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PARENT ATTRIBUTIONAL STYLE AND EARLY TERMINATION FROM CHILD AND PARENT THERAPY

by

Ryan J. Mattek, M.A.

A Dissertation submitted to the Faculty of the Graduate School,
Marquette University,
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy

Milwaukee, Wisconsin

August 2013

ABSTRACT

PARENT ATTRIBUTIONAL STYLE AND EARLY TERMINATION
FROM CHILD AND PARENT THERAPY

Ryan J. Mattek, M.A.

Marquette University, 2013

Behavior problems are prevalent in young children and represent a threat to a child's typical development. These early behavior problems are even more common in children from low-income, urban settings. If left untreated, such challenging behaviors may become ingrained and lead to later more severe behaviors including aggression, violence, and anti-social behaviors. Research has demonstrated that participation in child and parent therapy (CPT) programs significantly reduces problematic child behaviors while increasing positive behaviors in both the child and the parent. However, CPT programs report rates of early termination as high as 70%. Research to reduce these early termination rates have historically focused on barriers to treatment including logistical conflicts, race, culture, socioeconomic status, child age, and symptom severity. However, several years of implementing intervention enhancements specifically designed to address these barriers have yielded only moderate and inconsistent results and early termination rates in CPT programs have remained essentially unchanged. More recent research has focused on a new category of barriers to treatment, parent cognitive variables. One such cognitive variable is parental attributions – the spontaneous explanations that parents make to explain the reason for their child's behaviors. This study examined whether attributional style can predict treatment compliance in a CPT program specifically targeting low-income, urban, minority parents of children with behavior problems. For the study, 425 parents of children with behavior problems completed the Parent Cognition Scale – Adapted (PCS-A) to assess their parent-referent and child-referent attributions at pretest and posttest. Results indicated that parents of children with behavior problems tended to have a more negative attributional style at pretest, but that these attributions underwent a positive shift after receiving CPT treatment. Results also indicated that caregivers who viewed themselves as more of the cause of their child's behavior problems at pretest were significantly more likely to successfully complete the CPT program. Alternatively, caregivers who viewed their child as more responsible for their own behavior problems at pretest were significantly more likely to prematurely terminate from the CPT program. Limitations of the study, suggestions for future research, and implications for CPT programs serving similar populations were discussed.

ACKNOWLEDGEMENTS

Ryan J. Mattek, M.A.

It is with sincere appreciation that I take this moment to acknowledge those who have helped me during my journey. Without the love and support of my family, friends, and colleagues, this accomplishment would not have been possible.

I owe my sincerest thanks to Dr. Fox, my academic advisor, dissertation chair, and mentor. Since my first year of graduate school, you have had an enormous impact on both my personal and professional development. Without your personal and selfless investment in me I would not be where I am to day. Your passion to serve the underprivileged, your dedication to the families of Milwaukee, and your investment in your students will always serve as an inspiration for me. I will never forget what you have done for me. To Dr. Lisa Edwards and Dr. Viktor Brenner, thank you for your willingness to serve on my dissertation committee and the many hours that you have given to this project. To Dr. Lopez, thank you for your statistical guidance and encouragement. To the staff and students at the Behavior Clinic, thank you for your many hours of hard work providing treatment and collecting data. Without your dedication to serving the families of Milwaukee, this project would not have been possible. To Dr. Young, thank you for the countless hours of classroom instruction that you have provided me throughout the graduate program at Marquette. You have been instrumental to my personal and professional development and I look to you as an inspiration and a mentor. To Patti Grede and the staff of Penfield Children's Center and to Bill Hotz and the Exchange Clubs of the Greater Milwaukee Charitable Foundation, thank you for your

years of support and assistance. Without your dedication and support, the mission of the Behavior Clinic would not be possible.

Finally, I would like to express my sincerest thanks to my family. To Jennifer, my wife, I owe you a special debt of gratitude due to the countless sacrifices that you have made. I depended on your love, steadfastness, encouragement, support, sack lunches, late-night snacks, and motivation to make it through the best and worst of graduate school. You encouraged me during the darkest hours and cheered for me during the brightest hours. I would not have earned my Ph.D. were it not for you. For you I am forever thankful. To Ethan and Avrilynn, my children, you are too young to understand, but I owe you many hours that I could not give you these last few years. It broke my heart to have to say "no" to so many games of blocks, cars, marbles, tag, or catch, but I knew that with hard work and sacrifices in the present, I could give you a better future. I dedicate this dissertation to you.

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CHAPTER I: INTRODUCTION

Background Context

Children under the age of five years typically display a number of challenging behavior problems including destructiveness, self-injury, tantrums, hyperactivity, and noncompliance (Roberts, Mazzucchelli, Taylor, & Reid, 2003). While many of these difficulties represent typical development and will dissipate over time, they do become mild to moderate problems in 10 – 15% of young children (Einfeld et al., 2006) with a high probability (i.e., 50%) that they will persist through elementary school years and into early adolescence (Campbell, 1995, Hudson et al., 2003). Research has demonstrated that behavior problems can adversely affect a young child's development of social skills (Mendez, Fantuzzo, & Cicchetti, 2002), interpersonal relationships (Greene, & Doyle, 1999), communication ability (Sigafoos, 2000), future academic achievement (Neilsen & McEvoy, 2004), and place children at an increased risk of abuse and neglect (Crouch & Behl, 2001).

When these early behavior problems become severe enough, they may warrant a psychiatric diagnosis such as attention deficit hyperactivity disorder, separation anxiety disorder, conduct disorder, or oppositional defiant disorder, among others (Keenan & Wakschlag, 2002). Clinical behavior problems may cause expulsion from preschools or daycares and impede the development of social skills due as family and peers avoid interacting with children with challenging behaviors (Green & Doyle, 1999; Mendez, Fantuzzo, & Cicchetti, 2002; Sigafoos, 2000). If left untreated, clinical behavior problems can become ingrained, predisposing children for future cycles of violence and

abuse (Einfeld et al., 2006, Hofstra, Van Der Ende, & Verhulst, 2002; Roberts, Mazzuchelli, Studman & Sanders, 2006). While clinical behavior problems are not specific to any racial, ethnic, and socioeconomic status, disadvantaged families are particularly at risk. A 2003 study by Qi and Kaiser found that preschool children from low-income families have a significantly higher incidence of clinical behavior problems (31%) than the general population. If left untreated, as many as 50% of low-income, urban young children will continue to have problems when they begin formal schooling, leaving them particularly vulnerable for becoming trapped in the cycle of poverty beginning with academic underachievement and dropout (Keenan, Shaw, Deliquadri, Giovannelli, & Walsh, 1998; Neilsen & McEvoy, 2004).

The etiology of behavior problems is complex and includes such contributing factors as a difficult temperament, developmental delays, inappropriate parental expectations, dysfunctional parenting styles and practices, family stress, lack of social support, a poor parent-child relationship, single-parent families, and limited family resources (Eyberg et al., 1992; Hofstra et al., 2002). Combinations of these factors give rise to the development of negative behavior cycles between a child and caregiver in which the caregiver's reaction (e.g., yelling, spanking, giving in to tantrums) to the child's problematic behaviors (e.g., tantrums, aggression, noncompliance) may inadvertently reinforce that behavior and causes it to occur more frequently in the future (Fox & Fox, 1992). A 1998 study by Brenner and Fox found that the frequency of a young child's behavior problems was best predicted by parental use of verbal and corporal punishment. More recent studies have consistently found punitive parenting practices to be associated with elevated levels in children's behavior problems (Eyberg,

Nelson, & Boggs, 2008; Roberts et al., 2006; Fox & Holtz, 2009). Therefore, because caregivers retain significant control over a young child's environment and can play a key role in the development of behavior problems, improving parenting practices is widely considered the most effective way of treating behavior problems in young children (Eyberg, Nelson, & Boggs, 2008).

A number of evidence-based child and parent therapy (CPT) programs exist that focus on treating behavior problems by improving parenting practices. Such programs include the Triple P-Positive Parenting Program (Sanders, 1999), the Incredible Years Parent Training Program (Webster-Stratton, Reid, & Hammond, 2001), Parent Child Interaction Therapy (Eyberg & Matarazzo, 1980), and the Parenting Young Children program (Fox & Nicholson, 2003). CPT programs use a variety of techniques to decrease children's challenging behaviors and increase pro-social behaviors. These programs share many common treatment components including: (1) enriching the parent/child relationship through child-led play; (2) helping parents learn to thoughtfully interact with their child instead of emotionally overreacting to them; (3) helping parents to learn and maintain appropriate expectations based on their child's level of developmental functioning; (4) using positive reinforcement, consistent home routines, supervision, and giving clear instructions to strengthening their child's pro-social behaviors; and (5) reducing challenging behaviors by using limit-setting strategies such as redirection, ignoring, and time-out.

The effectiveness of these CPT programs is well-documented among toddlers and children with a broad range of clinical emotional and behavior problems including oppositional defiant disorder (Fox & Holtz, 2009; Bor, Sanders, & Markie-Dadds, 2002),

separation anxiety disorder (Choate, Pincus, Eyberg, & Barlow, 2005), and attention-deficit hyperactivity disorder (Webster-Stratton, Reid, & Hammond, 2011). Yet despite their general effectiveness, these CPT programs report early termination rates ranging from 20 – 70% (Bagner & Eyberg, 2007; Helfenbaum-Kun & Ortiz, 2007; Leung, Sanders, Leunch, & Lau, 2003; Webster-Stratton et al., 2004). This high rate of early termination is well-recognized within the field as a significant problem for families of children with emotional and behavioral problems (Johnson, Mellor, & Brann, 2009; Kazdin, Holland, Crowley, & Breton, 1997). For example, not only do individuals miss treatment who might benefit from it, unresolved psychological difficulties may predispose the child to become a malfunctioning adult (Johnson et al., 2009). Furthermore, from an economic standpoint, premature termination of treatment may have extensive long-term costs for the child, family, and society. Finally, for community mental health clinics with limited budgets, early dropout represents a poor return on resources invested in the individual in terms of the personnel and financial costs associated with conducing an initial intake, assessments, treatment planning, report writing, and treatment delivered up to the point of dropout (Johnson et al., 2009).

Statement of the Problem

In order to more effectively and efficiently serve young children in need of clinical services, researchers have sought to identify critical pretreatment variables that may contribute to successful treatment and help to reduce early termination rates. Three classic categories of barriers to treatment have been identified as predictors of early termination: (1) situational barriers including time and location conflicts with treatment sessions, lack of information, ineffective/disrespectful treatment providers; (2) family

barriers including low socioeconomic status (SES), racial/ethnic minority status, parental education level, parental mental health status; and (3) child barriers including age at intake and symptom severity (Kazdin, 1997; Miller & Prinz, 2003). However, several years of implementing intervention enhancements specifically designed to address these three barriers to treatment have yielded only moderate and inconsistent results (Morrissey-Kane & Prinz, 1999) and early termination rates in CPT programs have remained essentially unchanged.

More recent research has begun to focus on a new category of barriers to treatment – parental attitudes and cognitions (Kazdin, 2000; Miller & Prinz, 2003). A renewed and more narrowed focus on caregivers seems appropriate because they are often the decision-makers when it comes to pursuing and terminating treatment for their young children (Morrisey-Kane & Prinz, 1999). In particular, parental attributions (i.e., the explanations that the parent assigns as the cause of the child's behavior) have been examined as they have been linked to higher family engagement in and more positive treatment outcomes from CPT programs. For example, parents of young children have been found to be more likely to complete treatment if parents viewed the quality of their parenting skills as a contributing factor of their child's behavior problems (Peters, Calam, & Harrington, 2005). Moreover, parents that complete CPT treatment programs have been found to have more functional attributional styles (Boggs et al., 2004). However, while the three classic barriers to treatment (i.e., situational, family, and child barriers) have been well-explored within the CPT literature, very little research has investigated the relationship between parent attributional style and early termination from CPT programs. The research that does exist has primarily been conducted among well-

educated, middle-SES, Caucasian populations. Little is known about the role parental attributions play in early termination from CPT in low-income, urban, minority populations.

Purpose of the Study

The purpose of the current study is to investigate parental attributions among low-income, urban parents receiving in-home therapy for their toddler's externalizing behavior problems. While two studies exist that have examined parental attributions among children under the age of 5 years (Boggs et al., 2004; Sanders et al., 2004), both were among primarily White, middle-class populations. The present study will investigate the link between parental attributions among low-income, urban, primarily minority caregivers and early termination from CPT programs. Specifically, the study will seek to understand whether parents who believe that they have little control over their child's behavior problems or believe that their child is responsible for their own behavior problems will be less likely to complete a treatment program that is centered around parental involvement. It will compare these parents' completion rate to that of parents who believe that they do have control over their child's behavior problem and do not believe that their child is responsible for their own behavior problems.

Research Questions

This study addresses the following research questions:

1. Do parents' attributions for their young children's behavior problems differ significantly by family variables such as race, gender, age, income, use of

corporal punishment, and symptom severity prior to participating in a CPT program as measured by the Parent Cognition Scale – Adapted (PCS-A)?

2. Do parents' attributions for their young children's behavior problems change significantly after completing the CPT program as measured by the PCS-A?
3. Are pretreatment family variables such as race, gender, age, income, corporal punishment, and symptom severity significantly predictive of treatment success in the CPT program?
4. Are parents' pretreatment attributions for their young children's behavior problems significantly predictive of treatment success in the CPT program?

Significance of the Study

The United States Surgeon General has identified the high rates of early termination from CPT programs as a significant problem facing children and families (USDHHS, 1999). While poverty status has long been associated with dropping out of services (Hoberman, 1992), the Surgeon General's report points out that this relationship is especially significant for low-income minority children and their families (USDHHS, 1999). Despite this, there is a paucity of research among low-income, minority families. Furthermore, the research into early termination from CPT programs has generally focused on logistical, demographic, or child factors. This project is significant and unique in that it will investigate the link between parent cognitive variables and early termination among a low-income, urban, minority population. If it is found that parental attributions significantly predict attrition from a CPT program, new treatment components can be added to the beginning of the treatment program specifically to address parents' conceptualization of the cause of behavior problems in their child. Addressing parents'

attributions may, in turn, help reduce early termination rates which will subsequently benefit the child, the family, and society.

CHAPTER II: REVIEW OF THE LITERATURE

Overview

In the current review, the following CPT programs will be examined as they have been identified as the most current, widely-used, and researched programs to date: Parent-Child Interaction Therapy (Eyberg, Boggs, & Algina, 1995), the Incredible Years Parent Training Program (Webster-Stratton, 1992), the Triple P-Positive Parenting Program (Sanders, 1999), and Parenting Young Children (Fox & Nicholson, 2003). Key studies from the past 25 years examining early termination rates in these programs will be discussed and information related to the following participant and treatment factors will be noted when available: treatment setting (e.g., controlled clinic, service clinic, home), participant demographics, definitions of early termination, and early termination rates. The programs will then be summarized and the strengths and limitations of each will be discussed. In addition to a comprehensive examination of the CPT early termination literature, this review will also examine how attribution theory has been studied in relation to the treatment process. Finally, this review will evaluate the conclusions regarding how attending to parental attributions in CPT programs may be a means of improving early termination rates for parents of young children with behavior problems.

Early Termination in Psychotherapy

The basic premise of early termination implies that a client has left therapy before obtaining a necessary level of improvement or meeting the goals of the intervention.

Early termination from mental health services (also referred to as attrition or drop-out) represents a widespread and poorly-understood problem within the field of mental health (Barrett, Chua, Crits-Christoph, Gibbons, & Thompson, 2008). The most often cited meta-analysis of early termination (Wierzbicki & Pekarik, 1993) compared 125 studies and found an average drop-out rate of 47%, regardless of setting (e.g., university counseling center, private clinic, community clinic, etc.), treatment mode (e.g., individual therapy, group therapy, family therapy, couple therapy), and client type (e.g., adult, child, mixed). However, individual studies have reported significant variability in their findings, estimating that anywhere from 30 to 77% of children, adolescents, and adults who begin receiving psychotherapy drop out of treatment prematurely (Baekeland & Lundwall, 1975; Elkin, Shea et al., 1989; Kazdin, 1996; Swift, Callahan, & Levine, 2009). The large differences found among attrition statistics in these studies is generally attributed to the variability in their definitions of premature termination (Hatchett & Park, 2003; Johnson et al., 2009; Wierzbicki & Pekarik, 1993). Therefore, while research into early termination dates back over 50 years (Rogers, 1951), general methodological problems continue to obscure definitive answers (Barrett et al., 2008), dropout rates have not improved (Johnson et al., 2008), and little more is known about early termination other than the fact that it is common (Hatchett & Park, 2003).

Defining Early Termination in Psychotherapy. Most problematic to the study of early termination is the apparent liberty which researchers take to define it. For although early termination may be easy to recognize intuitively ("you know it when you see it;" Hatchett & Park, 2003), it has proven a troublesome construct for scholars to operationalize and measure scientifically (O'Brien, Fahmy, & Singh, 2009). Early in the

history of psychotherapy research, premature termination was quite simply defined as the client's failure to attend a prescribed number of treatment sessions (Butcher & Koss, 1978). However, as the field has grown, so has the number of ways in which researchers define early termination. More contemporary operationalizations of the construct include the client failing to return after an intake assessment (Longo, Lent, & Brown, 1992), the client failing to attend the last scheduled session (Hatchett & Park, 2003), the client missing two consecutive treatment sessions (Kolb et al., 1985), the client ending treatment at any time within 9 months of the intake (Frayn, 1992), the client initiating termination without the therapist's approval (Richmond, 1992), and therapist rating of the appropriateness of termination (Chisholm, Crowther, & Ben-Porath, 1997; Reis & Brown, 2006). This variety of definitions is troubling because research has shown that early termination is not a singular phenomenon (Swift, Callahan, & Levine, 2009) and different definitions can yield significantly different results (Hatchett & Park, 2003). Therefore, researchers interested in studying early termination face a formidable and meticulous task in deciding how to operationalize this complex, multi-faceted construct. Unfortunately, very little empirical evidence exists within the psychotherapy literature to guide researchers in selecting a valid and reliable definition by which to measure early termination.

Early studies typically defined dropout according to a client's dosage or duration of treatment (Baekeland & Lundwall, 1975). Defining early termination in this manner simply meant that clients must attend a minimum number of treatment sessions before a termination can be considered appropriate. Pekarik (1985) was one of the first to measure an alternative definition of client dropout. In his seminal 1985 study, Pekarik examined

152 consecutive outpatient mental health terminations and classified them into two categories: (1) termination based on treatment duration and (2) terminations based on therapist judgment. Subsequently, Wierzbicki and Pekarik (1993) conducted an extensive meta-analysis on psychotherapy in which they added a third categorical definition of early termination. In their review of 125 studies on psychotherapy, the authors grouped the definitions of early termination based on: (1) treatment duration (i.e., the median-split method), (2) therapist judgment, and (3) failure to attend the last scheduled session. Hatchett and Park (2003) identified a fourth category in their review of the psychotherapy attrition literature: termination based on failure to return after the intake appointment. Most recently, the early termination literature has recommended using combinations of these four definitions together with measures of clinically significant or reliable change.

Dropout Based on Duration of Treatment. The duration of treatment definition has both logistical and logical appeal. Logistically, it is an easy and convenient way to measure early termination. Researchers need only set a threshold number of treatment sessions and then count up the number of sessions that each client attends. To determine this threshold, researchers often use the median-split method whereby the median number of treatment sessions attended by the entire treatment sample is established as the cutoff. Clients who attend fewer than the median number of treatment sessions are considered early terminators and clients who attend more than the median number of treatment sessions are considered appropriate terminators. Logically, such an approach also has appeal as the dose-effect literature (Barkham et al., 2006) suggests that participant recovery is positively correlated with the number of sessions they attend (r =.13, p < .001, n =1,472). However, the research has demonstrated that the inherent weaknesses of

this approach outweigh its potential strengths. First, although this method has potential to be highly reliable if the same number of treatment sessions were required by all studies, in reality, this is not the case. The number of treatment sessions that differentiates treatment completers from dropouts varies greatly between both treatments and authors, making this approach highly unreliable. Second, duration-based operationalizations of early termination have demonstrated poor validity in the literature. Research has shown that some clients do not recover after any given number of sessions, while other clients can demonstrate clinically significant change in symptoms after attending as few as one or two sessions (Barkham et al., 2006). Likewise, Pekarik's original 1985 study tested the effectiveness of the median-split method and found that it was unable to accurately discern between appropriate and inappropriate client terminations on any of 16 different client variables.

Dropout Based on Therapist Judgment. According to this definition of early termination, the therapist makes a decision regarding the appropriateness of a client's dropout after they stop coming to treatment. Researchers commonly base this decision on a retrospective review of the therapist's termination notes or by have therapist fill out a simple "yes/no" measure in response to a question such as, "In your opinion, did the client appropriately drop out of treatment?" Alternatively, quantitative measures such as the Termination Status Questionnaire exist that have been developed by researchers specifically to asses a client's level of dropout (Reis & Brown, 2006). Regardless of how it is measured, therapist judgment has historically been accepted as the most preferred and accurate method of defining early termination (Pekarik, 1985; Swift, Callahan, & Levine, 2009). Ideally, therapists would offer the most objective and well-informed

judgment regarding the appropriateness of a client's termination as they could quickly process all the factors that go into a client's termination and then simplify this data into a yes or no decision. Pekarik's 1985 study was the first to establish the credibility of this definition, finding that therapist judgment was able to categorize 152 client terminations into more distinct groups than treatment duration (effect size not reported). Furthermore, Wierzbicki and Pekarik (1993) recommended therapist judgment as the preferred definition of early termination because of its inherent validity and flexibility. However, more recent research into therapist judgment as a definition of premature termination has uncovered several weaknesses. First, the potential increase in validity offered by this definition may come at a cost of lower reliability. Different therapists likely have different ideas about the purpose of therapy and meaning of dropout (Todd, Deane, & Bragdon, 2003). An inherent assumption in this operationalization is that the therapist's expectations for therapy are the correct expectations, regardless of whether or not they match with the client's expectations or goals. A therapist could classify a client as a premature terminator even though the client was functioning well by other standards and was satisfied with the results of the therapy (Barrett et al., 2009). Second, research has shown that therapists are poor objective assessors. Therapist judgment has been found to be less accurate than statistically-based approaches to clinical decision making in psychotherapy (Garb, 2005; Grove, Zald, Lebow, Snitz, & Nelson, 2000; Hanan et al., 2005) and research has demonstrated that therapists sometimes remain so confident in their own clinical judgment that they will dismiss any objective evidence contrary to their opinion (Lambert, 2007). Third, therapists often differ from clients in the reasons they cite for early termination. Hunsley et al., (1999) reviewed 194 client files and found that

therapists could accurately identify the client's reason for leaving treatment when that reason was positive. However, therapists were especially less likely to correctly identify the client's reason for termination when that reasons were negative. Fourth, social desirability bias plays a significant role on both sides of the therapeutic alliance. Therapists may be reluctant to report high rates of client dropout because of a perceived sense of personal blame or professional failure (Swift et al., 2009). Finally, therapists and clients have been shown to have differing ideas regarding the necessary length of treatment. Therapists tend to believe that longer term treatment is necessary to achieve meaningful results, but clients' estimates of treatment length tend to be more consistent with what actually happens (Pekarik, 1985). Some clients may prematurely end therapy because they recognize a lack of progress and believe that more sessions will not be beneficial whereas therapists will continue to recommend more sessions (Swift et al., 2009). Therapists have also been found to rate a client's termination as more appropriate the longer they stay in therapy (Reis & Brown, 1999). Thus, in attempting to judge the appropriateness of a termination, therapists may unintentionally be rating duration of treatment.

Dropout Based on Missed Session. According to this method, clients are considered early terminators if they fail to attend their last scheduled treatment session. Essentially, these clients initially agree to continue in therapy, but then unilaterally terminate without contacting their therapist and not showing up for their scheduled session. This operationalization is similar to duration-based definitions early termination in that it is easy both to define and measure. However, the missed-last-session definition is preferred by some researchers over therapist judgment or treatment duration definitions

because it contains a certain degree of face validity (Hatchett & Park, 2003). In theory there is little room for measurement error in this method (i.e., a client either shows or does not show) which would give such a definition of early termination a high degree of reliability and make it directly comparable across studies (Swift et al., 2009; Wierzbicki & Pekarik, 1993). Yet, in practice this is often not the case. Swift et al., (2009) cite four situations where the reliability of this definition might be compromised: (1) a client experiences "good enough" recovery from their symptoms after the fourth treatment session and chooses not to attend any further sessions without notifying their therapist; (2) a client fully recovers from their symptoms but is prevented from attending another session by an extra-therapeutic event such as a move or sudden illness; (3) a client who misses a number of consecutive sessions is categorized as an inappropriate terminator by the therapist, then the client initiates a resumption of services; and (4) the client has not made any improvement, but discusses termination with the therapist and the dyad mutually agrees that it is beneficial. Furthermore, Wierzbicki and Pekarik (1993) described the termination-by-failure-to-attend method as being overly conservative. Under this method a client could be classified as a completer simply if they decline to schedule another visit after having attended only one session. Additionally, clients are classified as completers regardless of the number of treatment sessions that they attend, so long as they decline to schedule another treatment after attending one. Because of this, highly symptomatic clients who need services but decline them would be classified as completers and clients who have recovered but fail to attend a schedule session would be classified as early terminators. Finally, empirical research has revealed that the missed-last-session definition has low construct validity. Using kappa coefficients to examine

various definitions of early termination, Hatchett and Park (2003) found that therapist judgment and missed-last-appointment were moderatelycorrelated with each other (κ = .62). The authors then suggested that the high level of agreement between these two definitions indicates that they both converge on a similar phenomenon and may actually be tapping a construct such as client level of courtesy or avoidance of issues related to termination.

Failure to Return After Intake. Community and college counseling centers have long reported that 20 – 35% of clients drop out of psychotherapy after the intake interview and before the first treatment session (Baekeland & Lundwall, 1975; Longo, Lent, & Brown, 1992). However, this method of classifying early termination remains largely under-studied in the general psychotherapy attrition literature and the few studies that have examined the intake-only definition remain highly critical of it. Similar to other duration-based definitions of early termination, this method is highly reliable and easy to measure (Hatchett & Park, 2003). Furthermore, Swift et al. (2009) found that that the intake-only method had very low correlations with therapist judgment (κ= .02), missed-last-session (κ = .05), and duration-based definitions (κ = .01), suggesting it may be tapping a unique aspect of the early termination. Yet some researchers question the validity of the intake-only method. Garfield (1994) argued that clients who fail to return after an intake evaluation are not really prematurely terminating therapy, but rather are failing to begin therapy.

Clinically Significant Change and Reliable Change. After a thorough review of the early termination literature, Hatchet and Park (2003) concluded that the four conventional definitions of dropout were fundamentally flawed. In response, they

suggested a new method for conceptualizing dropout based on client improvement in psychotherapy or the lack thereof. They recommend that researchers administer a standardized psychotherapy outcome assessment inventory to each client at the intake and every subsequent treatment session. This way, if a client drops out before a formal termination session can be completed, the last score on the inventory from their most recent session would be used to establish their termination status. Clinically significant change (CSC) would be indicated when (1) the client obtains a score in the nonclinical range on this standardized inventory and (2) the change in scores reflects reliable improvement (Jacobson, Follette, & Revenstorf, 1984; Jacobson & Truax, 1991). Clients whose last score met these two criteria would be classified as appropriate terminators, whereas clients whose last score did not meet these criteria would be classified as early terminators. Given that relatively few clients actually obtain CSC through therapy (Cahill et al., 2003; Hansen & Lambert, 2003; Hansen Lambert, & Forman, 2002; Lambert & Ogles, 2004), Swift et al. (2009) recommend a less stringent partial operationalization based only on the client making a reliable change (RC). The CSC and RC methods of operationalizing early termination are promising in that they are logically valid and highly reliable. Both tie the appropriateness of a termination to standardized measures and reliable improvement, regardless of the number of sessions attended or the biases of the therapist. Their ability to account for the wide variability of symptom severity, treatment duration, and recovery rates that clinicians experience in the field make them perhaps the most accurate and valid measures of early termination (Swift et al., 2009).

However, these methods are not without their weaknesses. First, using the CSC or RC operationalization of early termination relies on symptom reduction to define

improvement. In practice, the actual targets and goals for treatment that a client and therapist agree on may not necessarily include symptom reduction (Swift et al., 2009). Second, these definitions rely on the choice of outcome measure that is used. For example, a client may experience a reduction in depressive symptoms but terminate before they experience a decrease of general distress. If the outcome measure being used by the therapist only measures acute depressive symptoms and not general distress, this client would be classified as an appropriate terminator, but if the therapist was using an outcome measure of general distress, this client would be classified as an inappropriate terminator (Swift et al., 2009). Furthermore, some may argue that people who prematurely terminate from therapy are, as a group, distinct from those who simply fail to engage in the treatment process. If the researcher adopts such a definition of early termination, the CSC and RC methods would not be able to distinguish these two groups whereas more conventional methods of operationalization such as therapist judgment would (Swift et al., 2009).

Multi-method Approach. Recognizing the strengths and limitations of both the traditional and the CSC/RC definitions of early termination, Swift et al. (2009) recommended a fusion of both operationalizations in what they termed a multi-method approach. Such an approach could take a number of forms, each with different strengths and weaknesses. Combining therapist judgment with CSC or RC methods would allow the therapist to determine whether clients have dropped out of therapy before achieving the agreed-upon goals that are not included in typical outcomes measures. Also, the data obtained from the CSC or RC method would be able to give the therapist an objective and unbiased view of whether or not their client recovered before the termination (Swift et al.,

2009). Alternatively, treatment duration methods and CSC or RC methods could be used. This approach would be useful to discern between clients who were early completers (i.e., attended only a few sessions but still made significant change), early premature terminators (i.e., attended only a few sessions but did not improve), and treatment failures (i.e., attended more than a few sessions but did not still improve). Finally, a multi-method approach could combine all three of these methods (i.e., therapist judgment, treatment duration, and CSC or RC) to attain the most comprehensive and objective measurement of client recovery and termination appropriateness (Swift et al., 2009). However, while any one of these multi-method approaches offers a compelling operationalization of early termination in theory, no studies exist that have tested their validity, reliability, or clinical utility.

Early Termination from Parent Child Interaction Therapy

PCIT Program Overview. Parent Child Interaction Therapy (PCIT) is a CPT program for children ages 2-7 years that focuses on changing the interaction patterns between a parent and child in young children with disruptive or externalizing behavior disorders. It is based on Baumrind's (1967) perspective that seeks to establish an authoritative parenting style with a high degree of parental nurturing, clear parent-child communication, and firm limit-setting. PCIT also draws from Bandura's (1977) social learning theory which states that children learn from imitating parents, superiors, and role models. Lastly, PCIT incorporates attachment theory (Ainsworth, Blehar, Watters, & Wall 1978) which suggests that children who receive a high degree of nurturing, sensitivity, warmth, and responsiveness from their parents are likely to develop more secure relationships with others and have more effective emotional regulation.

As described by Zisser and Eyberg (2010), families who receive PCIT treatment typically received 12-14 one-hour weekly treatment sessions in a clinic or laboratory setting. PCIT is divided into two stages, child-directed interaction (i.e., relationship development) and parent-directed interaction (i.e., discipline training). In the child-directed interaction (CDI) phase, the parents are taught to increase positive parenting and warmth through play with their child. Parents learn to follow their child's lead during play and avoid asking questions, giving commands, or criticizing their child's behavior. During the play, parents instead use positive attention skills such as praise, reflection, imitation, description, and enthusiasm (i.e., PRIDE skills). These PRIDE skills are then combined with techniques such as active ignoring to apply differential attention to help the child learn to distinguish prosocial and problematic behaviors during the play interaction. The CDI phase of PCIT strengthens the parent-child relationship and the parents must demonstrate mastery of its skills before moving on to the parent-directed interaction (PDI) phase. Once parents reach this phase, the focus of therapy shifts towards increasing the child's compliance by teaching parents to give clear, developmentally-appropriate instructions. When the child complies, the parent reinforces this behavior with praise. When the child does not comply, the parent implements a time-out. The therapist observes these interactions from behind a one-way mirror and coaches the parent on how to respond to their child's behaviors by means of a bug-in-the-ear listening device. In-vivo coaching is also provided by the therapist when needed. Parents also practice using the compliance skills at home and gradually shift the PDI skills used during play to times when it is necessary for their child to comply in their natural home environment.

PCIT Research Participant Demographics. PCIT remains one of the most well-researched and empirically-supported CPT programs. According to a PsychInfo search, in the last 25 years over 130 PCIT works (i.e., books, book chapters, dissertations, and journal articles) have been published. Eighteen studies were identified that were published in peer-reviewed journals, had a sample of English-speaking or Spanish-speaking families of young children (i.e., less than 6 years of age), and reported participant early termination rates. Treatment outcomes research on PCIT has been primarily conducted in controlled clinical settings (e.g., academic lab or academic clinic), service clinic settings (e.g., outpatient/community mental health clinic or primary care clinic), or in the participant's home among Caucasian families. On average, caregivers tend to be married or cohabitating, lower-middle-class, high school graduates between the ages of 29 and 36 years. A summary of these studies can be found in Table 2.1.

Early Termination in PCIT. In the 18 PCIT outcomes studies reviewed rates of early termination ranged from 16% to 71% with an overall rate of 44% was found. Early termination in PCIT studies was typically well-defined and clearly-operationalized. Fernandez and Eyberg (2005) describe early termination in PCIT as the client discontinuing treatment at any given point after attending the first treatment session and before the completion of treatment. Therapists in PCIT always work to prevent client dropout, and therefore when dropout occurs it is always unilaterally classified as treatment failure (Harwood & Eyberg, 2004). Treatment completion in PCIT is synonymous with treatment success and is measured according to four criteria: (1) the caregiver must score within half of a standard deviation of the normative mean on the Eyberg Child Behavior Index (a measure of how severe and problematic a child's

behaviors are); (2) the child must comply to >75% of parental commands during a five minute PDI interaction; (3) the child must not meet diagnostic criteria for Oppositional Defiant Disorder based on the Diagnostic and Statistical Manual IV (DSM-IV) rating scale administered to the caregiver; and (4) the caregiver must meet mastery criteria for the CDI phase (i.e., in 5 minutes of observation the caregiver must give at least 10 behavioral descriptions, 10 reflective statements, 10 labeled praises, and no more than 3 questions, commands or criticisms) and for the PDI phase (i.e., in 5 minutes of observation, the parent must employ at least 75% of commands and follow-through behaviors correctly) of therapy (Harwood & Eyberg, 2004). Nearly all PCIT studies adhere to this definition of dropout, although more recent studies (Fernandez et al., 2011; Fernandez & Eyberg, 2009; Lyon & Budd, 2010) have also begun to incorporate CSC and RC methods of defining early termination alongside the classic PCIT definition of drop out.

PCIT Early Termination Research. Several studies have examined the reasons for early termination from PCIT. Capage, Bennett, and McNeil (2001) investigated the impact of ethnicity on treatment completion. The sample consisted of 56 children ages 2.9 to 7.5 years (M = 5.3 years) who were referred to a mental health clinic and had been diagnosed with a disruptive behavior disorder according to the DSM-III-R (i.e., ODD, ADHD, CD). The participants were assigned to one of two groups based on their race (African American and Caucasian) and both groups received 14 weeks of PCIT in a controlled clinic environment. Participant demographics and the number of participants who dropped out of treatment were not reported. Analyses showed no significant differences between the African American and Caucasian groups with regard to gender,

Table 2.1 *PCIT Early Termination Research*

Study	Setting	Parent				Child		Early Termination	
		Age *M*	Education	Married	SES	Age *M (SD)*	Race	Definition	Rate
Eisenstadt et al., 1993	Academic Lab	-	-	54%	*M*=$18.7K	4.5	Cau=88%	-	25%
Eyberg et al., 1995	Clinic Lab	-	-	-	-	-	-	Standard PCIT definition	28%
Schuhmann et al., 1998	Clinic Lab	31.7	-	62%	*M*=36.5 (HH)	4.95 (1.08)	Cau=77% AfA=14%	Standard PCIT definition	41%
Bagner & Eyberg, 2003	Academic Lab	-	-	-	*M*=34.5 (HH)	4.41 (1.09)	Cau=74% AfA=13% La=8%	-	40%
Nixon et al., 2003	Academic Clinic	34.5	-	84%	*M*=$23.2K-$40.6K	3.89 (0.55)	Cau=100%	-	16%
Harwood & Eyberg, 2004	Academic Clinic	33	-	68%	*M*=37.8 (HH)	4.59 (1.09)	Cau=86% AfA=5% Other=9%	Standard PCIT definition	63%
Timmer et al., 2005	Clinic	-	-	-	-	4.58	Cau=42% AfA=20% La=17%	-	56%
Timmer et al., 2006	Clinic	36.1	63%≤HS	50%	-	4.47 (1.64)	Cau=55% AfA=24% La=21%	Treatment mastery, child compliance with commands	52%
Werba et al., 2006	Clinic	31.4	-	62%	*M*=34.8 (HH)	4.80 (1.0)	Cau=78% AfA=14% La=8%	Unilateral client decision: 1.) before treatment begins 2.) after treatment begins	1.) 49% 2.) 38%
Bagner & Eyberg, 2007	-	35.2	-	67%	*M*=37.4 (HH)	4.37 (0.73)	Cau=67% AfA=17% La=3%	Standard PCIT definition	47%
Ware et al., 2008	In-home	-	-	-	-	4.6	Cau=80%	Unilateral client decision	40%
Chaffin et al., 2009	Outpatient clinic	29.0	29%<HS	35%	*M*=$900 per month	-	Cau=60% AfA=91% La=7%	Unilateral client decision	32%
Fernandez et al., 2009	Academic Clinic	30.5	-	33%	*M*=28.7 (HH)	4.41	AfA=100%	Unilateral client decision after inclusion criteria & before meeting completion criteria	56%

Fernandez & Eyberg, 2009	Academic Lab	33.8	-	58%	*M*=38.4 (HH)	4.3 (1)	Cau=76% AfA=4% La=4%	CSC and RC	36%
Matos et al., 2009	Clinic	-	-	50%	-	-	La=100%	-	49%
McCabe & Yeh, 2009	Community Clinic	32.2	51%≤HS	69%	*M*=$23.1K	4.39 (1)	La=100%	-	43%
Berkovits et al., 2010	Primary care	33.3	*M*=14.16 years	-	40%<$30K 36%=$30-60K 23%>$60K	4.32	Cau=64% AfA=20% La=8%	-	49%
Lyon & Budd, 2010	Community clinic	-	-	7%	79%=public assistance	3.7 (1.4)	AfA=50% Bi=29% La=21%	Attending >1 session; treatment mastery; completing treatment; CSC	67%

Note: HH = Hollingshead; Cau = Caucasian; AfA = African American; La = Latino; CSC = Clinically Significant Change; RC = Reliable Change; PCIT = Parent-Child Interaction Therapy

age, diagnosis, family constellation, income, parenting stress, and early termination. However, when all 6 of these measures were combined, they were found to account for 65% of the variance in treatment attendance (F [1,6] = 11.09, $p < .05$) with maternal stress emerging as the single significant predictor (beta = .81, $p < .05$).

Caregiver social support may also play a role in early termination. Bagner and Eyberg (2003) examined the impact of father involvement among 107 families of 3-to-6-year-old children receiving PCIT for an externalizing behavior disorder in a controlled clinical setting (for demographic details, see Table 2.1). Participants were classified into three groups based on the father's involvement in treatment: involved father (IF; n=56), uninvolved father (UF; n=16), and absent father (AF; n=35). Early termination rates were lowest for IF families (33%) and highest for UF families (44%) and AF (43%) families, but these differences were not statistically significant (χ^2 [1, 107] = 1.06, $p = .59$). However, significant differences ($p < .05$) with large effect sizes (d = 1.48-3.27) were found between groups in regards to level of improvement and maintenance of treatment gains. While all three groups experienced posttest treatment gains, IF families showed significantly less-severe child behavior problems and treatment gains were not sustained and at a 4-month follow-up for AF families.

Boggs et al. (2004) conducted a follow-up study with the participant sample from the 1998 Schumann et al. study (see Table 2.1) to examine variables associated with early termination. The authors contacted 46 families 1-to-3-years after the Schumann et al. (1998) study to assess group differences between treatment completers and non-completers (for demographic details, see Table 2.1). All families had participated in a PCIT program and 50% (n=23) dropped out before meeting the treatment completion

criteria. Analyses of pretreatment variables revealed that the two groups did not differ on participant demographic variables or child symptom severity. The only pretreatment difference between treatment completers and dropouts was maternal stress related to their child ($t[43] = 2.145$, $p = .04$, $d = 0.63$). Mothers who dropped out of treatment were found to report a higher degree of parenting stress related to the mother-child relationship compared to mothers who completed treatment. Both groups also reported an increase in internal locus of control regarding their children's behavior (i.e., feeling more able to control their child's behavior) at follow-up, but the parents who completed treatment showed greater change in their locus of control than those who dropped out. Anecdotal interviews revealed that families who dropped out of treatment revealed that the primary reason for early termination was logistical problems around transportation or child-care for siblings (35%) followed by a feeling that the treatment was not progressing quickly enough (19%) and a dislike of the treatment approach or techniques (16%).

These findings were echoed by Werba, Eyberg, Boggs, and Algina (2006), who explored predictors of treatment response and attrition among 99 families of 3-to-6-year-old children who met the diagnostic criteria for ODD (for demographic details, see Table 2.1). All families received the traditional PCIT treatment program (approximately 14 weekly sessions) within a psychology clinic in a large health sciences center. Two definitions of early termination were used: (1) study dropouts (i.e., families that consented to the study but dropped out before treatment actually started) and (2) treatment dropouts (i.e., families consented to the study and attended at least one treatment session before dropping out of the study). Because the rate of early termination was so high for study dropouts (49%), only the treatment dropout definition was used

(attrition rate = 38%). At pretreatment, significant differences were found between treatment completers and dropouts in maternal age ($p < .05$, $d = 0.42$), maternal depression ($p < .05$, $d = 0.43$), inappropriate parent behavior management skills $p < .05$, ($d = 0.42$), parent direct command ratio in behavior management ($p < .05$, $d = 0.44$), and wait-list assignment ($p < .01$, $d = 0.27$). However, neither family demographic variables nor child symptom severity variables (including comorbid diagnoses of CD or ADHD) were significant predictors of treatment completion in the study. Only two variables, parent stress and inappropriate parenting behavior (e.g., critical or sarcastic comments during mother-child interaction) were found to be significant predictors of early termination ($p < .10$; $d = 0.43$ and 0.42 respectively). The authors noted that because all significant predictors of outcome identified in their study were related to the parents, future research should focus on potential parent variables such as parenting style, cognitive processes, treatment expectations, and treatment acceptability.

However, not all PCIT outcomes studies have found maternal stress to be a predictor of early termination. A 2009 study by Fernandez and Eyberg examined predictors of and reasons for treatment attrition and follow-up attrition. Their sample consisted of 99 caregivers of 3-to-6-year-old children diagnosed with disruptive behavior disorders (for demographic details, see Table 2.1). All families received the traditional PCIT treatment program (approximately 14 weekly sessions) in a controlled clinical setting. Thirty-six percent of families dropped out during treatment, with an additional 46% dropping out before 12 and 24 month follow-ups. Analyses revealed that SES was the best predictor of dropout or completer status ($r = 0.67$), followed by caregiver negative talk ($r = -0.48$) and positive talk ($r = 0.35$) in pretreatment for parent-child

interactions. Contrary to previous research (Capage et al., 2001; Werba et al., 2008), maternal distress did not emerge as a salient predictor of early termination from PCIT. The authors also collected data from early terminators regarding why they dropped out of treatment. The most common reason for discontinuing treatment was a disagreement with the treatment approach (26%), followed by being too busy to participate in treatment (13%), having stressors that interfered with treatment participation (13%), and having logistical problems that interfered (13%). The authors specifically recommend continued research among low-SES populations to identify the salient barriers associated with participant dropout.

Recent investigation into early termination from PCIT has transitioned from a highly controlled clinical setting to service clinic settings (e.g., a community mental health center) in order to study dropout among populations that are more representative of clinical practice. Lyon and Budd (2010) conducted a pilot among 14 low-income, urban, minority families of children ages 2-7 years who were referred to an urban community mental health clinic for disruptive behavior disorders (for demographic details, see Table 2.1). All families received the traditional PCIT treatment and 67% of the sample dropped out before completing treatment (completion being defined as attending at least one treatment session and then demonstrating mastery of both components of the PCIT program). Treatment completers attended an average of 14.0 sessions (SD = 1.8) and non-completers attended an average of 6.4 sessions (SD = 4.9). The study yielded mixed findings. Treatment completers demonstrated quicker change on a scale of child behavior intensity than did treatment dropouts (effect sizes not available). Interestingly, the authors reported that some parents who dropped out of treatment still

demonstrated clinically significant and reliable change before ending treatment. Also of interest, treatment completers reported more barriers to treatment participation than treatment dropouts (e.g., my medical insurance does not cover this treatment [25%/17%]; I lost my job or had a change in income [25%/0%]; I got a job or changed jobs [25%/17%]; a close friend or relative got very sick or died during treatment [50%/33%]). In their recommendations, Lyon and Budd (2010) speculate that the high rate of dropout (67%) in their study may be due to the low-SES population or incongruities between parents' conceptualization of their child's behavior problem and the treatment provided.

Early Termination from the Incredible Years Parent Training Program

IY-PT Treatment Program Overview. The Incredible Years is a series of treatment programs based on social learning theory (Bandura, 1977). It is designed to strengthen families, reduce children's disruptive behaviors (e.g., aggression, temper tantrums, noncompliance) at home and at school, and increase child and caregiver competencies. The treatment consists of three programs, one for children, one for parents, and one for teachers (Webster-Stratton & Reid, 2003). The Incredible Years Parent Training (IY-PT) program is designed for parents of children with disruptive behaviors aged 2-8 years old. IY-PT takes place in a group format in which 8 to 12 parents meet with a therapist weekly for a total of 13-14 two-hour sessions. All parents in the IY-PT program are given a copy of the book *The Incredible Years: A Trouble Shooting Guide for Parents* (Webster-Stratton, 1992). The treatment sessions consist of parents watching videotapes that demonstrate the principles of social learning theory, child development, child-led play, ignoring negative behaviors, praising positive behaviors, and implementing consistent discipline strategies. The videotapes show proper and improper

implementations of the aforementioned skills in a series of vignettes that are intended to spur group discussion among the parents regarding problem solving and the important components of effective parenting (Webster-Stratton & Taylor, 2001). The therapist also directs group discussion towards the topics of effective limit setting, teaching children problem-solving to strengthen children's social skills, methods for dealing with stress, and soliciting social support from friends, family, and the community.

IY-PT Research Participant Demographics. IY-PT has been thoroughly researched and is backed by a wealth of empirical support. A PsychInfo search reveals that in the past 25 years, over 90 Incredible Years works have been published in books, dissertations, and journals. Twelve IY-PT outcomes articles were identified that were published in peer-reviewed journals, had a sample of English-speaking or Spanish-speaking families of young children (i.e., less than 6 years of age), and reported participant early termination rates. A summary of the demographic characteristics and dropout rates of these 12 articles can be found in Table 2.2. Treatment outcomes research on IY-PT has primarily been conducted in controlled clinical settings (e.g., academic lab or clinic) or services clinics (e.g., community centers, community mental health clinics, or Head Start clinics) among Caucasian families. On average, caregivers tended to be single or cohabitating, lower-middle-class, high school graduates between the ages of 21 and 37 years. Several studies consisted of participants whose average education was a college degree.

Early Termination in IY-PT. Rates of early termination in IY-PT tend to be relatively low when compared to other CPT programs. The 12 studies reviewed reported rates ranging from 0% to 40% with a mean dropout rate of 15% across studies. This low

attrition rate may be due in part to the definition of early termination used in IY-PT studies. For example, an early study of IY-PT (Webster-Stratton, 1996) reported a dropout rate of 0%, but only categorized participants as dropouts if they did not attend any treatment sessions. In this study, participants only needed to attend one treatment session to be considered completers and the author reports that 87% of these completers attended less than 75% of the treatment program sessions. Likewise, the 2001 study (Webster-Stratton, Reid, & Hammond) reported an early termination rate of 17%. Again, participants were only required to attend one session to be considered completers, and the authors report that 12% (n = 23) of treatment completers attended less than half of the treatment sessions. Furthermore, 37% (n = 71) attended no parenting classes but were not counted as treatment dropouts because they did complete posttest analyses. Definitions of early termination in IY-PT also tend to be ambiguous. For example, the 2003 study by Gross et al. defines early termination as 'losing contact with the participant.' Similarly, McIntyre (2008) defines early termination as 'not coming to session.' In both cases, it is not clear what is meant by these operationalizations of early termination and whether there are any extenuating circumstances (e.g., a participant attends 13 treatment sessions but does not attend the 14th and final session and is unable to be contact by the researchers) that may affect participant categorization.

IY-PT Early Termination Research. Reasons for early termination from IY-PT programs remains relatively under-studied as IY-PT research tends to instead focus on predictors of treatment outcome (i.e., baseline variables that predict greater changes on behavioral measures). The IY-PT studies that have examined reasons for or predictors of early termination often have inconclusive results. For example, Webster-Stratton, Reid,

and Hammond (2001) studied IY-PT as an early prevention program for ODD/CD among 272 Head Start caregivers and their 4-year-old children (*M* = 4.59 years). The caregivers (see Table 2.2) had an average yearly income of $11,600, tended to be of racial/ethnic minority status (60.7%), single (52%), and have graduated high school (68.1%). Participants were randomly assigned to treatment (n = 191) or wait-list control groups (n = 81), and the treatment group received 12-weeks of IY-PT group treatment in a Head Start classroom. Early termination was defined as attending less than half of the group treatment sessions (i.e., 6 sessions). Twenty-three participants (12%) attended less than six sessions, and 71 participants (37%) attended no sessions for an overall early termination rate of 49%. Attrition analyses comparing treatment completers to early terminators revealed no significant differences on any baseline measures such as symptom severity, parenting styles (i.e., level of leniency or harshness), risk factors (e.g., caregiver depression, caregiver punitive experiences, caregiver anger levels), or demographic variables.

Likewise, a 2011 study by Marcynyszyn, Maher, and Corwin evaluated IY-PT among a sample of 41 caregivers of children ages 3-to-8 years who had been mandated to receive child-welfare services but volunteered to receive the IY-PT program. The participants (see Table 2.2) were primarily single (63%), African American (43.9%) caregivers who had graduated high school (71%). Seventy-one percent of the caregivers received public assistance and the sample's median income was $12,500. The IY-PT program was conducted at a Head Start facility and consisted of group meetings of 10 to 14 parents for 2 hours per week over a period of 12 to 14 weeks. The authors reported that 29% (n = 12) of the participants dropped out of treatment early, which was defined

as attending less than 10 total group treatment sessions. Completers attended an average of 14 treatment sessions and non-completers attended an average of 3 sessions. Statistical comparisons between treatment completers and those who dropped out revealed two group differences. First, caregivers who completed the program were significantly more likely to be the recipients of public assistance (i.e., they had lower annual incomes) than non-completers ($\chi^2[1, 37] = 4.21$, $p < .05$). Second, caregivers who completed the program were slightly more likely to have fewer children than non-completers, but this difference was not statistically significant ($\chi^2[8, 41] = 14.72$, $p < .10$). No other pretreatment or demographic differences were found between caregivers that completed treatment and those that terminated early.

Some evidence does exist that caregiver perception of the severity of a child's behavior problems is related to drop out of IY-PT programs. Reid, Webster-Stratton, and Baydar (2004) studied the parent and child moderators of outcome, program engagement effects, and predictors of engagement in IY-PT programs from the cohorts of three previous studies. Their sample consisted of 882 families of children with clinical behavior problems enrolled in Head Start programs. The participants (see Table 2.2) tended to be Caucasian (51%), have children under the age of 5 years (86%), and have an annual income of $21,000 or less (84%). Participants were assigned to treatment (n = 588) and no-treatment control (n = 294) conditions. Parents in the treatment condition met for up to 9 weekly, 2-hour, group treatment sessions at a Head Start facility. Early termination was defined as attending less than 3 of these treatment sessions and 40% of the families in the treatment condition (n = 235) met this criteria for early termination. The other 60% (n = 353) were classified as treatment completers and attended an average

Table 2.2 *IY-PT Early Termination Research*

Study	Setting	Parent				Child		Early Termination	
		Age *M*	Education	Married	SES	Age *M (SD)*	Race	Definition	Rate
Webster-Stratton & Hammond, 1990	Academic clinic	-	-	69%	18%=welfare 27%<$28.9K 54%>$29K	4.5	-	-	11%
Webster-Stratton, 1996	Academic clinic	33.8	-	70%	*M*=$21K-28.9K	4.9 (1.2)	Cau=90% AfA=2%	Not attending sessions	0%
Webster-Stratton & Hammond, 1997	Academic clinic	35.1	*M*=4 yrs college	68%	13%<$9K 11%=$9K-20K 31%=$21K-39K 49%>$40K	5.7 (1.2)	Cau=93%	Unilateral client decision	1%
Webster-Stratton, 1998	Head Start Centers	29.4	76%=some HS	45%	*M*=$10K	4.7 (0.4)	Cau=64% AfA=17% La=6%	Dropping out of Head Start	22%
Webster-Stratton et al., 2001	Head Start Centers	32.1	68%=HS deg	48%	*M*=$11.6K	4.6 (0.4)	Cau=37% AfA=19% La=18%	Attending less than half of the sessions	22%
Gross et al., 2003	Daycare	27.9	85.6%=HS deg	69%	*M*=$13.5K	-	AfA=57% La=29% Cau=3.4%	Losing contact with family	21%
Reid et al., 2004	Head Start Centers	-	-	-	84%<$20K	-	Cau=51% Afa=19% La=10%	Attending less than 3 treatment sessions	40%
Webster-Stratton et al., 2004	Academic Clinic	31.6	*M*=4 years college	62%	*M*=$21K-$28.9K	4.6 (0.9)	Cau=66%	Not completing posttest assessment	2%
Gardner et al., 2006	Community Center	30.5	60%<3 yrs HS	53%	62%=manual laborers/unemployed	5.9	-	Not coming to any sessions	12%
McIntyre, 2008	Community Center	33.6	84%=some college	93%	32%<$35K	4.0 (0.9)	Cau=96%	Not coming to any sessions	8%
Marcynyszyn, Maher, & Corwin, 2011	Welfare Agency	37 (median)	29%≤HS 27%= col. 17%=Col. deg	37%	71%=public assistance	-	AfA=44% Cau=39% La=17%	Coming to 9 or fewer sessions	29%
Webster-Stratton et al., 2011	Academic Clinic	21	*M*=15.6 years	-	*M*=31.95 (Hollingshead)	5.4 (0.9)	27% = Minority	Losing contact with family	5%

Note: HS=High School; Cau = Caucasian; AfA = African American; La = Latino; HS = High School

of 7.7 treatment sessions. Structural equation modeling revealed that caregivers who reported their children as having more problematic behaviors at baseline were more likely to complete treatment than caregivers who did not report high levels of conduct problems. However, teacher-report measures indicate that both groups (i.e., dropouts and completers) had somewhat elevated conduct problems at school, suggesting that it may be a caregiver's impression of their child's behavior problems that predicts dropout as opposed to the actual severity of the child's negative behaviors.

Early Termination from Triple P-Positive Parenting Program

Triple P Overview. The Triple P – Positive Parenting Program (Triple P) is a five-level, increasingly focused treatment program for families of children with developmental, emotional, and behavioral problems (Sanders, 1999). It is based on the tenets of social learning theory, cognitive-behavioral theory, developmental theory, as well as current research into the risk and protective factors that are associated with social and behavioral disturbances in young children. Triple P is designed to help children develop emotional self-regulation and build parents' self confidence in their ability to independently solve future problems that they encounter with their child's behavior. Level 1 is a media-based parent information campaign called Universal Triple P that targets all parents interested in information about promoting their child's development through self-directed resources, brief consultations, group presentations, and telephone referral services. The second level is a brief selective intervention program called Selected Triple P that targets parents with specific concerns about their child's behavior or development through telephone, group, and individual consultations delivered by a health care provider. Level 3 is a narrow-focus parent-training intervention called

Primary Care Triple P that is the same as level two except that the intervention is delivered through a brief 1-to-4 session treatment program that includes telephone, group, or individual therapy. Level 4 and Level 5 deliver more intensive CPT interventions that are implemented by mental health providers. Level 4 (Standard Triple P) is for parents of children with more severe behavior problems that teaches positive parenting skills and the application of these skills to disruptive child behaviors. Level 5 (Enhanced Triple P) is designed to treat parents of children with behavior problems who also have concurrent stressors such as family dysfunction, caregiver depression, anger problems, and caregiver conflict.

Outcome research on Triple P is most often based on Level 4 (Standard Triple P) or Level 5 (Enhanced Triple P). Both levels focus on the role that caregivers play in the development of children's behavior problems and actively involve them in the conceptualization and treatment planning process. Both levels also use similar treatment techniques including practice sessions to enhance parenting skills, caregiver mood management strategies, stress coping skills, partner support skills, and anger management. The Standard Triple P program (Level 4) is delivered in an individual or group format over the course of 10-12 treatment sessions that are typically held in a community or mental health center. In some Triple P programs, up to 4 sessions of in-home observation or telephone consultation are provided during or after the treatment sessions. Treatment is focused around 17 core parenting skills such as: talking one-on-one with children, giving physical affection, differential attention, limit setting, and active ignoring that increase positive behaviors and reduce negative behaviors. A final piece of Standard Triple P is planned activities training. In this component, parents are

taught to manage activities with their child in six steps: (1) plan ahead; (2) decide on rules; (3) select engaging activities; (4) decide on rewards; (5) decide on consequences; and (6) process the activity with the child. Enhanced Triple P is an intensive intervention that adds three extra treatment components (i.e., Practice, Coping Skills, and Partner Support) to Standard Triple P for families with additional stressors. The supplemental content is delivered through two additional treatment sessions and is specifically tailored to the individual needs of the parents. Treatment focuses on helping parents to communicate more effectively with each other (e.g., having more frequent discussions, using positive listening skills) and better cope with stress (e.g., relaxation techniques, and cognitive skills to manage depression, anger, and anxiety).

Triple P Research Participant Demographics. Triple P is backed by a substantial body of empirical research. In the past 25 years, over 200 Triple P works have been published in books, dissertations, and journals. A PsychInfo search revealed 10 Triple-P outcomes articles that were published in peer-reviewed journals, had a sample of English-speaking or Spanish-speaking families of young children (i.e., less than 6 years of age), and reported participant early termination rates. A summary of the demographic characteristics and dropout rates of these 10 articles can be found in Table 2.3. A review of these articles reveals that early termination research on Triple P has primarily been conducted in a university clinic or community clinic exclusively among Caucasian Australian families. Caregivers tend to be married or cohabitating, between the ages of 29 and 36 years, have a high school degree, and make more than $25,000 per year (Australian).

Early Termination in Triple P. Rates of early termination tend to be relatively low. The 10 studies reviewed reported rates ranging from 0% to 33% with an overall mean dropout rate of 16% across studies. With the exception of two studies (Ireland, Sanders, & Markie-Dadds, 2003; Zubrick et al., 2005), the definition of early termination is consistent across Triple P studies - treatment completers are those that complete pretest and posttest data, and treatment dropouts are those that do not complete posttest data. However, Triple P studies rarely provide data on the average number of sessions attended by completers, so it is unknown whether participants who attend only the pretest and posttest treatment sessions are considered to be treatment completers.

Triple P Early Termination Research. Several studies have examined the reasons for early termination from Triple P. Some studies (Sanders, Bor & Morawska, 2007; Sanders & McFarland, 2000) compared treatment completers and dropouts on all pretreatment variables (for demographic details, see Table 2.3) and found no statistically significant differences between groups. Still, other studies have found significant group differences. Sanders, Markie-Dadds, Tully, and Bor (2000) compared versions of Level 4 and Level 5 Triple P treatment among 208 families of 3-year-old children diagnosed with clinically significant, early onset conduct problems (for demographic details, see Table 2.3). Families were randomly assigned to Standard Triple P, Enhanced Triple P, or Self-Directed Triple P and received 12 weeks of individual treatment in a community or neighborhood center. Twenty percent of the sample (n = 41) dropped out before completing posttest assessments. Analyses revealed that caregivers who dropped out of treatment had higher ratings of depression or anxiety ($F[1,213] = 4.49$, $p = .035$, $d = 0.29$), rated their child's behavior as more problematic ($F[1, 302] = 7.50$, $p = .007$, $d =$

0.31), and used more aversive parenting techniques at pretest than caregivers who completed treatment (F[1, 217] = 5.36, p = .02, d = 0.31). No other significant between-group differences were observed. Anecdotal follow-up interviews revealed that the reasons for early termination included too many other problems occurring at the same time as treatment, work schedule interfering with attending sessions, moving, financial difficulties, transportation and child care problems, and too many other pressures in life happening at the same time.

Similarly, Bor, Sanders, and Markie-Dadds (2002) compared 87 preschoolers who had a diagnosis of comorbid disruptive behavior and attentional/hyperactivity disorders (for demographic details, see Table 2.3). Participating families were randomly assigned to Level 4 Triple P, Level 5 Triple P, or a waitlist control group. Treatment groups received approximately 10 weeks of individual treatment at a community center. Twenty percent of the treatment group families dropped out before completing posttest assessments. Analyses comparing treatment completers to dropouts revealed a main effect for caregivers' ratings of child behavior (F[1, 81] = 5.3, p < .05, d = 0.51). Specifically, caregivers who rated their child's behavior as more problematic at pretreatment were significantly more likely to drop out of the treatment program. No other child or caregiver pretreatment variables significantly differentiated the two groups. A logistic regression was conducted to evaluate whether specific caregiver risk factors (e.g., single parent, financial difficulty, low SES, low education, substance abuse, criminal history, abusive towards child, mental illness) or combinations of these risk factors predicted treatment dropout and none were found to be significant.

Table 2.3 *Triple P Early Termination Research*

Study	Setting	Parent				Child		Early Termination	
		Age *M*	Education	Married	SES	Age *M (SD)*	Race	Definition	Rate
Sanders & McFarland, 2000	Academic Lab	32.8	-	68%	*M*=1.6 (SDI)	4.4 (1.6)	Cau=100%	Not completing posttest	17%
Sanders et al., 2000	Community Center	31.3	40%<HS	71%	*M*=4.4 (PPP)	3.4 (0.3)	Primarily Caucasian	Not completing posttest	20%
Bor et al., 2002	Community Center	29.4	52%<HS	65%	*M*=4.5 (PPP)	3.4 (0.3)	Primarily Caucasian	Not completing posttest	28%
Ireland et al., 2003	University Clinic	34.7	29%≤HS 14%=Tech 62% = College	100%	*M*=3.7 (PPP)	3.7	Primarily Caucasian	Missing more than 1 session	10%
Sanders et al., 2004	-	33.8	52%<HS	70%	28%<$25K	4.5 (1.6)	-	Not completing posttest	12%
Gallart & Matthey, 2005	-	-	75%<HS	-	-	5.4 (1.4)	-	Not completing posttest	10%
Zubrick et al., 2005	-	-	44%=HS deg	86%	13%<$20K 17%=$20K-30K 20%=$30K-40K 30%=$40K-60K 11%>$60K	3.7 (0.6)	-	Not completing posttest	14%
Roberts et al., 2006	University Clinic	-	75%<HS 13%=HS deg 13%=college	-	-	4.4 (0.9)	-	Not completing posttest	33%
Plant & Sanders, 2007	-	36.3	27%<HS 18%=HS deg 55%>HS	82%	29%<$25K 16%=$25K-35K 12%=$35K-50K 41%>$50K	4.6 (1.1)	-	Not completing posttest	0%
Sanders et al., 2007	Community Center	-	34%<HS	82%	"low"	-	Cau=100%	Not completing posttest	19%

Note: HS = High school; SDI = Sociodemographic Disadvantage Index; PPP = Power Privilege and Prestige Scale; Cau = Caucasian

Interestingly, a less-dysfunctional parenting style has been identified as a predictor of early termination in Triple P. A 2006 randomized clinical trial (Roberts, Mazzucchelli, Studman, & Sanders) examined a Triple P treatment program among 48 preschoolers with developmental and behavior problems (for demographic details, see Table 2.3). Caregivers were randomly assigned to Enhanced Triple P, Standard Triple P, Self-Directed Triple P, or waitlist control groups and each treatment group received 10 weekly sessions of treatment at a university clinic. Thirty-three percent of the treatment participants dropped out of the program before completing posttest analyses. When compared to treatment completers, on pretreatment variables, caregivers who dropped out of the intervention reported significantly less dysfunctional parenting behaviors as characterized by less authoritarian, punitive, or controlling discipline or no overly long reprimands with few meaningful consequences for misbehavior (d = 0.95). There were no other group differences on any pretest demographic variables. Follow-up interviews revealed that families' reasons for dropout included relocation, pursuing alternative treatments, family emergencies, and viewing the intervention as inappropriate for their child's needs.

Early Termination from Parenting Young Children

PYC Treatment Program Overview. Parenting Young Children (PYC) is a CPT program based on social learning, cognitive, and developmental theories that help parents of children under the age of 6 years respond more effectively to their challenging behaviors (Fox & Nicholson, 2003). PYC is a four-step program centered on the S.T.A.R. acronym: Stop, Think, Ask, and Respond. Parents are provided a laminated card with these four stages printed over the picture of a traffic light to help them remember the

techniques of treatment (i.e. a mnemonic device). Steps one and two (i.e., Stop and Think) correspond to the red and yellow lights on the traffic light. These steps focus on teaching parents to *stop* themselves from reflexively overreacting to their child's behavior before they *think* about how what they as caregivers are thinking and feeling. Parents are taught various techniques such as deep breathing, counting to ten, yelling into a pillow, and/or engaging in domestic activities to help them regain emotional control before disciplining their child. The third and fourth steps of PYC (i.e., Ask and Respond) correspond to the yellow and green lights on the traffic light. Parents are provided with information on child development and process the expectations that they have for their child in several areas of life functioning (e.g., adaptive, social/emotional). The therapist then teaches parents to *ask* themselves if their expectations for their child are developmentally appropriate after they have stopped and thought about what they were thinking and feeling. Finally, parents are taught ways to *respond* to their child's behaviors through positive parenting and discipline strategies. Parents work to increase their child's positive behaviors through positive reinforcement, giving clear instructions, and establishing routines. Parents are taught to decrease their child's negative behaviors through setting developmentally appropriate expectations and limits, redirecting, ignoring, giving natural consequences, and time-out. The entire PYC treatment program lasts between 8 and 15 sessions and can be administered in an individual, group, or in-home setting.

PYC Research Participant Demographics. PYC is well-researched and empirically supported, particularly among diverse populations. Since the program's inception in 1990, over 50 works have been published in books, dissertations and

journals. A PsychInfo search revealed that six PYC articles that were published in peer-reviewed journals, had a sample of English-speaking or Spanish-speaking families of young children (i.e., less than 6 years of age), and reported participant early termination rates. The demographic characteristics and dropout rates of these articles can be found in Table 2.4. A review of these articles reveals that early termination research on PYC has primarily been conducted in community center or in-home setting among racial/ethnic minority families. Caregivers in the selected studies tend to be in their mid-20's or mid-30's, single, have less than or equal to a high school education, and be below the federal poverty level for income.

Early Termination in PYC. Rates of early termination in PYC are consistent with those reported in the general mental health literature. The 6 studies reviewed reported rate ranging from 0% to 64%, with an overall mean dropout rate of 37% across studies. Early termination in PYC is not explicitly standardized like it is in PCIT, but little variation is found in its operationalization between studies. Most PYC studies reporting attrition rates defined early termination as participants dropping out prior to completing posttest analyses. Two PYC studies were found that do not provide an operationalization of early termination.

PYC Early Termination Research. Most outcomes studies on PYC that report early termination rates also examine differences between completers and non-completers. A 1999 study by Nicholson, Brenner, and Fox examined the effectiveness of PYC among 143 primarily low-income parents of children age 1 to 5 years (see Table 2.4 for demographic details). Participants received 10 weeks of group treatment sessions in a community center. Approximately 50% of the sample (n = 71) dropped out of treatment,

but the study's operationalization of early termination is not reported. Initial program analyses compared treatment completers to non-completers and found that parents who completed the program were significantly older ($F[1, 120] = 4.26$, $p = .01$, $d = 0.37$), had more education ($F[1, 120] = 6.70$, $p < .05$, $d = 0.45$), and had higher expectations for their children ($F[1, 120] = 9.61$, $p < .01$, $d = 0.56$) than those who dropped out. The authors recommend that future research examine ways to better motivate parental involvement in CPT programs by increasing the importance of positive parenting in at-risk families.

Other studies have failed to find variables that significantly distinguish parents who complete PYC from those who drop out. A 1999 study (Brenner, Nicholson, & Fox) evaluated the ecological effectiveness of PYC among 149 parents of children age 1 to 5 years (see Table 2.4 for demographic details). Participants received 10 weeks of group PYC at a local family resource center. Thirty-nine percent of the participants (n = 58) dropped out of treatment early (defined as not completing the posttest assessments). A multivariate analysis of variance was computed to assess pretreatment differences between completers and non-completers, but no significant differences were found between the two groups in terms of parent age, education, number of children, marital status, parent discipline levels, parent nurturing levels, parent expectation levels, or child symptom severity. The only significant difference between the two groups was on the percent of sessions attended, with completers attending 64% of the treatment sessions and non-completers attending 31% (effect sizes not available). Follow-up interviews with non-completers revealed that reasons for dropping out of treatment included conflicts with childcare or jobs, family issues, and transportation problems. The authors

Table 2.4 *PYC Early Termination Research*

Study	Setting	Parent				Child		Early Termination	
		Age *M*	Education	Married	SES	Age *M (SD)*	Race	Definition	Rate
Nicholson et al., 1998	Local school	Mid-30's	-	-	Middle-class, suburban	3.1 (1.4)	-	Not completing posttest	0%
Nicholson et al., 1999	Community agencies	25.7	49%<HS 17%=HS 33%>HS	38%	73%=low	-	AfA=76% Cau=9% La=4%	-	50%
Brenner et al., 1999	Family resource center	31	28%≤HS 38%>College 34%=College deg	43%	47%=Mid-Lower 23%=Mid-Lower 20%=Low	-	AfA=44% Cau=44% LA=4%	Not completing posttest	39%
Nicholson et al., 2002	-	30.8	25%<HS 30%=HS 42%>HS	38%	100%<federal poverty level	-	AfA=54% La=23% Cau=15%	-	10%
Fox & Holtz, 2009	In-home	-	*M*=11.9 years	38%	85%≤federal poverty level	2.8 (0.8)	AfA=43% La=21% Cau=21%	Not completing posttest	57%
Carrasco & Fox, 2012	In-home	30.2	*M*=12.2	22%	100%≤federal poverty level	2.6 (0.7)	AfA=60% La=17% Cau=10%	Not completing posttest	64%

Note: HS = High school; AfA = African American; Cau = Caucasian; La = Latino

recommend individualized treatment and provisions for childcare and transportation as a way to overcome these obstacles to treatment.

More recent outcomes studies of PYC have experienced high attrition rates despite seeking to minimize caregivers' barriers to treatment by providing in-home, individualized treatment and monetary incentives for attending session. A 2009 article (Fox & Holtz) examined the effectiveness of PYC among 102 low-income families of toddlers between the ages of 1 and 5 years (M = 2.8, SD = 0.84), 83% of whom met the criteria for a psychiatric diagnosis (e.g., oppositional defiant disorder, separation anxiety disorder, ADHD; see Table 2.4 for demographic details). Participants received an average of 12 weeks of individual, in-home PYC treatment and were provided a $5 grocery store gift card at each session. Fifty-seven percent of the participants dropped out of the treatment program (i.e., they did not complete posttest analyses) and treatment completers attended significantly more treatment sessions (79%) than non-completers (52%). Treatment completers and dropouts were compared on all pretest variables and several patterns emerged. First, treatment completers tended to have children who were significantly younger (M = 2.66, SD = 0.74) than those who terminated early (M =2.94, SD = 0.93) with a small to medium effect size (d = 0.33). Second, African American families were significantly more likely to dropout prematurely (59%) than were Caucasian families (35%), Latino families (34%), or families of mixed ethnicity (36%) [χ^2 (3) = 11.46, p = .009]. Finally, parents in the completers' group were significantly more likely to be married (38%) than those in the non-completers' group (24%) [χ^2 (1) = 7.89, p = .007]. No significant differences were found between the two groups in terms of parent age, parent education, parent economic status, parent employment status, number of children living at home, child's gender, presence of a

developmental delay, referral reason, psychiatric diagnosis, or symptom severity. The authors recommend developing new strategies (i.e., in addition to in-home treatment and monetary incentives) to attempt to overcome the barriers to treatment participation in high-risk families such as the one in this study.

The most recent PYC outcomes study also experienced high attrition rates despite taking significant measures to address barriers to treatment. Carrasco and Fox (2012) conducted a randomized controlled study among 166 low-income families of young children (age 1-5 years, $M = 2.6$, $SD = 0.68$) with clinically significant externalizing behavior problems (see Table 2.4 for demographic details). Participants were randomly assigned to one of two treatment levels; standard PYC treatment (i.e., eight individual in-home treatment sessions over the course of eight weeks) or intensive PYC treatment (i.e., 12 individual in-home treatment sessions over the course of eight weeks). Significant measures were taken to reduce barriers to treatment and increase family engagement. For example, all treatment sessions took place in the home to eliminate child-care and transportation barriers. Furthermore, all caregivers received a $5 grocery store gift card at each session and when necessary were provided treatment supplies such as edible reinforcers (e.g., fruit snacks), stickers, door gates for time-out, and safety latches for doors. Parents were also given a magnetic reminder card listing the day and time of their next appointment to affix to their refrigerator and received an appointment reminder postcard in the mail or a telephone call the day before each scheduled appointment. Despite these attempts to increase engagement, 64% of the original 166 participants (n = 106) dropped out of treatment (defined as not completing posttest assessments). The most common reasons for early termination included: the lead clinician judged the family to have disengaged from treatment

(e.g., frequent cancellations or no-shows at appointments) (38%); the lead clinician lost contact with the family (e.g., phone was disconnected, caregiver did not respond to mailings) (30%); and the family stated that the services were no longer desired (24%). Other reasons for early termination included the family changing residences or scheduling problems such as conflict with work or school schedules. Statistical analyses comparing treatment dropouts and completers revealed one pretreatment difference – children who completed treatment complied significantly less with parental requests at intake (M = 35.4%, SD = 28.3%) than those who dropped out (M = 44.9%, SD = 29.3) [$t(158) = 2.0$, $p = .046$], although this effect size was small-to-medium (d = 0.34). No other differences between groups were found on pretreatment or demographic variables relating to the child (i.e., age, gender, race, developmental level, symptom severity) or the parent (age, education, marital status, SES). The authors of the study recommend that future research focus on identifying additional reasons for early termination and developing effective strategies to address them.

Review of Early Termination from CPT Programs

Summary. The four major CPT treatment programs (i.e., PCIT, IY-PT, Triple P, and PYC) share many similar characteristics. All treatment programs were designed to treat clinical behavior problems in young children (i.e., under the age of 6 years) by combining the tenets of Bandura's social learning theory with cognitive and behavioral treatment principles. All four programs incorporated multiple treatment strategies to address the complex and nested individual, systemic, and environmental factors that are involved in the development of behavior problems in young children. Although each program is unique in their method of content delivery, all programs involved teaching parents empirically supported techniques (e.g.,

reinforcing positive behavior with praise, differential attention, positive physical contact, non-directive play, setting clear and consistent limits, natural consequences, time-out, etc.) to increase a child's prosocial behavior and decrease their problematic behaviors. All four programs consisted of empirically-supported treatments that have each built up an impressive research base over the past 25 years. With the exception of PYC, the CPT outcomes research reviewed has been primarily conducted in controlled clinical settings (e.g., academic labs or academic clinics) among married or cohabitating, lower-middle class, Caucasian caregivers who graduated high school. However, PCIT, IY-PT, and PYC all demonstrated effectiveness with racial minority populations. Attrition was a common problem in CPT with rates ranging from as low as 0% to as high as 67% with an overall mean of 28% (*SD* = 19%). PCIT and PYC tended to experience higher overall average attrition rates (44% and 37%, respectively) than IY-PT and Triple P (16% and 15% respectively).

CPT programs tended to have differing operationalizations of early termination from treatment. PCIT used the most intricate definition of dropout that is a multi-method approach combining clinician judgment and clinically significant change criteria. Although more recent studies have modified this official method of determining early termination by adding duration-based criteria (Chaffin et al., 2009; Lyon & Budd, 2010), few PCIT studies deviate from this definition. IY-PT did not appear to have a standardized operationalization of early termination and dropout is generally defined according to duration of treatment, missed last treatment session, clinician judgment, or failure to complete posttest assessments. Finally, Triple P and PYC almost exclusively defined early termination in outcomes research as failure to complete

posttest assessments as only one Triple P study was found that used a duration-of-treatment operationalization.

Several factors were identified that significantly differentiate CPT treatment completers from dropouts, however, findings often vary from study-to-study (see Table 2.5). Higher maternal stress was the most frequent significant predictor of treatment dropout across CPT programs but other common factors included lower SES, less-functional or less-appropriate parenting techniques, more severe child behaviors, and a lower attendance rate at sessions. Conversely, demographic variables (e.g., race, SES, age, gender, education, marital status, etc.) repeatedly were not found to significantly differentiate treatment completers from dropouts. Other common non-differentiating factors included child symptom severity and parenting style (i.e., permissive, authoritarian, authoritative). Several CPT outcomes studies have also contacted participants who dropped out of treatment to solicit their reason for discontinuing treatment. Participants commonly cited problems with transportation to treatment sessions, scheduling conflicts, a change in residence, and disagreement with the treatment approach as reasons for dropping out of treatment. Within the CPT outcomes research, there was a general consensus among researchers that early termination is a problem that needs to be addressed. Most commonly, authors called for more research into overcoming the barriers to treatment among low-income populations and better understanding how caregiver variables such as parenting style, cognitive processes, treatment expectations, and treatment acceptability impact their participation in treatment services.

Table 2.5 *CPT Early Termination Findings*

Study	Treatment	Characteristics of Dropouts:	Effect Size (*d*)	Not Characteristic of Dropouts:	Author Recommendations:
Brenner et al., 1999	PYC	Attended less sessions	n/a	Any variables	Individualized treatment, provisions for childcare, provisions for transportation
Nicholson et al., 1999	PYC	Younger Less-educated Lower parental expectations	0.37 0.45 0.56	-	-
Sanders & McFarland, 2000	Triple P	-	-	Any variables	-
Sanders et al., 2000	Triple P	Caregiver depression/anxiety More problematic child behaviors Aversive parenting techniques	0.29 0.31 0.31	Demographic variables	-
Webster-Stratton et al., 2001	IY-PT	-	-	Symptom severity Parenting styles Risk factors Demographic/pretreatment variables	-
Capage et al., 2001	PCIT	Higher Maternal Stress	n/a	Race	-
Bor et al, 2002	Triple P	More problematic behaviors	0.51	Demographic variables caregiver risk	-
Gross et al., 2003	IY-PT	Less coercive discipline strategies Non-Latino ethnicity	0.30 n/a	Parent stress Any other outcomes or demographic variable	-
Bagner & Eyberg, 2003	PCIT	Less-Involved parent (not sig.)	n/a	-	-
Reid et al., 2004	IY-PT	Less-problematic behaviors	n/a	-	-
Boggs et al., 2004	PCIT	Higher maternal stress Less treatment satisfaction	0.63 n/a	Demographic variables	-
Werba et al., 2006	PCIT	Higher maternal stress More inappropriate parenting behavior	0.43 0.42	Demographic variables; Symptom severity	Research into parent variables such as parenting style, cognitive processes, & treatment expectations/acceptability

Roberts et al., 2006	Triple P	More-functional parenting styles	0.95	Any pretreatment variables	-
Sanders et al., 2007	Triple P	-	-	Any pretreatment variables	-
Fernandez & Eyberg, 2009	PCIT	Low SES Negative parent talk	n/a n/a	Maternal distress	More research into treatment barriers among low-income families
McCabe & Yeh, 2009	PCIT	-	-	Demographic/pretreatment variables	-
Fox & Holtz, 2009	PYC	Attended less sessions Older children African American Single parent	n/a 0.33 n/a n/a	Any other pretreatment variables	Develop new strategies to overcome treatment barriers and increase participation
Lyon & Budd, 2010	PCIT	Slower symptom improvement Less barriers	n/a n/a	-	Research into Low-SES populations and how parents' conceptualization of their child's behavior problems does/doesn't match treatment provided
Marcynyszyn et al., 2011	IY-PT	Lower SES More children (not sig)	n/a n/a	Any other pretreatment variables	-
Carrasco & Fox, 2012	PYC	More compliant children at intake	0.34	Any other pretreatment variables	-

Note: PCIT = Parent-Child Interaction Therapy; IY-PT = Incredible Years Parent Training; PYC = Parenting Young Children; SES = Socioeconomic Status

Limitations. Despite the apparent strength of current CPT outcomes studies, significant gaps remain in the research. First, it is unclear to what degree CPT researchers attended to salient ethical issues associated with their work. Authors do not go beyond stating that their research was approved by an institutional review board (IRB) and that researchers obtained informed consent from the study participants. Because there are several ethical concerns inherent to conducting research with children, more detailed discussions of ethical issues are warranted. Areas of concern included: 1) the inability of young children to provide informed consent; 2) the purpose of and consequences from withholding treatment in waitlist controls; 3) potential harm or distress caused to either children or parents as a result of study procedures; 4) precautions taken to protect vulnerableresearch subjects such as policies for reporting neglect and physical, emotional, or sexual abuse; and 5) safeguards adopted to prevent differential treatment to participants based on their gender, age, ethnicity, social situation, physical health, or mental health. Researchers investigating treatment outcomes of CPT programs should pay attention to these and other salient ethical issues so that the ethical adequacy of the CPT research can be more adequately assessed.

Second, few CPT studies utilized a consistent, reliable, or valid operationalization of early termination and many studies failed to even describe their definition of early termination. IY-PT studies in particular tended to have ambiguous definitions of dropout sometimes included participants that did not attend any treatment sessions in their group of treatment completers. A consistent, reliable, valid, and well-articulated definition of dropout is of vital importance to better understand the problem of early termination because research has demonstrated that different ways of measuring attrition yield

significantly different statistical results (Hatchett & Park, 2003). Therefore, the early termination research recommends a multi-method definition of early termination. However, only PCIT followed this recommendation. The majority of CPT programs categorized participants as early terminators if they fail to complete posttest assessments, which, in essence, is a duration-of-treatment definition of dropout. The poor validity and low reliability of this definition is well-documented (Barkham et al., 2006) and has demonstrated a lack of ability to discern between treatment completers and those who dropout (Pekarik, 1985). For example, participants may dropout because their symptoms have significantly subsided after only one or two sessions of treatment (Barkham et al., 2006). In such instances the study's definition of early termination would serve as a moderator variable because, although the clients were successfully treatment in therapy, they would be categorized as early terminators by a duration-based method. Therefore, because dropout is poorly operationalized within the CPT literature, its results are difficult to interpret and generalize when applied to other settings or treatments.

Third, research into early termination from CPT is rarely conducted by independent investigators in a community setting (Lyon & Budd, 2010). PCIT, Triple P, and IY-PT in particular have been primarily studied in controlled university clinics or laboratory settings among middle-SES, married or cohabitating, well-educated Caucasian families. However, the most at-risk children and families who may benefit the most from CPT programs receive their mental health services from service clinic settings such as public sector mental health systems and community clinics (Aarons, Wells, Zagursky, Fettes, & Palinkas, 2009). Compared to the participants in controlled research settings, the clients of these service clinics are often more racially and ethnically diverse, of lower

SES, involved in the child welfare system, developmentally delayed, and more likely to present with comorbidities that would exclude them from controlled research studies (Hawley & Weisz, 2002; McKay & Bannon, 2004). Generally speaking, PYC stood alone in meeting the challenges of such populations whereas the findings of PCIT, IY-PT, and Triple P may not generalize well to more "real-world," service-clinic settings such as these. As a result, there is an ongoing need to better understand the reasons that contribute to early termination among low-income, racial minority families of children with behavior problems.

Finally, the body of CPT outcomes research has not followed its own recommendations regarding the study of early termination. There is a clear call within the CPT literature to expand early termination research into parent domains such as cognitive processes, treatment expectations, treatment acceptability, and their conceptualization of how well their child's behavior problems match the treatment provided (Lyon & Budd, 2011; Werba et al., 2006). Despite this, CPT outcomes studies with young children continue to compare treatment completers and dropouts on the three categories of barriers to treatment (i.e., situational, family, and child barriers) that have been established in studies among older children including: socioeconomic disadvantage, racial or ethnic minority status, single parenthood, difficult living circumstances, family stress, low educational achievement, overcrowded housing, symptom severity, and life events (Armbruster & Kazdin, 1994; Kazdin, 1990; Miller & Prinz, 2003; Nock & Kazdin, 2001). Yet, even when differences between treatment completers and non-completers on these variables reach statistical significances, effect sizes (see Table 2.5) typically fall between 0.29 and 0.56 (M = 0.44, SD = 0.17) indicating small to medium differences.

Effect sizes of 0.50 and less indicate that greater than 77% of the values for the measured variable in the treatment completers group overlapped with those in the non-completers group suggesting limited actual between-group differences. Furthermore, several findings of the present review suggested that these aforementioned variables do not apply to CPT with young children. First, although some CPT studies in the present review were consistent with the older children treatment literature (e.g., Fernandez & Eyberg, 2009; Fox & Holtz, 2009; Marcynyszyn et al., 2011; Nicholson et al., 1999), more studies found no significant difference between treatment completers and treatment dropouts on some or all of these variables (e.g., Bor et al., 2002; Brenner et al., 1999; Capage et al., 2001; Carrasco & Fox, 2012; Fox & Hotlz, 2009; Lyon & Budd, 2010; Marcynyszyn et al., 2011; Roberts et al., 2006; Sanders & McFarland, 2000; Sanders et al., 2007; Sanders et al., 2000; Webster-Stratton et al., 2001; Werba et al., 2006) and one study conducted among at-risk families (Lyon & Budd, 2011) actually found that participants who had fewer barriers at baseline were more likely to drop out of treatment. Second, among CPT studies in which most of the treatment sample met nearly all of the barriers to treatment identified in the older child treatment literature (e.g., Carrasco & Fox, 2012; Fox & Holtz, 2009; Nicholson et al., 2002), 36% – 50% of families still completed treatment. Third, studies such as Fox and Holtz (2009) or Carrasco and Fox (2012) that have taken specific measures to address the barriers to treatment described in the older children treatment literature by providing individualized and in-home services, monetary incentives, treatment supplies, and appointment reminders, have reported no decrease in their rate of early termination. Although a thorough review of literature reveals that demographic variables, barriers to treatment, and treatment variables largely do not

contribute to dropout among parents of young children receiving CPT services, CPT outcomes studies continue to explore these variables. No treatment outcomes studies could be found that investigated the relationship between parent cognitive variables (e.g., attribution) and early termination from CPT programs for young children.

Attribution Theory

Overview. Approximately 50 years ago, Fritz Heider (1958) sought to explain how people perceive and form explanations for the causes of social behaviors. Heider theorized that the cognitive perceptions people form in social interactions follow many of the same principles that govern object perception in physical interactions (i.e., perceiving why someone acted a certain way is comparable to perceiving why an object moved). He argued that individuals tend to unwittingly form credulous causal explanations for their own and others' behavior in order to help them better understand, predict, and respond to the events that they perceive to occur in their environment. According to Heider, these explanations are not solely based on the event itself (i.e., the actions of another person), but also take into account what the individual perceives the other person to be thinking, feeling, and perceiving while they enact the event (Heider, 1958; Snarr, Slep, & Grande, 2009). Heider found that after they interact with an event, individuals tend to assign an explanation of the event to two things: the situation (e.g., social norms, peer pressures, culture etc.) and the disposition (e.g., attitudes, motives, personal traits, etc.). For example, a spectator at a baseball game who briefly averts his attention from the action only to see the ball sailing into the stands automatically perceives that the batter has hit a home run. The spectator did not actually see the batter hit the ball, but took into account the crack of the bat, the reaction of the crowd, the trajectory of the ball, and the body

language of the fielders to assign meaning to the ball moving through the air. Similarly, another individual walking past the stadium after the game may receive a hug from a complete stranger. Typically, an unsolicited hug from a stranger would be a violation of social norms. However, in this case the recipient of the hug explains the behavior based on what he perceives the hugger to be thinking and feeling – that is, the hugger is so overcome with joy because their team won the game that they cannot help but share their exuberance with a complete stranger. Hence, the typically aberrant behavior is explained, excused, and tolerated based on the environment and the perceived intent of the hugger. Furthermore, just as our senses' inherent subjectivity makes them fallible and thus can lead to inaccurate perceptions (e.g., perceiving depth to three-dimensional images, perceiving a rapid series of pictures as a movie, hearing one thing when the speaker in fact said something different), Heider put forth that the inherent subjectivity of our social perceptions (i.e., people make assumptions to explain someone's behaviors based on what they *guess* that person is thinking, feeling, or perceiving) can cause the individual to make erroneous explanations of social behaviors. Heider labeled these explanations as "attributions" and asserted that while they are not always accurate, they are lawful and predictable in the study of human social behavior.

In the decades since Heider's monumental work, attribution theory has evolved into a number of overlapping concepts and has been defined in different ways by different researchers (Weary, Stanley, & Harvey, 1989). However, all of these variances on Heider's original theory can be broadly classified into one of two categories: causal attributions and responsibility attributions. Both have found numerous applications within the field of psychology.

Causal Attributions. Causal attributions refer to explanations for the *occurrence* of an event (Bradbury & Fincham, 1990) and consist of four dimensions: locus (internal vs. external), stability (stable vs. unstable), controllability (controllable vs. uncontrollable), and generality (general vs. specific; Rotter, 1966; Weiner, 1980, 1986). The principles of causal attribution have formed the basis for the theory of learned helplessness. This theory states that individuals who consistently attribute themselves (i.e., an internal locus) as being the cause of all (i.e., global) negative events tend to have lower self-esteem and are more at risk of developing depression (Abramson, Seligman, and Teasdale, 1978). Causal attribution has also been used to study such topics within psychology as occupational safety (Gyekye, 2010), perceived media realism (Shapiro, Barriga, & Beren, 2010), and competitiveness (Allen, Jones, & Sheffield, 2009).

Responsibility Attributions. Alternatively, responsibility attributions do not explain *why* an event occurred, but rather, *who should be held accountable* for causing the event. It consists of three dimensions: intent (accidental vs. purposeful), motivation (the reason for action), and justifiability (whether the actions are proved reasonable by the mitigating circumstances; Bradbury & Fincham, 1990; Shaver, 1985; Snarr et al., 2009; Weiner, 1995). The principles of responsibility attributions have been used to predict anger, conflict, and retaliatory actions (Weiner, 1995). For example, the more an individual assigns responsibility to a target (i.e., a person or thing), the greater control and negative intention that individual perceives the target to be responsible for (Weiner, 1995). However, because the judgment of an individual's intent (i.e., responsibility attribution) requires that the individual has already been identified as the cause of the event (i.e., causal attribution has already been made; Weiner, 1995), responsibility

attribution has generally received less attention than causal attribution. Nevertheless, responsibility attribution has found a niche within the couple and marriage literature where it has been used to study domestic violence, partner blame, and marital conflict (Davey, Fincham, Beach, & Brody, 2001; Bradbury & Fincham, 1990). Responsibility attribution has also been applied to rage (Weiner, 1995), obedience (Blass, 1996), organizational public relations (Kim, Kim, & Cameron, 2009) and coping with chronic illness (Audulv, Asplund, & Norgergh, 2010).

Attribution Theory and the Parent-Child Relationship

Within the parenting literature, responsibility attributions are typically called child-referent attributions (e.g., the parent perceives the child's disposition, judgment, or ability as being responsible for their behavior) and causal attributions are typically referred to as parent-referent attributions (e.g., the parent perceives their skill and competence as the cause of the child's behaviors). Child-referent attributions and parent-referent attributions can be either beneficial or detrimental to the parent-child relationship and both are inherently symbiotic. Developmental research has demonstrated that in most situations, caregivers use a positive attributional bias (i.e., both child-referent and parent-referent) when interacting with their children. Most parents attribute their child's prosocial behaviors to stable, dispositional traits within the child and view negative behaviors as temporary and situational (Goodnow, Knight, & Cashmore, 1986; Morrisey-Kane & Prinz, 1999). When a parent experiences a positive child-referent attribution (e.g., they perceive their child's compliance as a result of the child's good temperament and intelligence), it reinforces their own positive parent-referent attributions (e.g., they perceive themselves as a skilled and competent parent because they are able to facilitate

the development of compliance in their child). Thus, the parent typically responds to their child in a manner that is positive and rewarding, in essence reinforcing both parties' attributions and behaviors. However, research has revealed that a negative attributional shift occurs in parents of children with behavior problems where they tend to attribute the cause of their child's negative to dispositional traits within the child (Compas, Adelman, Freundl, Nelson, & Taylor, 1982). Subsequently, such parents tend to have more negative, external parent-referent attributions in which they view their own parenting practices as less important and effective in impacting their child's behaviors (Himelstein, Graham, & Weiner, 1991; Morrisey-Kane & Prinz, 1999). A growing body of research indicates a strong relationship between attributional style (i.e., positive or negative parent-referent or child-referent attributions), caregiver perception of their child, disciplinary techniques, and child behavior problems.

Dysfunctional Child-Referent Attribution Research. As in the couples and marriage literature, responsibility attributions have found a niche in the parenting literature. In fact, the link between child-referent attributions and family dysfunction has been called one of the most robust findings in the research on parental attributions (Leung & Slep, 2006; Snarr et al., 2009). Negative child-referent attributions (i.e., responsibility attributions) have been repeatedly linked to affective arousal – namely anger. A study by Slep and O'Leary (1998) demonstrated an association between caregiver attributions and subsequent parenting behaviors. Working with caregivers of 2 to 3.5 year old toddlers with behavior problems, the researchers found if they gave parents different explanations for future noncompliant behavior that a child might demonstrate in a parent-child interaction, the parents significantly altered their discipline style and emotional reactivity

(t[38] = 2.18, $p < .02$, $d = 0.70$). Parents who were given child-referent responsibility attributions to explain their child's misbehavior (i.e., suggesting that their child will misbehave only to get their way, solicit attention, etc.) were observed to significantly overreact in their discipline (t[38] = 2.15, $p = .02$, $d = 0.69$) and report marginally more feelings of anger (t[38] = 1.59, $p = .06$, $d = 0.51$) during the interaction.

Other studies have linked negative child-referent attributions to more severe discipline strategies. Dix, Ruble, Grusec, and Nixon (1986; 1989) found that mothers who perceived their child's behavior as more intentional became more upset with the child and disciplined them more sternly. Specifically, caregiver attributions of intentionality (i.e., the caregiver perceives the child's misbehavior as intentional) were found to significantly increase with the age of the child (F[2,30] = 3.15, $p < .06$, $d = 0.64$) and be related to greater caregiver emotional reactivity and the use of more severe discipline (F[2,30] = 9.81, $p < .001$, $d = 1.14$). Likewise, Smith and O'Leary (1995) conducted a study in which mothers observed a video of a child displaying negative affect (i.e., crying and whining). Mothers who presumed that the internal negative attributes of the child were responsible for the child's negative behavior (i.e., they experienced child-referent responsibility attributions) rated themselves as more angry (t[40] = -12.34, $p < .0001$, $d = 3.9$) and were more likely to suggest the use of more punitive discipline techniques ($r = .396$, $p < .01$).

Finally, negative child-referent attributions have been linked to conduct problems in young children. A 2006 longitudinal study by Wilson, Gardner, Burton, and Leung collected data from 60 predominately lower-middle-class, Caucasian parents regarding their attributional style and the frequency of behavior problems in their 3-year-old

children. Analyses revealed that already at 3 years of age, conduct problems in children were significantly associated ($r = .28$; $p < .05$) with negative child-referent attributions. Early behavior problems in toddlers were also found to be predictive of future negative attributions. The parents of children who displayed externalizing behaviors at the age of 3 years were significantly more likely ($r = .42$; $p < .01$) at age 4 to assign responsibility of negative behaviors to negative attributes within the child. Similarly, a recent study by Snyder, Cramer, Afrank, and Patterson (2005) investigated the link between negative child-referent attributions, ineffective parenting practices, and the development of behavior problems at home and school. They found that while parent's hostile child-referent attributions did not predict behavior problems during kindergarten and first grade, these attributions did interact with ineffective/irritable parental discipline to reliably predict behavior problems in school ($\chi^2[40,275] = 67.09$, $p = .005$) and at home ($\chi^2[15,275] = 31.28$, $p = .01$).

Dysfunctional Parent-Referent Attribution Research. Parent-referent attributions are considered to be causal-based attributions and are more heavily researched than child-referent attributions, particularly around the dimension of locus of control (Campis, Lyman, & Prentic-Dunn, 1986; Morriseey-Kane & Prinz, 1999). Caregivers with an external locus of control view their child's behaviors as being caused by factors outside of their control such as chance, teachers, peers, the media, or the child's psycho-social environment. A negative external locus of control may arise from very early interactions in which the child is unresponsive to the parent or uncontrollable (Thomas, Chess, & Birch, 1968), and may lead to the later development of behavior problems in the child (Janssens, 1994). This is supported by a 2001 longitudinal study

(Hageskull, Bohlin, & Hammarberg, 2001) that assessed parents' perceived control in child development among a sample of 103 children at infancy, 2.75 years, 4 years, and 9 years of age. The researchers found that unsatisfying parenting experiences during an infant's first months combined with difficult infant and toddler behavior were significantly correlated (r = -.24, p < .05) with parents' negative external locus of control at 2.75 years. Additionally, caregiver report of negative external locus of control at 2.75 years was significantly correlated with externalizing behavior problems at 4 years (r = -.47, p < .001), and 9 years (r = -.54, p < .001). A negative external locus of control has also been associated with coercive or authoritarian styles of parenting (Bugental, Blue, & Cruzcosa, 1989; Janssens, 1994). Parents with this attributional style do not view themselves as in control of the child and try to gain control by using commanding or harsh parenting strategies (Loeb, 1975). Parents with an external locus of control style also perceive their own efforts to help their child develop self-regulatory skills as ineffective and thus refrain from efforts to enable the child to regulate their own emotions (Calkins, 1994; Hageskull, Bohlin, & Hammarberg, 2001).

Conversely, caregivers with an internal locus of control tend to view their child's behaviors as a result of their own competency and skill (positive or negative) as parents. Parents with a negative internal locus of control are at risk for depression, feelings of incompetence, and the use of ineffective parenting techniques. Dysfunctional, internal, parent-referent attributions are those in which the parent attributes their child's misbehavior to a dispositional characteristic of their own effectiveness as a parent (i.e., internal to them) that is persistent over time (i.e., stable) and occurs across all situations (i.e., global). Caregivers with this attributional style may endorse statements about their

parenting style such as “it’s hard for me to set limits” or “I can’t give my child enough attention (Leung & Slep, 2006). Therefore, just as depressed individuals with internal, stable, and global attributions tend to expect that future events will be negative and inevitable (Abramson, Seligman, & Teasdale, 1978), caregivers with a similar attributional style will tend to believe that something dispositional, stable, and global about themselves is the cause of their child’s behavior problems. Whereas negative child-referent attributions and external parent-referent attributions have been linked to a harsh parenting style, negative internal parent-referent attributions have been linked to a permissive parenting style. A 2006 study by Leung and Slep investigated the relationship between parents’ psychological difficulties (i.e., overt anger, symptoms of depression), negative attributions for their child’s misbehavior, and dysfunctional discipline strategies among a random sample of 453 married or cohabitating couples of children between the age of 3 and 7 years (M =5.45, SD = 1.46). Analyses revealed significant correlations (r = .35, p < .01) between parent report of depressive symptoms and a negative internal locus of control. A lax parenting style was also significantly correlated (r = .35, p < .01) with parents’ negative internal locus of control. Path analyses revealed that parent report of depressive symptoms and lax parenting were mediated by negative parent internal locus of control. In other words, caregiver depressive symptoms predicted negative caregiver internal locus of control which in turn was predictive of lax parenting techniques. Negative child-referent attributions were also significantly correlated with caregiver depressive symptoms (r = .30, p, < .01), but were not predictive of lax parenting. Instead, path analyses revealed that child-referent attributions mediated depressive symptoms and

over-reactive parenting. In other words, depressive symptoms predicted child-referent attributions which in turn predicted over-reactive parenting.

Parental Attributions Across Cultures. Research has long established the importance of parenting behaviors such as attribution in the development and maintenance of externalizing behaviors in young children. However, because a majority of this work has been conducted exclusively among Caucasian families, relatively little is known about the role that attribution plays in behaviors among Latino and African American children (Chavira, Lopez, Blacher, & Shapiro, 2000).

Although no research could be found that investigated parent attributional style among African Americans, several studies have investigated the general parenting style of African American families. Research has shown that African American families tend to share parenting responsibilities among community members and more frequently endorse the use of physical punishment than Caucasian parents (Hurd, Moore, & Rogers, 1995). In an early study of parenting styles, Baumrind (1972) compared parenting styles of African American and Caucasian mothers. Baumrind found that an authoritarian parenting style was associated with negative child behaviors such as hostility and resistance in Caucasian families, but found no such association with African American families. Other studies have also lent support to this finding. A 1994 study by McLeod, Kruttschnitt, and Dornfeld compared data collected through the Children of the National Longitudinal Survey of Youth on African American (n = 536) and Caucasian (n = 1,330) parents of children age 6 years and older. They found that the frequencies of spanking and of maternal affection were predictive of antisocial behavior regardless of race (χ^2 = .86, df = 2, p = .65). However, the processes that created these effects did vary by race.

The authors found that children's misbehavior causes Caucasian parents to spank their children more, but that this spanking also caused the Caucasian children to misbehavior more. Conversely, for African American, the use of physical discipline occurred only as a result of their children's misbehavior and not as a cause of it. Similarly, Deater-Deckard, Dodge, Bates, and Pettit (1996) examined the relationship between physical discipline and child aggression in a sample of 466 Caucasian and 100 African American children. The authors assessed families when the child was in kindergarten and Grades 1, 2, and 3 and found that a significant correlation exists between maternal physical discipline and externalizing behaviors ($r = .31$, $p < .001$) among Caucasians. Yet, the association between these two variables was not significant for African American children ($r = -.07$, $p > .05$).

More recent research has challenged the notion that differences in parenting styles is a product of racial membership. Bluestone and Tamis-LeMonda (1999) examined the disciplinary practices among 114 middle-class African American parents of young children and found marked variability in their parenting styles. The authors found that physical punishment (associated with authoritarian parenting) was the least-frequently reported discipline strategy and reasoning (associated with authoritative parenting) was the most-frequently reported strategy. Notably, maternal education was significantly correlated ($r = .31$, $p < .001$) with characteristics of an authoritative parenting style (e.g., using reasoning, a nonrestrictive attitude, responsive to child's needs, low physical punishment). The authors suggest that an authoritarian parenting style is better explained by sociodemographic variables (e.g., income, education, etc.) than by racial status. Likewise, Querido, Warner, and Eyberg (2002) investigated the relations between

parenting styles and behavior problems. The study's sample consisted of 114 low-to-middle SES (*M* = $11K-$20K) African American caregivers of preschool children ages 3-to-6 years (*M* = 4.65; *SD* = 1.11) who filled out a series of questionnaires about their parenting style. Analyses revealed that permissive and authoritarian parenting styles were positively and significantly correlated with behavior problems ($r = .44$, $p < .01$; $r = .37$, $p < .01$), whereas an authoritative parenting style was negatively and significantly correlated with behavior problems ($r = -.46$, $p < .01$). The results indicate that even among a lower-income African American sample, authoritative parenting strategies may be most beneficial for young children. However, as no research to date could be found that has investigated parental attributions in an exclusively African American sample, it remains unknown what is the relationship between attributions and parenting style.

The present body of literature also suggests that there are important cultural differences in regard to parenting between Latino and Caucasian parents. Research has shown that Latino families have stronger family interconnectedness (Fontes, 2002), are more authoritarian in their style (Zayas & Solari, 1994), use more public discipline (Fontes, 2002), and utilize more nonverbal instruction (Cousins, Power, & Olvera-Ezzell, 1993). A handful of studies have also investigated attributional style or locus of control among Latino families of young children. Chavira et al. (2000) applied attribution theory to the reactions that 149 Latina mothers had in response to their young child's (i.e., 3 years of age and older) problem behavior. The authors found Latina mothers tend to view behavioral excesses (e.g., severe temper tantrums and too much hitting) in their children as problematic, but tended not to hold their child responsible for these behavior problems (i.e., low child-referent attributions). Analyses revealed that, consistent with attributional

theory, mothers who perceived their child as being more responsible for their own problem behavior tended to react with significantly more negative emotions (ϕ = .30, χ^2[1,139] = 12.56, p = .001) and aggressive behavior (ϕ = .20, χ^2[1,130] = 5.44, p = .02). However, dissimilar from research on White parents, the authors found no significant relationship between Latina mothers' emotional reactions and exhibiting harsh or aggressive behavior (ϕ = .12, χ^2[1,130] = 1.711, p = .19).

A more recent study (McCabe, Goehring, Yeh, & Lau, 2011) investigated the relationship between parental locus of control and externalizing behaviors among 115 low-to-middle income (M = \$24.4K, SD = \$15.6) Latino families with young children (M = 4.39, SD = 0.93). After controlling for demographic variables such as age, education, language preference, and American orientation, multiple regression analyses revealed that Latina mothers of children with behavior problems had a significantly higher external locus of control (i.e., they attributed control of their child's behaviors to factors outside of themselves as parents) on domains including parental efficacy (R^2 = .19, p < .001), parental responsibility (R^2 = .11, p < .001), child control (R^2 = .07, p < .01), and parent control (R^2 = .30, p < .001) than mothers whose children did not have such problems. The authors note that the findings of their study are consistent with previous studies showing similar parental attribution patterns among Caucasian parents and recommend that the general parent attribution research is able to be generalized to low-income Latino families. However, the authors called for more parent attribution research among low-income Latino caregivers to better understand whether they have a more external parental locus of control than Caucasian parents in an absolute sense or just in relation to children with externalizing behavior problems.

Parental Attributions and the Treatment Process

As demonstrated by this review, there is a strong relationship attributional style, caregiver perception of their child, disciplinary techniques, and child behavior problems. Research has also demonstrated that the tenets of attribution theory have an impact on three stages of the child/family treatment process: help seeking, participation, and outcomes.

Parent Attributions and Help Seeking. Attributional theory states that individuals under stress make more attributional statements in an attempt to make sense out of a difficult and confusing situation (Weiner, 1995). This holds true in the parenting literature as well. Caregivers experiencing emotional distress from their toddler's behavior problems have been shown to make dysfunctional attributional statements at a significantly higher rate than those with typically-behaved children (White & Barrowclough, 1998). While many of these parents never seek professional services for their children's behavior problems (Stouthamer-Loeber, Loeber, & Thomas, 1992), the parents who actually seek out CPT services may have a specific attributional profile. Logic would hold that parents with a negative internal locus of control would be more aware of their own ineffectiveness as parents and therefore be more likely to seek out CPT services. However, some evidence exists that this is not the case. Campis, Lyman, and Prentice-Dunn (1986) examined parent-referent attributions among 60 parents of typically-behaved young children and 45 parents who had sought professional services for parenting problems. The authors found that parents who sought help for their child's behavior problems actually displayed a significantly more external locus of control compared to parents not seeking help. Other studies have also found a greater external

locus of control in parents of children with clinical behavior problems (Johnston & Patenaude, 1994; Roberts, Joe, & Row-Hallbert, 1992). Therefore, parents with a negative external locus of control may be more likely to seek out professional services because, although they view their child's behaviors as outside of their parental influence, they may believe that a therapist can "fix" their child (Morriessey-Kane & Prinz, 1999). However, a recent study by Pidgeon and Sanders (2009) found that parents of children with clinical behavior problems had more internal parent-referent attributions (M = 4.65, SD = 0.62) than parents in a non-clinical control group (M = 4.29, SD = 0.75) with a medium effect size (d = 0.52). Therefore, it remains relatively unknown whether researchers studying parental attributions in CPT treatment programs can expect a specific attributional profile among parents seeking services for their children.

Parent Attributions and Participation in Treatment. The expectations that a parent has for treatment have long been known to influence their participation in therapy (Burck, 1975). Furthermore, it has been established that when parental expectations at intake do not match with treatment realities (e.g., the parent does not need to participate; treatment will only last one or two sessions), parents are more likely to drop out of treatment (Day & Reznikoff, 1980; Plunket, 1984). Parent attributions are thought to have a similar effect on engagement in and dropout from treatment. Parents of children with behavior problems are more likely to have dysfunctional attributional styles that assign the cause and responsibility of their child's behavior problems to factors within the child and outside themselves as parents. However, CPT treatment programs focus on modifying the parenting practices of caregiver to change the behavior of the child, in essence assigning both responsibility and causality to the parent. Thus, there is an

inherent contradiction between caregivers' conceptualization of the problem and the nature of CPT programs. This attributional mismatch is thought to contribute to difficulties with parental engagement in CPT programs (Morrisey-Kane & Prinz, 1999), a hypothesis supported by several studies. A 2003 study by Miller and Prinz found that the parents of children with clinically significant behavior problems who had negative child-referent attributions were significantly more likely to drop out of treatment that required their involvement compared to treatments that did not require parental involvement ($\chi^2[1, 112] = 9.02$, $p < .001$, $\phi = .28$) . Likewise, a 2005 study (Peters, Calam, & Harrington) found that parents of young children were more likely to complete treatment if the parent had an internal parent-referent attributional style (i.e., they viewed their lack of parenting skills as the cause of their child's behavior problems).

Other studies have found no link between dysfunctional parent attributions and engagement in or dropout from treatment. Nordstrom, Dumas and Gitter (2008) examined the relationship between these two variables in a sample of caregivers of children ages 3 to 6 years with clinical behavior problems. Contrary to their hypothesis, the authors found that parents with a more internal locus of control had lower rates of attendance than parents with an external locus of control. This suggests that parents who view themselves as not being able to control their child's behaviors are more likely to attend CPT programs. Similarly, a 2009 study (Williford, Graves, Shelton, & Woods) examined attributions among an at-risk sample of low-income, minority parents of young children. The authors administered measures of parent attributions and a measure of hypothetical treatment acceptability. Statistical analyses did not find that dysfunctional

child-referent or parent-referent attributions were associated with less treatment acceptability in a CPT program.

Parent Attributions and Treatment Outcomes. Some empirical studies have applied attributional theory to treatment outcomes. Because CPT programs focus on teaching parents new strategies to control their children's behaviors, parents who complete CPT programs would theoretically have positive child-referent and parent-referent attributions (Morrisey-Kane & Prinz, 1999). Roberts et al., (1992) collected pretreatment and posttreatment parent-referent attributional data from 72 families of young children (ages 2 to 12 years) with clinical behavior problems. All parents received an average of 8 treatment sessions from a parenting program based on the principles of social learning theory. At posttest a significant drop was found in parent-referent attribution scores, indicating that parents who completed the parenting program developed a more internal locus of control than before treatment (t[30] = 7.6, $p < .001$, d = 1.57). Likewise, a study by Hoza et al. (2000) examined parent cognitions as predictors of treatment outcomes among 105 children with clinical externalizing behavior problems. Families were randomly assigned to 14 months of treatment in one of four treatment conditions: medication treatment only, behavioral treatment, medication and behavioral treatment, and community care. Posttest analyses revealed that caregivers' negative (R^2 = .14, $p < .01$) and external parent-referent attributions (R^2 = .10, $p < .01$) at pretest (i.e., they viewed the child's behavior problems as outside of their control) significantly predicted less success in treatment. Finally, as previously discussed, a 2004 study by Boggs et al. demonstrated that parents who complete a PCIT treatment program reported an increase in their internal locus of control (F[1, 40] = 1.11, $p > .05$, d = 1.29) with a

large effect size, suggesting that treatment may lead to a more functional parent-referent attributional style.

However, as with the help-seeking behaviors and treatment engagement, not all studies have supported the impact of attributional style on treatment outcomes. Sanders et al. (2004) examined whether adding an attributional component to Triple P enhanced the treatment effectiveness. The authors randomly assigned 82 caregivers of young children (M = 4.47 years; SD = 1.61) with behavior problems to either standard treatment or attribution enhanced treatment. All parents received four sessions of Triple P group therapy, but parents in the enhanced group received an additional four sessions aimed at challenging dysfunctional attributional styles. At posttest, there were no significant differences between standard and enhanced treatment conditions and both groups showed clinically significant and reliable change across all criterion measures. The results indicate that attributional enhanced Triple P offers little advantage over standard Triple P.

Limitations of Parent Attribution Research. This review of the attribution literature has focused on the role of attribution theory in the parent-child relationship and the treatment process. Although empirical studies have demonstrated a strong relationship between attribution theory and caregiver perceptions of their child, disciplinary techniques, and child behavior problems, research applying attribution theory to the treatment process has several limitations.

First, the findings within the parental attribution literature are inexplicably mixed. While some studies have established a link between parental attributions and treatment help-seeking, engagement, or outcomes, other studies have found no such connections. Still other studies have found relationships between parental attributions and the

treatment process that are contrary to attributional theory. These differences may be due to variation in the definition of parental attributions, how parental attributions were measured, or the differences in population being studied (Mah & Johnson, 2008). However, there is a general lack of research examining parental attributions in the context of the treatment process, particularly in the domain of early termination from CPT programs. It remains largely unknown if low engagement experienced by CPT programs can, in part, be explained by parents' attributions.

Second, the body of research that has examined the relationship between parental attributions and the treatment process has limited external validity. Only two treatment process studies could be found (Boggs et al., 2004 and Sanders et al., 2004) that were based on any of the four most well-researched and empirically-supported treatment programs for young children with externalizing behavior problems (i.e., PCIT, IY-PT, Triple P, and PYC). A majority of the studies examined do not detail the procedures of their treatment program or are based on CPT programs with limited empirical support. Several studies, particularly those examining the help-seeking behavior and treatment engagement, are not conducted in the context of actual clinical outcomes studies. Rather, their findings are based on participant report of how they would act in hypothetical treatment situations. As a result, it is unknown how well the findings of research on parent attributions and the treatment process will generalize to a "real-life," clinical environment.

Third, there is a paucity of research regarding parent attributional styles across cultures. No studies on parents' attributions for their young children's behavior problems been conducted among African American populations and only two such studies could be

found among Latino populations (Chavira et al., 2000 and McCabe et al., 2011). The findings of these studies suggest that attributional style among Latino families does not differ from that of White families and the authors suggest that the results of the general parenting attribution literature is able to be generalized to low-income Latino families. However, because both of these studies consist of ethnically homogenous samples, the variability of within- and between-group differences is inherently limited. Inclusion of a more heterogeneous sample would increase the variability of these samples thus illuminating group differences that otherwise may have been undetected. This notion is supported by work outside of the parenting, where researchers have demonstrated that significant variability exists in an individual's attributional style across age, culture, and psychopathology (Mezulis, Abramson, Hyde, & Hankin, 2004). Research specifically examining the attributional styles of parents of children with behavior problems among culturally-heterogeneous groups is necessary before conclusions regarding the generalizability of previous parent attribution findings can be made.

Lastly, many of the empirical works examining the relationship between parental attributions and the treatment process are conducted among older child populations (i.e., the sample had a mean age greater than 6 years). Yet, the four major CPT programs have established their effectiveness among populations of children aged 3 to 5 years. Given the rapid cognitive, social, and emotional development that occurs in children between the ages of 3 and 7 years, the difference in parenting techniques that are appropriate across that span, and the fact that parents' child-referent attributions are positively correlated with age (see Wilson et al., 2006), the findings of attribution research on older children may not generalize to families of children under the age of 6 years. More research among

families of children under the age of 6 years is needed to better understand how parental attributions affect the treatment process among this younger population.

Conclusion

Behavior problems in young children negatively impact their social and emotional development. If left untreated behavior problems may become ingrained, lead to a negative school experience, and setting the stage for future cycles of violence and abuse. Behavior problems are particularly prevalent among low-income, urban families of racial minority status. Several CPT programs have demonstrated general effectiveness in treating clinical behavior problems in young children across a variety of settings and populations. However, because approximately 50% of families dropout of CPT treatment programs prematurely, a large number of children miss important services at a critical point in their development. Within the CPT research there is a general call for research to focus on ways to decrease early termination in order to engage more families in CPT treatment.

Early termination is a multi-faceted construct that is difficult to operationalize. Researchers studying early termination must take great care when selecting their operationalization of early termination because research has shown that different definitions of dropout yield significantly different results. The dropout literature has historically grouped definitions of early termination into one of four categories, early termination based on duration of treatment, therapist judgment, missed last treatment session, and failure to return after intake. However, because independently each of these definitions is limited in either validity or reliability, more recent research has recommended a multi-method approach in which one or more of these

operationalizations is used together with definitions based on clinically significant change or reliable change.

Several studies across the four major CPT programs have sought to better understand attrition by comparing treatment dropouts to treatment completers on a wide range of pretreatment variables. A systematic review of the CPT literature for young children reveals that early termination findings are mixed, inherently limited by poor definitions of dropout, and primarily conducted among middle-SES, well-educated, Caucasian families. Furthermore, research into early termination from CPT programs has largely focused on the three classic categories of barriers to treatment including situational barriers, family barriers, and child barriers. These variables were established in studies among older children and may not apply to samples of children under the age of 6 years. The general early termination research has recently added participant cognitions as a fourth category of early termination and CPT research has repeatedly called for more investigation into parental attitudes towards the nature of their child's behavior problems and treatment. However, there is a general lack of research on the role of parental cognitions among CPT programs for young children.

Parental attributions about the nature of their children's behavior problems may play a significant role in their decision to continue with or drop out of treatment. The literature has demonstrated that parental attributions play an important role in the relationship between parent disciplinary style and child psychopathology. Parental attributions have also been linked to engagement in and positive treatment outcomes from CPT programs. CPT programs are a unique form of therapy as the involvement of the client's parents or caregivers is considered essential to the success of the treatment.

Preschool children have little voice in the decisions about whether their caregivers will continue or drop out of treatment. Hence, the decision to drop out of treatment is made not by the individual receiving treatment, but by a third party. Therefore, parental attitudes and beliefs regarding their child and the nature of their behavior problems are inextricably linked to their participation and success in treatment. The research on parent attributions and the treatment process has focused on factors such as help-seeking, engagement in services, and treatment success and its findings are mixed, lacking in external validity, and may only apply to older children. It remains relatively unknown whether the high attrition rates experienced by CPT programs for young children can be explained by parents' attributions. Even less is known about the role parental attributions play in early termination from CPT in low-income, urban, minority populations. Clearly, more research is needed among low-income, urban, minority populations to better understand the link between attributions and early termination.

CHAPTER III – METHODOLOGY

Participants

The participants in this program were 425 families from Milwaukee County who were consecutively referred to and completed an intake at a clinic that was specifically developed to address mental health problems in young children (Fox, Keller, Grede, & Bartosz, 2007). A summary of the participants' demographics is provided in Table 3.1.Families were referred to the clinic by parents, other caregivers (e.g., grandparents, aunts, foster parents), providers in private practice (e.g., psychologists, pediatricians,

Table 3.1 *Participant Demographics*

	M	*SD*	*n*	%
Child				
Age	3.20	1.03		
Male			279	65.6
Female			146	34.4
Race				
African American			239	56.2
Latino			77	18.1
Caucasian			46	10.8
Multiracial			63	14.8
Primary Diagnosis				
Oppositional Defiant Disorder			184	45.1
ADHD			22	5.4
PTSD			12	2.9
Separation Anxiety			7	1.7
Reactive Attachment Disorder			4	1.0
Other			196	46.1
Caregiver (mother, father, grandparent, foster parent, etc.)				
Age	29.66	8.49		
Race				
African American			246	58.2
Latino			87	20.6
Caucasian			65	15.4
Mixed/Other			25	6.0
Receiving Public Assistance			376	89.1

psychotherapists), and over 50 social service agencies (e.g., hospitals, schools, daycare centers, Birth-to-Three centers). Eligibility criteria for this study included: (1) the child was under 6 years of age; (2) the referral source expressed significant behavioral or emotional concerns for the child (e.g., oppositional behavior, aggression, destructiveness, hyperactivity, separation anxiety, self-injury); (3) the child did not have significant physical disabilities, serious medical conditions, or present with symptoms indicative of Pervasive Developmental Disorder or significant mental retardation; and (4) the child's parent or guardian signed a consent form approved by Marquette University's Institutional Research Board. If the parent or guardian declined to participate in this research project, the same treatment program was offered to the family, but their data was not included in this study.

Clinic Protocol and Training

Referral and Intake. A referral form that contained the referral source, family contact information, the child's age, and referral concerns was required to initiate clinic services. After receiving the completed referral form, caregivers were contacted to obtain more information regarding their concerns, to determine the eligibility of the child for the clinic's services, to describe the treatment program, and to explain the importance of caregiver participation in the treatment program. Children eligible to receive services were placed on a waiting list until a clinician had availability on their case load to schedule an intake appointment. The caregivers of ineligible children were referred to other appropriate agencies for services. The initial comprehensive intake evaluation session took place in the home, lasted approximately two hours, and consisted of a review of available records, a comprehensive caregiver semi-structure interview, an observed

parent-child natural play interaction, an observed parent-child compliance interaction, and a completion of a series of self-report measures. Finally, a treatment plan was developed in collaboration with the parent based on the details of the intake interview and the first treatment session was scheduled within a week of the intake session.

Treatment Program. This study utilized an individualized, in-home format of the Parenting Young Children (PYC) program for young children (Fox & Nicholson, 2003). The core concepts and skills of the PYC treatment program (i.e., child-led play, parent cognitive strategies, establishing developmentally-appropriate expectations, reinforcing pro-social behaviors, and extinguishing challenging behaviors) were covered in the first three sessions. However, additional sessions were typically needed to fully achieve the treatment goals established at intake. The additional sessions involved further tailoring the treatment plan to the unique strengths and needs of each child. A significant amount of time was also spent problem-solving with families when implementation difficulties arose (e.g., using a time-out in a very small and overcrowded apartment; encouraging siblings and extended family members to assist in treatment delivery). Further, during later sessions, a parent-coaching component was included where clinicians observed parents during their natural day-to-day interactions with their children and provided immediate feedback to parents as they implemented treatment strategies.

All treatment sessions were approximately 1½ hours in length. During treatment sessions, handouts were provided to caregivers to explain treatment strategies in more detail. Other materials necessary to implement the treatment were also provided (e.g., edible and tangible reinforcers, toys, door gates for time-out; safety latches for kitchen cupboards). Families were given a magnetic reminder card of the next appointment to put

on their refrigerators and were given a reminder phone call or card in the mail the day before each scheduled appointment.

Clinician Training. Clinicians were master-degreed therapists and graduate students in counseling and psychology programs who received practicum and internship course credit for their work at the Behavior Clinic. All clinicians received extensive training and supervision in four modules: (a) working with diverse families of young children with developmental delays who live in poverty and maintaining personal safety in the home setting; (b) clinical skills needed for interacting with children less than six years of age and their caregivers; (c) treatment theory, program content and procedures; and d) assessment administration and data collection. Training included didactic instruction based on a comprehensive training manual, reviewing relevant empirical literature articles, watching treatment program videotapes and rating parent-child interactions to ensure inter-rater reliability, shadowing treatment sessions, and a gradual assumption of the role of lead clinician in the field under close supervision. Fidelity to the treatment program was established through the use of specific treatment adherence criteria that were met by all therapists and students prior to their functioning independently as a clinician to ensure consistent administration of the treatment program (e.g., demonstrating sensitivity to families' cultural diversity, tailoring language to caregivers' educational levels, establishing and maintaining home visit guidelines, providing caregiver feedback, individualizing treatment strategies to children's needs). Each clinician participated in ongoing weekly supervision (group and individual) for assistance on specific issues that arose with families and for feedback on their performance while implementing the treatment program. In general, clinicians completed

training in a period of three-to-four months, at which time they began carrying a caseload of five to eight families. As most of the children's homes were located in unsafe neighborhoods, clinicians often provide treatment services in pairs and had access to an on-call supervisor at all times in the event that assistance is required (e.g., evidence of child abuse; caregiver with suicidal ideation). Case assignment was made randomly based on clinicians having an opening in their ongoing caseload to help guard against contamination of the results by possible differences in the varying levels of clinician skill.

Instruments

Treatment clinicians were responsible for collecting all study measures and were blind to the study's conditions. In order to ensure that all participants understood the items on the instruments, a translator was available to verbally administer the measures to Spanish-speaking participants.

Sociodemographic Questionnaire. The sociodemographic questionnaire (see Appendix A) was filled out by the intake clinician during the intake interview in order to obtain background information about the participants. Caregiver variables on the questionnaire included the age, race, relationship to child, and receipt of public assistance. Child variables on the questionnaire include age, gender, racial/ethnic identity, and history of developmental delays (if applicable).

Early Childhood Behavior Screen (ECBS). The ECBS (Holtz & Fox, 2012) is a 20-item rating scale that measures the parent perceptions of their child's positive and challenging behaviors in children under the age of 6 years. The ECBS consists of two empirically-derived scales: *Pro-Social,* 10 items that assess the frequency of positive child behaviors (e.g., "how often does your child listen to you?") and *Challenging*, 10

items that assess the frequency of negative child behaviors (e.g., "how often does your child throw things at others?"). Items are rated on a 3-point frequency scale (2 = almost always/always, 1 = sometimes, 0 = rarely/never) with a range of scores from 0-30 on each subscale. The sum total of the *Challenging* subscale is then compared to age-normed cut-scores in order to determine clinical significance. Cut-score validity was set for each gender and age group (i.e., <1, 1, 2, 3, 4, and 5 years old) at one standard deviation above the mean. ROC curve analysis has been used to evaluate the sensitivity and specificity of the ECBS Challenging subscale compared to the Eyberg Child Behavior Inventory (ECBI), a behavior rating scale with adequate reliability and validity (Eyberg & Pincus, 1999; Gross et al., 2007; Holtz & Fox, 2012). When using a clinical cutoff of 17 on the ECBS, the ECBS acquired a .82 sensitivity rate with the ECBI and a specificity rate of .25. Analyses indicated that the ECBS is accurate at predicting the clinical cutoff of the ECBI as 90% of the total area under the curve was predicted by the ROC curve analysis. The coefficient alphas for the *Pro-Social* and *Challenging* subscales were reported as .92 and .87, respectively. The ECBS was normed on a racially diverse sample of low-income, urban families and has demonstrated validity in its ability to discriminate between clinical and non-clinical populations (Holtz & Fox, 2012). In this study, the full ECBS was administered at referral, intake, and termination while the *Challenging* subscale was administered at each treatment session.

Parent Behavior Checklist (PBC). The PBC (Fox, 1994) is a 32-item rating scale designed to measure the behaviors and expectations of caregivers of children younger than the age of 6 years. The PBC consists of three empirically-derived scales: *Expectations*, 12 items that assess parents' developmental expectations (e.g., "my child

should be able to draw a circle"); *Discipline*, 10 items that assess parental responses to their child's challenging behaviors (e.g., "I yell at my child for whining"); and *Nurturing*, 10 items that measure specific parent behaviors that promote a child's psychological growth (e.g., "I take walks with my child once a week"). Items are rated using a 4-point frequency scale (4 = *almost always/always*, 3 = *frequently*, 2 = *sometimes*, and 1 = *almost never/never*). The range of total scores for each subscale are: *Expectations* (12-48) with higher scores indicating higher parental expectations; *Discipline* (10-40) with higher scores indicating more frequent use of verbal and corporal punishment (i.e., more yelling or spanking); and *Nurturing* (10-40) with higher scores suggesting more frequent use of positive nurturing activities. The following coefficient alphas were reported for the PBC: Expectations = .97, Discipline = .91, and Nurturing = .82. Test-retest reliabilities for each of the three subscales were: Expectations = .98, Discipline = .87, and Nurturing = .81. The PBC has been shown to successfully discriminate between parents of children of different chronological ages (Fox & Bentley, 1992) and to not be influenced by social desirability (Peter & Fox, 1993). It has also demonstrated clinical utility among families of children with significant emotional and behavioral control problems (Nicholson, Fox, & Johnson, 2005; Holtz, Carrasco, Mattek, & Fox, 2009) and clinical validity as an outcome measure for treatment programs involving parents of young children (Nicholson et al., 2002; Nicholson et al., 1999). In this study, the PBC was administered at intake and termination.

Parent Cognition Scale - Adapted (PCS-A). The PCS-A is an adapted and simplified version of the Parent Cognition Scale (Snarr et al., 2009); a 30-item measure that assesses the degree to which caregivers endorse dysfunctional child-referent and

parent-referent attributions to explain their young child's challenging behavior. The original Parent Cognition Scale (PCS) was normed on 453 families of children age 3 to 7 years (*M* = 5.44 years) living in the state of New York, 18% of whom were identified as having externalizing behavior problems. The PCS's normative sample had a median household income of $74,500 (*SD* = $43,099) and caregivers had an average of 14.3 years of education (*SD* = 2.3). Racial/ethnic representation in this sample was 80% White, 8.6% Latino, 6.2% African American, and 2% Asian. The PCS consists of two empirically-derived subscales: *Child-Referent,* 14 items that assess how frequently the caregiver makes child-referent responsibility attributions to explain their child's negative behaviors (e.g., "My child won't listen, My child thinks that he/she is the boss; My child is headstrong; etc.") and *Parent-Referent,* 16 items that assess how frequently the caregiver makes parent-referent causal attributions to explain their child's negative behaviors (e.g., "I'm not structured enough with my child; I don't give my child enough attention; It's hard for me to set limits; etc."). Items on the PCS are rated on a 6-point frequency scale (1 = always true, 2 = frequently true, 3 = sometimes true, 4 = occasionally true, 5 = rarely true, 6 = never true) with a range of 0-84 on the *Child-Referent* subscale and a range of 0-96 on the *Parent-Referent* subscale. The *Child-Referent* and *Parent-Referent* subscales of the PCS report alpha coefficients of .89 and .83, respectively and test-retest reliability coefficients of .72 and .66, respectively. Both subscales have been found to be significantly correlated with higher levels of parent-child aggression, over-reactive discipline, and lax parenting, but distinct from other parenting cognitions including rigid expectations and attitudes toward parent aggression (Snarr et

al., 2009). Both subscales have also been found to be negatively correlated with parenting satisfaction (Snarr et al., 2009)

The PCS-A retains the structure (i.e., child-referent and parent-referent attributions) and format (i.e., parent self-report on a frequency scale) of the PCS while making only minor modifications to simplify it for this study. First, the PCS-A was shortened to include only the 16 items from the PCS that were identified by confirmatory factor analysis as loading highly (i.e., between .55 - .80) on either one of the scales two factors (i.e., child-responsible attributions and parent-causal attribution), did not cross-load on the other factor, and did not have sizable or persistent residual covariances with items from the other factor (Snarr et al., 2009). Of these 16 items on the PCS-A, nine make up the *Child-Referent* subscale and seven make up the *Parent-Referent* subscale. Second, the response set on the PCS-A was shortened from a 6-point frequency scale to a 4-point frequency scale (1 = almost always the reason, 2 = frequently the reason, 3 = sometimes the reason, 4 = almost never the reason) to simplify the response-selection process to accommodate a less-educated participant sample. Finally, minor changes were made to the wording of items to make them more appropriate for the population of this study. For example, “my child is headstrong” was changed to “because my child is headstrong or stubborn,” “my child tries to get my goat or push my buttons” was changed to “because my child tries to get me upset or push my buttons,” and “I handle my child in a non-confident way” was changed to “because I’m not sure how to handle my child’s misbehavior.” Based on the present sample, the *Child-Referent* and *Parent-Referent* subscales of the PCS-A had alpha coefficients of .83 and .80 respectively.

Procedures

Approval from Marquette University's Institutional Review Board for this study was obtained as part of larger research project at the Behavior Clinic (see Appendix B). Parents referred for this study provided consent at the initial intake interview for themselves and their children to participate. Parents were informed both orally and in writing regarding the research methodology and requirements. Parents were also informed about the intervention procedures and told that they can withdraw from the study at any time without affecting the clinical services their child was receiving. After parents consented to participate, the intake evaluation was completed which included the collection of the study's pretest measures (i.e., sociodemographic questionnaire, ECBS, PBC, and PCS-A). The lead clinician administered the ECBS-Challenging Scale at each treatment session. This was done for several reasons. First, it provided an objective assessment of the child's symptom severity with a standardized instrument to assess the ongoing effectiveness of treatment. Second, many families served by the Behavior Clinic end services before a formal termination session can be conducted. Administering the ECBS: Challenging Scale at the beginning of each treatment session provides an objective measure of the child's symptom severity that can be compared to the pretest score in order to assess therapeutic change up to the time that the family drops out of treatment. Because such clients might be otherwise be categorized as dropouts despite making reliable therapeutic change, collecting the ECBS at each session allows for a more accurate assessment of early termination even in the absence of a formal termination session. When a formal termination session was scheduled, the posttest measures included the ECBS, the PBC, and the PCS-A.

Predictor and Criterion Variables. This study examined the degree to which race, gender, age, income, discipline style, symptom severity, and parent attributional style (independent variables) are predictive of early termination (dependent variable). A summary of the predictor and criterion variables in this study is provided in Table 3.2. Following the recommendations for best practice by Swift et al. (2009), the multi-method approach was used to operationalize the construct of early termination. Under this definition, participants needed to meet two criteria in order to be considered early terminators: 1) the child must fail to demonstrate reliable change (i.e., calculated according to the Jacobson-Traux method [Jacobson & Traux, 1991]) on the ECBS from their pretest score to their last obtained score, 2) the child and caregiver must attend fewer than three treatment sessions after the initial intake assessment (see Table 3.3). This operationalization of early termination was selected for several reasons. First, while some researchers recommend using clinically significant change to measure behavioral changes (Hatchet & Park, 2003), such a definition requires the client to obtain a score in the nonclinical range on a standard measure of behavior. Given the high level of clinical

Table 3.2 *Predictor and Criterion Variables*

Predictor Variables	Measurement
Race, gender, age, income	Sociodemographic Questionnaire
Discipline style	Parent Behavior Checklist – Discipline subtest
Symptom Severity	Early Child Behavior Screen
Parent Attributional Style	Parent Cognition Scale – Adapted
Criterion Variable	**Measurement**
Treatment Success	1. Reliable Change on last scored Early Child Behavior Scale 2. Attendance of at least three treatment sessions

severity of the population served by the Behavior Clinic (Fox & Holtz, 2009) and the fact that relatively few clients actually obtain clinically significant change in therapy (Lambert & Ogles, 2004), such a definition of early termination may misclassify participants that terminated appropriately after experiencing treatment success despite having scores in the clinical range at termination. Second, exclusive reliance on reliable change as an operationalization of early termination would allow some families to be counted as appropriate terminators without receiving any meaningful treatment programming. For example, a caregiver could report reliable change on the ECBS from the intake to the first treatment session, drop out, and still be considered an appropriate terminator despite only receiving one third of the primary core treatment content. In such a case, there is little evidence that the reliable change reported by the parent was because of the treatment program. Therefore, because all of the didactic content of PYC is delivered before session four, parents will be required to attend at least three treatment sessions before they can be considered appropriate terminators.

Table 3.3 *Operationalization of Early Termination*

Attends three or more sessions after intake?	Reliable change on the ECBS from intake to last recorded treatment session?	
	Yes	No
Yes	Appropriate Terminator	Inappropriate Terminator
No	Inappropriate Terminator	Inappropriate Terminator

Analysis of Research Questions. Research question one (i.e., do parents' attributions for their young children's behavior problems differ significantly by family demographic variables such as race, gender, age, income, discipline style, and symptom

severity prior to participating in a CPT program) were answered by conducting a linear regression to examine group differences on the subscale scores of the PCS-A. Research question two (i.e., do parents' attributions for their young children's behavior problems change significantly after completing the CPT program) will be answered by conducting a paired-samples *t*-test to examine significant pre-to-posttest changes in parental attribution. Research questions three (i.e., are pretreatment family demographic variables such as race, gender, age, income, discipline style, and symptom severity significantly predictive of treatment success in the CPT program) and four (i.e., are parents' pretreatment attributions for their young children's behavior problems significantly predictive of treatment success in the CPT program) consist of predictor variables that are continuous (e.g., symptom severity, discipline style, age, income, and parent attributional style) and categorical (e.g., race and gender) and an outcome criterion that is categorical. In such instances, it is most appropriate to use a binary logistic regression for data analyses. For research question three, the pretreatment family variables will be the predictors and treatment success will be the outcome criterion. For research question four, parental attribution style will be the predictors and treatment success will again be the outcome criteria. Pretreatment family demographic variables will be entered in block 1 of the logistic regression, symptom severity in block 2, and parent attributional style in block 3. In this study the ratio of predictor variables to participants is well above the recommendation of 5:1, which indicates that the study will have sufficient power to detect medium effect sizes.

CHAPTER IV – RESULTS

Overview

The previous chapter described the demographic data of the participants: age, gender, race, primary diagnosis, and recipient of public assistance. The following chapter will describe the results of the statistical analyses of the dependent variables performed using the Statistical Package for the Social Sciences (SPSS 19.0 for Windows) program. This study utilized three statistical analyses: a linear regression, a paired-samples *t*-test, and a binomial logistic regression.

Research Question One

To address research question one (i.e., do parents' attributions for their young children's behavior problems differ significantly by family demographic variables such as race, gender, age, income, discipline style, and symptom severity prior to participating in a CPT program) a standard linear regression was used to assess group differences on the two subscale scores of the PCS-A as measured at pretest (see Table 4.1). Predictor variables were entered into the regression stepwise in two blocks. Block one consisted of demographic variables and a measure of parental discipline and block two consisted of a measure of symptom severity. The predictor variable of race was dummy-coded into separate binary variables and Caucasian was excluded as a predictor in the regression.

With regard to parent-referent attributions, the regression results indicate that Model 1 (demographic and parent discipline variables) was a significant predictor of parent-referent scores on the PCS-A that accounted for 8.8% of the variance within these scores ($F[7, 379] = 5.19$, $p \leq .001$, $R^2 = .088$). Within Model 1, the pretest PBC

Discipline subscale was the only variable that was a significant predictor of parent-referent attribution scores (t[7, 379] = 5.28, $p \leq .001$, $\beta = .27$). Model 2 (demographic, parent discipline, and child symptoms severity variables) was also found to be a significant predictor of parent-referent attribution scores on the PCS-A that accounted for

Table 4.1 *Linear Regression Results: Predictors of Pretest Parent Attributional Style*

Domain/Predictor	*df*	R^2	*B*	*β*	*t* or *F*	*p*
Parent-Referent Attributional Style						
Model 1	7	.088			5.19	.000**
Child's Gender	385		0.09	.10	0.20	.84
Child's Age	385		0.10	.03	0.50	.62
Public Assistance	385		1.17	.90	1.68	.10
African American	385		-0.67	-.08	-0.90	.37
Latino	385		-0.60	-.05	-0.70	.49
Other Race	385		-0.42	-.04	-0.49	.63
Pretest PBC Discipline	385		0.11	.27	5.28	.000**
Model 2	8	.094			4.89	.000**
Child's Gender	385		0.24	.03	0.52	.60
Child's Age	385		0.15	.04	0.71	.48
Public Assistance	385		1.02	.08	1.45	.15
African American	385		-0.87	-.10	-1.15	.25
Latino	385		-0.61	-.06	-0.72	.47
Other Race	385		-0.52	-.04	-0.60	.55
Pretest PBC Discipline	385		0.11	.26	5.11	.000*
Pretest ECBS Challenging	385		0.09	.09	1.63	.11
Child-Referent Attributional Style						
Model 1	7	.103			6.19	.000*
Child's Gender	385		-0.10	-.01	-0.17	.87
Child's Age	385		-0.01	-.00	-0.04	.97
Public Assistance	385		1.01	.06	1.08	.28
African American	385		-0.20	-.02	-0.20	.84
Latino	385		-2.93	-.20	-2.55	.01*
Other Race	385		-1.29	-.08	-1.09	.28
Pretest PBC Discipline	385		0.14	.25	5.08	.000**
Model 2	8	.217			13.12	.000**
Child's Gender	385		0.74	.06	1.30	.20
Child's Age	385		0.24	.04	0.93	.36
Public Assistance	385		0.16	.01	0.18	.86
African American	385		-1.36	-.12	-1.42	.16
Latino	385		-3.03	-.20	-2.81	.01*
Other Race	385		-1.84	-.11	-1.67	.10
Pretest PBC Discipline	385		0.13	.22	4.69	.000**
Pretest ECBS Challenging	385		0.49	.36	7.44	.000**

Notes: $*p \leq .05$. $**p \leq .001$

9.4% of the variance within these scores (F[1, 378] = 4.89, $p \leq .001$, $R^2 = .094$). However, the addition of child symptom severity on Model 2 did not significantly increase its predictive ability over that of Model 1 (F[1,378] = 2.62, $p > .10$).

With regard to child-referent attributions, the regression results indicate that Model 1 (demographic and parent discipline variables) was a significant predictor of child-referent scores on the PCS-A that accounted for approximately 10% of the variance within these scores (F[7, 379] = 6.19, $p \leq .001$, $R^2 = .103$). Within Model 1, two variables were found to be significant predictors of parents' child-referent attribution scores: Latino race (t[7, 379] = -2.55, $p \leq .05$, $\beta = -.20$) and the pretest PBC *Discipline* subscale (t[7, 379] = 5.08, $p \leq .001$, $\beta = .25$). Model 2 (demographic, parent discipline, and child symptoms severity variables) was also found to be a significant predictor of child-referent attribution scores that accounted for 21.7% of the variance within these scores (F[1, 378] = 13.12, $p \leq .001$, $R^2 = .217$). The addition of child symptoms severity in Model 2 significantly increased its predictive ability over that of Model 1 (F[1, 378] = 55.35, $p \leq .001$). Within Model 2, three variables were found to be significant predictors of parents' child-referent attribution scores: Latino race (t[385] = -2.81, $p \leq .05$, $\beta = -.20$), the pretest PBC *Discipline* subscale (t[385] = 4.69, $p \leq .001$, $\beta = .22$), and the pretest ECBS *Challenging* subscale (t[385] = 7.44, $p \leq .001$, $\beta = .36$).

Research Question Two

To address research question two (i.e., do parents' attributions for their young children's behavior problems change significantly after completing the CPT program), a paired-samples t-test was conducted to assess differences in caregivers' attributional style

as measured on the PCS-A at pretest and posttest (see Table 4.2). There was a significant time effect between pretest (*M* = 13.30, *SD* = 4.15) and posttest (*M* = 11.17, *SD* = 3.67)

Table 4.2 *Paired-Samples t-Test Analysis of Changes in Parent Attributional Style*

	Pretest		Posttest		Paired Sample T-Test			
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	*d*
PCS-A Parent Referent	13.30	4.15	11.17	3.67	7.14	171	.000*	0.54
PCS-A Child Referent	22.42	5.56	20.19	5.83	5.45	171	.000*	0.39

Note: $*p \leq .001$

ratings of parent-referent attributions; $t(171) = 7.14$, $p < .001$ indicating that after receiving treatment, parents were significantly less likely to blame themselves for their child's negative behaviors. A significant time effect was also found between pretest (*M* = 22.42, *SD* = 5.56) and posttest (*M* =20.19, *SD* =5.83) child-referent attributions; $t(171) = 5.45$, $p < .001$ indicating that after receiving treatment, parents were significantly less likely to view their children as responsible for their negative behavior. Effect sizes calculated using Cohen's *d* (Cohen, 1988) indicate a moderate effect for the parent-referent change (*d* = 0.54) and a moderate effect for the child-referent change (*d* = 0.39).

Research Questions Three and Four

To address research questions three (i.e., are pretreatment family demographic variables such as race, gender, age, income, discipline style, and symptom severity significantly predictive of treatment success in the CPT program) and research question four (i.e., are parents' pretreatment attributions for their young children's behavior problems significantly predictive of treatment success in the CPT program), a logistic regression was performed to assess how pretreatment variables other than attributional

style predicted treatment success. The model contained eight independent variables that were entered into the regression in three blocks. The variables child age, child race, child's gender, family income (i.e., receiving or not receiving public assistance), and parent use of corporal punishment (i.e., as measured by the PBC *Discipline* subtest) were entered into the first block of the regression. Child symptom severity (i.e., as measured by the ECBS *Challenging* subscale) was entered on the second block of the regression and both scales of the PCS were entered on the third block of the regression (see Table 4.3).

Table 4.3 Model Summaries

	Omnibus			Hosmer & Lemeshow			Cox & Snell	Nagelkerke
	χ^2	df	p	χ^2	df	P	R^2	R^2
Block 1	2.83	7	.900	5.59	8	.694	.007	.010
Block 2	21.65	1	.000*	13.01	8	.112	.061	.086
Block 3	13.62	2	.001*	8.78	8	.361	.094	.132

Note: *p ≤ .001

The model containing all of the predictors in block 1 was not found to be statistically significant (χ^2 [7, N = 387] = 2.83, $p > .05$), indicating that the model was unable to distinguish between participants who appropriately terminated therapy and those who terminated inappropriately. The block 1 model as a whole explained between 0.70% (Cox and Snell R square) and 1.0% (Nagelkerke R Square) of the variance in termination status, and correctly classified 69% of cases (see table 4.4). As shown in Table 4.5, none of the predictor variables made a unique statistically significant contribution to the model.

The model containing all of the predictors in block 2 was statistically significant (χ^2 [8, N = 387] = 24.47, $p < .01$), indicating that the model was able to distinguish

between participants who appropriately and inappropriately terminated therapy. The model as a whole explained between 6.10% (Cox and Snell R square) and 8.60% (Nagelkerke R Square) of the variance in the appropriateness of termination, and correctly classified 67.20% of the cases (see table 4.4). As shown in Table 4.5, only one of the individual predictor variables made a unique statistically significant contribution to the model - child symptom severity. This predictor recorded an odds ratio of 1.15, indicating that for every additional point scored on the ECBS *Challenging* subscale, the

Table 4.4 *Predicted and Observed Classification Table*

	Predicted		
	Inappropriate Terminator	Appropriate Terminator	Percent Correct
Block 0 - Observed			
Inappropriate Terminator	267	0	100
Appropriate Terminator	120	0	0
Overall Percentage			69
Block 1 – Observed			
Inappropriate Terminator	267	0	100
Appropriate Terminator	120	0	0
Overall			69
Block 2 - Observed			
Inappropriate Terminator	252	15	94.4
Appropriate Terminator	112	8	6.7
Overall			67.2
Block 3 - Observed			
Inappropriate Terminator	244	23	91.4
Appropriate Terminator	95	25	20.8
Overall			69.5

parents were 1.15 times more likely to be appropriate terminators, controlling for other factors in the model. The model containing all of the predictors in block 3 was statistically significant (χ^2 [10, N = 387] = 38.10, $p < .001$), indicating that the model was (Nagelkerke R Square) of the variance in the appropriateness of termination, and able to distinguish between participants who appropriately and inappropriately terminated

Table 4.5 *Logistic Regression Analysis of Pretreatment Predictors of Treatment Success*

Predictor	*df*	*Wald*	*p*	*B*	*Odds*	*95% C.I.*	
						Lower	*Upper*
Block 1							
Age	1	0.34	.558	.06	1.07	0.86	1.31
African American	1	2.06	.151	-.44	0.64	0.35	1.18
Latino	1	0.85	.358	-.34	0.71	0.34	1.47
Caucasian	1	0.86	.353	-.42	0.66	0.27	1.59
Gender	1	0.19	.667	.10	1.10	0.70	1.74
Public Assistance	1	0.38	.536	.23	1.26	0.61	2.63
PBC Discipline	1	0.00	.973	.00	1.00	0.98	1.02
Block 2							
Age	1	1.45	.228	.14	1.11	0.92	1.43
African American	1	0.32	.054	-.62	0.54	0.29	1.01
Latino	1	0.36	.549	-.23	0.79	0.37	1.69
Caucasian	1	0.36	.550	-.28	0.76	0.30	1.89
Gender	1	1.91	.168	.34	1.40	0.87	2.26
Public Assistance	1	0.00	.994	-.00	1.00	0.46	2.14
PBC Discipline	1	0.18	.668	-.01	1.00	0.97	1.02
ECBS Challenging	1	19.64	.000**	.14	1.15	1.08	1.22
Block 3							
Age	1	1.58	.208	.14	1.15	0.92	1.44
African American	1	3.21	.073	-.59	0.56	0.29	1.06
Latino	1	0.66	.418	-.32	0.73	0.34	1.57
Caucasian	1	0.13	.714	-.17	0.84	0.33	2.13
Gender	1	2.41	.120	.39	1.47	0.90	2.40
Public Assistance	1	0.04	.847	-.08	0.93	0.43	2.01
PBC Discipline	1	0.08	.775	-.00	1.00	0.97	1.02
ECBS Challenging	1	25.08	.000**	.17	1.19	1.11	1.27
PCS-A Parent	1	6.38	.012*	.07	1.08	1.02	1.14
PCS-A Child	1	9.30	.002**	-.07	0.93	0.89	0.98

Notes: $*p \leq .05$. $**p \leq .001$

therapy. The model as a whole explained between 9.40% (Cox and Snell R square) and 13.20% correctly classified 69.50% of cases (see Table 4.3). As shown in Table 4.5, only three of

the independent variables made a unique statistically significant contribution to the model (child symptom severity, parent-referent attributions, and child-referent attributions). Again, child symptom severity was the strongest predictor of termination appropriateness, recording an odds ratio of 1.19. This indicated that for every additional point scored on the ECBS *Challenging* subscale, the parents were 1.19 times more likely to be appropriate terminators, controlling for other factors in the model.

Summary

Regression analyses found that parent discipline technique was a significant predictor ($p < .05$) of parent-referent attributions and that Latino race, parent discipline technique, and child symptom severity were significant predictors of child-referent attributions. Not only were these variables statistically significant predictors of attributional style, they also accounted for a moderate amount of the overall variance in parent attributional style (i.e., 9 - 22%). Paired-sample *t*-tests revealed a significant time effect for child-referent and parent-referent attributions, both of which became more positive over the course of treatment. Logistic regression analyses revealed no demographic variables that, at pretest, predicted early termination. However, child symptom severity, child-referent attributions, and parent referent attributions were all found to be significant pretest predictors of treatment success. Together these variables

accounted for approximately 10 – 13% of the overall variance in the appropriateness of termination and increased the predictive accuracy of the model from baseline.

CHAPTER V – DISCUSSION

Overview

The current study sought to fill a gap in the research by examining the role of parental attributions in CPT programs among low-income, urban, minority families of children with behavior problems and what ability these attributions, together with family demographic variables, have to predict early termination from therapy. The overall results of this study suggested that parents' attributional style varies significantly among parents with different discipline styles, children of Latino parents, and children with more severe behavior problems. Additionally, the CPT program used in this study was found to significantly change parent attributional style over the course of treatment. Finally, parent attributional style and child symptom severity were found to be significant predictors of attrition from the CPT program at pretest. The results of the current study suggested a number of implications for early in-home intervention among low-income, urban, minority families of children with behavior problems.

Research Question One – Variability in Parental Attributions

The present results demonstrated that there is significant variation in parent attributional style within the population served by the Behavior Clinic (see Table 4.1). These differences accounted for a small to moderate amount of the overall variance in parent attributional style (9 – 22%). At pretest, parent discipline style was found to significantly predict parent-referent attributional style. Specifically, parents who reported greater use of verbal and corporal punishment at pretest tended to view themselves as more responsible for their child's negative behaviors but less-effective at controlling

them. This finding is consistent with the research of Leung and Slep (2006) who found that having negative parent-referent attributions was correlated with a more lax parenting style and over-reactive responses to child misbehavior. This finding also suggested a certain level of insight by the parents served by the Behavior Clinic. Parents who use more verbal and corporal punishment tend to assume more of the blame for their children's negative behaviors suggesting that at some level, they realized that their present parenting techniques are ineffective in managing their children's behavior. This is consistent with the research of Stouthamer et al., (1992) who suggested that parents who seek out CPT services may have a specific "attributional profile" in that they are more aware of their own ineffectiveness as parents. Finally, this result is not unexpected given the fact that "parent discipline" is the only predictor in this regression model that measures actual parent behaviors. One would expect that a parent's approach to discipline would be significantly related to how effective they view themselves as a parent and how much they are the cause for their child's misbehavior.

When examining child-referent attributions, three variables (i.e., Latino race, level of corporal and verbal punishment, and child symptom severity) were found to be significantly related at pretest. Specifically, parents who reported greater use of verbal or corporal punishment and rated their children's negative behaviors as more severe tended to view their children as significantly more responsible for their own negative behaviors, while Latino parents tended to view their child as being significantly less responsible for their own negative behaviors. When combined with the aforementioned parent-referent results, the child-referent findings regarding parents' use of verbal or corporal punishment and child symptom severity are consistent with the "attributional shift"

described in the general parent attribution literature (Compas et al., 1982). This shift refers to the phenomenon whereby parents of children with behavior problems tend to develop both negative parent-referent and child-referent attributions (Himelstein et al., 1991; Morrisey-Kane & Prinz, 1999). These findings are also consistent with the growing body of research that indicates a strong relationship between attributional style, caregiver perception of their child, disciplinary techniques, and child behavior problems. The finding regarding Latino parents and child-referent attributions is consistent with the research of Chavira et al. (2000) who found that while Latino parents tended to find their child's behavioral excesses problematic, they also tended to not blame their child for this negative behaviors (i.e., they had low child-referent attributions).

These findings have several implications for clinical treatment and future research. First, the results suggest that the population in the present study has attributional tendencies similar to those of the general CPT population; namely that dysfunctional parent attributions tend to be present in the parent child relationship when a child is exhibiting behavior problems. This suggests that the increased focus in the general literature on the link between parent cognitive factors and dropout from CPT programs may also be an important line of research for low-income, urban, minority populations. Second, the finding of significant child-referent differences among Latino parents indicates that parent attributional style may vary as a function of racial group membership. This suggests that additional research is needed to explore the racial group differences in attributional style among this population. Such research will help shed light on how to structure the attribution intervention differently when working with parents of a particular racial group. Future research should also examine the within-racial-group

differences to determine what variables differentiate appropriate and inappropriate Latino, African American, and Caucasian terminators. Third, given the demonstrated link between negative parent attributions and child behavior problems, it may be important for clinics serving this population to incorporate interventions targeting parent attribution into PYC treatment program. For example, if a caregiver endorses high, negative parent-referent attributions at intake, the first treatment session could be modified to specifically address these maladaptive attributions. Finally, the fact that the parents in this study were more aware of their ineffective parenting and had sought out services suggests that clinics that serve populations similar in characteristics to those of this study may need to adjust their outreach efforts to also reach parents with less insight into the link between their ineffective parenting techniques and their children's behavior problems.

Research Question Two – Change in Parental Attributions

The present results demonstrated a significant decrease from pretest to posttest in both parent-referent and child-referent negative parental attributions (see Table 4.2). This is a positive finding and indicates that after receiving the PYC treatment program, parents viewed both themselves and their child as less to blame for their child's problematic behavior. The effect size of the change was moderate for both parent-referent and child-referent attributions. These results are consistent with the findings of several other studies (Boggs et al., 2004; Hoza et al., 2000; Morrisey-Kane & Prinz, 1999; Roberts et al., 1992) that found significant posttest decreases in parent-referent attribution scores. These findings make sense in the context of the PYC treatment program for several reasons. First, it has been well documented in the literature that the PYC treatment program is effective at reducing negative behaviors in young children (Carrasco & Fox, 2012; Fox &

Holtz, 2009). Given the link between negative parent attributions (i.e., both parent and child-referent) and problematic child behaviors, one would expect to observe a decrease in negative parent attributions over the course of a successful treatment that reduces their children's problem behaviors. Second, the larger effect size found in the reduction of negative parent-referent attributions may reflect the focus of PYC. The PYC treatment program primarily focuses on reducing caregivers' ineffective parenting techniques and replacing them with more effective ones. Additionally, because PYC therapists demonstrate and coach parents through the implementation of more effective techniques, parents are more likely to see them work. Furthermore, as the PYC program focuses more on changing parent factors than child factors, parents may not see as much of a change in the reasons that their child misbehaves (e.g., My child just doesn't listen, My child tries to get me angry on purpose, My child thinks he/she is the boss, Because my child is headstrong or stubborn) despite this misbehavior happening less and them feeling more confident in their parenting abilities. Because of this, it would be logical that parents would endorse negative parent-referent items on the PCS-A (e.g., I'm not structured enough for my child, it's hard for me to set limits, I'm not sure how to handle my child's behavior, I don't do the right thing) less at the conclusion of the PYC treatment program than at the beginning.

These findings have several implications for clinical treatment and future research. First, although other CPT studies exist that have examined posttest changes in parent-referent attributions, this study is the first to examine posttest changes in child-referent attributions. It is also the first study known to this author to examine parent and child referent attributions within a CPT treatment program in a community setting among

low-income, urban, minority parents of children with behavior problems. Therefore, this study demonstrates that research into parental attributions with this population is clinically relevant and a significant component of the treatment process. Second, these results suggest that the parent attributions play a significant, but previously unknown, role in the PYC treatment program. Prior research had established that parent levels of verbal or corporal discipline and child challenging behaviors decreased with PYC treatment, but no studies had examined parent perception of the source of the problem. Future research should examine the degree to which parental attributions affect other components of the PYC treatment program such as readiness for treatment, engagement in treatment, and number of treatment sessions required to achieve reliable change. Finally, both parent and child-referent attributions were significantly predicted by parent discipline and child symptoms severity and both decreased significantly over the course of treatment. However, parent-referent and child-referent attributions did not demonstrate the same degree of change over the course of treatment. This would suggest that parent-referent attributions and child-referent attributions are unique constructs that are affected differently by the PYC treatment program. Although empirical evidence supports the effectiveness of the PYC treatment program at reducing behavior problems in young children, it appears to accomplish this without large effect sizes in the reduction of child-referent attributions. Future research could investigate whether changes to the treatment program targeting a reduction in parents' negative child-referent attributions would affect treatment outcomes or parents' participation in treatment.

Research Question Three – Demographic Variables and Early Termination

The results for research question three demonstrated that child symptom severity is the only measured pretreatment demographic or behavioral variable in parents or children that is a significant predictor of early termination (see Table 4.5). The results indicate that parents who viewed their children's behaviors as more problematic at pretest were significantly more likely to be appropriate terminators when controlling for other factors in the model. The model including child symptom severity explained a small amount of the variation in early termination (6 – 9%) and correctly classified 67% of the cases (See Table 4.3). This finding contradicts existing research (Bor et al., 2002; Sanders et al., 2000) that has found more problematic child behaviors at pretest to be characteristic of early terminators. It also contradicts existing research (Gross et al., 2003; Roberts et al., 2006; Sanders et al., 2000; Werba et al., 2006) that has found ineffective parent discipline strategies to be predictive of early termination. However, it is consistent with the research of Reid et al. (2004) who found that parents who were classified as early terminators rated their children's behaviors as less problematic at pretest as well as the general findings in the field that demographic variables are not predictive of early termination (Boggs et al., 2004; Bor et al., 2002; Fox & Holtz, 2009; Marcynyszyn et al., 2011; McCabe & Yeh, 2009; Sanders & McFarland, 2000; Werba et al., 2006. It may also support existing PYC research (Carrasco & Fox, 2012) that found that parents who were classified as early terminators had more compliant children at intake. These findings are unexpected as one might predict that parents of children with more severe behavior problems would experience greater stress and have greater difficulty complying with treatment. It may be that less-problematic children are treated more quickly and once

their behaviors are "good enough," their parents drop out of treatment. Alternatively, it may be that parents of children with more problematic behaviors are in greater distress because their child's behavior has embarrassed them in public or around family members. As a result, they may be more motivated to participate in treatment. Also surprising is the fact that higher levels of parent verbal and corporal punishment were not predictive of termination status. One might predict that parents who utilize less-effective parenting techniques would be resistant to learning new ones and subsequently have greater difficulty complying with treatment.

These findings have several implications for clinical treatment and future research. First, clinicians may be tempted to view the parents of children with the most severe symptoms as poor, unengaged caregivers who will not commit to the treatment program. These results suggest the opposite - that parents of the most behaviorally disordered children are the ones that are most likely to complete the program. Specifically, for every one point increase on the ECBS *Challenging* subscale, the likelihood of the parent being an appropriate terminator increased by 1.15 times. This finding could be included in the PYC training program at the Behavior Clinic to help clinicians overcome potential biases towards more difficult cases. This finding could also be incorporated into the intake assessment at the Behavior Clinic to help clinicians assess a parents' risk of early termination before the first treatment session. Second, this finding demonstrated that parents of children with less-severe behavior problems were more likely to drop out of treatment early. Perhaps these parents only need a session or two to gain the resources they need to better manage their child's behaviors. This suggests that the referral screening procedure at the Behavior Clinic may not be the most effective at

selecting parents who will truly benefit from the PYC treatment program. The Behavior Clinic may consider establishing a cutoff score on the ECBS alone or an index of instruments at referral. Parents who score below the cutoff could receive a truncated version of the PYC treatment whereas parents who score above the cutoff could receive the full PYC program. Alternatively, this finding may suggest that the operationalization of early termination used in this study may be too strict. It may inappropriately have classified "fast track parents" as inappropriate terminators. These parents may represent a subgroup of caregivers who quickly learn the program, effectively incorporate the techniques after one or two sessions, and then see a rapid improvement in their child's behaviors. Because such parents may not see a need for more formal treatment, they may not show up for future sessions and subsequently be miscategorized as inappropriate terminators. Future research should explore alternative operationalizations of early termination that more accurately discern between appropriate and inappropriate terminators. Future researchers could explore reducing the number of sessions that parents are required to attend as part of the outcome criterion definition (this study required parents to attend three sessions after the intake) and/or changing the requirement of "reliable change on the ECBS from intake to last recorded treatment session" to "reliable change on the ECBS at any point in treatment."

Research Question Four – Demographic Variables and Early Termination

The results for research question four demonstrated that both parent-referent and child-referent attributions were significantly predictive of termination status (see Table 4.5). The results indicate that caregivers who at intake viewed themselves as more of the cause of their child's behavior problems were significantly more likely to be classified as

an appropriate terminator. Alternatively, caregivers who at intake viewed their child as more responsible for their own behavior problems were significantly more likely to be classified as an inappropriate terminator. Block 3 of the logistic regression was found to explain approximately 10 – 13% of the variation in early termination. This is a significant finding as previous research among this population was unable to find any pretreatment variables that were able to explain a meaningful amount of the variance in early termination. Additionally, at intake block 3 correctly classified the termination status of approximately 70% of the cases (see Table 4.3). This may initially appear to be an insignificant increase over the predictive accuracy of 69% for block 0. However, given the relatively high baseline accuracy of block 0, any increase in predictive accuracy should be considered both statistically and clinically significant.

These findings are consistent with the "attributional mismatch" described in the literature (Morrisey-Kane & Prinz, 1999) whereby there is an inherent contradiction between caregivers' conceptualization of the problem (i.e., there is something wrong with their child that needs to be addressed in treatment) and the nature of CPT programs (i.e., caregivers need to change their parenting techniques to change their child's behaviors). Specifically, these findings are consistent with the research of Miller and Prinz (2003) who found that caregivers with more negative child-referent attributions at pretest were more likely to drop out of treatment and the research of Peters et al. (2005), who found that caregivers with more negative parent-referent attributions were more likely to complete treatment. These findings make sense within the context of the present study and support this writer's central hypothesis that parents who view themselves as more

responsible for their child's behavior are more likely to complete the PYC treatment program.

These findings have several implications for clinical treatment and future research. This is the first study to link parent attributions and early termination from a CPT treatment program being implemented by a community clinic among a low-income, urban, minority population. While other pretreatment predictor variables have been identified among this population, they are static factors such as race, child age, and marital status (Fox & Holtz, 2009) or parent age and parent education (Nicholson et al., 1999) that cannot be targeted by the treatment program to decrease attrition rates. Furthermore, the dynamic variables that have been identified in this population as predictive of early termination including parental expectations (Nicholson et al., 1999) and child compliance (Carrasco & Fox, 2012) have not led to lower attrition rates when targeted by the treatment program. Therefore, parent attributions represent a new dynamic variable that is predictive of attrition within the population served by the Behavior Clinic. Because parent attribution is a dynamic variable, it may be able to be specifically targeted by the PYC treatment program. Future research should focus on ways to incorporate attribution-based interventions in the first treatment session if not the intake. Doing so may have a retaining effect on the most at-risk parents (i.e., those with high negative child-referent attributions) that could keep them in therapy long enough to see some change in their child's behavior. Retaining at-risk parents long enough to see minor changes in their child's behavior may in turn further sustain their engagement in treatment and protect against any cognitive dissonance that they may experience in the PYC program due to an "attributional mismatch."

Limitations

The present study had several limitations. First, the sample was not obtained through random selection and none of the participants were mandated to complete therapy. As a result, self-selection bias may impact the results in that only the parents who were most internally motivated to receive help completed the study. This bias could have skewed the sample to include more insightful and more motivated parents. This would have influenced the finding that parents who used greater levels of verbal or corporal discipline view themselves as more of the cause of the child's behaviors (research question one) and the finding that parents who viewed themselves as more of the cause of their child's behavior problems are more likely to complete treatment (research question four). Second, this study did not include a measure of racial or cultural identity. Given the variability of identity present within racial groups, this may have skewed the findings that Latino caregivers have significantly lower levels of negative child-referent attributions. Third, the study did not examine within-racial-group pretest differences between inappropriate and appropriate terminators. Such comparisons may have been more informative than between-racial-group differences given the variability that exists within racial groups. Fourth, the findings regarding parent discipline from research question one may be limited due to the instrument used to measure discipline. Because the PBC is a self-report measure, parents may tend to minimize or under-report their use of verbal or corporal discipline which, in turn, may skew the results of the study. Fifth, this study adapted an assessment of parent attributions (i.e., the PCS-A) that had been normed on a different population. As a result, the construct validity of this measure is unknown among the population in the present study. Because of this, the results of this

study should be considered exploratory in nature and interpreted with caution. Future research should explore the construct validity of the PCS-A on the population served by the Behavior Clinic. Finally, this study only used one measure of child symptom severity – the ECBS. Rather than objectively measuring child symptom severity, this instrument is actually measuring parents' subjective perception of their child's symptom severity. What is perceived by one parent as extremely severe behavior may be perceived by another parent as only moderately severe. Future research should also include a measure of the clinician's perception of the child's symptom severity to improve the concurrent validity of this instrument.

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APPENDIX A

Intake Form

Intake Date: _____ **Clinician (s):** _____

Date of last Health Check: _____

Pediatrician/Primary Care Physician: _____

Phone number: _____ **Fax:** _____

Child's Medicaid/BadgerCare Number: _____
(Number must be 10 digits)

Ask to see child's Forward Card to verify correct spelling of name and verification of number

Child & Family Information

Child's name: _____ (including middle name/initial)

Nickname: _____ Sex: M F

DOB: _____ Race: _____ ID #: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Alternate Phone: _____

School/Childcare name: _____ Phone: _____

Days/Times attend: _____

Primary Caregiver: _____ Age: _____ Race: _____

Relationship to child: _____ Do you receive public assistance: Y N

Employer: _____ Phone: _____ Shift: _____

Household Income (circle one) $0-$9,999 $10,000-$14,999 $15,000-$22,999

$23,000-$33,999 $34,000-$49,999 $50,000-$74,999 $75,000 or more Unknown

Health: _____

Additional Caregiver: _____ Age: _____ Race: _____

Relationship to child: _____ Time spent with child: _____

Employer: _____ Phone: _____ Shift: _____

Health: _____

Who lives in the home (names, ages, relationship): _____

_____

Significant family mental health history: _____

_____

Child Health

Birth weight: _____ Weeks gestations: _____

Drug use during pregnancy: Y N (If yes, please describe_____

Tobacco use during pregnancy: Y N (If yes, please describe_____

Alcohol use during pregnancy: Y N (If yes, please describe_____

Medications used during pregnancy: _____

Pregnancy or delivery complications: _____

Significant past health problems: _____

Current health concerns: _____

_____

Medications: _____

Prescribing Physician:_____Phone Number: _____

Lead tested: Y N Date: _____ Level: _____

Areas of concern:
Hearing: Y N Vision: Y N Activity Level: Y N Peer Relations: Y N Mood: Y N

Comments: _____

_____

Assessed for developmental delay: Y N If no, concerns: _____

Agency: _____ Date: _____

Results: No Delays Cognitive Delay Language Delay Motor Delay

Type of services: ST PT OT Spec. Ed Other: _____

Frequency of services: _____ Location: Home Center



APPENDIX B

MARQUETTE UNIVERSITY
PARENT PERMISSION FORM

Behavior Clinic: Treatment Intensity Project
Dr. Robert Fox, Professor of Counselor Education and Counseling Psychology and
Director of the Behavior Clinic at Penfield Children's Center

Your child has been invited to participate in this research study. Before you agree to allow your child to participate, it is important that you read and understand the following information. Participation is completely voluntary. Whether or not you choose to allow your child to participate in this project will have no affect on your child's treatment or relationship with the clinic. Please ask questions about anything you do not understand before deciding whether or not to give permission for your child to participate.

PURPOSE: I understand that the purpose of this research study is to determine what predicts how successful our treatment program is for young children with behavior problems. I understand that my child will be one of approximately 300 participants in this research study.

PROCEDURES: I clearly understand the following procedures will be part of this project following my initial orientation to the program after my child has been referred: (1) Intake Session – I will be participating in an interview with my child, observed interacting with my child, completing surveys, answering interview questions, and having my child's development and behavior assessed. These procedures will require two hours to complete: (2) Treatment Sessions - I will meet with clinic staff for 8 or more 1 to 1 1/2-hour treatment sessions in my home. I will be expected to implement a new form of play with my child and a treatment program including strategies designed to improve my child's behavior that will require up to one hour of my time each day in my home. (3) Post-Test Session – After the treatment sessions are over, I will meet with a staff member for one hour to repeat the intake procedures and a treatment satisfaction form. (4) Short-Term Follow-up Session – About 4-6 weeks after the post-test session, I will meet again with clinic staff for one hour to repeat the post-test session. At that time I may request additional services from the Behavior Clinic. (5) Long-Term Follow-up Session – About 6 months to one year after the post-test session, I will meet again with clinic staff for one hour to repeat the post-test session. At that time I may request additional services from the Behavior Clinic. These treatment records and procedures will be collected and used to tailor our treatment program to meet your child's unique needs and will be collected and used regardless of whether or not you agree to participate in the research project.

DURATION: I understand that my child's participation will consist of one intake session, eight or more treatment sessions, and a post-test session over a period of 10-16 weeks. Following the post-test session, I will be asked to participate in one short-term follow-up session 4-6 weeks after treatment has completed and again 6 months to one year after treatment completion. The duration of your participation will be the same regardless of whether or not you agree to participate in the research project.

RISKS: I understand the risks associated from my participation in this study including: the ongoing parenting stress I may experience in managing my child's behavior and the emotional discomfort my child may experience as I implement new procedures to improve his/her behavior.

BENEFITS: I understand the benefits associated with my participation in this study including: I will have an improved understanding of my child and his/her behavior; I will learn effective strategies to better manage my child's behavior; I will have ongoing professional support as I work to improve my child's behavior; and I will observe improvement in my child's behavior. I also understand that my participation in this study may assist other parents who are experiencing similar behavior problems with their young children.

CONFIDENTIALITY: I understand that all information my child and I reveal in this study will be kept confidential. All of my child's data will be assigned an arbitrary code number rather than using my child's name or other information that could identify my child as an individual. When the results of the study are published, my child will not be identified by name. The data for this study will be kept in a locked file cabinet at Penfield Children's Center. I understand that the data will be destroyed by shredding paper

Initials:_____

Date:_____

documents and deleting electronic files seven years after the completion of the study. I understand that the research records may be inspected by the Marquette University Institutional Review Board or its designees and (as allowable by law) state and federal agencies. I understand that the clinic staff are mandated reporters and are required by law to report child abuse and neglect to the authorities.

COMPENSATION: Not applicable.

VOLUNTARY NATURE OF PARTICIPATION: I understand that participating in this study is completely voluntary and that my child may withdraw from the study and stop participating at any time without penalty or loss of benefits to which my child is otherwise entitled. If I chose to withdraw from this study, my child's research records will be destroyed. I also understand that if I choose not to participate in the Behavior Clinic, I will be referred to alternative family services in the community.

CONTACT INFORMATION: If I have any questions about this research project, I can contact Dr. Robert Fox at (414) 345-6351 or email him at robert.fox@marquette.edu. If I have questions or concerns about my child's rights as a research participant, I can contact Marquette University's Office of Research Compliance at (414) 288-7570.

I HAVE HAD THE OPPORTUNITY TO READ THIS PARENT PERMISSION FORM, ASK QUESTIONS ABOUT THE RESEARCH PROJECT AND AM PREPARED TO GIVE MY PERMISSION FOR MY CHILD TO PARTICIPATE IN THIS PROJECT.

Please choose and check the appropriate consent option box, add the date of consent, and obtain the appropriate signatures.

☐ **Option A** I, the person signing below, understand the above explanations. On this basis I consent to participate voluntarily in the Behavior Clinic Research Study.

Parent/Legal Guardian Signature(s)	Date
Parent/Legal Guardian's Name(s)	Child's Name
Researcher Signature	Date

☐ **Option B** I, the person signing below, understand the above explanations. On this basis I do not consent to participate in the Behavior Clinic Research Study but would like to voluntarily participate in the full range of clinical services offered by the Behavior Clinic.

Parent/Legal Guardian Signature(s)	Date
Parent/Legal Guardian's Name(s)	Child's Name
Researcher Signature	Date

MARQUETTE UNIVERSITY Approved MAR – 2 2010