2003).

Therapists play a central role in the engagement process. Those therapists who recognize that barriers exist for clients when seeking treatment will employ engagement strategies at a higher rate than those who do not in an attempt to improve participation rates (Manfred-Gilham, Sales, & Koeske, 2002). Therapists who avoid coalition formation in family therapy treatment may also prevent client dropout (Robbins, Alexander, Turner, & Perez, 2003). Therapists who primarily use teaching or confrontation with their clients had higher client noncompliance than those therapists who were supportive or facilitative in their interactions (Patterson & Forgatch, 1985).

Access to care can also be improved by employing engagement strategies prior to the families' first appointment. Engagement strategies that include clarifying the need for mental health services, maximizing the caregiver's investment in help seeking, identifying attitudes about help seeking, and developing strategies to overcome concrete obstacles that might impact upon attendance have been used successfully in outpatient settings (McKay, Gonzales, Quintana, Kim, & Abdul-Adil, 1999). An Engagement Interview utilized at the time of an initial appointment for families who are accessing treatment has been proven to be effective in increasing attendance rates (McKay, Nudelman, McCadam, & Gonzales, 1996, Szapocznik, et al., 1988). Multiple family groups have also been used successfully for children with disruptive behavioral problems to improve attendance rates and clinical outcomes (McKay, et al., 1999). Social workers are challenged by the need to be adequately informed and prepared to provide clinical treatment to children with conduct problems drawing upon the existing empirically supported interventions available.

2.2 PARENTAL INVOLVEMENT WITH CHILDREN WITH CONDUCT PROBLEMS

Family processes are important to understand from the perspective of what impact positive or negative processes may have on the child and thus what intervention points may be amenable for treatment services. For this study, three parental factors are measured and analyzed for their direct and indirect effects

on the child in treatment and for the reciprocal impact child behavioral improvements may have upon them. Parental self-efficacy, parenting skills, and parent-child relations all appear to be related to the development of conduct problems in children and thus may be fundamental for effective intervention.

2.2.1 Parental Self-Efficacy

Parental self-efficacy may be related directly to how children fare in treatment, how parents engage in the treatment process, and how parents make necessary changes that affect their child's behaviors. Children's positive changes in treatment may also increase parents' efficacy level as they may feel more effective in their role as a parent. Perceived self-efficacy is defined as a person's belief about his or her own abilities to produce designated levels of performance that can serve to influence events that affect their lives (Bandura, 1994). Self-efficacy beliefs determine how people feel, think, motivate themselves and behave (Bandura, 1994). In Bandura's social cognitive theory, efficacy beliefs are the foundation of human agency (Bandura, 2001). Self-efficacy beliefs tend to have individuals reflect on themselves and regulate their own behavior in accordance with their personal goals and standards. Efficacy beliefs are also dependent upon the life experiences of an individual and, as a result of these past experiences, provide an indication of the course of action an individual will be inclined to take in the future.

It is thought that when a person has a strong belief in his or her capabilities, this person will approach difficult tasks as challenges to be mastered

rather than as threats to be avoided. These individuals may set challenging goals and maintain strong commitment to them even when confronted with difficulties. They tend not to give up even if they experience setback or failures. They will attribute failure to insufficient effort or knowledge and skills which they may then undertake to acquire (Bandura, 1994). This belief model can be applied to any person in whatever life's role they are found.

Bandura's self-efficacy model (Bandura, 1997) provides a framework within which to understand parent's beliefs of their own parenting skills and ability to be parents. According to Bandura's model, parents who believe that they possess the qualities or skills that are necessary to ensure positive effects on their children's behavior and development manifest a sense of efficacy. Their self-perception of being competent and capable parents and persistent in the face of challenging behaviors should be high. A parent's ability to feel competent or effective despite challenging circumstances may protect against negative outcomes (Koeske & Koeske, 1990). Low parental efficacy may result in negative outcomes such as the parent adopting coercive or punitive punishment styles, inconsistent limit setting or poor parent-child relationships.

Parents' belief in their capacity to care for their child may also affect their behavior and perception of the child. Parental self-efficacy is thought to be at the core of parenting competence and parent-child dynamics, starting when a child is an infant (Boivin et al., 2005). Parents' self-efficacy level has been shown to be a predictor of their ability to understand and respond to infant signals (Donavan, Leavitt, & Walsh, 1990). For at-risk infants, higher levels of maltreatment were

shown to occur when the mother's attributions included low perceived power (Bugental & Happaney 2004). When mothers were provided with cognitive retraining, lower levels of harsh parenting were found among these mothers and the prevalence of physical abuse following treatment was 4% as compared with 26% in the control condition and 23% in the noncognitively focused home visitation condition (Bugental, Ellerson, Lin, Rainey, Kokotovic, & O'Hara, 2002). Maternal self-efficacy may have the potential to promote positive parenting even under stressful environment demands faced by mothers with young children from high-risk environments (Seo, 2004).

Self-efficacy measures have also shown to be significant predictors of maternal discipline style (Sanders & Woolley, 2004), parenting beliefs and parent-child relationships (Turner & Johnson, 2003), and even maternal sensitivity (Leerkes & Crockenberg, 2002). Parents' discipline strategies were predicted by their belief in what parenting strategies would be effective and whether or not they perceived themselves capable in performing that strategy (Perozynski & Kramer, 1999). Mothers who reported lower levels of self-efficacy tended to use more coercion in their interactions with their children (Bor & Sanders, 2004).

Parental self-efficacy increases parental involvement in activities important for the child's functioning. Parents' self-efficacy contributes to some extent to whether or not a parent becomes involved in their adolescents' schooling (Deslandes & Bertrand, 2005). Janicke & Finney (2003) looked at social-cognitive influences such as parental perceptions in parents' decision-making

process. The best predictive model for the use of primary care services was the interaction between parental stress and self-efficacy to cope with parenting demands and child behavior problems. Parents with higher levels of stress but also higher levels of self-efficacy were more likely to seek services. The parents who were confident in their parenting abilities were more likely to reach out for assistance as a means of reducing their sense of burden.

Parental self-efficacy appears to be a critical factor affecting the child's development within the family system. Parents' perception of their ability as parents contributes to a secure parent/child attachment relationship. Parental attachments are believed to form the basis of a cognitive structure for psychological development and interpersonal functioning (Webster, 2002). Parents who are able to effectively attach and bond with their children are able to provide them with stability, help them to feel connected and persevere even when behavior may be difficult (Bartholomew & Horowitz, 1990).

Parental self-efficacy also appears to have a direct affect on the child. In a study of adolescents, parental efficacy predicted the adolescent's academic and social-emotional adjustment through three parental behaviors: monitoring, parental involvement, and parent-adolescent communication (Shumow & Lomax, 2002). Maternal parenting was mediated by perceived self-efficacy to affect children's subsequent behavioral and cognitive functioning in early elementary school (Jackson & Schemes, 2005). Factors in the home environment such as child-rearing behavior and parent efficacy of care were important in explaining

children's early social, vocational, motor, and intelligence development and adaptation (Anme & Segal, 2004).

Parental self-efficacy has also been linked to the development of externalizing behavior problems in children. Mothers who attended a clinic for treatment with their children scored significantly lower on self-efficacy measures (Sanders & Woolley, 2005). In Karazsia, Wildman, & Langkamp's study (2004), parents with poorer parenting efficacy tended to use overactive discipline and this parenting strategy was a significant predictor of behavior problems in children. Enhancing parental self-efficacy is believed to make a significant contribution toward the prevention of future conduct problems in disruptive children (Bor & Sanders, 2004).

As mentioned earlier, when caregivers enter mental health treatment services with their children, there are many barriers to overcome, including the often-present perception that the child's psychopathology is due to their own poor parenting skills or failed parenting attempts. In fact, it appears that many family psychologists and clinical social workers assign higher causal attributions to parents than child psychiatrists, who believe strongly in biological determinants of psychiatric disorders and in the use of biological remedies to treat these disorders (Johnson et al., 2000). The more parents engage in the therapeutic process as collaborators with the provider, the more efficacious they report feeling in the treatment (Reich, Bickman, & Heflinger, 2004). It would be logical then to posit that parents' level of self-efficacy might lead to their own

involvement in the treatment process through the process referred to as engagement.

As suggested by the literature, high levels of parental self-efficacy will increase the child's improvements when in therapeutic services both directly and indirectly through the mediation of engagement, parenting skills, and parent-child relations. In this study, it is proposed that self-efficacy affects these parental behaviors, which, in turn, relate to a child's behavioral changes. Parents who experience high levels of efficacy are more apt to engage in the treatment process, are more likely to utilize more efficacious parenting skills, and engage in more warm and encouraging interactions with their children. These capabilities may make it more likely that they and their children will benefit from the therapeutic process.

A change in child behaviors can also be viewed as a predictor of parental self-efficacy through the mediating effect of parenting skills and parent-child relations. As a child progresses in treatment and makes positive changes in his or her behavior, the parent receives feedback that his or her parenting skills are effective. The child's improved behavior serves as a reinforcer for the parent's effort. In addition, as a child becomes more compliant and cooperative, the relationship between the child and parent is less hostile and conflictual; the parents are more able to enjoy their time together with their child. The experience of positive interactions may serve to increase parents' feeling of being capable and competent in their parenting role.

2.2.2 The Mediating Role of Engagement

The first mediator in this study is the process referred to as engagement. In the field of social services, engagement is understood in different ways. Engagement can be conceived as the process by which an individual comes to understand his or her need for mental health services or is identified by another as needing service, as in the case of a parent or teacher, and then seeks and utilizes the services. The initial part of engagement is when a parent makes the decision to seek services, makes the call for obtaining an intake or assessment, and attends the scheduled appointment (Holm & Hansen, 2004). In the literature there tends to be more focus on the treatment adherence portion of engagement, with less written about the initial phases of engagement. Treatment adherence is thought to include three distinct behaviors; attending treatment sessions, participating in the session, and doing work outside of the session (Holm & Hansen, 2004; Lundquist & Hansen, 1998).

Possible reasons for why certain families seek and attend services and why others don't have been a growing concern in mental health providers and a growing area of interest for researchers. In a study of 1,120 adolescents 11 to 18 years of age, it was found that adolescents who do not recognize the problematic nature of their conditions do not seek services, leaving unmet mental health needs (Zwaanswijk, Vander Ende, Verhaak, Bensing, & Verhulst, 2003). In fact, even inner city children who have been exposed to trauma and have elevated rates of mental health conditions have low rates of ongoing service involvement (McKay, Lynn, & Bannon, 2005). A parent's ability to recognize

behavior problems in their children and seek services is important for child outcomes, but their own poor social competence and distress has been shown to limit their ability to utilize available treatment services (Pihlakoski et al., 2004).

As mentioned earlier, perceived or practical barriers to treatment that are present may limit or prevent families from seeking the needed services. Kazdin (1980) reported that parents who perceived treatment as appropriate and practical in addressing their concerns are more likely to follow through with treatment provided. Others note that, when family support is present, the support may act as a facilitator to treatment engagement (Compton, 2005).

Another way to view engagement is the process by which an individual connects to treatment. The goal of engagement then could be viewed as the formation of a therapeutic bond between a family and mental health provider so that the services offered can achieve the best outcomes for the child and family functioning. When parents view the therapeutic relationship as a positive one, they experience it to be caring, affirming, accommodating, and appropriately focused on their goals (Duncan & Miller, 2001). When goals of therapy are viewed as being both desirable and attainable, parents may participate more in the treatment process (Bandura & Schunk, 1981). In Bandura & Locke (2003), a meta-analysis of the effects of self-efficacy on functioning suggests that efficacy beliefs positively contribute to a person's level of motivation and performance. It is thus hypothesized that those parents with higher levels of self-efficacy will be able to engage at higher rates in treatment, which will then positively affect their children's treatment outcomes.

2.2.3 The Mediating Role of Parenting Skills

A second mediating variable proposed in this study is that of parenting skills. It is hypothesized that parenting skills play an intervening role between parental self-efficacy and child treatment outcomes. Parenting skills are important for managing children's behaviors and, due to the advancement of evidence-based treatments, have become more prevalent as a focus in treatment by providers working with children. When parents utilize consistent and effective strategies of discipline, they create an environment that produces more beneficial effects for their child's development and functioning. There are a number of potential negative outcomes for children when the parental discipline style is a punitive one. Child abuse is an example of an extreme discipline style (Connor, 2002) that can negatively affect the child's functioning in all life domains.

Effects of ineffective parenting styles take a toll on children in several different ways. Children of parents who utilized high levels of aggressive punishment have been shown to display low levels of moral development (Lopez, 2001). School achievement in girls appears to be negatively impacted by the mother-child interaction when the mother is ineffectual in her attempts to influence her daughter's behavior (Doolittle, 1995). Parenting stress has also been negatively related to teacher ratings of social competence, internalizing and externalizing behaviors in children (Anthony, Anthony, Glanville, Naiman, Waanders, & Shaffer, 2005).

The parents' ability to provide appropriate and sound parenting to a child is crucial for a child's development. When a parent is not capable of providing

consistent structure and supervision, due to their mental illness, stress, or lack of support, a child may suffer. Children of depressed mothers demonstrate higher levels of symptoms and dysfunction than their cohorts (Hammen, Burge, & Stansbury, 1990). Children residing in homes with high levels of marital conflict and hostility show elevated levels of internalizing and externalizing problems (Grych & Fincham, 1990; Yoshikawa, 1994). Distressed marital couples have shown to have a parenting style that is cold, unresponsive, angry, and lacking in appropriate levels of limit setting and structuring. Children in these homes are more angry and noncompliant, have lower levels of play interactions, more negative peer interactions, and poorer health (Gottman & Katz, 1989). Maternal antisocial behavior has also shown to contribute directly to relationship transitions and indirectly to child adjustment problems (Capaldi & Patterson, 1991). Parental use of corporal punishment has been associated positively with child acting out behavior (McCabe, Clark, & Barnett, 1999).

According to the extensive work completed in the child abuse field by Bavolek (1989), parent education is believed to be the primary prevention strategy to decrease childhood injuries. Abusive parenting practices are believed to be learned behaviors that can be unlearned by effective parenting education. Parent training is thought to affect parents and their children by challenging their thoughts and beliefs, modifying their attitudes about parenting and family members, and through expanding the parent's repertoire of parenting and interaction patterns (Bavolek, n.d.). Evidence-based positive parenting programs

have also demonstrated the value of the training in reducing behavioral problems in children (Sanders, Mazzucchelli, & Studman, 2004).

When parents have effective parenting skills, they also experience their abilities as parents as higher. In a study by Christophersen and Sykes (1992), after mothers were taught a discipline strategy, i.e., time-out, not only did their children's behaviors improve, they themselves showed increases in the use of positive verbal statements, in their level of attentiveness, and needed to make fewer verbal commands to achieve higher rates of compliance from their children. A tolerant, low-conflict style of parenting is linked to an increased sense of control and competence as a parent, which might be due to a parent gaining pleasure in the parenting role (Ohan, Leung, & Johnston, 2000). These studies support the mediating role parenting skills may play in this study. It is hypothesized that parenting skills play an intervening role between parental self-efficacy and child treatment outcomes and between change in child's behaviors and the subsequent elevation of parental self-efficacy.

2.2.4 The Mediating Role of Parent-Child Relations

Another mediator proposed in this study is that of parent-child relations. The importance of good family relations must also be emphasized in treatment settings and plays a critical role for parents of children with conduct problems. Harmonious parent-child interactions appear to provide a level of support that encourages a child's growth and a parent's ability to fulfill the role of parenting. The construct of a quality parent-child relation consists of varied components

such as emotional availability (Lum & Phares, 2005), good communication skills (Davalos, Chavez, & Guardiola, 2005), and warm interactions (Barnes & Austin, 2001). The relationship is strained when behaviors of both the child and parent are not supportive. A strained relationship inhibits the opportunities for growth and development of all family members. Parents may become distant and withdrawn in their interactions with their child, or punitive and coercive in their discipline style. Children may engage in rule-breaking or oppositional behavior.

To what extent the relationship between a child and parent affects a child's functioning is not altogether clear. There is evidence supporting the notion that the child-parental relationship is important for a child's development. Children in a clinical sample reported lower rates of parental emotional availability than did children in a nonclinical sample (Lum & Phares, 2005). Warm and involved parenting is associated with decreases in a child's risk for problems with relationships with peers and in school performance (Scaramella, Conger, Simons, & Whitbeck, 1998). Warm and involved parents also appear to directly affect adolescent academic competence in a number of studies (Glasgow, Dornbusch, Troyer, Steinberg, & Ritter, 1997; Melby & Conger, 1996). Parental warmth and involvement have also shown to have direct effects on the risk-taking behavior of adolescent girls, which played a mediating role for increased risk of teenage pregnancy (Scaramella, Conger, Simons, & Whitbeck, 1998).

Parents have often been assigned the burden of causality for their child's behavioral problems; especially parents of children with conduct disorders.

There have been studies that demonstrate parents of children diagnosed with conduct disorder tend to use aversive and aggressive interactional approaches with their children (Patterson, 1982). Other studies show that children with conduct disorders are exposed to high rates of conflict and aggression in family interaction patterns (Dadds, Sanders, Morrison, & Rebgetz, 1992). Parents in these homes tended to use coercion and anger in their interactions with their children.

A one-way causal link however, is not the entire picture. Evidence exists that points to a more reciprocal and interactional process being in place. In Anderson, Lytton, & Romney (1986) an alternative view for understanding the interactional effects between parent and child was presented. The authors first viewed parental behaviors as a potential exacerbator of a child's negative behaviors. Secondly, they viewed parental behaviors as a reaction to a child's behavior. Lastly, they interpreted certain parental tendencies as manifestations of underlying genetic factors that predispose both the child and parent to antisocial or socially maladaptive behaviors. Not only do parents have an impact on the child's actions but the child's own high level of misbehavior affects in a negative way the parent's behavioral choices, with both parties being influenced by genetic predispositions.

Rutter (1994) proposes that person-environment interactions offer another way to understand the impact of family discord for all family members. He reports that a child's behavior affects parents' behaviors. Also drawing from the biopsychosocial model, he suggests that family discord may result in child

conduct problems when the child also has genetic factors or vulnerabilities. Family discord and maladaptation were also associated with a two-fold increase in risk of the development of conduct disorders in children; however, when factoring in the parent's genetic influence, only family maladaptation remained as a predictive variable (Meyer et al., 2000).

In a meta-analysis conducted by Rothbaum & Weisz (1994), the association between parental caregiving behaviors such as approval, coercion, affection and child externalizing behavior appears to be present more for boys than for girls and for mothers more than for fathers. The authors propose a reciprocity theory to understand the interactional behaviors of the parents and children, where each party affects the responsiveness of the other to expectations and needs. For these families, negative interactions lead to more negative interactions with each other. A reciprocal relationship was also found to be true with mothers who were depressed, in that characteristics of the child contributed to maternal functioning in a negative manner (Hammen, Burge, & Stansbury, 1990). Two aspects of parenting behaviors, power assertion and maternal responsiveness, have also been predicted from mother-child interactive contexts, suggesting a bidirectionality of the parent-child relationship (Clark, Kochanska, & Ready, 2000).

The multidirectional model proposed for this study is derived from the literature reviewed as well as from social systems theory. The family contextual model argues that the family context, through parents' efforts to engage in the treatment process, to utilize appropriate parenting skills, and to interact with their

children in a warm and nonconflictual manner, affects the ability to make necessary changes in their behavior. It is proposed here that children who have parents with high levels of self-efficacy, who experience their abilities as capable, will experience better outcomes in treatment because of the parents' ability to be involved in the treatment process, to utilize effective parenting practices, and to have better interactions with their children. As an extension of this model, it is hypothesized that a bidirectional process will also be present. That is, it is expected that as children make improvements in their behavior, such as experiencing less symptomatology, engaging in more prosocial behaviors and activities, and having better school and home performance, parents will then improve in their own parenting behaviors and experience an increase in parental self-efficacy.

2.3 INTERVENTIONS FOR CHILDREN WITH CONDUCT PROBLEMS

Various treatment approaches in use for children with conduct problems, will be described next, including individual and pharmacological treatment, with the majority of attention devoted to family treatment issues.

2.3.1 Individual Treatment

There are a number of individual treatment approaches that have shown high levels of effectiveness with youth with conduct problems, such as skills training in social, anger management, problem-solving and cognitive-behavioral

skills. Problem-solving therapy (PST) is a cognitive-behavioral based treatment utilizing an individual's ability to identify effective solutions for coping with a problem situation (Sahler et al., 2002). The skills taught in this treatment consist of 1) problem identification, 2) goal statement, 3) impulse delay, 4) generation of alternatives, 5) consideration of consequences, and 6) implementation of a strategy (Kolko, 1992). It has been shown to be effective in the treatment of a number of mental health conditions (D'Zurilla & Nezu, 1999). The Cognitive Problem Solving Skills Training (PSST) is another program that has shown evidence for efficacy (Riley, 2003). PSST focuses on altering the cognitive processes that appear to underlie social behavior, focusing on cognitive distortions and impulse control (Riley, 2003).

2.3.2 Pharmacological Treatment

Pharmacotherapy has not been a primary treatment intervention for children with conduct problems, as there has been little success in managing these behaviors with pharmacological agents. There is, however, a role for medication in treating the high occurrence of other co-existing mental health disorders. Screening for and treating the co-occurring disorders have proven to be beneficial for children and adolescents with conduct problems. A high number of children with ODD or CD also have Attention Deficit Hyperactivity Disorder (ADHD), which has been effectively treated with a combination of medication and other treatment modalities. When a combination of methylphenidate and behavior modification was used in a group of children with ODD or CD with

ADHD, improvements were noted in the core symptoms of ADHD and positive behaviors, peer conflicts and aggression, and oppositional behaviors (Kolko, Bukstein, & Barron, 1999). There has also been successful treatment of aggressive behaviors of youth with conduct disorders through the administration of psychotropic agents such as lithium carbonate and haloperidol (Kazdin, 1987).

2.3.3 Family Treatment-Parenting Skills Focus

Researchers have focused much effort on studying the effectiveness of child treatments, especially those designed for children and families affected by conduct problems. Frequently in parent training, especially in strategies using a parent management training (PMT) model, parents are trained in procedures to alter their child's behavior in the home (Kazdin & Weisz, 1998). The procedures focus on improving the parent's ability to discipline and reward a child in an effective manner. PMT is designed to alter the pattern of interchanges that occur between a parent and a child with an emphasis on reinforcing and supporting prosocial behaviors through the use of positive reinforcement, token economies, and others and removal of reinforcement, such as time-out, and use of punishment for negative behaviors (Kazdin, 1987).

The basis for many of the parenting skills programs is on social-learning principles, with the understanding that those behaviors that are reinforced will occur more often (Kazdin, 1987). Two main principles of discipline are positive reinforcement and punishment. Positive reinforcement is the procedure by which an event occurs following a behavior that results in the increased probability of

the behavior occurring again (Larsen & Tentis, 2003; Miller, 1997; Patterson, 1976). Positive reinforcement can take the form of parental attention, positive feedback or praise, or rewards such as affection, privileges, or special activities (Banks, 2002). Punishment is the procedure by which a consequence occurs following a behavior that results in the decreased probability that the behavior will occur in the future (Larsen & Tentis, 2003; Miller, 1997; Patterson, 1976). For children with conduct problems, it is hypothesized that parents have failed to attend to appropriate behaviors of children and use ineffective commands and harsh punishment in an attempt to obtain compliance (Kazdin & Weisz, 1998).

Researchers in the area of parent training identify three components of parenting behaviors needed to achieve effectiveness, promote the parent-child relationship, reinforce positive behaviors, and decrease undesired behaviors of the child (Howard, 1996). Two of the three components, reinforcement strategies and discipline techniques, are best categorized in the area of parent training, whereas promoting the parent-child relationship building will be covered in family therapy approaches in the next section.

There are a number of evidenced-based treatments that have developed as a result of these social learning principles, such as Triple P-Positive Parenting Program (Sanders, 1999), Barkley's parent training (1987), or Living with Children (Patterson, 1976). All of these have been shown to be efficacious for children with conduct problems. Parents who received parent training reported higher self-efficacy and less coercive discipline and were observed to have more positive behaviors towards their children (Gross, Fogg, Garvey, Julion, Webster-

Stratton, & Grady, 2003). Intensive in-home crisis services that focused on parent training resulted in increases in family adaptability, children's self-concept, and parental self-efficacy both at discharge and at 6 months post discharge (Evans, Boothroyd, Armstrong, Greenbaum, Brown, & Kuppinger, 2003).

Parent training also appears to not only positively affect a parent's effectiveness in reducing child behavior problems but also in preventing new occurrences, and teaching the child appropriate behaviors (Feldman & Werner, 2002). In a nurturing parenting program used for parents and children aged 4-12 years, indications were that significant positive changes occurred in the parenting and child-rearing attitudes of the parents. These changes included improved expectations for their children, an increase in empathic awareness of their children's needs, a decrease in the use of corporal punishment, and a decrease in parent-child role reversal (Bavolek, 2002). Another primary prevention study that utilized several techniques such as modeling, role-playing, home practice and visits demonstrated that parents showed improvements in their overall parenting skills, the use of appropriate interventions, appropriate developmental beliefs, a decrease in negative affect, acceptance of the responsibility and nurturing of the parental role, and self-efficacy (Peterson, Tremblay, Ewigman, & Saldana, 2003).

Changes in child adjustment and parenting practices have been reported for children who participated in the Oregon Social Learning Center treatment in measures of outcome such as decrease in externalizing behaviors and improvement in problem-solving scores (Patterson & Forgatch, 1995). For

parents, improvements were noted in their discipline practices and in their monitoring behaviors. In fact, even in comparison studies of three varied parent training approaches, all treatment conditions demonstrated clinically significant change on at least one measure of child behavior following treatment (Sheldrick, Kendall, & Heimberg, 2001).

When PMT was combined with problem-solving skills training, marked changes have been reported in both child and parent functioning (Kazdin, Siegel, & Bass, 1992). Children were reported to have a reduction in their overall deviant and antisocial behaviors and lower levels of aggression, with an increase in their prosocial competence demonstrated both at home and at school. For parents, lower stress and depression were noted, as well as other symptoms of parent dysfunction. Another form of parent training, parent-child interaction therapy has also been shown to reduce parental stress levels and externalizing behavior in children diagnosed with ODD (Nixon, Sweeney, Erickson, & Touyz, 2003). In DeGarmo, Patterson, & Forgatch's research (2004) following PMT, a reduction in maternal depression appeared to be mediated by a reduction in a child's externalizing behaviors as well as effective parenting skills predicting a reduction in a child's behavior problems.

Studies such as these demonstrate that when parents are provided with training on how to engage in activities or parenting practices with their children in a constructive and consistent manner, improvements are noted not only in the child behaviors but in their perceptions of themselves as parents and well-being and in their perception of their children. These positive changes may lead to

improved parent-child relationships and a decreased chance of abuse or punitive actions used by parents. The parenting skills enhancement then may act as a mediator for changes in childhood behavior problems and in parental self-efficacy.

2.3.4 Family Treatment-Family Therapy Focus

Family centered treatments for children with conduct problems provide another rich empirical arena for researchers. There has been a number of treatment approaches studied in this area and, as a result, a few have been proposed in the field as being efficacious. Programs that utilize a family-focused multi-modal approach, such as Multisystemic Therapy (MST) (Henggler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) and family-based mental health services have been found to be effective in improving relations within the family unit. MST focuses on the reduction of antisocial behaviors by working with all the systems that impact on the child and family. The goals of the approach include helping parents shape the child's behaviors, overcoming family difficulties, reducing negative parent-child interactions, and developing cohesion and emotional warmth among family members (Riley, 2003).

Family based treatment, such as functional family therapy (FFT) (Alexander, 1988), focuses on reorganizing family relationships so that each family member's needs can be met in more constructive ways (Diamond, Serrano, Dickey, & Sonis, 1996). Studies have shown that utilizing these family focused interventions has an impact on improving family interactions such as

increasing support giving and improving communication, which then results in positive treatment outcomes in the behaviorally disordered youth (Diamond, Serrano, Dickey, & Sonis, 1996; Klein, Alexander, & Parsons, 1977; Parsons & Alexander, 1973). Family-based approaches also rely heavily on “strength-based” interventions that stress the importance of viewing the family as having the ability to change and to solve their own difficulties. Interventions steer clear of blaming families for their problems. Family-based strategies are less threatening in nature and appear to work ideally with families who are at risk of not engaging in treatment services (Kagan, Reid, Roberts, & Silverman-Pollow, 1987; Snell-John et al., 2004).

Family-based preventive interventions have demonstrated positive effects on parenting behaviors, the development of appropriate child management strategies, and improvements in parent-child affective quality (Spath, Redmond, & Shin, 1998). In a review of the literature, Liddle (2004) has found that family-based treatments produce stable outcomes, with improvements in family interaction patterns and decreases on target symptoms of alcohol and drug use and related problems such as delinquency, school and family problems, and affiliation with substance abusing peers.

It is believed that parenting training alone is not effective enough to engage a family either in treatment or in sustaining the effects of treatment over time. Other family issues such as marital conflict, economic issues, and dysfunctional family interactions need to be addressed to effectively manage the child with severe behavioral problems. When social learning family interventions

were adapted to include multisystems adjuncts of both cognitive-behavioral interventions and ecological approaches, children with conduct disorder and their parents experienced favorable outcomes (Miller & Prinz, 1990).

As with parenting skills, improving family relations may also act as a mediator for changes in childhood behavior problems and it too is proposed to have a direct effect on parental self-efficacy. As a child and parent experience improved relationships within the family setting, the process of what constitutes a quality family interaction affects changes for the child with conduct problems and for the parent's own sense of efficacy.

2.4 STUDY PURPOSE

The purpose of the current study is to gain an understanding of the parental factors that contribute to the outcome of a child with conduct problems when the family enters mental health treatment. This study uses a multiple path model to investigate the influence of selected variables on the clinical outcomes of the child as well as the changes that occur for the parents of these children. The role of parental self-efficacy is examined as the independent variable predicting the clinical outcomes for the child. The roles of engagement, parenting skills and parent-child relations are examined as mediating variables relative to the self-efficacy variable and change in the child's clinical symptomatology as the outcome measure. A secondary focus in the study is in

examining how the change in a child's functioning impacts a parent's self-efficacy through the mediating effects of both parenting skills and parent-child relations.

2.4.1 Statement of Hypotheses

Based on the current literature that indicates the important contributions of self-efficacy, it is expected that when parental self-efficacy is high, parents will engage more in the treatment process, will be more inclined to use appropriate parenting skills once they are taught, and will have more positive parent-child relations. It is also crucial to address the reciprocal nature of parent-child interactions. As already noted, children also have an impact on a parent's emotional state, cognitions, and behaviors. Thus it is reasonable to anticipate that changes in the child's behavior through treatment efforts will also reinforce a parent's perception of self-efficacy. Through this feedback loop of improved parent-child relations and parenting skills, parents will experience their own abilities as capable and competent. This study investigates the impact self-efficacy has on parents' behaviors and the subsequent impact on their child treatment outcomes as well as the impact that improvements in a child's behavior will have on parents' report of self-efficacy.

2.4.2 Test of First Mediation Model

Parenting skills, parent-child relationship, and engagement in treatment will act as mediators between parental self-efficacy and child clinical outcomes. Parenting skills and parent-child relations along with engagement in treatment

are considered to be several paths towards improving child behavior problems and towards improvement of child functioning. Based on the empirical literature to date, parenting skills and parent-child relations can be important intervention points for child behavioral problems (Riley, 2003). Also, for efficacious treatments to be effective, parents must be engaged in the process (McKay et al., 2002; Staudt, 2003). Therefore, a path analysis is anticipated to show that this set of variables function as mediating variables between the parental self-efficacy variable and child outcome variables.

Operating as mediators, parenting skills, parent-child relations, and engagement are expected to account for the relationship between the independent variable, parental self-efficacy, and the dependent variable, child clinical outcomes. Temporal order requires these mediating variables to be located between them in time. According to the path model (see Figure 1), variations in the levels of parental self-efficacy will significantly account for the variations in parenting skills (Path b), parent-child relations (Path c), and engagement (Path a), which in turn, will account for the variations in the child's clinical outcomes (Paths e, f, g). When the variations in Paths A, B, and C are controlled, the direct main effects of parental self-efficacy and child clinical outcomes (Path d) should no longer exist or significantly decrease.

To confirm the mediation model proposed, the results of the path analysis are expected to show 1) a non-significant or diminished relationship between parental self-efficacy and changes in a child's functioning (behavior in school and home settings); 2) significant and positive relations between self-efficacy and

engagement (attendance in sessions), parenting skills (use of appropriate discipline), and parent-child relations (quality of interactions); and 3) significant positive relationships between engagement (attendance in sessions), parenting skills (use of appropriate discipline), and parent-child relations (quality of interactions) with child's functioning (behavior in school and home settings).

Hypothesis 1: The more parental self-efficacy, the more engaged parents will be in the treatment process.

Hypothesis 2: The more parental self-efficacy, the better the parents' parenting skills will be.

Hypothesis 3: The more parental self-efficacy, the better the parents' interactions with their child will be.

Hypothesis 4: The more engaged the parent is, the better the child does in treatment.

Hypothesis 5: The more positive parenting skills, the better the child does in treatment.

Hypothesis 6: The more positive the parent-child relation, the better the child does in treatment.

Additionally, research has shown a strong correlation between parenting skills and parent-child relations. The combined effects of maternal knowledge or skills and confidence have been shown to be related to the quality of mother-child interactions (Conrad, Gross, Fogg, & Ruchala, 1993). In addition, parents who are engaged in treatment will also be more likely to have better parenting

skills and relationships with their children. It is hypothesized that the three mediating variables will thus have a similar correlational pattern.

Hypothesis 7: Parenting skills, engagement, and parent-child relations are positively correlated with each other.

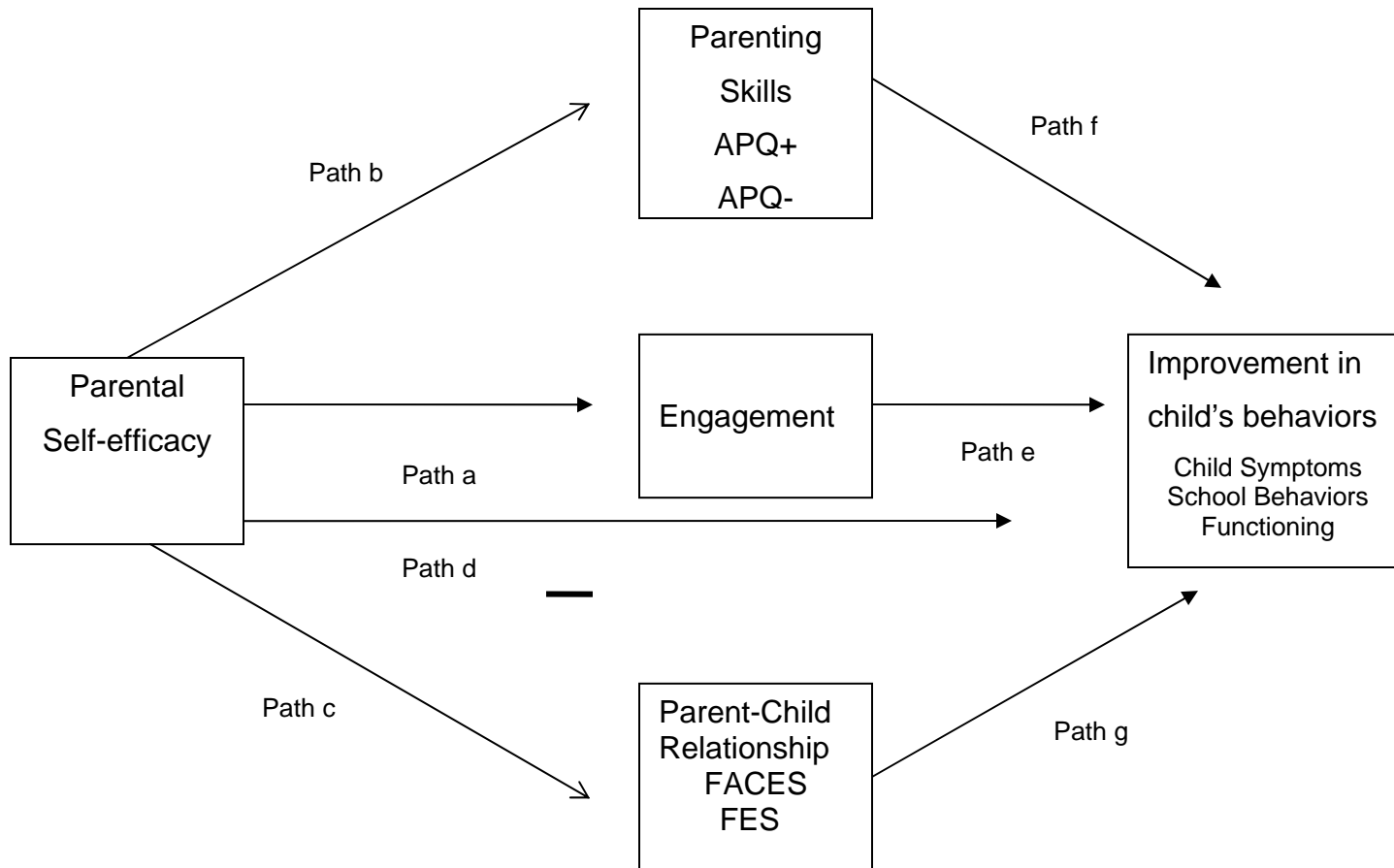


Figure 1: Path Analysis for Mediating Effects of Parenting Skills, Engagement, and Parent-Child Relationships on Parental Self-efficacy and Improvement in Child's Behaviors

2.4.3 Test of Second Mediation Model

Parenting skills and parent-child relationship will act as mediators between child treatment outcomes and parental self-efficacy. Parenting skills and parent-child relations are considered in this model to be two paths towards improving a parent's report of self-efficacy. The literature to date substantiates that when parents receive feedback from their children that is positive and rewarding, they also feel more capable about their abilities (Martinez & Forgatch, 2001). Therefore, a second path analysis that demonstrates a reciprocal relationship between child and parent is anticipated to show that these two variables function as mediating variables between the child outcome variables and the parental self-efficacy variable.

As mediators, parenting skills and parent-child relations, are expected to account for the relationship between the independent variable, child clinical outcomes, and the dependent variable, parental self-efficacy. Temporal order requirements state that these two mediating variables are located between the independent and dependent variables in time. This is achieved by using the measures of parental factors at Time 2. According to the path model (see Figure 2), variations in the child's clinical outcomes will significantly account for the variations in parenting skills (Path a) and parent-child relations (Path b) which in turn, will account for the variations in the levels of parental self-efficacy (Paths d & e). When the variations in Paths A and B are controlled, the direct main effects of child clinical outcomes and parental self-efficacy (Path c) should no longer exist or significantly decrease.

To confirm the mediation model proposed, the results of the path analysis are expected to show 1) a non-significant or diminished relationship between changes in a

child's functioning (behavior in school and home settings) and parental self-efficacy; 2) significant positive relationships between the child's functioning (behavior in school and home settings) with parenting skills (use of appropriate discipline) and parent-child relations (quality of interactions); and 3) significant and positive relations between parenting skills (use of appropriate discipline) and parent-child relations (quality of interactions) with self-efficacy.

Hypothesis 8: The more positive changes the child makes in treatment, the more improvements noted in the parent-child relationship.

Hypothesis 9: The more positive changes the child makes in treatment, the more improvements noted in a parent's parenting skills.

Hypothesis 10: The more positive changes in a parent's parenting skills, the more improvements noted in a parent's self-efficacy.

Hypothesis 11: The more positive changes in the parent-child relationship, the more improvements noted in a parent's self-efficacy.

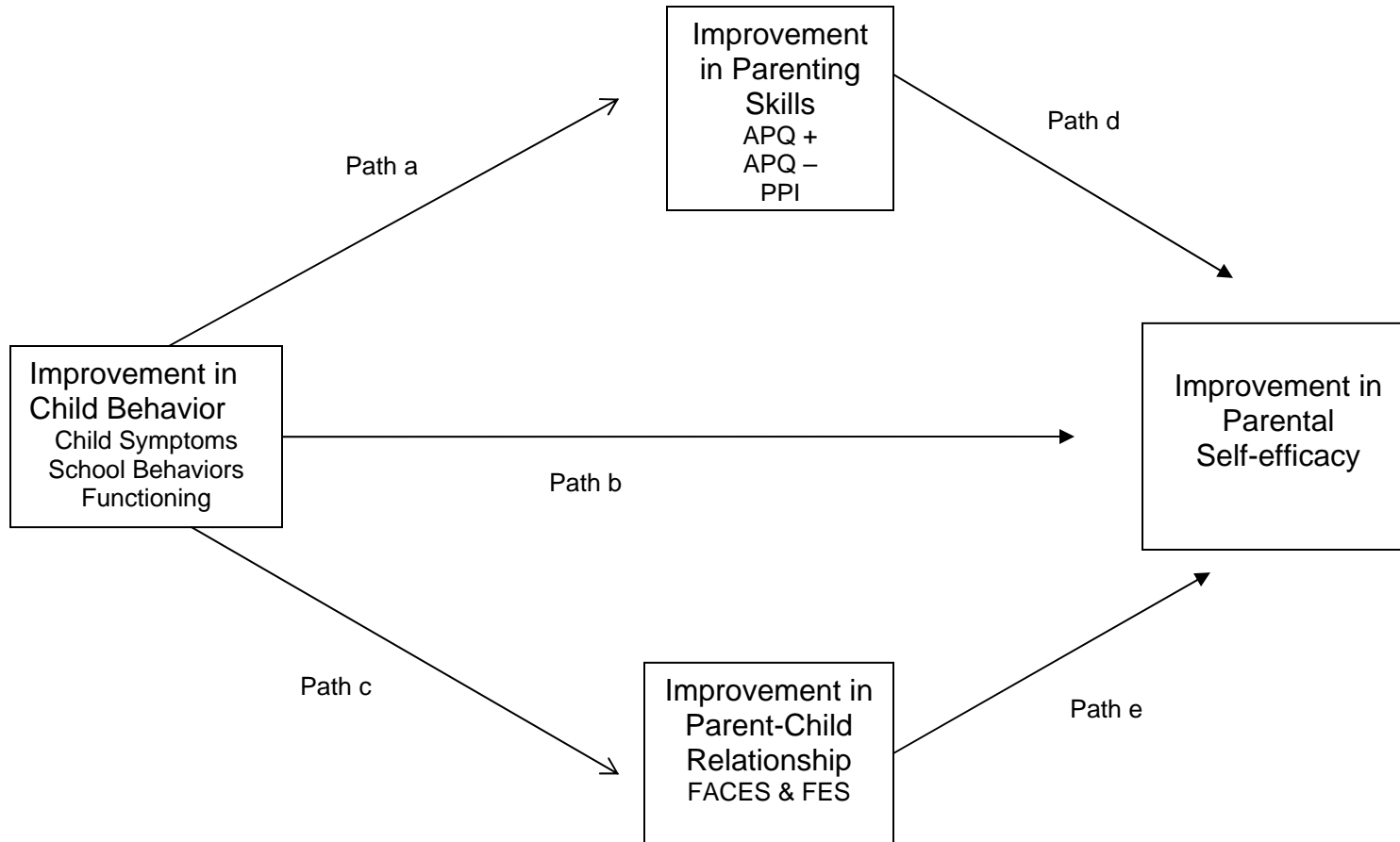


Figure 2: Path Analysis for Mediating Effects of Parenting Skills and Parent-Child Relationship on Change in Child's Behaviors and Improvement in Parental Self-efficacy

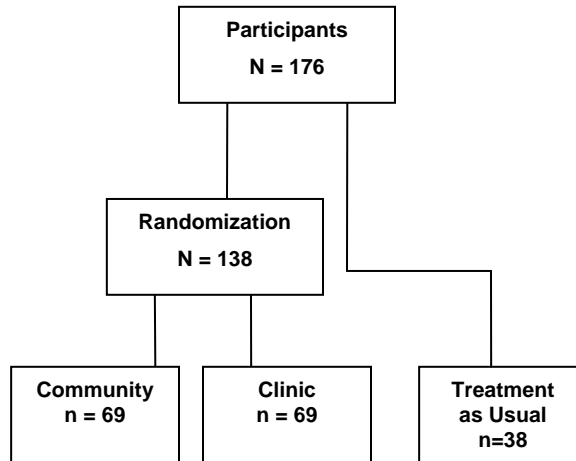
3.0 METHOD

The original study by David Kolko, Ph.D. was a randomized clinical trial of a multimodal treatment of 131 children with conduct problems/antisocial behavior and their families. Inclusion criteria for study eligibility were males or females between the ages of 6-12, living with at least one parent or guardian, and having an intellectual level no less than one standard deviation below age norms as shown on the Ammons Quick Test. Children were excluded from the study if they were currently in treatment, had current psychotic, bipolar, or major depressive disorders, were suicidal or homicidal, or had a substance abuse or an eating disorder. Primarily, children in the study were referred from schools or responded to advertisements about the study. In addition, children who were new referrals for assessment at the Center for Children and Families, an outpatient clinic at Western Psychiatric Institute and Clinic (WPIC) in Pittsburgh, Pennsylvania, were screened for appropriateness in the study.

There were 690 potential participants who obtained a telephone screen, resulting in 311 who were seen for an initial assessment. Of these, 135 participants were eventually excluded, resulting in 176 participants. There were 138 children who were randomly assigned to receive treatment in the clinic or in the community, with each assignment consisting of 69 participants. The remaining 38 participants were in the “treatment as usual” group and an additional 69 children served as “healthy controls”.

Only the 138 children who were randomly assigned to the two treatment groups were used in this study. This secondary data analysis was approved under an exempt status by the Institutional Review Board at the University of Pittsburgh.

Figure 3: Comparison of Participant Groups in REACH Study



3.1 PARTICIPANTS

Although the original sample consisted of 138 children and at least one parent, seven cases were eliminated from this analysis as they did not have at least three treatment sessions. All seven cases were from the clinic treatment setting. There were 112 males (86.5%) and 19 females (14.5%). The participants ranged from 6 to 12 years, with a mean age of 8.7 (SD = 1.61). There were 65 Caucasians (49.6%), 59 African-Americans (45%), 1 Hispanic (.8%), and 6 identified as biracial (4.6%). The primary parent respondents were mothers (n=111, 85%), fathers (n=13, 10%), and

other (n=7, 5%). The primary parents participating in the study were married (n=52, 39.7%), single (n=37, 28.2%), divorced (n=17, 13%), separated (n=14, 10.7%), living together (n=9, 6.9%), or widowed (n=2, 1.5%). The children resided in a home with 2 adults 47% of the time. The parent's educational level was most commonly some college (n=56, 42.7%), followed by high school graduate (n=30, 22.9%), college degree (n=26, 19.8%), some high school (n=11, 8.4%), graduate or professional training (n=8, 6.1%). The majority of the parents were employed (75.2%). The household income ranged from no income to \$218,000, with the mean income being \$35,906 (SD = \$30,304). Table 1 provides a summary of the demographic characteristics of the participants.

There were 69 (53%) children and their parents treated in the community setting and 62 (47%) who were treated in the clinic setting. The children and parents received an average of 50 hours (SD = 17.78) of total service (direct and indirect) with 35 hours (SD = 9.62) representing direct service during the treatment phase of this study. The average number of treatment sessions received per child/family unit was 19 (SD = 6.35) with an average of 16 sessions (SD = 8.5) being family sessions.

**Table 1. Demographic Characteristics of the Participants
(N=131)**

Variable	Value	Percent
Child Gender	Male	86.5
	Female	14.5
Child Race	Black, not Hispanic	45.0
	White, not Hispanic	49.6
	Hispanic	.8
	Biracial	4.6
Parent Marital Status	Married	39.7
	Single	28.2
	Divorced	13.0
	Separated	10.7
	Widow/widower	1.5
	Living Together	6.9
# Adults in Home	1 Adult	53.4
	2 Adults	46.6
Parent Education	Some High School	8.4
	High School Graduate	22.9
	Some College	42.7
	College Degree	19.8
	Graduate/Professional training	6.1
Parent Employment	No	24.8
	Yes	75.2
Household Income	≤ 25000	50.4
	25001+	49.6

3.2 PROCEDURE

Following a complete psychiatric evaluation to assure diagnostic criteria were met for either a conduct disorder or an oppositional defiant disorder, cases were randomly assigned to one of two treatment conditions that differed along the dimension of the service setting, in-home or in-clinic. In each condition, the children and their families received at least 32 hours of treatment that focused on training in pro-social skills, parent management training, individual and marital therapy as it related to the parenting role, parent-child therapy, education, social network and community interventions, and pharmacological treatment for co-morbid attention deficit hyperactivity disorders. Staff received the necessary training to perform the procedures developed for their respective treatment condition and ongoing supervision and weekly treatment team meetings were held to ensure integrity of the model. The intervention phase of the study lasted for approximately four months.

Rating scales were administered at pretreatment, post-treatment, 6-month follow-up, and 12-month follow-up by a trained master's level research interviewer who was naïve to the treatment status of the participant. All four research assessments were conducted with each child and primary caretaker and took place in the clinic or home of the family. The average duration of each assessment was approximately two hours for the child and a little over three hours for the primary caretaker. Participants were paid a total of \$100 for completing all four assessments. The teacher assessments were completed at the same designated intervals as the child and parent assessments and were mailed to them with a return postage paid envelope. Teacher participants were paid \$20 gift card for completing assessment materials.

3.3 MEASURES

Multiple informants and methods were used to assess changes in the children's behavior and to measure parental and family factors. Child outcomes relevant for this analysis include the changes in a child's conduct problems, social competence and functioning. Parental and family variables included self-efficacy and parenting skills. Family variables addressed assessing the parent-child relationship including conflict resolution, family processes, and adjustment. Each of these variables and the instruments utilized for their measurement is described below.

3.3.1 Conduct Problem Symptoms

Child Behavior Checklist. To obtain the change in a child's mental health status, baseline and outcomes data were collected using the Child Behavior Checklist/6-18 (CBCL/6-18) and the Teacher Report Form (TRF) (Achenbach & Rescorla, 2000). The rationale for using these measures is that they are widely recognized in the field of mental health as a screening instrument for tracking the emergence and existence of behavior problems in children. They are well-standardized, highly valid assessments of children's adjustment and allow for longitudinal analyses of children's adjustment and problem behavior. In addition, the availability of versions appropriate for parents and teachers allow clinicians to track the emergence of problems across settings and reporters. Norms exist to determine whether children's behaviors fall into the normal range of functioning, suggest that the child is at risk for problems, or indicate that the child's behavior is more akin to those with clinically diagnosed problems. The parent

and teacher versions of the Child Behavior Checklist are analogous in their primary scale structure and they both provide comparable summary scales for internalizing and externalizing problem behaviors. Internalizing problems are defined as behaviors of withdrawal, somatic complaints, and anxiety or depression. Externalizing problems are defined as delinquent and aggressive behaviors.

The CBCL/6-18 is a questionnaire designed for parents, close relatives, and/or guardians to report behaviors they observe in a child between the ages of 6 to 18. The CBCL/6-18 has 118 items that describe specific behavioral and emotional problems, plus two open-ended items for reporting additional problems. The parent or other adult rates the child on the checklist for how true each item is now or within the past 6 months using the following scale: 0 = not true; 1 = somewhat or sometimes true; 2 = very true or often true. Internalizing items such as “There is very little he/she enjoys” or “Talks about killing self” and externalizing items such as “Impulsive or acts without thinking” or “Threatens people” when answered in the affirmative indicate a high level of behavioral or emotional difficulty. There are 27 items when totaled comprise the internalizing subscale and 37 items comprise the externalizing subscale. The CBCL/6-18 is scored by summing the items for the particular subscale and converting it to *T* scores.

The DSM-oriented scales are based on a factor analyses of parents’ ratings of 4,994 clinically referred children, and are normed on 1,753 children aged 6 to 18. The testing of the scale showed good test - retest reliability (Achenbach & Rescorla, 2001). The content and criterion-related validity is reported to discriminate significantly ($p \leq .01$) between referred and nonreferred children (Achenbach & Rescorla, 2001). The construct validity of the scale demonstrates evidence for significant associations with

analogous scales of other instruments as well as with DSM criteria, by genetic and biochemical findings, and with predictions of long-term outcomes (Achenbach & Rescorla, 2001). The Cronbach's Alpha for the syndrome scales range from .66 to .92. The internalizing problems scale was .89, externalizing problems was .92, and the total problems score was .95 (Achenbach & Rescorla, 2001).

Teacher Report Form. The Teacher Report Form (TRF) was administered both at pre-treatment and post-treatment to obtain information about the child's functioning in the classroom setting. The TRF is designed to obtain teachers' reports of a child's behavioral/emotional problems. The teacher rates the child on each item of the 112 problem checklist for how true it is within the past two months using the following scale: 0 = not true; 1 = somewhat or sometimes true; 2 = very true or often true. Sample items from this scale include: "Is afraid of making mistakes" or "Showing off or clowning around". The TRF is scored by summing the items for the particular subscale and converting it to *T* scores. Syndromes were based on principal components analyses of 4,437 referred students and were normed on 2,319 nonreferred students. The Cronbach's alpha for the syndrome scales range from .52 to .96 with the internalizing scale being .89, externalizing was .96, and the total problems scale was .97 (Achenbach & Rescorla, 2001). The validity has been reported in the above section and applies to the TRF as well.

IOWA Conners. The IOWA Conners is a measurement completed by both the parent and the teacher to assess attentional difficulties and oppositional behaviors (Conners, 1989). In this study, the IOWA Conners Teacher Rating Scale (Loney & Milich, 1982; Pelham, Milich, Murphy, & Murphy, 1989) was used. It is a 15-item scale

selected from the original 39-item Conners Teacher Rating Scale which includes a 5-item hyperactivity scale, a 5-item oppositional/defiant scale, and a 10-item abbreviated Conners scale. Parents and teachers are asked to read and judge how much they think the items describe the child currently. The choices range from 1 = “not at all” to 4=“very much”. Items on this questionnaire include of “Demands must be met immediately (easily frustrated)” and “temper outbursts (explosive and unpredictable behavior).” The scale is scored by adding the numbers in the boxes in each column and then summing for a total score. Higher scores reflect more difficulties in behaviors. The instrument is reported to have good test-retest reliability over one year with ranges of .68 to .83 for the inattentive/overactive subscale and .51 to .74 for the oppositional/defiant subscale (Smith, Pelham, Gnagy, Molina, & Evans, 2000).

3.3.2 Child Functioning Status Measures

Child Behavior Checklist & Teacher Report Form. The CBCL and TRF mentioned earlier also include Competence, Academic Performance, and Adaptive Functioning scales that are used to measure the child’s functioning status. The reliability for these subscales are listed separately below, but as stated earlier, the validity has been reported in the above sections and applies to these functioning scales as well.

The Competence scale consists of parents’ report concerning the child’s activities (hobbies, tasks, chores), functioning in social relationships (with peers, siblings, and parents) on a 3-point scale where 1 = “Less than average” and 3 = “More than average”, and school performance on a 4-point scale where 1 = “Failing” and 4 =

“Above average”. Scores on the competence scales for individual items are summed and are converted to a normalized T score. T scores range from 0 to 100 with scores of 30 or lower signifying a clinical range of functioning, scores of 31 to 35 are in the borderline range, and scores above 35 are in the normal range of functioning.

On the TRF there are the Academic Performance scale and the Adaptive Functioning scales. The Academic Performance scale asks the teacher to identify the child’s academic subjects and rate performance on a 5-point scale where 1 = “Far below grade” and 5 = “Far above grade”. The Adaptive Functioning scale asks teachers to use a seven-point scale to compare the child to typical pupils for how hard he/she is working, how appropriately he/she is behaving, how much he/she is learning, and how happy he/she is. The scores on these two scales are also converted to normalized T scores with scores of 35 or lower signifying a clinical range of functioning, above 35 to 40 being in a borderline range, and scores above 40 are in the normal range of functioning. The Cronbach's alpha was .88 for this scale (Achenbach, 1991).

Child and Adolescent Functional Assessment Scale. The Child and Adolescent Functional Assessment Scale (CAFAS) was completed by a research assistant to evaluate the adjustment of the child in multiple role domains. The CAFAS is an instrument used to record the extent to which a youth’s mental health or substance use problems are disruptive to functioning in each of eight psychosocial areas: school/work role performance, home role performance, community role performance, behavior toward others, mood/emotions, self-harmful behavior, substance use, and thinking (Hodges, 1996). A rater determines the youth’s functional impairment as severe, moderate, mild, minimal or no impairment. There is a score assigned to each of these

impairment levels that ranges from 30 for severe impairment to 0 for minimal or no impairment. The scores for each of the eight scales are then summed to yield a total score. The CAFAS has been extensively studied with several clinical populations, including a low-functioning population receiving in-home family therapy (Hodges, 1999; Hodges, Doucette-Gates, & Liao, 1999; Hodges & Kim, 2000; Motter, Slattery & Bean, 1999). Hodges reports good test-retest reliability and predictive and criterion-related validities for the CAFAS. It has been useful for predicting level of service utilization and acting out behaviors (Hodges & Kim, 2000). Clinical scales have generally been used to identify the nature of problems, while CAFAS totals have been used to identify their severity (Hodges & Kim, 2000). The inter-rater reliability is .92. The range of internal consistency is .73 to .78 (Hodges, Doucette-Gates, & Liao, 1999).

Columbia Impairment Scale. The Columbia Impairment Scale (CIS) is a global functioning questionnaire to assess impairments in four dimensions: interpersonal relations, broad psychopathological domains, functioning in schoolwork, and use of leisure time. There are 13 items with responses ranging from 1 being “no problem” to 5 being “a very bad problem”. Items on this questionnaire include “In general, how much of a problem do you think your child has with getting into trouble?” and ‘How much of a problem does your child have getting along with other kids his/her age?’ Items are summed across all questions with a cut off score of 15 identifying those children who may be in need of psychiatric services. Both the child and a parent version of the CIS were completed for this study. The scale has been found to have good construct, discriminant, and concurrent validity, although the parent-derived CIS data have shown stronger predictive associations than the youth-derived data. The correlation between

the CIS-parent and the Children's Global Assessment Scale was $-.73$ while the CIS-child was $-.48$ (Bird, 1993). The internal consistency reliability is estimated to be good, with the alpha reported to be $.88$ on the parent report and $.70$ to $.78$ for the child CIS. The test-retest reliability with a mean interval of 14.7 days was reported to be $.89$ for CIS-parent and $.63$ for the CIS-child (Bird, et al., 1993).

3.3.3 Parent Attributes and Skill Measures

Parental Self-Efficacy. The Parental Self-Efficacy Scale (PSES) was completed by parents to document their perceived ability to carry out various tasks or behaviors as a parent such as being a provider, managing school issues, behavior management, providing emotional support, and their ability to advocate for their child (Evans, Boothroyd, & Armstrong, 1997). This scale is a 25-question self-report measure which asks parents to answer a series of statements using a 4-point response scale ranging from 1 (not very comfortable) to 4 (very comfortable). Sample items include: "How comfortable are you with your ability to control your child's behavior?" and "How comfortable are you with your ability to praise your child for good behavior?" A total score and five subscale scores are obtained for this measure. The total score internal consistency based on an administration of this measure to 215 parents was $.78$. The subscale alphas ranged from $.61$ on school issues to $.78$ on provider issues (Boothroyd & Evan, 1996).

Alabama Parenting Questionnaire. The Alabama Parenting Questionnaire (Shelton, Frick, & Wooten, 1996) assesses the parent's parenting practices and activities along six common dimensions: involvement, monitoring/supervision,

consistency in discipline, positive parenting, corporal punishment, and other discipline practices. This instrument has 42 items, with the parent rating each item on a 5-point frequency scale ranging from 1 (never) to 5 (always) to represent the typical frequency in the home. The two subscales of positive parenting and involvement and the three subscales of corporal punishment, inconsistent discipline, and poor monitoring are averaged to obtain a positive parenting score (APQ+) and a negative parenting score (APQ-) respectively. Higher scores on the APQ+ reflect higher levels of positive parenting practices with higher scores on the APQ-, reflect poorer parenting practices. Sample items include “You have a friendly talk with your child” and “You ignore your child when he/she is misbehaving.” The scale has shown to be useful when assessing parenting practices related to children with antisocial behavior (Shelton, Frick, & Wooten, 1996). The scale is shown to have good reliability with highly consistent scores across interview times. The subscales of involvement, positive parenting, and inconsistent discipline have alpha scores of .85 to .89 (Shelton, Frick, & Wooten, 1996).

Parent Perception Inventory. The Parent Perception Inventory (PPI) (Hazzard, Christensen, & Margolin, 1983) is an instrument completed by children who rated their caregiver’s involvement in various management and interactional behaviors. The scale consists of nine positive behavior classes including positive reinforcement, comfort, talk time, involvement in decision-making, time together, positive evaluation, allowing independence, assistance, and nonverbal affection and nine negative behavior classes including privilege removal, criticism, command, physical punishment, yelling, threatening, time-out, nagging, and ignoring. The scale is administered by reading the descriptions and examples of each behavior class to the child, such as “How often does

your mother take away things when you misbehave?" The child responds by circling a response on a 5-point frequency scale from 0 = never to 4 = a lot. The nine items are summed to obtain both a positive and negative score for each parent with the score ranging from 0 to 36. The instrument also has a total score that is derived by subtracting the negative score from the positive score. The internal consistency of the PPI ranges from .74 to .89. The authors' preliminary attempts to establish validity for the scale indicates that the instrument significantly discriminates between children from distressed homes, who give less positive ratings, than children from nondistressed homes to a significant level (Barnes & Austin, 2001).

3.3.4 Parent-Child Relationship Measures

Family Environment Scale. The Family Environment Scale (FES) is an inventory rated by the children in the study designed to assess 10 characteristics of family interaction patterns (Moos & Moos, 1990). The FES is composed of 90 true-false items scored on 10 subscales. Items are rated from 0 to 9 with higher numbers indicating increased existence of a particular interactional pattern. A 27-item version of the scale was used in this study with a total score of the three subscales, control, cohesion, and conflict, used for analysis. A sample item for control is "There is a strong emphasis on following rules in our family" cohesion is "Family members really help and support one another, and for conflict "We fight a lot in our family". Internal consistency for the 10 subscales ranges from .61 to .78. Test-retest correlations for the individual subscales range from .68 to .86 after two months, .54 to .91 at 4 months, and .52 to .89 in a 12-month follow-up study (Moos & Moos, 1990). The FES is reported to have good

construct validity with the subscale of cohesion being positively related to measures of support from family members, conflict positively related to family arguments, and organization and control related to predictable and regular family routines. Measures of aspects of the family environment have been associated with adjustment issues of family members to such things as divorce, outcome of treatment, and adaptation to life stressors (Moos, 1990).

Family Adaptability and Cohesion Evaluation Scales. The Family Adaptability and Cohesion Evaluation Scales (FACES-III) (Olson, Portner, & Lavee, 1985) was used as a measure of family functioning. It assesses an individual's perceived levels of family cohesion, adaptability, and level of functioning. The FACES is 20- item self-report inventory with norms on over 1,000 families nationwide measuring a family's level of cohesion (emotional bonding) and family adaptability (roles, rules, and relationships). Items are rated on a 5-point Likert scale (1 = almost never, 5 = almost always) and sample items include "*Family members like to spend free time with one another*" (cohesion) and "*Rules change in our family*" (adaptability). Higher scores on this scale reflect higher levels of cohesion and adaptability. This measure is reported to have an internal consistency alpha of .68 and test-retest reliability .80 (adaptability) to .83 (cohesion) over a 4-5 week period (Edman, Cole, & Howard, 1990). Convergent validity was shown when using multiple measures of family adaptability and cohesion administered to two family members and two significant others. Discriminant validity has also been demonstrated which showed that the subscales are distinct traits although they positively related to each other (Edman, Cole, & Howard, 1990).

3.3.5 Engagement in Treatment Measure

Progress of Treatment Report. The concept of engagement, while having several possible meanings, will be defined as the amount a family was connected to the treatment process as measured by analyses of the *Progress of Treatment Report (POT)* completed throughout treatment. Therapists rated the performance of the family in sessions on a 5-item rating scale that was developed for the original study. The POT measures the family's behavior in each session on a scale of 1 "Not at all" to 5 "Very much". Questions on this instrument include the family's level of being on-task/attentive, participation/involvement, understanding of material covered, amount of material covered/productivity, and an overall session progress score. All items are tallied for an overall score and a mean score is obtained and used for analysis. No psychometric properties have been established for this instrument.

3.3.6 Analysis Plan

An alpha level of .05 was used for all statistical tests, unless otherwise summarized. To confirm the first mediation model proposed, a factor analysis was performed for all of the outcome child measures, *Child and Behavior Checklist* (internalizing, externalizing, and total competence subscales), *Teacher Rating Form* (internalizing, externalizing, academic performance, and adaptive functioning subscales), *Columbia Impairment Scale* (parent and child version), the *Child and Adolescent Functional Assessment Scale* (research assistant rated), and the parent and teacher ratings on the *IOWA/Conners Scale*. Once the factors were determined, the

standardized factor scores were regressed Time 2 (32 weeks) on Time 1 (baseline) with the residual scores being used as the measure of changes in a child's behaviors. For the independent variable of parental self-efficacy the total score at Time 1 was used. For the mediating variables all Time 1 scores were used which include the *Alabama Parenting Questionnaire* (positive and negative subscale) and the *Parent Perception Inventory* (total net score) for the measures of parenting skills and the *Family Environment Scale* and *Family Adaptability and Cohesion Evaluation Scale* for parent-child relationships. The mean score of all rated sessions from the *Progress of Treatment Report* will be used.

The second mediation model utilized the change scores in a child's functioning (as described earlier) and the standardized residual score as the changes in parental self-efficacy, parenting skills (listed above) and parent-child relations (APQ+, APQ-, PPI, FACES, FES, PSES) determined by the regression of Time 3 (six month follow-up) scores on Time 1 scores.

Control variables considered in the analysis phase included the treatment condition that was randomly assigned to each of the children in the study and socioeconomic variables, such as SES score, parent status (one or two parent headed household), and child's gender, and age. These variables are included to control for differences in the characteristics of the children and families that may bias the results.

4.0 RESULTS

4.1 DESCRIPTIVE RESULTS

The 131 children included in this study all met the Diagnostic and Statistical Manual for DSM-IV (American Psychiatric Association, 2000) criteria for diagnosis of a disruptive behavior disorder (either ODD or CD). A Master's level clinician completed the Kiddie-SADS-PL Diagnostic Interview (Kaufman, Birmaher, Brent, Rao, & Ryan, 1996) with the child and parent to establish the child's diagnosis. Table 2 provides a summary of the statistics on the distribution for the child outcome variables. On the CIS, a score of 15 or higher is considered to be in a clinical range of functioning. On the CIS, 86% of the parents rated their child in the impairment range whereas only 37% of the children rated themselves in this manner. As reported in the Methods for the Epidemiology of Child and Adolescents Mental Disorder (MECA) study, parents with higher incomes are more likely to report impairment and need for services on this scale (Glied, et al., 1997), which was also found for the population in this study.

On the IOWA Conners, the inattentive/overactive scale has a clinical cutoff score of 11 points for children in grades K through third grade and nine points for children in grades four and up. In this sample, 46% and 54% of the children respectively scored in the clinical range. The oppositional subscale has a clinical cutoff of nine points for children in grades K through third grade and six points for children in grades four and up.

In this sample, 80% and 82% of the children respectively scored in the clinical range. No normative data are available for the parent version of the IOWA Conners (Collett, Ohan, Myers, 2003).

For the IOWA Conners Teacher Rating Scale, the inattentive/overactive and oppositional defiant subscales used in this study have the same clinical cutoffs as the parent version described above (inattentive-11 points for children in grades K through third grade and nine points for children in grades four and up and, for oppositionality, nine points for children in grades K through third grade and six points for children in grades four and up). In this sample of the children scored 53% and 46% respectively in the clinical range on the inattentive subscale and 70% and 57% respectively scored in the clinical range on the oppositional subscale. The normative data that provided the clinical cutoff scores for children were derived from a sample of 608 elementary aged boys and girls (Pelham, Milich, Murphy, & Murphy, 1989). From the results of this study, teachers rated the children as having less oppositional and inattentive behaviors than did their parents.

On the CAFAS, the total score is used to determine the level of overall dysfunction and intensity of care recommended. Norms were established for this scale on 4,758 children referred for mental health services at three military bases (Hodges, 1994). For example, scores of 20-40 indicate that the child could be treated in an outpatient setting, whereas scores of 50-90 indicate the child may need additional services beyond an outpatient setting. In this sample, 51% of the children and families scored in 50-90 range, 47% scored in the range indicating that more intensive services is recommended, and the remaining 2% scored in the highest intensity of care level.

In addition, 84% of the children in this study had clinical scores on externalizing behaviors, 41% had clinical scores on internalizing behaviors, and 52% had clinical scores on competence as rated by their parents on the CBCL. When teachers rated the children using the TRF, 67% had clinical scores on externalizing behaviors, 33% had clinical scores on internalizing behaviors, 24% had clinical scores on academic performance and 49% had clinical scores on adaptive functioning. As with the IOWA Conners, teachers tended to rate the children as having less severe difficulties than their parents did. However, on all clinical measures, the children in this study demonstrated high levels of disruptive behavior problems consistent with clinical populations.

Table 2. Statistics on the Distribution for Child Outcome Variables

	N	Min	Max	Mean	SD
IOWA-Conners-parent	131	8	30	21.17	4.86
IOWA-Conners-teacher	129	0	29	17.85	7.84
CBCL-Competence	130	15	57	36.40	7.64
CBCL-Internalizing	130	34	92	62.18	10.54
CBCL-Externalizing	130	41	87	71.45	7.17
CAFAS	131	50	160	94.35	21.52
TRF-Academic Performance	121	35	60	43.11	7.61
TRF-Adaptive Functioning	123	35	60	38.63	5.49
TRF-Internalizing	123	36	93	58.46	10.05
TRF-Externalizing	123	39	95	69.10	11.14
CIS-Child	131	0	48	13.70	8.78
CIS-Parent	131	3	47	21.86	7.76

Regarding the parental/family variables used to describe the participants' parenting skills and parent-child relationships, Table 3 provides a summary of the statistics on the distribution for these variables. Parental self-efficacy is a central variable in this study. The PSES was used with scores ranging from 25 "low self-efficacy" to 100 "very high self-efficacy". The parents in this sample scored in the range

of 58 to 100 with a mean score of 82.6, which represents a fairly high level of self-efficacy.

On the APQ+, the range of scores is 16-80, with higher scores reflecting more positive parenting techniques. The parents in this sample scored in the range of 18.5 to 40 total points, reflecting relatively low levels of positive parenting skills. However, the parents also rated themselves low on their use of negative parenting techniques, scoring in the range of 7 to 21 on the APQ- which has mean scores ranging from 6.3 to 33. Higher scores on this scale reflect the use of negative parenting techniques. The scores of this sample, when compared to the results of a large community sample of parents with children ages four to nine (Dadds, Maujean, & Fraser, 2003), demonstrate that parents in this clinical population reported somewhat poorer parenting skills than in the general population.

An additional parenting skills measure, rated by the child, is the PPI, which uses the net score of the positive subscale score minus the negative subscale with the range of scores being -36 to 36. Higher scores reflect the use of more positive parenting skills. The range of scores in this current sample was -17 to 36, with 87% of the parents scoring in the positive range of parenting. In comparison to the University Family Studies Project (Hazzard, Christensen, & Margolin, 1983), children from nondistressed families viewed their parents similarly to the children in this sample.

Related to parenting skills are the two measures that were used to determine the quality of the parent-child relationship, FACES and FES. The FACES has two positive relationship subscales, cohesion and adaptability. The range of scores after these two items are totaled was 20 to 100, with higher scores reflecting more positive

relationships. This sample scored in the range of 38 to 84 with a mean score of 61. This sample is placed in the problematic-functioning range as determined by established norms (Gorall, Tiesel, Olson, 2006). The other relationship scale used was the FES, which, after the conflict and control subscales are reverse scored, yields a range of scores between 3 and 27, with higher scores reflecting more positive relationships. This sample scored 3 to 23 points with a mean score of 17. When comparing the three subscales used, cohesiveness, conflict, and control, against the “normal” interpretive scale provided for them, this sample scored in the normal range for all subscales and scored better when compared with parents of children with ADHD (Pressman, et al., 2006).

Engagement was measured by using the mean score on the POT, with scores ranging from 1 to 5. Higher engagement corresponds with a higher score. The scores obtained in this sample ranged from 2.20 and 4.96 with a mean score of 3.9. It appears that clinicians felt that the child and parents were highly engaged in service sessions.

Table 3. Statistics on the Distribution for Parent/Family Variables

	N	Min	Max	Mean	SD
PSES	131	58	100	82.56	8.15
APQ-Positive	130	19	40	31.25	4.27
APQ-Negative	130	7	21	12.67	2.59
PPI	131	-17	36	11.78	10.61
FACES	131	38	84	60.86	8.77
FES	131	3	23	17.40	3.32
POT	126	2	5	3.87	.64

4.2 PSYCHOMETRIC RESULT/CENTRAL VARIABLES

4.2.1 Child Outcome Variables

The distribution for nine of the twelve child outcome variables was approximately normal. Focusing first on the distributions for the child outcome variables that approximated normality, the parent and teacher ratings of attentional and oppositional behaviors (IOWA Conners, skewness = $-.38$ & $-.67$ respectively) and child impairment (CIS-parent, skewness = $.53$), internalizing behaviors (CBCL, skewness = $.12$ & TRF, skewness = $.37$), externalizing behaviors (TRF, skewness = $-.30$), competence ratings (CBCL, skewness = $.25$), academic performance (TRF, skewness = $.67$) and child and family functioning (CAFAS, skewness = $.36$) met the criteria. The child outcome variables that did not approximate normality included externalizing behaviors (CBCL, skewness = $.86$), child impairment (CIS-child, skewness = 1.66) and adaptive functioning (TRF, skewness = 1.27).

Several attempts were made to transform the data to obtain a normal distribution by using square root, logarithm, and reciprocal transformations; however, each attempt was unsuccessful. Because these variables were subsequently compiled for a sum score, the issue of skewness ceased to be an issue. This analysis will be discussed in more detail later.

The reliability for these variables was also calculated where data were available. A reliability analysis of the 13 item CIS-parent and CIS-child scales resulted in an alpha = $.02$ and alpha = $.70$ respectively and the mean of the inter-item correlation = $.15$ (N= 139) and $.20$ (N=139) indicating poor reliability for the parent scale and adequate

reliability for the child scale. The reliability analysis for the 8-item CAFAS scale resulted in an $\alpha = .47$ and the mean of the inter-item correlation = $.10$ ($N=138$) which indicates poor reliability for this scale. It might be possible that the low alphas obtained in this sample may be because of the independent nature of the item domains which may make these scales inappropriate for alphas. However, as for the CBCL, TRF, or IOWA-Conners, raw scores were not available for the CAFAS.

4.2.2 Child Outcome Change

The variables for this investigation were collected at various time points as described earlier, baseline, post-treatment, and 6 months. Critical to the path analysis of Model 1 was the need for controlling for the Time 1 scores and its impact on Time 2 scores. This was achieved by the regression analysis described in the Analysis Plan. However, knowing the change in these child outcome variables, although not central to this study, provides for a further elaboration of the variables.

The means for Time 1 and Time 2 on the child outcome measures are presented in Table 4 for the purposes of displaying the changes that occurred for the central variables of this study. The CIS-child and CIS-parent both showed a significant improvement from Time 1 to Time 2. The clinician rated scale, CAFAS, also showed a significant improvement from Time 1 to Time 2. There were also significant improvements noted on the parent rated scale of the CBCL (competence, internalizing, and externalizing subscales) from Time 1 to Time 2. Significant improvements on the teacher rated scales of the TRF (academic performance, adaptive functioning, internalizing, and externalizing subscales) from Time 1 to Time 2 is noted. The

IOWA/Conners-parent and IOWA/Conners-teacher both show a significant improvement from Time 1 to Time 2. Overall, statistically significant improvements were noted for all the child outcome measures used in this study.

Table 4. Change in Scores for Child Outcome Measures Across T1 and T2 Periods

Variables	Time 1	Time 2	df	t/z
Columbia Impairment Scale-Child ¹	13.70	9.69	129	-4.62***
Columbia Impairment Scale-Parent	21.86	13.99	130	12.29***
CAFAS	94.35	74.03	128	8.93***
CBCL- Total Competence	36.40	38.94	129	-3.95***
CBCL- Internalizing	62.18	55.56	129	7.64***
CBCL- Externalizing ¹	71.45	63.57	129	-7.90***
IOWA-parent	21.17	14.72	129	11.84***
IOWA-teacher	17.85	13.57	121	6.41***
TRF: Academic Performance	43.11	44.42	118	-2.36*
TRF: Adaptive Functioning ¹	38.63	41.54	119	-4.43***
TRF: Internalizing	58.41	55.50	116	2.87**
TRF: Externalizing	69.32	63.73	116	5.30***

Note¹: For items that were not normally distributed, the nonparametric Wilcoxon signed-rank test was performed.

* p<.05

** p<.01

*** p<.001

4.2.3 Inter-Correlations-Child Variables

There are a number of significant correlations for the child outcome measurements in several expected areas. Table 5 summarizes the correlations for all of the child outcome variables. The conduct problem symptom scales, CBCL-internalizing & externalizing, TRF-internalizing & externalizing, and IOWA Conners (parent & teacher), were expected to be correlated with each other. However, the teacher rated measures were not significantly correlated with any of the parent rated measures. The parental rated measures had significant correlations with each other, with CIS-parent positively correlating with IOWA Conners, CBCL-internalizing, and

CBCL-externalizing. The teacher rated measures were significantly correlated with each other, with the IOWA Conners-parent positively correlating with the TRF-internalizing and TRF-externalizing.

The child functioning status measures, CAFAS, CBCL-competence, TRF-academic functioning, TRF-adaptive functioning, and CIS (parent & child) were all expected to be correlated. The CBCL competence score negatively correlated with the CIS-child and CIS-parent. It also positively correlated with TRF-academic performance and adaptive functioning. The research clinician rated scale, CAFAS, was positively correlated with the CIS-parent, negatively with the CBCL-competence and TRF-adaptive functioning.

Table 5. Correlations of Child Outcome Variables

	1	2	3	4	5	6	7	8	9	10	11
1. CIS-Child	---										
2. CIS-Parent	.08	---									
3. IOWA/Conners-Parent	.03	.38***	---								
4. CBCL: Competence	-.21*	-.34***	-.12	---							
5. CBCL: Internalizing	-.03	.50***	.29***	-.14	---						
6. CBCL: Externalizing	.16	.49***	.47***	-.21**	.45***	---					
7. CAFAS	.15	.58***	.23**	-.32***	.26**	.44	---				
8. IOWA/Conners-Teacher	.07	-.06	.01	-.08	-.14	.1	.11	---			
9. TRF: Academic Performance	-.06	.07	.15	.28**	.22**	.15	-.16	-.40***	---		
10. TRF: Adaptive Functioning	-.02	-.04	.07	.19*	.13	-.04	-.19*	-.66***	.57***	---	
11. TRF: Internalizing	-.05	.02	-.06	.03	.06	.13	.12	.28**	-.08	-.21	---
12. TRF: Externalizing	.04	.03	-.06	-.10	-.15	.14	.20*	.76***	-.27**	-.62***	.36***

Note:

* p<.05

** p<.01

*** p<.001

4.2.4 Parent/Family Variables

All of the parenting variables used in Model 1 had distributions that approximated normality; PSES (skewness = $-.50$), APQ+ (skewness = $-.64$), APQ- (skewness = $.52$), PPI (skewness = $-.27$), FACES (skewness = $-.01$), FES (skewness = $-.72$), and POT (skewness = $-.26$). In Model 2, change scores for these variables were obtained by regressing Time 3 scores of these variables on Time 1 scores. The distribution of these newly formed variables, except for the change score of PSES (skewness = $-.97$), approximated normality. The data for the parental self-efficacy measure were transformed to obtain a normal distribution using square root transformation (skewness = $.03$). The score obtained by this transformation was subsequently used in the path analysis for Model 2.

Reliability analyses were completed for the parental/family variables. The engagement score was determined by obtaining the mean scores for each item on the POT across all administrations and then a mean sum score was created for engagement from this five-item questionnaire. A reliability analysis of the three items that make up the overall POT scale resulted in an alpha = $.92$ and the mean of the inter-item correlations = $.87$, ($N = 129$). The reliability analysis for the two parenting scales APQ (42 items) and PPI (18 items) resulted in an alpha = $.78$ and $.69$ and the mean of the inter-item correlations = $.10$ ($N=135$) and $.11$ ($N=138$) respectively. Both of these results indicate low reliability for use of the measures. The two scales used for the parent-child relationship variables were the 20-item FACES and the 27-item FES. The reliability analysis obtained alphas of $.77$ and $.41$ and the mean of the inter-item

correlations = .14 and .02 (N=138) respectively. The FACES had adequate reliability consistent with scores of previous studies. The parental self-efficacy scale, PSES, consisted of 25 items and obtained an alpha = .80 and the mean of the inter-item correlations of .14 (N=138). This analysis indicated good reliability for use of this measure with the study population.

4.2.5 Parent/Family Outcome Change

Parenting skills and family measure scores for Time 1, Time 2, and Time 3 are presented in Table 6. Time 1 variables are used in Model 1 hypothesis testing. Time 3 variables are presented because they were used in Model 2 hypothesis testing. As stated earlier with the child outcome variables, controlling for Time 1 scores and its impact on Time 3 scores is critical to the path analysis of Model 2. The control for the Time 1 scores is achieved by the regression analysis described in the Analysis Plan where Time 3 variables are regressed on Time 1 variables. Although the change in these parent and family outcome variables is not central to this study, they are presented here for a thorough understanding of their dimensions.

The measurement of parental self-efficacy shows a significant increase from Time 1 to Time 2 that is maintained at Time 3. The child rated scale of their parent's parenting skills (PPI) shows an increase from Time 1 to Time 2 and a slightly improved score at Time 3. There was also a significant improvement on the family relationship measurement (FES) from Time 1 to Time 2 that is maintained at Time 3. A significant improvement on the parenting skills measurement (APQ+ & APQ-) from Time 1 to Time

2 is also noted with maintenance of skills at Time 3. There are no significant changes in the remaining parenting scale scores.

Table 6. Change in Scores for Parent and Family Measures Across 3 Time Periods

Variables	Time 1	Time 2	df	(T1-T2)	Time 3	df	(T1-T3)
				<i>t</i>			<i>t</i>
Parental Self-Efficacy Scale	82.56	87.83	129	-7.87***	87.86	125	-7.13***
Alabama Parenting Questionnaire +	31.25	31.99	129	-2.96**	31.73	124	-1.98*
Alabama Parenting Questionnaire -	12.67	11.39	129	6.43***	11.51	124	5.04***
Parent Perception Inventory	11.78	15.12	128	-3.55***	16.54	126	-4.74***
Family Adaptability & Cohesion Scale	60.86	60.22	130	.98	60.64	125	.44
Family Environment Scale	17.4	18.54	126	-3.75***	18.18	125	-2.36*

Note:

* $p < .05$

** $p < .01$

*** $p < .001$

4.2.6 Inter-Correlations-Parent/Family Variables

There are a number of significant correlations for the parental variables used in this study and are summarized in Table 7. The FACES had a positive correlation with APQ+ but not with the other measure for family relationship (FES). A negative correlation existed between the child rated FES and the child's rating of parenting skills on the PPI. No correlations were found among the PPI or the APQ+ and APQ-, all parenting skills measurements. Neither the parenting skills nor the family relationship variables correlated with engagement. The two child rated measures were correlated and the two parent rated measures but their lacked correlation amongst these two reporters on the variables that were expected to be statistically related. The same pattern of inconsistent correlation was found for the parent and teacher rated child outcome variables.

Table 7. Bivariate Correlations of Parental/Family Variables Model 1

	1	2	3	4	5	6
1. Self-efficacy	---					
Parenting Skills						
2. APQ+	.43***	---				
3. APQ-	-.22**	-.09	---			
4. PPI	.00	.13	.04	---		
Parent-Child Relations						
5. FACES	.21*	.32***	.03	-.04	---	
6. FES	.02	.02	-.11	.52***	-.05	---
7. Engagement	-.06	.06	-.11	.00	.08	.00

Note:

* p<.05

** p<.01

*** p<.001

In addition, a bivariate correlation test was done with the change scores of the parenting and relationship variables that were used in the Mediation Model 2 and are summarized in Table 8. The mediating variables were the change scores on the APQ+, APQ-, PPI, FACES, and FES. Only two variables had a significant relationship, i.e. parenting skills' PPI with parent-child relationship scale FES ($r = .42, p \leq .001$) and PPI with another of the parenting skills scale APQ- ($r = -.18, p = .04$). As mentioned above, the lack of expected correlation leads to some doubt about the ability of the measures to represent the constructs pertinent to this study.

Table 8. Bivariate Correlations of Parental/Family Variables Model 2

	1	2	3	4
1. APQ +	--			
2. APQ -	-.08	--		
3. PPI	.00	-.18*	--	
4. FACES	.10	.00	.02	--
5. FES	-.04	.07	.42	.00

Note:

* p<.05

** p<.01

*** p<.001

4.3 CHILD OUTCOME VARIABLES ANALYSIS

An exploratory factor analysis of the various measures at Time 1 that were used to define the child outcomes for this study was conducted to determine what, if any, underlying structure exists for the measures. All of the subscale scores from the *Child and Behavior Checklist* (internalizing, externalizing, and total competence), subscales from the *Teacher Rating Form* (internalizing, externalizing, academic performance, and adaptive functioning), total score from the *Columbia Impairment Scale* (parent and child version), the total score from the 8 subscales on the *Child and Adolescent Functional Assessment Scale* (clinician rated), and the 10-item subscale from the parent and teacher ratings on the *IOWA Conners Scale* were entered into this analysis. Principal components analysis was conducted utilizing a varimax rotation. The Kaiser-Meyer-Olkin (K-M-O) measure of sampling adequacy was initially .70 suggesting sufficient item convergence to justify the analysis. The scree test, variance accounted for, and conceptual clarity of the factors were used to select the number of factors extracted. Based on these extraction considerations, a four-factor solution was attempted. The first factor explained 25% of the scale variance. The extraction of the second factor explained an additional 23% of the scale variance. The extraction of the third and fourth factors explained an additional 11% and 8% of the scale variance respectively. The total cumulative percentage of the four factors accounted for 67% of the variance.

After rotation, positive loadings for Factor 1 included the variables of parent's rating of child's behavior on the CBCL (internalizing and externalizing subscales), IOWA-Conners-parent, and the CIS-parent. In addition to these four variables, the research assistant's rating of the child on the CAFAS also loaded. This component was

labeled *Child Symptoms*. Factor 2 included teacher ratings on the TRF (internalizing, externalizing, and adaptive functioning) and the IOWA Conners-teacher. This component was labeled *School Behavior*. Factor 3 included the parent's rating of a child's competence on the CBCL and the teacher's rating of the child's academic performance and was named *Child Functioning*. Only one item loaded on the fourth component, the child's rating of functioning on the CIS-child.

The CIS-child was removed which resulted in the K-M-O measure of sampling adequacy improving to .73. Based on a three factor solution, the first factor explained 27% of the scale variance. The extraction of second factor explained an additional 25% of the scale variance and the extraction of the third factor explained an additional 11% of the scale variance. The total cumulative percentage of the three factors accounted for 64% of the variance. It was this three factor solution that was then used for further model analysis. The following table, Table 8, presents the statistics for this factor analysis.

Table 9. Rotated Component Matrix of Child Outcome Variables

	Components		
	1	2	3
Factor 1 -Child Symptoms			
CBCL: Total Externalizing	.79	.17	.07
CIS-Parent	.79	-.08	-.27
CBCL: Total Internalizing	.72	-.14	.12
CAFAS	.64	.17	-.42
IOWA-Parent	.63	-.06	.04
Factor 2 -School Behaviors			
TRF: Total Externalizing	.02	.88	-.11
IOWA-Teacher	-.11	.85	-.20
TRF: Total Adaptive Functioning	.08	.72	.47
TRF: Total Internalizing	.14	.62	.31
Factor 3 -Child Functioning			
CBCL: Total Competence	-.30	.04	.72
TRF: Academic Performance	.25	-.35	.71

Once the factors were determined, the standardized z-scores were used in a regression analysis to obtain the change scores of a child’s functioning. The Time 2 standardized scores (32 weeks) were regressed on Time 1 standardized scores (baseline) with the standardized residual scores being used as the measure of changes in a child’s functioning. For Factor 2, a reverse scoring of the Adaptive Functioning score was completed to obtain a consistent direction with the other variables contained on this factor. For Factor 3, a reverse scoring of both the Academic Performance scale and the Competence scale occurred to be consistent with the other two factors and to aid in readability of the presentation of results. All child outcome variables thus have higher scores reflecting poorer functioning. The distributions for the newly developed child outcome factors all approximated normal and are presented in Table 9.

Table 10. Statistics on the Distribution for Child Outcome Variable for Model 1

	N	Min	Max	Skewness	Kurtosis
Child Symptoms	128	-2.38	2.26	-.18	-.37
School Behaviors	116	-2.83	2.21	-.35	.07
Child Functioning	112	-2.91	2.17	-.43	.04

In addition, a bivariate correlation test was done with the change scores of the child outcomes variables demonstrating that they were highly correlated with each other. “Child symptoms” was significantly correlated with both “school behaviors” ($r = .23, p = .02$) and with “child functioning” ($r = .26, p = .007$). “School behaviors” was also positively correlated with “child functioning” ($r = .30, p = .001$).

4.4 PARENTING/FAMILY VARIABLES ANALYSIS

When a factor analysis was attempted, using the subscale scores of the parent/family variables, to determine if there were discernible underlying factors for the main variables of parenting skills and family relationships, no factors were found that appear to represent a clear construct. The K-M-O measure of sampling adequacy for the parenting skills variables was .54, suggesting insufficient item convergence. The K-M-O measure of sampling adequacy for the family relationship variables was .47, also suggesting insufficient item convergence to justify the analysis.

For hypothesis testing in Model 2, standardized residual scores were obtained for the mediating variables of change in parenting skills and change in parent-child relationships, and the dependent variable of change in parental self-efficacy. As mentioned earlier, Time 3 scores (6 months) were regressed on Time 1 (baseline) with the standardized residual scores being used as the measure of changes in the parental skills, relationship, and self-efficacy variables. The distributions for these newly created scores, except for the parental self-efficacy measure, had distributions that approximated normality and are presented in Table 10. The square root transformation corrected the skewness in the parental self-efficacy measure and was used in the subsequent path analyses.

Table 11. Statistics on the Distribution for Mediating Variables for Model 2

Variables (T3 regressed on T1)	N	Min	Max	Skewness	Kurtosis
Improvement in self-efficacy	126	.04	1.40	.03	-.83
Improvement in parenting skills					
PPI	127	-2.34	2.39	-.10	-.01
APQ+	124	-3.30	2.16	-.29	.28
APQ-	124	-2.63	3.09	.41	.58
Improvement in parenting skills					
FACES	126	-2.38	3.55	.42	.69
FES	126	-3.03	1.94	-.60	.23

4.5 BIVARIATE RELATIONSHIPS FOR MODEL 1 AND MODEL 2-CENTRAL AND CONTROL VARIABLES

Bivariate correlations for the central variables and the control variable for Model 1 and Model 2 of this study were conducted. The control variables included the child's age and gender (male=1, female=2) and where the treatment for the original study took place, either in a clinic setting (scored 1) or community (scored 2). The categories for the variable entitled "number of adults in home" were either 1 or 2. Socioeconomic status was established using the Hollingshead (1975) two-factor index from information gathered on the Background Information Sheet (BIS) completed by parents. The result of the analyses of control variables with the central variables for Model 1 is presented in Table 11 and Table 12 for Model 2. Bivariate correlations were conducted for continuous variables and independent t-tests were conducted for categorical variables.

Table 12. Bivariate Correlations/Independent T-test of Control Variables and Central Variables Included in the Regression Analysis Model 1

Variables	<i>r</i>		<i>t</i>		
	SES	Age	Treatment Site	Gender	# adults in home
Change in Child Symptoms	-.18*	-.05	-1.65	-.71	-1.11
Change in School Behavior	-.21*	-.02	-.35	-.97	3.59**
Change in Child Functioning	-.12	.08	1.52	-.10	1.97
APQ+	.16	-.18*	1.22	1.10	.47
APQ-	-.15	.16	-.05	1.46	-.93
PPI	.27**	.09	1.39	.70	-1.27
FACES	.05	-.02	1.46	.40	1.02
FES	.15	.13	.49	.56	.83
Engagement	.14	.18*	4.70***	-.65	1.88
PSES	-.19*	-.11	.84	1.37	-1.32

Note:

* p<.05

** p<.01

***p<.001

Table 13. Bivariate Correlations/Independent T-test of Control Variables and Central Variables Included in the Regression Analysis Model 2

Variables	<i>r</i>		<i>t</i>		
	SES	Age	Treatment Site	Gender	# adults in home
Change in APQ+	.10	.09	-.61	-.70	.81
Change in APQ-	-.14	.07	.05	-.82	1.09
Change in PPI	-.02	-.05	1.12	.92	.36
Change in FACES	.14	.14	.62	.50	-.75
Change in FES	.03	.07	.04	1.25	.32
Change in PSES	-.02	-.11	-1.75	-.31	.19

Note:

* p<.05

** p<.01

***p<.001

As can be seen in the above tables, the control variables do relate to some of the central variables in the two models of this study. In Model 1, the higher socioeconomic status of the participants predicts higher levels of parenting skills on the PPI, but doesn't predict higher levels on the other 2 parenting skills measures (APQ+ & APQ-). Higher SES also predicts improvements in the child's school behaviors and functioning. The age of the child is positively related to engagement scores but negatively related to

positive parenting (APQ+). Having 2 adults in the home is related to more improvements in the child's school behaviors. The location of the treatment is positively related to the engagement level, with participants receiving treatment in their homes being less engaged than participants who received treatment in the clinic. The child's gender was not related to any of the central variables in this study. In Model 2, there were no significant relationships between the central variables and control variables.

4.6 HYPOTHESES TESTING MODEL 1

The data described earlier were used to test the hypotheses that were outlined in Chapter 3. The control variables of child's age, treatment setting, number of adults in home, and SES were entered into the analyses. The gender of the child was removed as a control variable because it lacked any significant correlations to the central variables of this model.

First, there was a hypothesized bivariate relationship between parental self-efficacy and parenting skills, engagement, and parent-child relationships. The parental variable of self-efficacy (PSES) was positively correlated with parenting skills variable on the APQ+ and APQ- ($r = .43$, $p \leq .001$ and $r = -.23$, $p = .008$), but not with the child rated PPI ($r = .00$, $p = 1.00$). The more parents positively rated themselves on self-efficacy, the higher they rated their parenting skills. Their children did not rate their parent's parenting skills in the same manner as their parents. There also was not a relationship between parental self-efficacy and the engagement level of the child and parents ($r = -.05$, $p = .55$). Parental self-efficacy was positively correlated with family

relationship on the FACES ($r = .23, p = .007$) but not on the FES ($r = -.00, p = .98$). Generally, the parents with higher levels of self-efficacy experienced better relationships with their children on at least one of the two measures used.

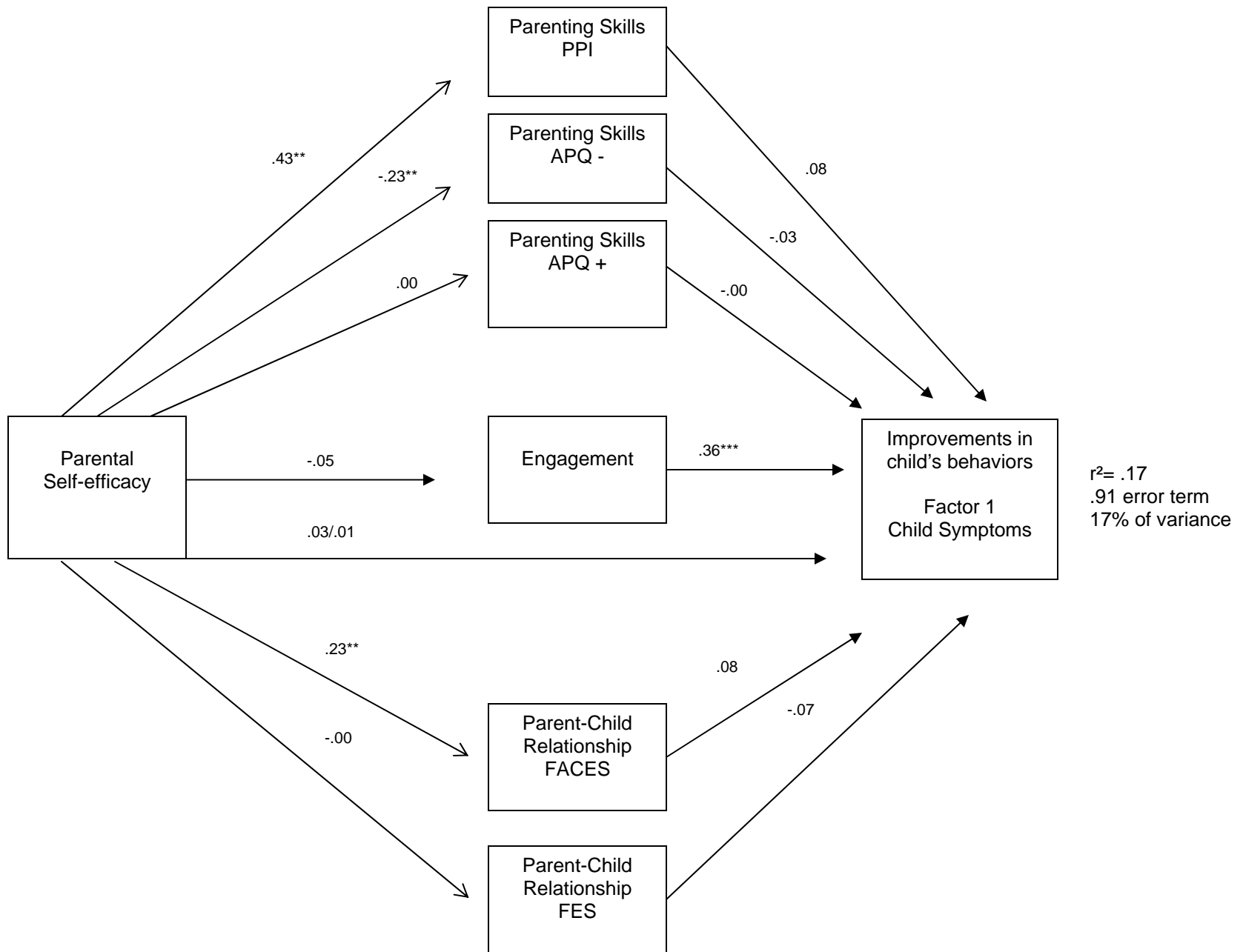
Secondly, there was a hypothesized positive correlation amongst the variables of parenting skills, engagement, and parent-child relations. The family relationship scale (FACES) had a positive correlation with parenting skills rating on the APQ+ ($r = .32, p \leq .001$) but not with the other parenting measures (APQ- $r = .03, p = .76$ or PPI $r = -.04, p = .68$). Another positive correlation existed between the FES and the child's rating of parenting skills on the PPI ($r = .52, p \leq .001$) but the FES did not correlate with the APQ+ or the APQ- ($r = .02, p = .82$ and $r = -.11, p = .21$ respectively). No correlations were found among the parenting skills variables or the family relationship variables with the engagement variable as had been predicted (APQ+ $r = -.06$; APQ- $r = -.11$; PPI $r = .00$; FACES $r = .08$; FES $r = .00$). Only partial support was found for this prediction. A summary of the bivariate relationships were presented earlier in Tables 7 and 8.

To confirm the mediation model proposed, the results of the path analysis were expected to show a non-significant or diminished relationship between parental self-efficacy and changes in a child's functioning when parenting skills, engagement, and parent-child relationships are entered. The simple regression of the parental self-efficacy with changes in a child's functioning on all three factors did not show a significant relation (Factor 1-Child Symptoms $\beta = -.03, p = .73$; Factor 2- School Behaviors $\beta = .03, p = .72$; and Factor 3- Child Functioning $\beta = .01, p = .98$). The lack of relationship, made the mediation test moot from the outset. These relationships have little change and continue to not be significant in the proposed hypothesis mediational

model (Factor 1-Child Symptoms $\beta = .01$, $p = .96$; Factor 2- School Behaviors $\beta = .09$, $p = .40$; Factor 3- Child Functioning $\beta = -.07$, $p = .55$).

In addition, it was hypothesized that children will have better treatment outcomes if their parents have higher levels of parenting skills, have better parent-child relations, and are more engaged in the treatment process. Only the engagement variable emerged as providing partial support for this hypothesis. The engagement level does have a significant predictive relationship with at least one of the three child outcomes, Factor 1- Child Symptoms ($\beta = -.36$, $p \leq .001$) but not for Factor 2- School Behavior ($\beta = -.17$, $p = .11$) or Factor 3-Child Functioning ($\beta = -.04$, $p = .75$). The parenting skills variables and the parent-child variables do not have any significant relationships with the child's improvement on any factors. Of the control variables used in this analysis, only the number of parents in the home has a significant predictive relationship ($\beta = .26$, $p = .01$) with improvements in a child's School Behaviors. Refer to Figures 3, 4, and 5 for details of the path analysis for Model 1.

An alternative strategy for analysis was completed for the first mediational model that utilized the factor scores of child symptomatology, school behaviors, and functioning at Time 1 as a control for the dependent variable of these factors at Time 2. The results of this strategy resulted in similar estimates as were obtained in the path analysis reported earlier. Generally the findings were stable across these two analyses strategies.



Note:

* p <.05

** p <.01

***p <.001

Only control variables with a significant relationship are shown in the figure.

Figure 4: Path Analysis for Mediating Effects of Parenting Skills, Engagement, and Parent-Child Relationships on Parental Self-efficacy and Improvement in Child's Symptoms

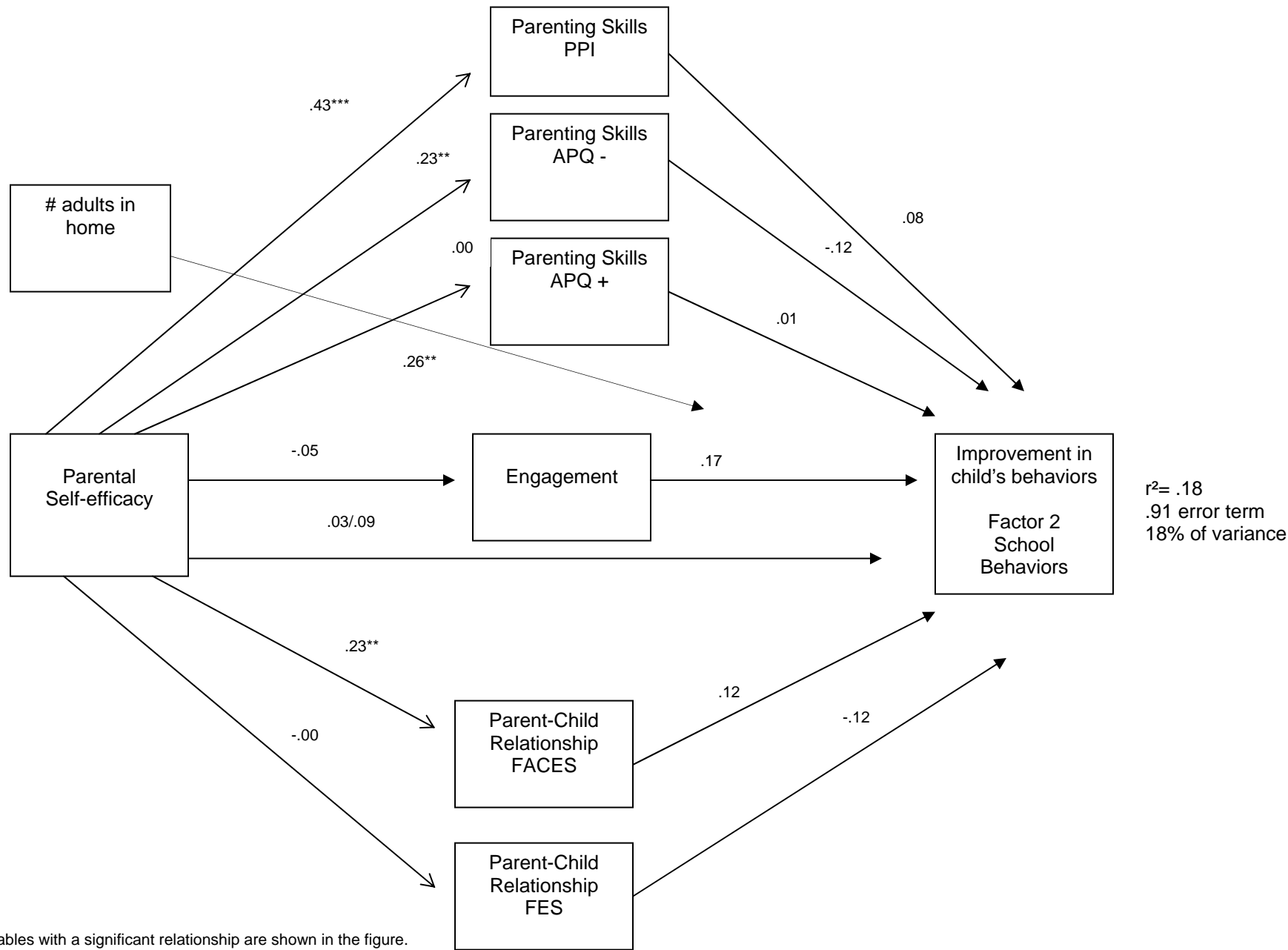


Figure 5: Path Analysis for Mediating Effects of Parenting Skills, Engagement, and Parent-Child Relationships on Parental Self-efficacy and Improvement in School Behaviors

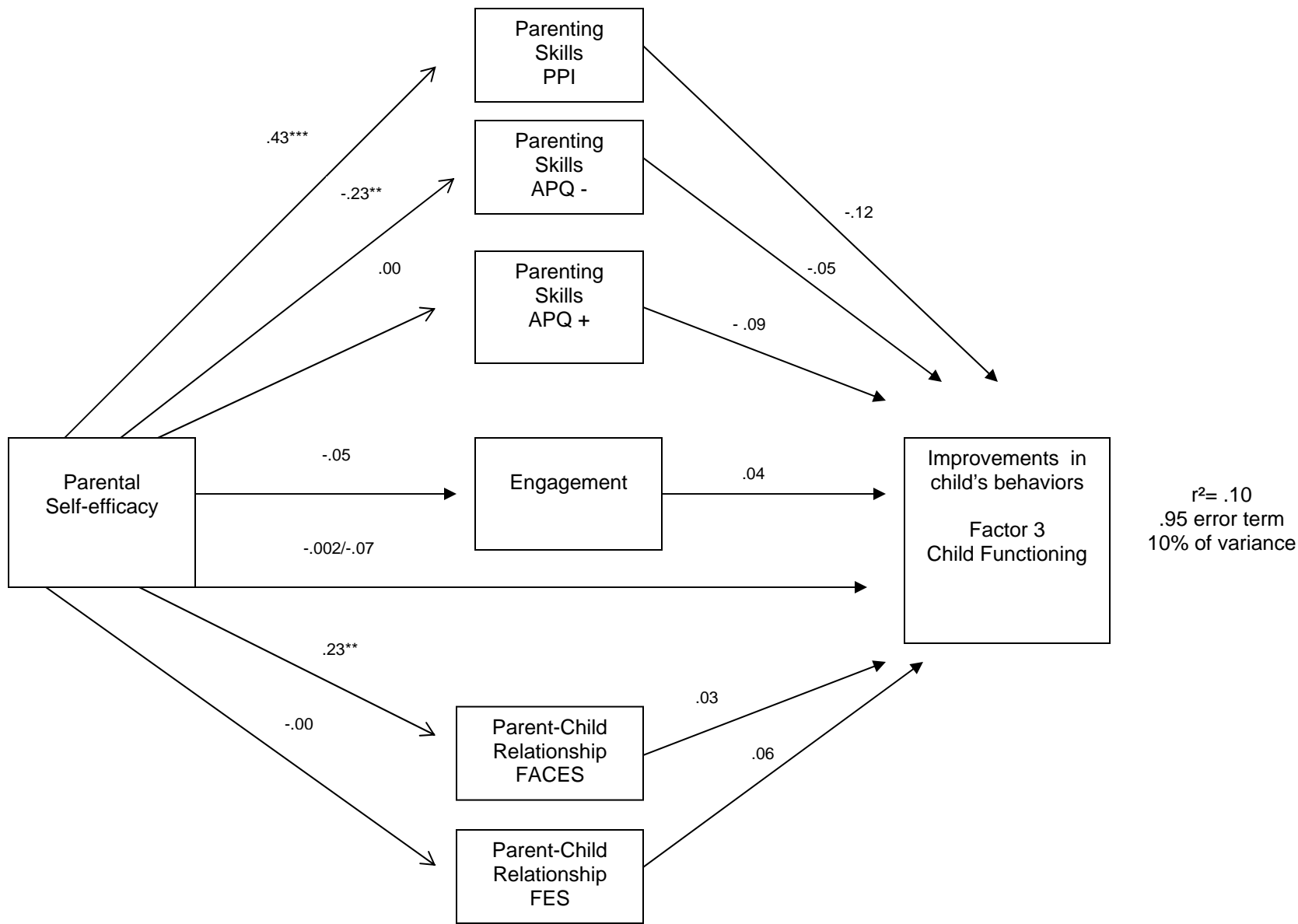


Figure 6: Path Analysis for Mediating Effects of Parenting Skills, Engagement, and Parent-Child Relationships on Parental Self-efficacy and Improvements in Child Functioning

4.7 HYPOTHESES TESTING MODEL 2

To assess the mediational model, a regression of the independent, mediating, and dependent variables was done. The one control variable that had significant effects to central variables of this model, SES, was entered into the regression analysis. All other control variables were dropped and not used in subsequent analyses. Figures 6, 7, and 8 outline the results of the path analysis for this mediational model. Although the analysis was conducted with all three independent variables of improvements in child symptoms, school behaviors, and child functioning entered together, the presentation of the model is shown separately for ease in readability.

First, the bivariate hypothesis was that the more positive changes the child experiences, the more improvements should be noted in a parent's parenting skills and in the parent-child relationship. The results of the bivariate hypothesis are summarized in Table 14. The child outcome variables of child symptoms and child functioning only had significant correlations with one of the parenting skills scale of APQ+ (child symptoms $r = -.29$, $p = .001$) and (child functioning $r = -.20$, $p = .04$). No other significant correlations were obtained.

Table 14. Correlations of Independent Variables with Parental/Family Variables Model 2

	Child Symptoms	School Behaviors	Child Functioning
4. Change in APQ+	-.29**	-.13	-.20
5. Change in APQ-	-.14	.03	.18
6. Change in PPI	-.04	.05	.07
7. Change in FACES	.07	-.12	.13
8. Change in FES	.05	.09	.14

Note:

* $p < .05$

** $p < .01$

*** $p < .001$

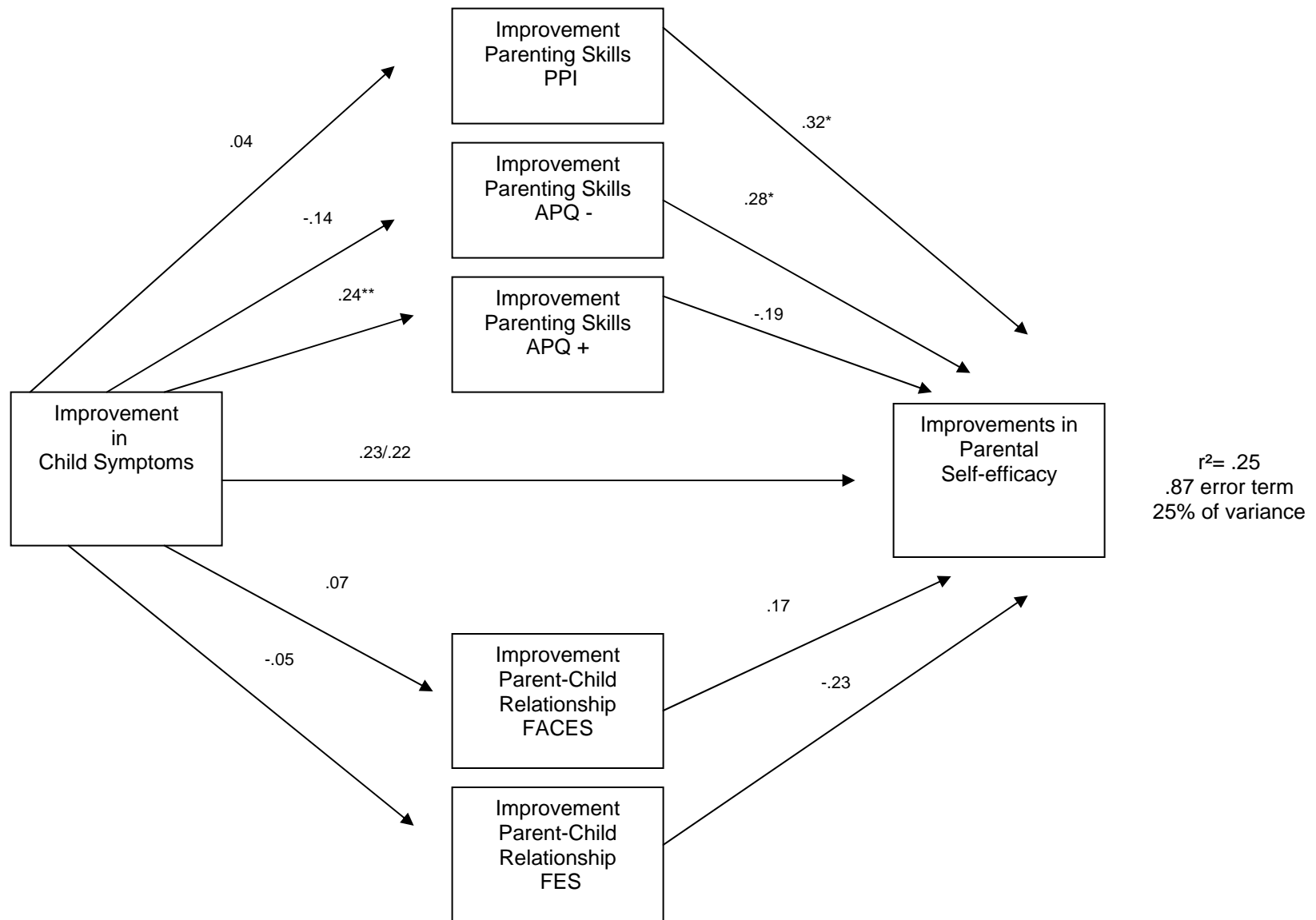
Secondly, to confirm the mediation model proposed, the results of the path analysis were expected to show a non-significant or diminished relationship between improvements in a child's condition and parental self-efficacy. The simple regression of changes in a child's condition with parental self-efficacy did not result in any significant relationships. As with the Model 1, the lack of support in the relationships between child's outcomes and parental self-efficacy predetermines that the mediational model will also not be supported. The relationships did diminish somewhat as proposed by this hypothesis model once the mediating variables were entered. The mediating variable of improvement in parenting skills APQ- and PPI emerge as having significant relationships with the dependent variable of improvement in parental self-efficacy ($\beta = .29$, $p = .04$ and $\beta = .32$, $p = .03$ respectively). No predictive relationships were found for the other parenting skill measure, APQ+ ($\beta = -.19$, $p = .14$), or for the parent-child relationship variables, FACES and FES ($\beta = .16$, $p = .25$ and $\beta = -.24$, $p = .11$ respectively).

The path analysis did not confirm the mediation model as hypothesized. The mediating variables of change in parenting skills (APQ- & PPI), although accounting for

most of the relationship between changes in child's behavior (independent variable) and the improvements in parental self-efficacy (dependent variable), did not mediate the relationship between changes in child's behavior and improvement in parental self-efficacy.

As with the Mediational Model 1, an alternative strategy for analysis was completed for Mediational Model 2 that utilized the Time 1 scores of the parenting variables as a control for the dependent variable of these factors at Time 3. The results of this strategy, as in the first mediational model, resulted in estimates similar to those obtained in the path analysis reported earlier. Generally the findings were stable across these two analyses strategies.

A follow-up strategy was also attempted to determine if there existed a relationship between the independent variables of child improvements and improvements in parental self-efficacy that could overcome the inherent problem of significantly correlated variables being entered into a regression analysis together. When the variables were entered together, as they were in the path analysis of Model 2, there was a reduction in their predictive ability. The three factors that constituted child improvements; child symptoms, school behaviors, and child functioning, were summed and then entered into block one of the regression model with the control variable of SES, the only significantly correlated control variable. The mediating variables, improvements in parenting skills and parent-child relations, were entered into the second block. However, the results of this analysis also did not improve the relationships among the variables as predicted.



Note:

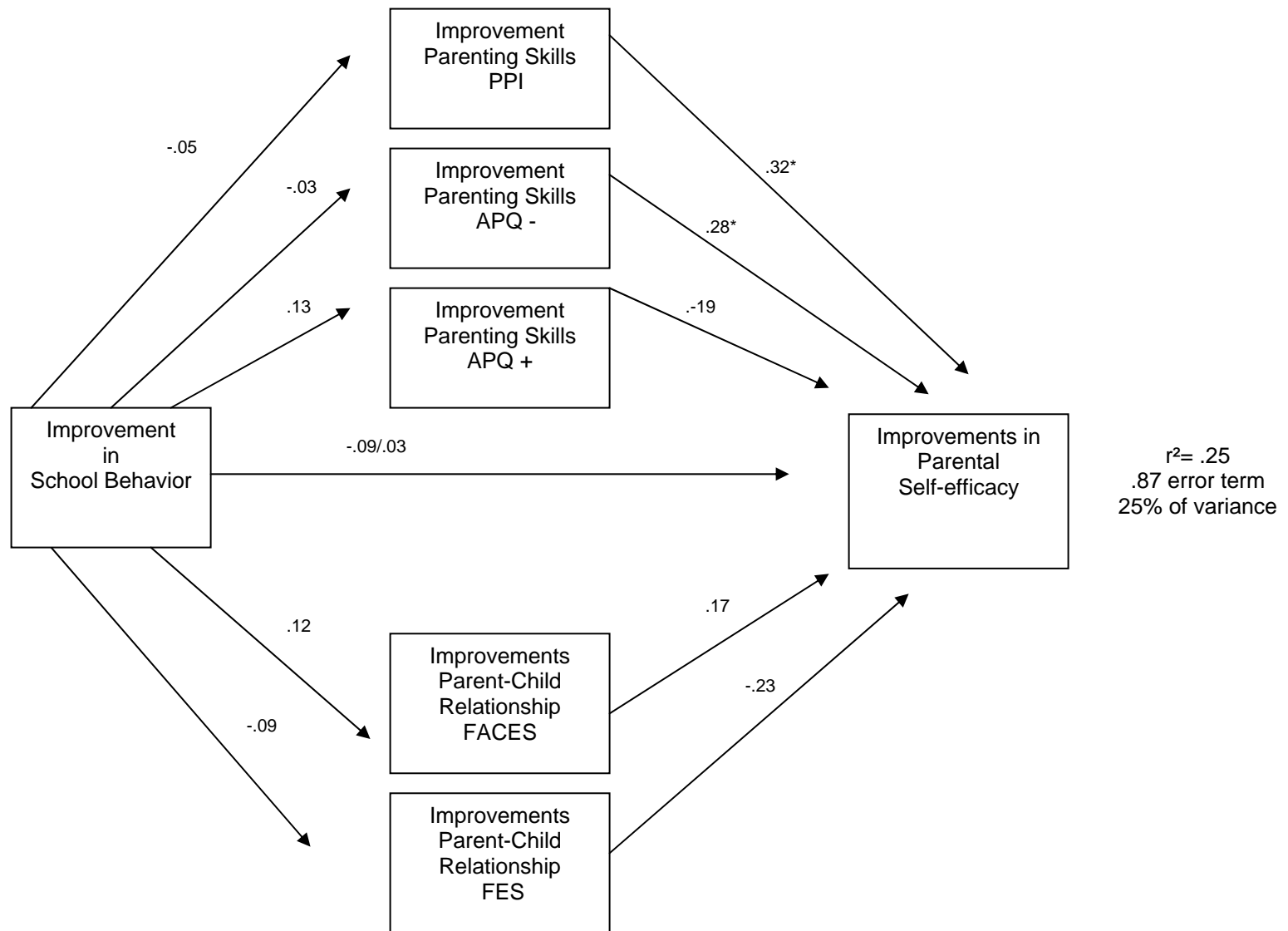
* $p < .05$

** $p < .01$

*** $p < .001$

Only control variables with a significant relationship are shown in the figure.

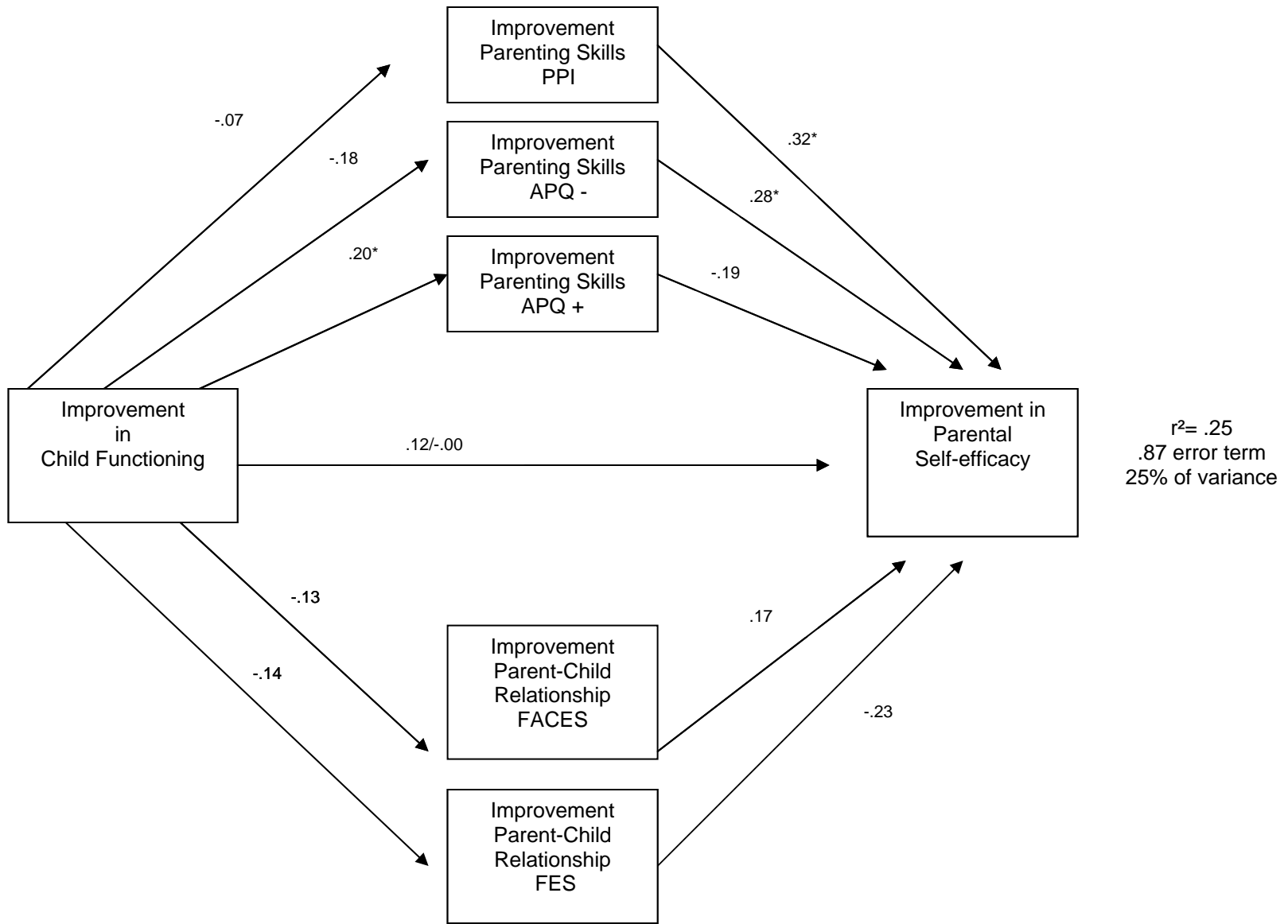
Figure 7: Path Analysis for Improvements in Child's Symptoms, Parenting Skills and Parent-Child Relationship to Improvement in Parent's Self-Efficacy



Note:
 * $p < .05$
 ** $p < .01$
 *** $p < .001$

Only control variables with a significant relationship are shown in the figure.

Figure 8: Path Analysis for Improvements in School Behavior, Parenting Skills and Parent-Child Relationship to Improvement in Parent's Self-Efficacy



Note:

* p < .05

** p < .01

***p < .001

Only control variables with a significant relationship are shown in the figure.

Figure 9: Path Analysis for Improvement in Child's Functioning, Parenting Skills and Parent-Child Relationship to Improvement in Parent's Self-Efficacy

4.8 SUMMARY OF FINDINGS

The data did not support the mediating role of parenting skills, engagement, and parent-child relationship between parental self-efficacy and the outcome variable of improvement in a child's treatment outcomes. The results of this secondary data analysis study indicated that for Mediational Model 1, there was only one variable, Engagement, that influenced the improvement in a child's symptoms. The more engaged the child/family was in treatment, the better the child outcomes were. Also, the data did not support the prediction that the higher the parent's self-efficacy, the more improvements would be realized in a child's outcomes, either in symptoms, school behaviors, and child functioning. One control variable, number of parents in the home, did influence the child's improvements in school behaviors. Homes that had two parents fared better in treatment on this outcome variable.

The data in Mediational Model 2 also did not support the mediating role of improvements in parenting skills between changes in a child's behavior and the outcome variable of improvement in parental self-efficacy. The results of the data analysis indicated that there were two variables that influenced the increase in parental self-efficacy. Therefore, the more parenting skills improved, regardless of the improvements in a child's behavior, the more parents' self-efficacy improved.

The data did not support the prediction that when there are more improvements in a child's condition, the more the parent's self-efficacy improved. Also, the data did not support the relationship between improvements in the parent-child relationship

resulting in improvements on parental self-efficacy. Overall, although the findings in these analyses are modest, they appear to have implications for social work practice, which will be discussed in the next section.

5.0 DISCUSSION

Most of the empirical research concerning child treatment outcomes typically examines the behavioral interventions utilized and their effectiveness. In this current investigation, the focus instead was on the evaluation of an array of parental variables expected to influence treatment outcomes. The current secondary data analyses examined two related mediational models. The first model outlined the mediating roles of parenting skills, engagement in treatment, and parent-child relationship between parental self-efficacy and the changes in a child's treatment outcomes. Theoretically, it was expected that parents who have high levels of self-efficacy would positively influence their children's outcomes in three ways. First, it was hypothesized that parents with higher levels of self-efficacy would be more likely to utilize appropriate parenting skills when disciplining their children and that these positive parenting approaches would directly impact the child's ability to improve in his or her behaviors.

Second, it was expected that parents with higher levels of self-efficacy would have more cohesive and positive relationships with their children and that the quality of their relationships would directly impact the child's ability to make improvements. Finally, parents who have higher levels of self-efficacy were expected to be more able to engage in the treatment process which would optimize the sessions held and positively effect the child's improvements.

The findings from the analysis of the first mediational model did not confirm the mediational effects of parenting skills and parent-child relationship on parental self-efficacy and child outcomes. The constructs consisting of the mediating variables, parenting skills, engagement, and parent-child relationship were not correlated with each other or with the independent variable of parental self-efficacy. These variables have been shown to be related in previous research studies (Conrad, Gross, Fogg, & Ruchala, 1993). Likewise, the independent variable of parental self-efficacy did not predict child outcomes in treatment, which had been shown previously to be related in other studies (Sanders & Woolley, 2005; Shumow & Lomax, 2002). It is possible, however, that due to the manner in which the change scores were obtained for analysis in this study and the high correlation between scores at Time 1 and Time 2 for Factors 1 and 2, it was difficult for the variables to detect a relationship as hypothesized.

There were direct effects found for engagement on one of the three outcome variables, child symptoms. This study's findings suggest that families who were more engaged in treatment experienced more improvements in the child's behaviors than those families who were less engaged. However, these findings were not consistent across the range of child outcomes examined: child symptoms, school behaviors, and functioning. The higher level of engagement was shown to be a significant predictor only for the child's improvement on symptomatology (Factor 1) when controlling for age, severity of condition, SES status, number of parents in home, treatment setting, and Time 1 behavior problems.

The second mediational model tested the roles of improvements in parenting skills and parent-child relationship as mediators between improvements in a child's

behaviors and improvements in parental self-efficacy. The theoretical model proposed that as a result of a child's improvements in his or her behavior, the parents would perceive themselves as being more capable in their role as parents through two processes. The first is that when a child has improved behaviors and is less difficult to manage, a parent is reinforced in their parenting skills and feels better about their abilities in their parenting role. Secondly, when a child has improved behaviors, a parent is more likely to experience positive interactions with the child and feel more capable about their parenting abilities.

The findings from the analysis of the second mediational model did not confirm the mediational effects of the changes in parenting skills or parent-child relationship on child outcomes and self-efficacy. As reported in the previous model, the constructs that comprised the mediating variables, parenting skills and parent-child relationship, were not correlated with each and only one parenting skills measure correlated with the independent variable of changes in child symptoms. As stated earlier, these variables have been shown to be correlated in previous research studies. Also, none of the three independent variables, improvement in child symptoms, school behaviors, or functioning, predicted improvements in parental self-efficacy using the analysis plan described previously. The relationship between child outcomes and parental self-efficacy has previously shown to be related in other studies (Martinez & Forgatch, 2001) but was not supported in this current study. As with Model 1, by regressing Time 3 scores on Time 1 scores to obtain improvement scores made it difficult for the analysis to detect relationships between child improvements and parental self-efficacy.

The second part of the study's findings suggests that as a parent experienced positive changes in his or her parenting skills, an increase in perceived self-efficacy resulted. These findings were also not consistent across the range of parenting skills examined, as the results were found for only two of the three parenting skill measures, APQ- and PPI. The reduction in the use of negative parenting strategies and the increase in parenting skills as rated by the child were shown to be significant predictors of a parent's improvement on parental self-efficacy when controlling for SES and Time 1 rating levels.

Later analysis might employ the use of alternative analyses procedures as suggested by the significant results that existed between self-efficacy and child outcomes when testing the model using a single time period. Also, by using structural equation modeling procedures, the bidirectional effects of the relationships among these variables might be determined.

5.1 STRENGTHS OF STUDY

A clear strength of this investigation is the use of a longitudinal, multi-informant design. The multi-informant design increases the confidence that the findings are less likely to be biased by method variance confounds. Parents, teachers, the child, and a trained research assistant measured child outcomes. Although inconsistency amongst the informants occurred, all respondents reported improvements in all of the key variables under investigation. The findings of the study are also strengthened by the

study design which controlled for initial behavioral functioning prior to the treatment phase.

An additional strength of the study was in the low dropout rate of the participants. There were 131 participants at the beginning of the treatment phase, 130 at end of the 32-week treatment, and 126 at the 6-month follow-up, constituting a 4% dropout rate. The study also had a good representation of both genders, ages of children, socioeconomic classes, and racial composition. There were also 129 who completed the assessment materials at the beginning of treatment, 122 at the end of the 32-week treatment period, and 122 at the 6-month follow-up. This constituted a 3% dropout rate for the teacher participation.

5.2 LIMITATIONS OF STUDY

Several limitations of this study should be noted. First, the unmeasured effects of the clinician's own attributes or skills could provide alternative explanations for the findings. These attributes could have enabled some clinicians more than others to engage with certain children and parents in a therapeutic relationship. These clinician variations were not addressed in the current investigation. Other unmeasured factors were issues about the parents such as their own psychopathology, motivation level, and even past utilization of behavioral health services that could impact their ability to learn strategies taught in the sessions or engage in the treatment. In addition, untreated mental health conditions of the parents may impact the environment in which the child is to practice new strategies. If the home environment is not conducive to this "practice

laboratory” the child may be less likely to use the skills or receive the positive feedback from significant others which could serve to strengthen the treatment efforts.

As mentioned earlier, the pertinent mediating constructs of this investigation, parenting skills and parent-child relationship variables, had very low correlations with each other, which indicates that these parenting/family measures should be considered questionable in identifying the parenting variables for this sample. Also, the self-reports, completed primarily by parents, may have introduced response biases, with parents providing socially desirable responses about their skills and relationships.

Other limitations in the study are in terms of generalizability, as it was conducted in one metropolitan city, which may not be representative of all geographic or regional areas. Also, the parents who agreed to participate in a research study may not be representative of parents who are typical to a clinical population seeking mental health services.

5.3 IMPLICATIONS OF FINDINGS

The findings from this investigation highlight the complexity of the relationships amongst parents, children, and the treatment process. Parents of children who enter treatment have an array of skills and attributes that may or may not contribute to the child’s behavioral problems and how they may fare in treatment. According to systems theory, personal characteristics of parents and children help to determine the impact other systems will have on the family processes and their outcomes (Bronfenbrenner, 1986). The relationships are complicated however, in that each system also has an effect on

the other. This study is consistent with systems theory and lends support to the view that intricate and reciprocal relationships exist within a family who engages in treatment.

Parents and children in this study, despite the severity of the child's conduct problems, reported that they have a fairly high degree of self-efficacy. The parents viewed themselves competent in fulfilling various parental roles such as providing emotional support and behavior management to their children, being an advocate, and managing provider and school relations. Although they rated their use of positive parenting approaches relatively low, they also did not report engaging in high rates of negative or punitive parenting strategies. In addition, their children tended to rate their parenting style as a positive one. Even the family relationships were reported to be positive and cohesive. These families tended to operate in a fairly positive manner with each other and were able to engage in the treatment process in spite of the stress that may be present when significant child misbehaviors interfere with functioning.

By attending to and addressing a parent's self-efficacy, a therapist could effect a change in the parent's feelings about the important role of parenthood, especially as it relates to the more complicated role of caring for a child with significant behavior problems. The parent who has higher levels of self-efficacy may be able to manage the difficulties and problems that confront these children and the multiple systems that they may encounter. Also, a parent with higher levels of self-efficacy may be in a better position to reinforce the skills that a child may learn in the treatment process so as to enhance the treatment strategies.

Researchers and practitioners have argued that there is the need for more intensive attention to engagement strategies to effectively connect with a child and

parent during the treatment process. Little is known about the types of strategies that could be employed to engage the family unit in therapy. A few studies have implemented various engagement strategies with individuals seeking behavioral health services, but the outcomes generally focused on the impact of these strategies on attendance rates (Manfred-Gilham, Sales, & Koeske, 2002; McKay, Nudelman, McCadam, & Gonzales, 1996; Szapocznik, et al., 1988). Other studies that address building an alliance demonstrate promising results. These studies report that it is the therapeutic alliance that predicts good patient outcomes (Barber, 2000). It appears that for at least the current investigation, the engagement of the families was also predictive of child outcomes.

Strategies to engage families could prove to be an essential ingredient to the treatment process and the desired treatment outcomes sought for parents and providers alike. When clinicians attend to issues of the relationship in therapy, including the child's and parent's expectations, eliciting their feedback during treatment, and addressing their questions or concerns, the clinician might be more in tune with the family system and its needs. In this current study, the clinicians completed the *Progress of Treatment* report, which was used as an indicator of the child's and parent's behavior in each session. The instrument may have served as a prompt to the clinician about the importance of using techniques to encourage participation of the child or parent to the treatment.

In this study there were a few findings, although not central to the main mediational model hypotheses, which revealed interesting patterns of relationships worthy of mention. First, the data showed that those families who were assigned to the

clinic setting were more engaged in treatment than those in the community setting. On the surface, it appears counterintuitive to have those results, especially when lately there has been focus in social work practice to deliver services in the homes and communities where families are. In this particular study, it might be that the families who attended clinic sessions were more inclined to participate in a less distracting manner than those who received services in the home. Also, the median income of the study participants was higher, which might suggest that middle class attitudes of attending traditional office services fit better with this group than providing the services in the home.

Another finding showed that when homes had two parents, the child had significantly improved school behaviors as rated by teachers. This might indicate a positive bias on the part of teachers to children who are from two-headed households, or it might be that homes that have two parents allow for more opportunities for at least one parent to be involved with the teacher as school issues arise. Having an involved parent interacting with school personnel may reinforce for the child the need to utilize more appropriate behaviors in the school setting and for the child to see a link between the school and home environment. There also appears to be some disconnect between the home and school on the child ratings obtained from parents and teachers. There was a general lack of consistency as measured by both the IOWA Conners and the CBCL and TRF. It might be that the structure of the classroom setting provides external structure resulting in the child having more on-task behaviors and thus lower scores given by teachers as compared to parents on these measures.

5.4 SUGGESTIONS FOR FUTURE RESEARCH

The results of this study tentatively support the notion that family engagement with the treatment process acts as an enhancing factor for children with conduct problems in behavioral health treatment. In addition, improvements in parenting skills seem to be able to bolster parental self-efficacy levels. Future research regarding parenting characteristics of self-efficacy and engagement and how to enhance these qualities needs to be addressed. More focused and direct studies of the bi-directional relationship amongst these variables are needed to clarify the nature of engagement and parent self-efficacy for parents of children with conduct problems and to enhance targets for intervention.

The accepted importance of good parenting and good parent-child relationships, coupled with the statistically significant relationship of engagement to child outcomes, only strengthens this argument. Future research will need to specifically address the issue of the effectiveness of engagement strategies to assist parents in the therapeutic alliance. Studies could untangle the complicated exchanges that occur between families and clinicians during the therapy process. The various techniques that clinicians use to “reach” or “connect” with families would be helpful to understand for their potential contribution to guide treatment practice. Additionally, documenting and assessing agency procedures that may provide obstacles to engagement or could enhance the engagement or support offered to parents with children with conduct problems could gain greater prominence on the research agenda.

Furthermore, the ability to enhance parental self-efficacy through improvements in child behaviors and parenting skill development speaks to the need for research

attention. Research can play a role in focusing on the means by which to assess the qualities of parents as they enter their child for treatment and how clinicians can effect changes in the parent's self-attributions and skills. By identifying and testing possible treatment enhancement strategies, clinicians can be more adept in providing treatments that can improve family functioning for all family members.

5.5 CONCLUSIONS

This investigation suggests that parent/child engagement in the treatment process has a direct effect on child's outcomes. This finding gives strength to prior researchers' recommendations that treatment providers be aware of and attend to issues of engagement as a routine strategy when providing behavioral health treatments. In addition, the parental attribute of self-efficacy, although not supported by the current findings as being critical for child outcomes, does have relevance to child treatment. Treatment that focuses on improving parenting skills could have positive effects of improving parents' level of self-efficacy. Service providers must advocate for a family systems perspective that considers not only the child's presenting problems and symptomatology but the family environment in which the child lives and the characteristics of the caretakers in the child's life. By viewing the child's needs within the context of the family system, intervention efforts can be made on various levels. A more inclusive treatment approach may assist all family members to achieve higher levels of functioning. Although family treatment strategies may be more time-consuming, the cost effectiveness of adopting a pro-family focus can be realized in the

decrease of functional impairments for both the child and other family members.

Clinical settings may find it cost effective to train clinicians on how to provide enhanced strategies to engage hard to reach families in order that improvements can be realized and the need for and usage of more crisis oriented interventions can be diminished.

This study was based on a multi-dimensional investigation of the complicated relationships that exist amongst the children and parents of children with significant behavioral difficulties. It is another step towards understanding the various issues prevalent in a family system when a child enters behavioral health treatment and provides suggestions on how to more effectively engage these families.

BIBLIOGRAPHY

- Achenbach, T.M. & Rescorla, L.A. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Alexander, J.F. (1988). Phases of family therapy process: A framework for clinicians and researchers. In Wynne L.C., (Ed.), *The State of the Art in Family Therapy Research*. New York: Family Process Press.
- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders-TR* (5th ed.). Washington, DC: Author
- Anderson, K. E., Lytton, H. & Romney, D.M. (1986). Mothers' interactions with normal and conduct-disordered boys: Who affects whom? *Developmental Psychology*, 22, 604-609.
- Anne, T. & Segal, U. A. (2004). Implications for the development of children in over 11 hours of centre-based care. *Child: Care, Health and Development*, 30 (4), 345-352.
- Anthony, L.G., Anthony, B.J., Glanville, D.N., Caiman, D.Q., Waanders, C., & Shaffer, S. (2005). The Relationships Between Parenting Stress, Parenting Behaviour and Preschoolers' Social Competence and Behaviour Problems in the Classroom. *Infant & Child Development*, 14, 133-154.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of Human Behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of Mental Health*. San Diego: Academic Press, 1998.)
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1–26.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review*, 84, 191-215.
- Bandura, A. & Locke, E.A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88 (1), 87-99.

- Bandura, A. & Schunk, D.H. (1981). Cultivating competence, self-efficacy and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41(3), 586-598.
- Banks, J.B. (2002). Childhood discipline: Challenges for clinicians and parents. *American Family Physician*, 66, 1447-1452.
- Barber, J. (2000). What works in therapy? *Journal of Consulting and Clinical Psychology*, 68, 1027-1032.
- Barkley, R. (1987). *Defiant children: A clinician's manual for parent training*. New York: Guilford.
- Barnes, T.P. & Austin, A.M.B. (2001). The influence of parents and siblings on the development of a personal premise system in middle childhood. *The Journal of Genetic Psychology*, 156 (1), 73-85.
- Bartholomew, K. & Horowitz, L.M. (1990). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61, 226-244.
- Bavolek, S.J. (1989). Assessing and treating high-risk parenting attitudes. *Early Child Development and Care*, 42, 99-112.
- Bavolek, S.J. (n.d.). *The prevention and treatment of child abuse and neglect: Identification of high-risk parents*, Retrieved October 12, 2003 from <http://www.nurturingparenting.com>.
- Bavolek, S.J. (n.d.). *The Role of Experiential Learning in Enhancing Education in Parenting* Retrieved June 11, 2005, from <http://www.nurturingparenting.com>.
- Bird, H.R., Shaffer, D., Fisher, P., Gould, M.S., et al. (1993). The Columbia Impairment Scale (CIS): Pilot findings on a measure of global impairment for children and adolescents. *International Journal of Methods in Psychiatric Research*, 3 (3), 167-176.
- Boivin, M., Perusse, D., Dionne, G., Saysset, V., Zoccolillo, M., Tarabulsy, G.M., Tremblay, N., & Tremblay, R.E. (2005). The genetic-environmental etiology of parents' perceptions and self-assessed behaviours toward their 5-month-old infants in a large twin and singleton sample. *Journal of Child Psychology and Psychiatry*, 46, 612-630.
- Boothroyd, R. A. & Evans, M. E. (1996). Preliminary Manual for the Parent Self-Efficacy Scale. Albany: New York State Office of Mental Health, Bureau of Evaluation and Services Research.

- Bor, W. & Sanders, M.R. (2004). Correlates of self-reported coercive parenting of preschool-aged children at high risk for the development of conduct problems. *Australian and New Zealand Journal of Psychiatry*, 38, 738-745.
- Bronfenbrenner, U. (1979). *The Ecology of human development: experiments by nature and design*, Cambridge: Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the Family as a Context for Human Development: Research Perspectives. *Developmental Psychology*, 22 (6), 723–742.
- Bugental, D.B., Ellerson, P.C., Lin, E.K., Rainey, B., Kokotovic, A., O'Hara, N. (2002). A cognitive approach to child abuse prevention. *Journal of Family Psychology*, 16(3), 243-258.
- Bugental, D.B. & Happaney, K. (2004). Predicting infant maltreatment in low-income families: the interactive effects of maternal attributions and child status at birth. *Developmental Psychology*, 40, 234-243.
- Bureau of Justice Statistics - Data Online (2003). Retrieved on July 17, 2005 from <http://www.ojp.usdoj.gov/bjs>
- Capaldi, D.M. & Patterson, G.R. (1991). Relation of parental transitions to boys' adjustment problems: I. A linear hypothesis. II Mothers at risk for transitions and unskilled parenting. *Developmental Psychology*, 27, 489-504.
- Christophersen, E.R. (1992). Discipline. *Pediatric Clinics of North America*, 39, 395-411.
- Clark, L. A., Kochanska, G., & Ready, R. (2000). Mothers' personality and its interaction with child temperament as predictors of parenting behavior. *Journal of Personality & Social Psychology*, 79(2), 274-285.
- Collett, B.R., Ohan, J.L., Myers, K.M. (2003). Ten-year review of rating scales, V: Scales assessing attention-deficit hyperactivity disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42, 1015-1037.
- Compton, M.T. (2005). Barriers to initial outpatient treatment engagement following first hospitalization for a first episode of nonaffective psychosis: A Descriptive case series. *Journal of Psychiatric Practice*, 11(1), 62-69.
- Conners, C.K. (1989). *Manual for Conners' Rating Scales*. Toronto, ON: Multi-Health Systems, Inc.
- Connor, D.F. (2002). *Aggression and Antisocial Behavior in Children and Adolescents: Research and Treatment*. New York, NY: The Guilford Press.

- Conrad, B., Gross, D., Fogg, L. & Ruchala, P. (1993). Maternal confidence, knowledge, and quality of mother-toddler interactions: A preliminary study. *Infant Mental Health Journal*, 13, 353-362.
- Costas, M. & Landreth, G. (1999). Filial therapy with nonoffending parents of children who have been sexually abused. *International Journal of Play Therapy*, 8(1), 43-66.
- Cunningham, J., Harris, G., Vostanis, P., Oyeboode, F., & Blissett, J. (2004). Children of mothers with mental illness: Attachment, emotional and behavioural problems. *Early Child Development and Care*, 174, 639-650.
- Dadds, M.R., Sanders, M.R., Morrison, M. & Rebgetz, M. (1992). Childhood depression and conduct disorder: II. An analysis of family interaction patterns in the home. *Journal of Abnormal Psychology*, 10, 505-513.
- Dadds, M.R., Maujean, A. & Fraser, J.A. (2003). Parenting and conduct problems in children: Australian data and psychometric properties of the Alabama parenting questionnaire. *Australian Psychologist*, 38, 238-241.
- Davalos, D.B., Chavez, E.L., & Guardiola, R.G. (2005). Effects of Perceived Parental School Support and Family Communication on Delinquent Behaviors in Latinos and White Non-Latinos. *Cultural Diversity and Ethnic Minority Psychology*, 11, 57– 68.
- DeGarmo, D.S., Patterson, G.R., & Forgatch, M.S. (2004). How do outcomes in a specified parent training intervention maintain or wane over time? *Prevention Science*, 5 (2), 73-89.
- Deslandes, R. & Bertrand, R. (2005). Motivation of parent involvement in secondary-level schooling. *The Journal of Educational Research*, 98 (3), 164-175.
- DeVoe, J.F., Peter, K., Kaufman, P., Miller, A., Noonan, M., Snyder, T.D., et al. (2004). *Indicators of School Crime and Safety: 2004* (NCES 2005–002/NCJ 205290). U.S. Departments of Education and Justice. Washington, DC: U.S. Government Printing Office Retrieved on July 19, 2005 from <http://nces.ed.gov/org>
- Diamond, G.S., Serrano, A.C., Dickey, M., & Sonis, W.A. (1996). Current status of family-based outcome and process research. *American Academy of Child & Adolescent Psychiatry*, 35 (1), 6-16.
- Dodge, K (1991). The structure and function of reactive and proactive aggression. In: *The Development and Treatment of Childhood Aggression*, Pepler, D.J., Rubin, K.H., eds. Hillsdale, NJ: Erlbaum, pp 201-218.
- Dogra, A., & Veeraraghavan, V. (1994). A study of psychological intervention of children with aggressive conduct disorder. *Journal of Clinical Psychology*, 21, 28-32.

- Donovan, W.L., Leavitt, L.A., & Walsh, R.O. (1990). Maternal self-efficacy: Illusory control and its effect on susceptibility to learned helplessness. *Child Development*, 61(5), 1638-47.
- Doolittle, E. (1995). Mother-daughter interaction in lower-socioeconomic African-American families and its implications for academic achievement, Dissertation Abstracts International: Section B: The Sciences & Engineering. Vol 56(5-B), Nov 1995, 2897.
- Duncan, B.L. & Miller, S.D. (2001). The Client's Theory of Change: Consulting the Client in the Integrative Process, Retrieved on August 10, 2005 from http://www.talkingcure.com/docs/Clients_Theory_of_Change.doc
- D'Zurilla, T.J., Nezu, A.M. (1999). *Problem-Solving Therapy: A Social Competence Approach to Clinical Intervention*, New York, NY, Springer-Verlag.
- Edman, S.O., Cole, D.A., & Howard, G.S. (1990). Convergent and Discriminant Validity of FACES-III: Family and Cohesion, *Family Process*, 29, 95-103.
- Evans, M.E., Boothroyd, R.A., & Armstrong, M.I. (1997). Development and implementation of an experimental study of the effectiveness of intensive in-home crisis services for children and their families. *Journal of Emotional and Behavioral Disorders*, 5, 93-105.
- Evans, M.E., Boothroyd, R.A., Armstrong, M.I., Greenbaum, P.E., Brown, E.C., & Kuppinger, A.D. (2003). An Experimental study of the effectiveness of intensive in-home crisis services for children and their families: Program outcomes. *Journal of Emotional and Behavioral Disorders*, 11, 92-102.
- Federal Bureau of Investigations (2003). Department of Justice Office of Justice Programs Bureau of Justice Statistics Crime and Victims Statistics. Retrieved on July 17, 2005 from <http://www.fbi.gov/ucr/adducr/violent%20crime.xls>
- Federal Bureau of Investigation. (2004). *Uniform crime reports for the United States: 2003*. Retrieved on July 17, 2005 from <http://www.fbi.gov/ucr/03cius.htm>
- Feldman, M.A. & Werner, S.E. (2002). Collateral effects of behavioral parent training on families of children with developmental disabilities and behavior disorders. *Behavioral Interventions*, 17, 75-83.
- Glasgow, K.L., Dornbusch, S.M., Troyer, L., Steinberg, L., & Ritter, P.L. (1997). Parenting styles, adolescents' attributions, and education outcomes in nine heterogeneous high schools. *Children Development*, 68, 507-529.
- Glied, S., Hoven, C.W., Garrett, A.B. Moore, R.E., Leaf, P., Bird, H.R., et al. (1997). Measuring child mental health status for services research. *Journal of Child and Family studies*, 6, 177-190.

- Glow, R. A., Glow, P. A., & Rump, E. E. (1982). The stability of child behavior disorders: A one year test-retest study of Adelaide versions of the Conners' Teacher and Parent Rating Scales. *Journal of Abnormal Child Psychology*, *10*, 36–60.
- Goldberg, S. (2000). *Attachment and Development*, London: Arnold.
- Gorman-Smith, D., Henry, D.B., & Tolan, P.H. (2004). Exposure to community violence and violence perpetration: The protective effects of family functioning. *Journal of Clinical Child and Adolescent Psychology*, *33*, (3), 439-450.
- Gorall, D., Tiesel, J., Olson, D.H. (2002). *FACES IV: Development and Validation*. Retrieved on March 31, 2006 from <http://www.facesiv.com/pdf/2.development.pdf>
- Gottman, J.M. & Katz, L. F. (1989). Effects of marital discord on young children's peer interaction and health. *Developmental Psychology*, *25*, 373-381.
- Gross, D., Fogg, L. Garvey, C., Julion, W., Webster-Stratton, C., & Grady, J. (2003). Parent training of toddlers in day care in low-income urban Communities. *Journal of Counseling and Clinical Psychology*, *71*, 261-278.
- Grych, J.H. & Fincham, F.D. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin*, *108*, 267-290.
- Halfon, N., & Newacheck, P.W. (1999). Prevalence and impact of parent-reported disabling mental health conditions among U.S. children. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(5), 600-609.
- Hammen, C., Burge, D., & Stansbury, K. (1990). Relationship of mother and child variables to child outcomes in a high-risk sample: A causal modeling analysis. *Developmental Psychology*, *26*, 24-30.
- Hazzard, A., Christensen, A., & Margolin, J. (1983). Children's perceptions of parental behaviors. *Journal of Abnormal Child Psychology*, *11*, 49–59.
- Helton, L.R. & Jackson, M. (1997). *Social work practice with families*. Boston: Allyn and Bacon.
- Hendren, R., & Mullen, D. (1997). Conduct disorder in childhood. In J. M. Weiner (Ed.), *Textbook of child and adolescent psychiatry* (2nd ed., pp. 427–440). Washington, DC: American Academy of Child and Adolescent Psychiatry, American Psychiatric Press.
- Henggler, W.W., Schoenwald, S.K., Borduin, C.M., Rowland, M.D., & Cunningham, P.B. (1998). *Multisystemic treatment of antisocial behavior in children and adolescents*. New York: Guilford.

- Hinshaw, S.P. & Anderson, C.A. (1978). Conduct and Oppositional Defiant Disorder. In E.J. Marsh & R.A. Barkley (Eds.) *Child Psychopathology* (pp. 113-149). New York: Guilford.
- Hodges, K. (1994). *Child and Adolescent Functional Assessment Scale*. Ypsilanti, MI: Eastern Michigan University, Department of Psychology.
- Hodges, K. (1999). Child and Adolescent Functional Assessment Scale CAFAS. In M.E. Maruish (Ed.), *Use of psychological testing for treatment planning and outcome assessment (2nd ed.)*. Mahwah, NJ: Lawrence Erlbaum.
- Hodges, K., Doucette-Gates, A., Liao, Q. (1999). The relationship between the Child and Adolescent Functional Assessment Scale (CAFAS) and indicators of functioning. *Journal of Child and Family Studies*, 8, 109-122.
- Hodges, K., & Kim, C. (2000). Psychometric study of the Child and Adolescent Functional Assessment Scale: Prediction of contact with the law and poor school attendance. *Journal of Abnormal Child Psychology*, 28, 287-297.
- Hollingshead, A.B. (1975). *Four factor index of social status*. Unpublished manuscript, Yale University.
- Holm, J.W. & Hansen, D.J. (2004). Examining and addressing potential barriers to treatment adherence for sexually abused children and their non-offending parent. Retrieved on August 10, 2005 from http://www.unl.edu/psypage/grad/maltreat_lab/documents/TXAdherbarriersposterAABT03.pdf
- Howard, B. (1996). Presentation: Advising parents on discipline: What works? *Pediatrics*, 98 (4), 809-815.
- Jackson, A.P. & Schemes, R. (2005). Single Mothers' Self-Efficacy, Parenting in the Home Environment, and Children's Development in a Two-Wave Study. *Social Work Research*, 29, 7-20.
- Janicke, D.M., & Finney, J.W. (2003). Children's primary health care services: Social-cognitive factors related to utilization. *Journal of Pediatric Psychology*, 28, 547-558.
- Johnson, H.C., Cournoyer, D.E., Fisher, G.A., McQuillan, B.E., Moriarty, S., Richert, A., et al. (2000). Children's emotional and behavioral disorders: Attributions of parental responsibility by professionals. *American Journal of Orthopsychiatry*, 70(3), 327-339.
- Kagan, R.M., Reid, W.J., Roberts, W.E. & Silverman-Pollow, J. (1987). Engaging families of court-mandated youths in an alternative to institutional placement. *Child Welfare*, 66, 365-376.

- Karazsia, B., Wildman, B., & Langkamp, D. (2004). Treatment of child behavior problems: Implications of age, parental relationship, satisfaction, and parenting practices in Abstracts of papers accepted for presentation at the annual meeting of the Society for Developmental and Behavioral Pediatrics. *Developmental and Behavioral Pediatrics, 25*, 372-382.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., & Ryan, N. (1996). Kiddie-Sads-Present and Lifetime Version (K-SADS-PL): Diagnostic Interview. Instrument developed at Western Psychiatric Institute and Clinic, University of Pittsburgh Medical Center.
- Kazdin, A. (1987). Treatment of antisocial behavior in children: Current status and future directions. *Psychological Bulletin, 102*(2), 187-203.
- Kazdin A. (1995). *Conduct Disorders in Childhood and Adolescence*. Sage Publications, Inc. Thousand Oaks, CA.
- Kazdin, A. (1995). Child, parent and family dysfunction as predictors of Outcome in cognitive-behavioral treatment of antisocial children. *Behavior Research & Therapy, 33*, 271-281.
- Kazdin, A. (1997). Parent management training: Evidence, outcomes, and issues. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1349-1356.
- Kazdin, A., Siegel, T.C., & Bass, D. (1992). Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical psychology, 60*, 733-747.
- Kazdin, A. & Weisz, J.R. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of Consulting and Clinical Psychology, 66*, 19-36.
- Klein, R.G., Alexander, J.F., & Parsons, B.V. (1977). Impact of family systems intervention on recidivism and sibling delinquency: A model of primary prevention and program evaluation. *Journal of Consulting Clinical Psychology, 45*, 469-474.
- Koeske, G., & Koeske, R. (1990). The buffering effect of social support on Parental stress. *American Journal of Orthopsychiatry, 60*, 440–451.
- Kolko, D.J. (1992). Conduct Disorder. In V.B. Van Hasselt & D.J. Kolko (Eds.), *Inpatient Behavior therapy for Children and Adolescents*, New York: Plenum Press.
- Kolko, D.J., Bukstein, O.G., & Barron, J. (1999). Methylphenidate and behavior modification in children with ADHD and comorbid ODD or CD: Main and incremental effects across settings. *Child and Adolescent Psychiatry, 38* (5), 578-586.

- Krug, E.G., Dahlberg, L.L., Mercy, J.A., Zwi, A.B., & Lozano, R. eds. (2002). *World Report on Violence and Health*. Geneva, World Health Organization. Retrieved on July 19, 2005 from http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf
- Larsen, M.A. & Tentis, E. (2003). The art and science of disciplining children. *The Pediatric Clinics of North America*, 50, 817-840.
- Leerkes, E.M., & Crockenberg, S.C. (2002). The Development of maternal self-efficacy and its impact on maternal behavior. *Infancy*, 3(2), 227-247.
- Leventhal, T. & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, 126(2), 309–337.
- Liddle, H.A. (2004). Family-based therapies for adolescent alcohol and drug use: Research contributions and future research needs. *Addiction Supplement*, 99 (Supplement 2), 76-92.
- Loeber, R., & Stouthamer-Loeber, M. (1986). Family factors as correlates and predictors of juvenile conduct problems and delinquency. In M. Tonry & N. Morris (Eds.), *Crime and justice* (Vol. 7). Chicago: University of Chicago Press.
- Loeber, R., Green, S.M., Keenan, K., & Lahey, B.B. (1995). Which boys will fare worse? early predictors of the onset of conduct disorder in a six-year longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34, 499-509.
- Loney, J. & Milich, R. (1982). Hyperactivity, inattention, and aggression in clinical practice. In M. Wolraich and D.K. Routh (Eds.), *Advances in developmental and behavioral pediatric* (pp. 113-147). Greenwich, CT: JAI.
- Lopez, N.L., Bonenberger, J.L., & Schneider, H.G. (2001). Parental disciplinary history, current levels of empathy, and moral reasoning in young adults. *North American Journal of Psychology*, 3, 193-204.
- Lum, J.J. & Phares, V. (2005). Assessing the emotional availability of parents. *Journal of Psychopathology and Behavioral Assessment*, 27 (2), 211-226.
- Lundquist, L.M. & Hansen, D.J. (1998). Enhancing treatment adherence, social validity, and generalization of parent-training interventions with physically abusive and neglectful families. In J.R. Lutzker (Ed.), *Handbook of child abuse research and treatment. Issues in clinical child psychology* (pp.449-471). New York, NY: Plenum Press.
- Lyon-Ruth, K. & Melnick, S. (2004). Dose-response effect of mother-infant clinical home visiting on aggressive behavior problems in kindergarten. *Journal of the American Academy of Children and Adolescent Psychiatry*, 43 (6), 699-707.

- Manfred-Gilham, J.J., Sales, E. & Koeske, G. (2002). Therapist and case manager perceptions of client barriers to treatment participation and use of engagement strategies. *Community Mental Health Journal*, 38, 212-221.
- Martinez, C.R. & Forgatch, M.S. (2001). Preventing problems with boy's noncompliance: Effects of parent training intervention on divorcing mothers. *Journal of Consulting Clinical Psychology*, 69, 416-428.
- McCabe, K.M, Clark, R., & Barnett, D. (1999). Family protective factors among urban African American youth. *Journal of Clinical Child Psychology*, 28(2), 137-150.
- McCabe, K.M., Hough, R., Wood, P.A., & Yeh, M. (2001). Childhood and adolescent onset conduct disorder: A test of the developmental taxonomy. *Journal of Abnormal Child Psychology*, 29(4), 305-316.
- McKay, M.M., Gonzales, J., Quintana, E., Kim, L., & Abdul-Adil, J. (1999). Multiple family groups: An alternative for reducing disruptive behavioral difficulties of urban children. *Research on Social Work Practice*, 9, 593-607.
- McKay, M.M., Nudelman, R., McCadam, K., & Gonzales, J. (1996). Evaluating A social work engagement approach to involving inner-city children and their families in mental health care. *Research on Social Work Practice*, 6(4), 462-272.
- McKay, M.M., Lynn, C.J., & Bannon, W.M. (2005). Understanding inner city child mental health need and trauma exposure: Implications for preparing urban service providers. *American Journal of Orthopsychiatry*, 75, 201-210.
- McMahon, R. (1999). Parent training. In S. Russ & T. Ollendick (ed.), *Handbook of psychotherapies with children and families* (pp.153-180). New York: Kluwer Academic/Plenum Publisher.
- Melby, J. & Conger, R.D. (1996). Parental behaviors and adolescent academic performance: A longitudinal analysis. *Journal of Research on Adolescence*, 6, 113-137.
- Meyer, J.M., Rutter, M., Silberg, J.L., Maes, H.H., Simonoff, E., Shillady, L.L., et al. (2000). Familial aggregation for conduct disorder symptomatology: The role of genes, marital discord and family adaptability. *Psychological Medicine*, 20, 759-774.
- Miller, G.E. & Prinz, R.J. (1990). Enhancement of social learning family interventions for childhood conduct disorder. *Psychological Bulletin*, 108, 291-307.
- Miller, K.L. (1997). *Principles of everyday behavior analysis*. 3rd edition. Pacific Grove (CA): Brooks/Cole Publishing Company.

- Moos, R. & Moos, B. (1990). Family Environment Scale. In Touliatos, J., Perlmutter, B. F., & Straus, M. A. (Eds.). *Handbook of family measurement techniques*. Newbury Park, CA: Sage.
- Motter, T. A., Slattery, J.M., & Bean, T. (1999, April). Assessment of in-home family therapy outcomes. Poster presented at the annual meetings of the Eastern Psychological Association, Providence.
- National Institute of Mental Health, *Blueprint for Change: Research on Child and Adolescent Mental Health*. Retrieved on March 2, 2003 from <http://www.nimh.gov>
- National Institute of Mental Health, *Press Release June 6, 2005*. Retrieved on June 6, 2005 from <http://www.nimh.gov>.
- Nahme-Huang, L. & Espiritu, R.C. (2003). To be or not to be evidence-based? *Data Matters*, 6, 1-2.
- Nixon, R.D.V., Sweeney, L., Erickson, D.B., & Touyz, S.W. (2003). Parent-child interaction therapy: A comparison of standard and abbreviated for oppositional defiant preschoolers. *Journal of Consulting and Clinical Psychology*, 71, 251-260.
- Offord, D.R. (2000). Identification of mental health needs, U.S. Public Health Service, *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*, Washington, D.C.: Department of Health and Human Services, 2000.
- Ohan, J.L., Leung, D.W., & Johnston, C. (2000). The parenting sense of competence scale: Evidence of a stable factor structure and validity. *Canadian Journal of Behavioural Science*, 32, 251-261.
- Olson, D. H., Portner, J., & Lavee, Y. (1985). *FACES III*. St Paul, MN: University of Minnesota. Oxford, M., Cavell, T.A., Hughes, J.N. (2003). Callous/Unemotional traits moderate the relation between ineffective parenting and child externalizing problems: A Partial replication and extension. *Journal of Clinical Child and Adolescent Psychology*, 32, 577-585.
- Owens, P.L. et al. (2002). Barriers to children's mental health services. *Journal of The American Academy of Children and Adolescent Psychiatry*, 41, 731-738.
- Parsons, B.V. & Alexander, J.F. (1973). Short-term family interventions: A therapy outcome study. *Journal of Consulting and Clinical Psychology*, 41, 195-201.
- Patterson, G.R. (1976). *Living with children: New methods for parents and teachers*. Illinois: Research Press.
- Patterson, G.R. (1982). *Coercive family process*. Eugene, Or: Castalia Press.

- Patterson, G.R. & Forgatch, M.S. (1985). Therapist behavior as a determinant for client noncompliance: A Paradox for the behavior modifier. *Journal of Consulting and Clinical Psychology, 53*, 846-851.
- Patterson, G.R. & Forgatch, M.S. (1995). Predicting future clinical adjustment from treatment outcome and process variables. *Psychological Assessment, 7*, 275-285.
- Payne, M. (1997). *Modern social work theory*. London: MacMillan Press LTD.
- Pelham, W.E., Milich, R., Murphy, D., Murphy, H.A. (1989). Normative data on the IOWA Conners teaching rating scale. *Journal of Clinical Child Psychology, 18*, 259-262.
- Perozynski, L. & Kramer, L. (1999). Parental beliefs about managing sibling Conflict. *Developmental Psychology, 35*, 489-499.
- Peterson, L., Tremblay, G., Ewigman, B., & Saldana, L. (2003). Multilevel selected primary prevention of child maltreatment. *Journal of Consulting and Clinical Psychology, 71*, 601-612.
- Pihlakoski, L. et al. (2004). Use of and need for professional help for emotional and behavioral problems among preadolescents: A Prospective cohort study of 3 to 12 year old children. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*, 974-983.
- Pressman, L.J., Loo, S.K., Carpenter, E.M., Asarnow, J.R., Lynn, D., McCracken, J.T., et al (2006). Relationship of family environment and parental psychiatric diagnosis to impairment in ADHD. *Journal of American Academy of Child & Adolescent Psychiatry, 45*, 346-354.
- Raine, A., Reynolds, C., Venables, P. H., Mednick, S. A., & Farrington, D. P. (1998). Fearlessness, stimulation seeking, and large body size at age 3 years as early predispositions to childhood aggression at age 11 years. *Archives of General Psychiatry, 55*, 745–751.
- Ray, D. & Bratton, S. (1999). What the research shows about play therapy. Retrieved on May 5, 2003 from <http://www.a4pt.org/research/index.html>.
- Reich, S., Bickman, L., & Heflinger, C. (2004). Covariates of self-efficacy: Caregiver characteristics related to mental health services self-Efficacy. *Journal of Emotional and Behavioral Disorders, 12* (2), 99-108.
- Reid, J.B. (1993). Prevention of conduct disorder before and after school entry: Relating interventions to developmental findings. *Development and Psychopathology, 5*, 243-262.

- Riley, A.W. (2003). Evidence-based treatments for children's disruptive behavior problems. *Data Matters*, 6, 6-7.
- Ringeisen, H. (2003). Identifying efficacious interventions for children's mental Health. *Data Matters*, 6, 10-11.
- Robbins, M.S., Alexander, J.F., Turner, C.W., & Perez, G.A. (2003). Alliance and dropout in family therapy for adolescents with behavior problems: Individual and system effects. *Journal of Family Psychology*, 17, 534-544.
- Rothbaum, F. & Weisz, J.R. (1994). Parental caregiving and child externalizing behavior in nonclinical samples: A meta-analysis. *Psychological Bulletin*, 116, 55-74.
- Rutter, M. (1994). Family discord and conduct disorder: Cause, consequence, or correlate? *Journal of Family Psychology*, 8, 170-186.
- Rutter, M., & Giller, H. (1984). *Juvenile delinquency: Trends and perspectives*. New York: Penguin.
- Rutter, M., Giller, H., Hagell, A. (1999). Antisocial behavior by young people. *Journal of American Academy of Child and Adolescent Psychiatry*, 38, 1320-1321.
- Sahler, O.J.Z., Varni, J.W., Fairclough, D.L., Butler, R.W., Noll, R.B., Dolgin, M.J., et al. (2002). Problem-Solving Skills Training for Mothers of Children with Newly Diagnosed Cancer: A Randomized Trial. *Journal of Developmental & Behavioral Pediatrics*, 23(2), 77-86.
- Sanders, M.R. (1999). Triple P-Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review*, 2, 71-90.
- Sanders, M.R., Mazzucchelli, T.G., & Studman, L.J. (2004). Stepping Stones Triple P: The theoretical basis and development of an evidence-based positive parenting program for families with a child who has a disability. *Journal of Intellectual & Developmental Disability*, 29, 265-283.
- Sanders, M.R. & Woolley, M.L. (2004). The relationship between maternal self-efficacy and parenting practices: Implication for parent training. *Child: Care, Health & Development*, 31 (1), 65-73.
- Scaramella, L.V., Conger, R.D., Simons, R.L., & Whitbeck, L.B. (1998). Predicting risk for pregnancy by late adolescence: A social contextual perspective, *Developmental Psychology*, 34, 1233-1245.
- Seo, S. (2004). Maternal self-efficacy, quality of parenting, and child developmental outcome among mothers with young children from early head start, *Dissertation*

Abstracts International Section A: Humanities & Social Sciences. Vol 64(8-A), 2774.

- Shaffer, D., Fisher, P., Dulcan, M. K., Davies, M., Piacentini, J., Schwab-Stone, M. E., et al. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, acceptability, prevalence rates, and performance in the MECA Study. *Methods for the Epidemiology of Child and Adolescent Mental Disorders Study. Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 865–877.
- Serketrich, W. & Dernas, J. (1996). The effectiveness of behavioral parent training to modify antisocial behavior in children: A meta-analysis. *Behavior Therapy*, 57, 571-578.
- Sheldrick, R.C., Kendall, P.C., & Heimberg, R. G. (2001). The clinical significance of treatments: A comparison of three treatments for conduct disordered children. *Clinical Psychology: Science and Practice*, 8, 418-430.
- Shumow, L. & Lomax, R. (2002). Parental efficacy: Predictor of parenting behavior and adolescent outcomes. *Parent: Science and Practice*, 2(2), 127-150.
- Sminkey, L. (2004). High economic cost of violence related injuries. *Medical News Today*, Retrieved from www.medicalnewstoday.com on July 19, 2005.
- Smith, B.H., Pelham, W.E., Gnagy, E., Molina, B. & Evans, S. (2000). The Reliability, validity, and unique contributions of self-report by adolescents receiving treatment for attention-deficit/hyperactivity disorder. *Journal of Consulting and Clinical Psychology*, 68, 489-499.
- Snell-Johns, J., Mendez, J.L., & smith, B.H. (2004). Evidence-based solutions for overcoming access barriers, decreasing attrition, and promoting change with underserved families. *Journal of Family Psychology*, 18, 19-35.
- Spoth, R., Redmond, C., & Shin, C. (1998). Direct and indirect latent-variable parenting outcomes of two universal family-focused preventive interventions: Extending a public health-oriented research base. *Journal of Consulting and Clinical Psychology*, 66, 385-399.
- Staudt, M.M. (2003). Helping children access and use services: A review. *Journal of Children and Family Studies*, 12, 49-60.
- Stouthamer-Loeber, M., Loeber, R., Van Kammen, W., & Zhang, Q. (1995). Uninterrupted delinquent career: The timing of parental help-seeking and juvenile court contact. *Studies on Crime & Crime Prevention*, 4, 236-251.
- Szapocznik, J., Perez-Vidal, A., Brickman, A.L., Foote, F.H., Santistieban, D., Hervis, O., & Kurtines, W.M. (1988). Engaging adolescent drug abusers and their

- families in treatment: A strategic Structural systems approach. *Journal of Consulting and Clinical Psychology*, 56(4), 552-557.
- Tucker, S. & Gross, D. (1997). Behavioral parent training: An intervention Strategy for guiding parents of young children. *Journal of Perinatal Education*, 6, 35-44.
- Turner, L.A., & Johnson, B. (2003). A Model of mastery motivation for at-risk preschoolers, *Journal of Educational Psychology*, 95 (3), 495-505.
- Yoshikawa, H. (1994). Prevention as cumulative protection: Effects of early family support and education on chronic delinquency and its risks. *Psychological Bulletin*, 115, 28-54.
- U.S. Department of Education, National Center for Education Statistics. *Violence and Discipline Problems in U.S. Public Schools: 1996-97*, NCES 98-030, by Sheila Heaviside, Cassandra Rowand, Catrina Williams, and Elizabeth Farris. Project Officers, Shelley Burns and Edith McArthur. Washington, DC: 1998 Retrieved from <http://nces.ed.gov> on July 19, 2005.
- U.S. Department of Health and Human Services. *Mental Health: A Report of the Surgeon General—Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999. Retrieved on June 8, 2005 from <http://www.surgeongeneral.gov/library/mentalhealth/pdfs/c3.pdf>.
- Webster, D.R. (2002). College students' perceptions of parent-child relationships and their correlates: Explanatory style and empathy. *Dissertation Abstracts International*, 63 (1-B), 571.
- Weiner, J. M. (1997). Oppositional defiant disorder. In J. M. Weiner (Ed.), *Textbook of child and adolescent psychiatry* (2nd ed., pp. 459–463). Washington, DC: American Academy of Child and Adolescent Psychiatry, American Psychiatric Press.
- Woolgar, M. & Scott, S. (2005). Evidence-based management of conduct Disorders. *Child and Adolescent Psychiatry*, 18, 392-396.
- Zwaanswijk, M., Vander Ende, J., Verhaak, P.F., Bensing, J.M., & Verhulst, F.C. (2003). Factors associated with adolescent mental health service need and utilization. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42, 692-700.