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Parental substance abuse and child neglect: A controlled trial of a developed treatment manual

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PARENTAL SUBSTANCE ABUSE AND CHILD NEGLECT:

A CONTROLLED TRIAL OF A DEVELOPED

TREATMENT MANUAL

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ABSTRACT

**Parental Substance Abuse and Child Neglect:
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Treatment Manual**

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The maltreatment of children is a devastating social problem in the United States. Many researchers and child welfare workers believe the recent increase in child neglect is directly correlated to an increase in parental substance abuse. There is a strong relationship between child neglect and parental substance abuse; however there are limited treatments that address both issues simultaneously. The present case studies evaluated the efficacy of a newly developed Family Behavior Therapy (FBT) program for child neglect and parental substance abuse utilizing controlled single case methodology. The Family Behavior Therapy (FBT) program is an integration of two published FBT interventions; one being specific to drug abuse (i.e., Azrin, Donohue et al., 2001), while the other is specific to child maltreatment (i.e., Donohue, Van Hasselt, 1999). The treatment included a manual with corresponding protocol adherence measures. Multiple baseline methodology was utilized to evaluate selected components of the FBT treatment program.

The results of controlled multiple baseline evaluations of home-based Family Behavior Therapy (FBT) is described for two participants with substance abuse or

dependence and co-occurring child neglect. The case examples include relevant background information, substance abuse history, diagnostic impressions, behavioral conceptualization of presenting problems, and course of treatment. An overview of the FBT program and treatment plan, course of treatment, and special issues are provided. After baselines were gathered, the first phase of treatment was initiated. The first case involved examination of home safety tours aimed at reducing home hazards and cleanliness followed by treatment additionally targeting family relationships through communication skills training exercises, and a 3rd phase of treatment involving administration of comprehensive FBT. The second case involved implementation of self control, stimulus control, and behavioral goal-setting to reduce drug urges, followed by a 2nd phase of treatment additionally targeting family relationships through communication skills training exercises, and 3rd phase of treatment involving administration of comprehensive FBT. Results demonstrated clear improvement in home safety, pronounced decrease in conflict in the family, and slight improvement in perceived family support and cohesion.

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CHAPTER 1

INTRODUCTION

The maltreatment of children is a devastating problem in the United States. The annual number of reports of child maltreatment in America is approximately 3 million, or 40 cases per 1,000 children and approximately one million of these reports are substantiated (McCurdy & Daro, 1993; USDHHS, 2006). The number of children reported to be victims of child abuse and neglect in the United States doubled from 1.4 million children in 1986 to 2.8 million in 1993, and that number has steadily increased to approximately 3.3 million allegations of abuse and neglect in 2004 (Sedlack & Broadhurst, 1996; USDHHS, 2006). Only a small percentage of child neglect cases are reported, and only a proportion of alleged neglect is substantiated (Way, Chung, Jonson-Reid, & Drake, 2001). Of the child maltreatment allegations, 64% received an investigation, and almost two thirds of the investigated cases involved a child who was found to be a victim of neglect (USDHHS, 2006).

Relative to other forms of child maltreatment, child neglect is grossly understudied. Indeed, researchers often refer to the "neglect of neglect" (Dubowitz, 1994; Kaplan, Pelcovitz, & Labruna, 1999; McSherry, 2007; Wolock & Horowitz, 1984). Child neglect is on a continuum of care, which makes it difficult to delineate and determine clear cutoffs for parenting practices (Dubowitz, 2007). For example, a medical doctor may view not giving a child prescribed medications as neglect, and make a referral to child protective services. However, depending on the neglect criteria for the child protective services agency, this may or may not legally constitute neglect. Interestingly, the concept

of neglect is heavily influenced by the victim's age and developmental level, as compared with sexual or physical abuse. For example, leaving a young child unattended is considered neglectful, but leaving a responsible adolescent home alone is not. Although governmental employees often perceive the consequences of neglect as relatively minimal, research findings indicate the consequences of child neglect are potentially more severe than any other form of maltreatment (McSherry, 2007).

Substance abuse is often co-morbid with child neglect, and has been more extensively studied. Along these lines, there has been a recent focus on the reciprocal relationship between child maltreatment and substance abuse. The rate of child maltreatment, especially child neglect, appears to be increasing over the years, and this increase is may be the result of an increase in parental substance abuse and dependence (Dunn et al, 2002). Studies of the relationship between substance abuse and involvement in the child welfare system indicate substance abuse is present in up to two thirds of child maltreatment cases (Murphy et al., 1991; USDHHS, 1999). It is estimated that 9% or 6 million children in this country live with at least one parent who abuses alcohol, drugs, or both (NCCANCH, 2003). Indeed, studies suggest that a majority of families receiving assistance from child protection services are affected by parental substance use disorders (see Brown and Anderson, 1991; Semidei, Radel, & Nolan, 2001; Young, Boles, & Otero, 2007).

When the relationship between different types of child maltreatment (i.e., neglect, physical abuse) and substance disorders are examined, the strongest association is between substance use and child neglect (Famularo, Kinscherff, & Fenton, 1992; Trocme et al., 2001). Parental drug use may put a child at increased risk for child neglect because

parents are likely to devote their time and resources to obtaining and using drugs when they should be performing care-taking behaviors for their children (Harrington, Dubowitz, Black, & Binder, 1995). More than half of the parents who have been found to physically abuse and neglect their children have evidenced drug abuse, yet no treatments have been validated to concurrently address substance disorders and child neglect in this population (Donohue, Romero, & Hill, 2006). Therefore, there is a significant need to empirically develop treatment programs for neglected children and their families, particularly those that employ strength based practices that target specific limitations in the family (Dubowitz, 2007).

The present study was conducted to evaluate components of a newly developed Family Behavior Therapy (FBT) program for child neglect and parental substance abuse utilizing controlled single case methodology. FBT was selected because of promising results in outcome studies with substance abuse, anecdotal support with child neglect, and promising results from an uncontrolled trial. The Family Behavior Therapy (FBT) program is an integration of two published FBT interventions; one specific to drug abuse (e.g., Azrin, Donohue, et al., 1994), and the other is specific to child maltreatment (i.e., Donohue & Van Hasselt, 1999). The developed FBT treatment includes a manual with multiple treatment modules that have corresponding protocol adherence measures. The FBT program was designed to address drug use, child neglect, and related behavioral problems such as domestic violence in a standardized treatment format. The study examined multiple interventions that are designed to reduce illicit drug use and child neglect behaviors by improving communication and support, teaching the participant to

identify maladaptive behavioral triggers, teaching impulse control techniques, and increasing the safely skills of the participants and their families.

Two multiple baseline designs across behaviors were utilized to evaluate particular components of the FBT program (i.e., two separate case studies). Measures of problem areas including home safety and beautification, parenting beliefs and practices, drug use, child neglect and abuse potential, and issues with communication were utilized on an ongoing basis to evaluate the effectiveness of the targeted treatment components. Although both cases met similar inclusionary/exclusionary criteria, each case had unique and interesting circumstances. The first case involved a woman with a history of severe mental illness, domestic violence, and involvement in the child welfare system. The second case involved young woman with a documented cognitive disability raised in a home of violence that was in the child welfare system for the first time. Treatment outcome results for each case will be described in light of their unique clinical features.

CHAPTER 2

LITERATURE REVIEW

In the following sections literature relevant to the current study are reviewed. These sections include 1) overview of child neglect, 2) the relationship between child neglect and substance abuse, 3) treatments for child neglect, 4) existing treatments for substance abuse, 5) an overview of Family Behavior Therapy for substance abuse and child neglect, 6) description of treatment manuals, 7) method of developing a treatment manual for substance abuse and child neglect, 8) summary of a pilot study of FBT program, 9) methodological issues to consider in treatment outcome research, and 10) specific aims and hypotheses.

Overview of Child Neglect

Definitions of Neglect

There are multiple forms of child maltreatment, including physical abuse, sexual abuse, emotional abuse, and child neglect. Unlike other forms of child maltreatment, child neglect involves an omission of behavior that generally results in impairment to a child's physical or emotional development, or to the overall welfare of the child. There are four main categories of neglect, including physical neglect (e.g., inadequate supervision, lack of food, lack of safe housing), emotional neglect (e.g., failure to provide affection to child), educational neglect (e.g., not enforcing school truancy rules, failure to promote the child's education), and medical neglect (e.g., not providing adequate medical care) (Scannapieco and Connell-Carrick, 2002). According to the U.S. Department of

Health and Human Services (1998), child neglect accounts for 60% of founded incidents of child maltreatment, with 57% of these cases being physical neglect, 29% being educational neglect, and 22% being emotional neglect.

Characteristics of Perpetrators of Child Neglect

Common characteristics of perpetrators of child maltreatment include being diagnosed with a specific mental health disorders, being a victim or perpetrator of domestic violence, experiencing an unhappy childhood, addiction to drugs or alcohol, not wanting or expecting the pregnancies, not bonding with the child, and living in poverty (Dufor, Lavergne, Larrivee, & Trocme, 2008; Regan, Ehrlich, & Finnegan, 1987). There are multiple risk factors for child neglect and the more risk factors that are present the greater the potential for a caregiver to become a perpetrator of child neglect (Larrieu, Heller, Smyke, & Zeanah, 2008). In understanding the context in which these characteristics develop, it is important to acknowledge there is a strong intergenerational transmission of child maltreatment (Crouch, Milner, & Thomsen, 2001), although the majority of victims of child maltreatment do not go on to victimize their children. Other risk factors include suffering from significant stressors such as health problems, economic problems, and family interaction problems (Bernstein, Stein, Newcomb, et al., 2003). In addition, perpetrators often have unrealistic expectations of a child's development (i.e., lack understanding of developmental stages), are unaware of the child's needs, and have a strong belief in the value of physical punishment (English, Marshall, Brummel, & Orme, 1999).

A relationship between psychopathology and perpetrating child maltreatment is well documented in the literature. Indeed, having a history of psychiatric problems has been significantly correlated with having had an open case with child protective services (Sidebotham & Heron, 2006). Abusive and neglectful parents commonly have been diagnosed with certain psychological disorders, including Antisocial Personality Disorder, Major Depression, Dysthymia, and Substance Abuse (Kaplan et al., 1983; Leinonen, Solantus, & Punamaki, 2003). Mothers who have been founded for child neglect are two times more likely than non-neglecting mothers to have suffered from post-partum depression (Zurivan, 1996). An Epidemiological Catchment Area study (1996) found more than half of the parents in the study who neglected their children meet lifetime criteria for a DSM-III Substance Abuse/Dependence Disorder. Dunn et al. (2002) found the rate of substance disorders was significantly higher among neglecting parents than in the general population. In a large community sample of approximately 11,000 parents, a lifetime DSM-III substance disorder was indicated in slightly more than half of the parents who self-reported neglecting their children (Chaffin, et al., 1996; Kelleher, et al., 1994). Similarly, Famularo, Kinschereff, and Fenton (1992) identified the diagnosis of substance abuse at a higher rate in mothers that maltreated their children compared to non-maltreating mothers. In addition, this study found mothers who maltreated their children exhibited a significantly greater incidence of current mood disorders, alcohol abuse, personality disorders, and posttraumatic stress disorder. Interestingly, the same study found other axis I DSM disorders are generally not risk factors for being a perpetrator of child maltreatment unless substance abuse is also present.

Certain maladaptive cognitive processes appear to increase the likelihood that child neglect will occur. Hildyard and Wolfe (2007) compared neglectful and non-neglectful mother's information processes on tasks specific to child emotions, behavior, and other child related information. Neglecting mothers demonstrated significantly greater difficulty with recognition of infant's feelings of interest, recognition of emotion, and were more likely to identify the emotions being displayed by as sadness or shame. In addition, neglecting mothers used significantly less descriptive words for emotions indicating neglecting mothers may have less developed emotion vocabulary or less general understanding of emotions. The difficulties with information processing may be the result of a failure to perceive and attend to information about the child's needs accurately resulting in the inability to understand what needs or emotional reactions of a child require a response ultimately leading to neglecting many of the child's needs (Crittenden, 1999).

Approximately 80% of perpetrators of child neglect are the primary caregiver of the victim, and 33% of families reported for child maltreatment are single female-headed households (Dufor, Lavergne, Larrivee, & Trocme, 2008; Fantuzzo, 1990; Wolock, Sherman, Feldman, & Metzger, 2001). Sedlak and Broadhurst (1996) found that being a single parent increased the risk of all types of neglect by 87%. Single parenthood and non-married status are significantly correlated with the occurrence of child neglect (Chaffin, Kelleher & Hollenberg, 1996). Perpetrators of physical neglect tend to be female (71.0%), and female perpetrators are more likely to be re-reported for child neglect than any other form of maltreatment (Way, Chung, Jonson-Reid, & Drake, 2001). Mothers who are the heads of single parent families have been found to have a harder

time coping with severe and stressful situations, and in general fare worse than father headed single households and intact families (Dufar, Lavergene, Larrivee, & Trocme, 2008). No matter what family members are involved if the family is more chaotic, less organized, or utilizes less positive affect the risk for child neglect is greatly increased (Gaudin et al., 1996).

Mothers under 26 years of age have been found to neglect their children more often than older mothers (Kienberger, Jaudes, Ekwo, & Van Voorhis, 1995; Lounds, Borkowski, & Whitman, 2006). The combination of high poverty and young maternal age increases the risk for child neglect. Mothers 17 years of age or younger who lived in high poverty areas were 17 times more likely to have a substantiated case of neglect than mothers who were 22 years of age or more in low poverty areas (Lee & George, 1999). It is believed that younger mothers engage in less appropriate parenting behaviors than older mothers possibly due to a lack of knowledge regarding parenting skills, having more unrealistic expectations of their children's development, being unaware of children's needs, and having a strong belief in physical punishment (Zurivan, 1988). Adolescent mothers have been found to offer toys to their infants less frequently, and have infants that vocalized and smiled less than adult mothers (Barratt & Roach, 1995).

In addition, young mothers may be less focused on their children as a result of attempting to deal with high levels of stress (i.e., financial, parenting, and relationship stress). A major stressor is having multiple children in the home. Parents who have more children, especially unplanned children, or space the ages of their children closer together have a greater likelihood of becoming perpetrators of child neglect likely as the result of the high stress levels associated with caring for multiple young children (Zuravin, 1988).

Zurivan (1996) identified neglecting mothers were 5 times more likely to have had 2 or more children prior to being 18 years of age as compared with physically abusing mothers. Another stressor is having a child with behavioral issues or difficult temperaments. Lounds et al. (2007) found that children who exhibited more externalizing problems were at greater risk for being the victim of neglect by young mothers. The stress may be harder for young mothers to deal with because of a lack of experience and maturity that adult mothers possess.

The literature regarding the common characteristics of perpetrators of child neglect provides insight for researchers to consider when developing or implementing treatment with this population. Treatments will need to address co-morbid psychological disorders including depression and substance abuse (Kaplan et al., 1983; Leinonen, Solantus, & Punamaki, 2003; Sidebotham & Heron, 2006; Zurivan, 1996). The findings regarding cognitive processes indicate cognitive behavioral interventions to improve information processing and to address maladaptive attributions may be beneficial with perpetrators of child neglect (Hildyard & Wolfe, 2007; Crittenden, 1999). These findings inform us that in addition to teaching parenting skills other skill based interventions should be utilized. Programs that assist the perpetrator in reducing their stress level including helping the perpetrator gain financial stability, teaching job getting skills (i.e., to obtain better paying employment, interviewing skills), and teaching how to budget finances would appear to be generally beneficial (Bernstein, Stein, Newcomb, et al., 2003). Including communication skills training to eliminate family interaction problems might increase the chance of success in treatment and in eliminating the intergenerational transmission of child neglect maltreatment (Crouch, Milner, & Thomsen, 2001). Finally, programs that

target mothers, both young and adult, may prove to be most advantageous (Dufor, Lavergne, Larrivee, & Trocme, 2008; Fantuzzo, 1990; Kienberger, Jaudes, Ekwo, & Van Voorhis, 1995; Lounds, Borkowski, & Whitman, 2006; Wolock, Sherman, Feldman, & Metzger, 2001).

Characteristics of Victims of Child Neglect

Certain characteristics place children at an increased risk for being a victim of child maltreatment. None of these characteristics place the blame on the child, but are used to identify children who are at risk for being a victim. A child's age is a risk factor for being a victim, as child neglect occurs predominately in children under the age of 8 years (Bernstein, Stein, Newcomb, et al., 2003). Indeed, Marovich and Wilson (1999) found the incidence of child neglect decreased as the age of the child increased. Infants and toddlers are more likely to be victims of neglect than any other form of maltreatment, which is likely because younger children are highly dependent on their caregiver (Jones & McCurdy, 1992; USDHHS, 2002).

Connell-Carrick (2003) conducted a review of the literature on correlates of child neglect and identified mixed findings in regards to the child's gender. Out of the five studies examined two identified being female as a risk factor for being a victim of child neglect. However, the other three studies reviewed found conflicting results that indicated boys were at a greater risk. Specifically, boys that had disabilities or handicaps were the most at risk of being a victim. Randall and Parrila (1997) found that disabled boys were more likely than non-disabled boys to be victims of maltreatment, and most often of child neglect. Although there is conflicting evidence for which gender is at

greatest risk there appears to be factors (e.g., developmental delay, disabilities) that may place males at an increased risk to be neglected.

Babies born exposed to drugs or alcohol in utero may have physiological problems, developmental problems, or both that place them at an increased risk to be victims of child neglect. Approximately 375,000 of the children born each year have been exposed to parental substance abuse resulting in Fetal Alcohol Syndrome, low birth rate, and many other serious problems that can have short term and long-term effects on the child's health (Chasnoff, 1988). Jaudes, Ekwo, and Vorrhis (1995) compared the number of children born exposed to illicit drugs with the Department of Family Services records of reported child abuse and neglect and found that in total 513 children in that community were exposed to illicit substances in-utero, and of these children 155, or 1.5 out of every 5 children, had been reported as victims of child abuse and neglect to child protective services. Kelly (1992) examined the relationship between parental stress, prenatal exposure to drugs, and the occurrence of child neglect. Drug exposed infants were more likely to be in the custody of child protective services, and significantly more drug using mothers were found by child protective services to neglect their children. As expected, parents of drug exposed infants reported higher levels of parenting stress including stress from the infants being easily agitated and crying at relatively high rates than the parents in the comparison group with non-drug exposed infants.

Other factors that put a child at risk for being a victim of neglect include being born prematurely, having a low birth weight, being viewed as less attractive by the parents, having a difficult temperament, and having a physical or mental disability because these characteristics are believed to make the parenting role less rewarding and more stressful

which increases parental irritability (Sidebotham & Heron, 2006; Swenson & Chaffin, 2006; Wolfe & McEachran, 1997). In regards to temperament, mothers who neglected their infants rated them as having a more difficult temperament compared to non-neglecting mothers (Brayden, 1992).

Children that live in poverty are at an increased risk of child neglect. Studies have found that the co-occurrence of an income less than $15,000 and a being single parent increase the chances a child will be neglected (Coohey, 1998). In addition, the more people that live in the home the greater the risk of child neglect. Child in families with four or more children in the home have been found to experienced neglect three times the rate of children with three or less children (Sedlak & Broadhurst, 1996). Death from child neglect tends to occur in families with an average of 4.9 people residing in the home (Margolin, 1990).

Negative Consequences of Child Neglect

The negative effects of child neglect are potentially more devastating than any other form of child maltreatment. In fact, the National Center on Child Abuse and Neglect reports child fatalities and serious injuries are more often associated with child neglect than any other form of child maltreatment including physical abuse (NCCAN, 2003). These consequences vary according to differences in the severity, duration, and frequency of maltreatment, as well as differences in the child (e.g., temperament, coping skills, developmental stage) and his or her environment (e.g., family income, social support, neighborhood characteristics; Hecht & Hansen, 2001). The consequences of child neglect include long-term behavioral and emotional problems that often require psychological treatment.

Many victims of child neglect report feeling a loss of control over life, experience high stress, poor self-esteem, feelings of hopelessness, and developmental delays (Erickson & Egeland, 2002). In fact, victims of neglect, as well as other forms of child maltreatment, have been identified as being at greater risk for developing psychiatric disorders compared to non-maltreated children (Livingston, Lawson, & Jones, 1993). These disorders include posttraumatic stress disorder, depression, personality disorders, conduct problems, dissociation, panic disorders, anxiety disorders, and eating disorders (see Bernstein, Stein, Newcomb, et al, 2003; Kaufman, 1991; Livingston, Lawson, & Jones, 1993; see Werkerle & Wolfe, 2003). In addition, being a victim of neglect is a risk factor for suicidal behavior in adolescence and adulthood (Brodsky & Stanley, 2008). A disproportionately large number of adults who suffer from a substance abuse disorder report that they were maltreated as children (Kelly, 2002). Indeed, being the victim of child maltreatment has been found to double the risk of having a substance abuse problem as an adult. Experiencing child maltreatment is also associated with criminal behavior in adulthood. McCord (1983) conducted a longitudinal study and found that of the children that were abused and neglected 40% were convicted of a crime as an adult. Moreover, approximately half became criminals, alcoholics, were mentally ill, or died before reaching 35 years of age.

Impairments in language in maltreated children are a well-documented. Maltreated toddlers tend to show less developed expressive language about themselves and others, which may negatively affect their social interactions with others. For instance, Katz (1992) found abused, and in particular neglected, children suffered from language delays including delays in the development of language use. Harrington, Dubowitz, and Black

(1995) examined the relationship of maternal substance abuse, child neglect, and early childhood development. Study results found children from safer, cleaner, and more organized home environments had higher receptive language development than children in homes that were hazardous, untidy, and less organized.

Maltreated children appear to have significantly lower scores relative to non-maltreated youth on measures of intellectual functioning and academic achievement. Indeed, being a victim appears to be associated with academic difficulties. The Minnesota Parent Child Project followed 267 newborns of mothers who were at high risk to commit child neglect (Egeland & Erickson, 1999). Results of the study showed that by the time the children were school age maltreated children evidenced academic difficulties and an astounding 95% of the maltreated children were receiving some form of educational assistance in school. Perez & Widom (1994) evaluated the long term effects of childhood victimization on intellectual and academic outcomes in individuals at the age of 28. They found individuals who had been abused or neglected functioned at lower IQ scores and reading levels than the controls. Indeed, victimized individuals had an IQ two standard deviations below the mean.

Maltreated infants often form insecure attachments with their caregivers that are later associated with anxious and avoidant patterns of interaction with others (Schneider-Rosen & Cicchetti, 1984). Indeed studies have found that children who were victims of maltreatment in infancy were more anxious than those who were not maltreated (Egeland & Erickson, 1999). This study also found that by the age of 2 years maltreated children lacked enthusiasm, were easily frustrated, had issues with anger, had poor impulse

control, and expressed less happiness as compared to non-maltreated children. These behaviors may create interpersonal difficulties for the child in the future.

The most disturbing negative consequence of child neglect is death. In 2004, it was estimated that 1,490 children died as a result of child maltreatment, with the majority of deaths attributed solely to neglect (U.S. Department of Health & Human Services, 2006). Child neglect accounts for approximately 45% of child fatality cases (Wang & Daro, 1998). Younger children are at greatest risk with 78% of neglect related child fatalities involving children less than 3 years of age (Scannapieco & Connell-Carrick, 2002; USDHHS, 1998). Child fatalities have also been identified to be associated with parental substance abuse. Substance abuse has been found to be associated with approximately two thirds of child maltreatment fatalities, with 44% of these deaths involving child neglect (Reid, Macchetto, & Foster, 1999).

The negative consequences of child neglect extend beyond the victim and the victim's family. For instance, direct and indirect monetary costs are associated with the needs of abused or neglected children, and with the long-term effects of child maltreatment. Fromm (2001) estimates annual spending as a result of child abuse and neglect is 94 billion dollars and rising. This cost includes hospitalization of children, chronic health problems, mental health services, spending by the child welfare system and law enforcement agencies, judicial system costs, special education, and loss of productivity as adults.

The Relationship between Child Neglect and Drug Abuse and Dependence

A 1998 survey found that 85% of U. S. child protection services caseworkers reported that substance abuse was one of the leading problems in families that receive services

from government agencies (Kelly, 2002). Results of a 1999 national survey found 80% of 915 frontline professionals from child welfare agencies reported that parental substance abuse contributed to the child maltreatment in their cases (Reid et al, 1999). Parental substance abuse appears to negatively influence at least 70% of reported cases of child maltreatment (Locke & Newcomb, 2003). In addition, caseworkers report that 65% of children were maltreated while their parents were under the influence of alcohol or drugs. Although there is a strong relationship there are limited treatments available for substance abuse in child welfare cases. Results from one survey found that child welfare agencies were able to provide substance abuse treatment services to only a small fraction of the families in need (Child Welfare League of America, 1997). Worcel, Green, Burrus, and Finigan (2004) found that only 50% to 75% of parents who were abusing substances received substance abuse treatment.

A parental substance abuse problem was found for slightly more than half (55%) the families in a study examining family characteristics of child abuse and neglect reports (Wolock, Sherman, Feldman, & Metzger, 2001). Walsh, MacMillan, and Jamieson (2003) examined the relationship between child maltreatment and parental substance in a community sample of 8,472 parents. Results indicated rates of maltreatment were significantly higher for those reporting parental substance abuse histories, and that parental substance abuse was associated with a two fold increase in risk for exposure to child physical or sexual abuse. The Canadian Incidence Study of Reported Child Abuse and Neglect (CIS) provided national estimates of cases of child maltreatment reported to and investigated by child welfare authorities and found alcohol or drug abuse was a factor in 34% of all cases with the highest rates for emotional abuse and neglect (Trocme et al.,

2001). McNichol and Tash (2001) examined current and closed cases of 268 children place in foster care and found for 14% the primary reason they were in foster care was parental substance abuse. Overall, 74% of the children had been "affected in some way" by parental substance abuse. Jones (2005) conducted case reviews of a random sample of 443 children with substantiated abuse or neglect cases. He found that 68% of the children had mothers who abused alcohol or drugs, and 37% had mothers who abused both.

Substances that are most often abused by perpetrators of child abuse and neglect include cocaine, opiates, heroin, and alcohol, with more than 24% of parents abusing multiple drugs (Chance & Scannapieco, 2002). The Drug Abuse Treatment Outcome Study (DATOS) examined both men and women who entered a community based drug and alcohol treatment program and in a sample of mothers, cocaine was the drug of choice for 58%, heroine for 24%, alcohol/ marijuana for 8%, and non-specified for 9% (Cash & Wilke, 2003). A national survey in 1991 indicated 18% of substantiated reports of child abuse and neglect involved a caretaker that primarily abused illicit drugs including marijuana (32%), cocaine (20%), crack (17%), and a small percentage-using heroin (4%) (Magura & Laudet, 1996).

Individuals who abuse substances tend to function worse as parents, because their substance use results in limited financial resources to purchase products necessary to effectively raise their children, they spend a significant amount of time seeking drugs, and the time away from their children prevents effective monitoring of, and engagement in, their children's activities (NCCANCH, 2003). Ammerman et al. (1999) hypothesized various ways that parental substance abuse negatively impacts parenting includes low

frustration tolerance, increased anger reactivity, disinhibition of aggressive impulses, and interference with appropriate judgment.

Parental substance abuse is also linked to higher rates of substantiated child maltreatment cases (Sun, Shillington, Hohman, & Jones, 2001). Indeed, 18% of substantiated reports of child abuse and neglect involved a caretaker that primarily abused an illicit drug (Magura & Laudet, 1996). The issue of parental substance abuse in the child welfare system has been complicated by the Adoption and Safe Families Act (ASFA, 1997), which mandates a 1-year timeline for permanency hearings. Parents who are unable to successfully address their substance abuse problems and associated issues within the one year timeline face a higher possibility of having their parental rights terminated (Green, Furrer, Worcel, Burrus, & Finigan, 2007). Indeed, studies have demonstrated parents identified to have substance abuse problems have the lowest probability of reunification with their children (Gregoire & Shultz, 2001).

Substance use increases the chances of being reported and re-reported to child protective services (English, Marshall, Brummel, & Orme, 1999). For instance, Wolock and Magura (1996) found significantly more re-reports for the cases in which the initial report involved parental substance abuse compared to those original that did not involve parental substance abuse. Leif (1985) explained the difficulties of working with this population by stating in his experience there is no group more special or complex than a drug-abusing parent. Drug-abusing mothers must cope with the consequences of drugs such as physical discomforts, including withdrawal symptoms, and they must often cope with financial and psychological problems that place them at risk for parenting

difficulties. Other problems that substance-using mothers commonly experience include being a single mother, living in poverty, and being uneducated (Bernstein et al, 2003).

The relationship between parental substance use and child neglect is not necessarily a linear relationship, but is best thought of as interplay between many factors, including overall functioning in the family, mental illness, unemployment, and stress (NCCANCH, 2003). Common problems exist in homes where substance abuse occurs, including poor communication skills, high family conflict, and low levels of family competence (Moos & Moos, 1984). For instance, in a sample of incarcerated individuals with substance abuse problems, child maltreatment was found to be both directly and indirectly related through problems in the family of origin (Sheridan, 1995). That is, substance abuse appears to negatively impact family functioning, which, in turn increases the likelihood of child neglect or abuse. Murphy et al. (1991) found parental substance abuse histories predicted various problem behaviors in parents such as higher recidivism rates for child neglect and abuse, higher rates of failing to comply with court ordered treatment, and a higher rate of children being removed from parental custody compared to parents without a history if substance abuse. Similarly, in a sample of families affected by child maltreatment, Dore, Doris, and Wright (1995) found families that included a substance abuser were more dysfunctional than families that did not involve a substance abuser.

Parental substance abuse increases the likelihood of child neglect directly (e.g., substance use leads to immediate neglectful behavior) and indirectly (substance use results in behaviors that lead to later neglect) (Sheridan, 1995). Donohue, Romero, and Hill (2006) provide several examples of the reciprocal relationship. An example of its direct contribution is leaving a toddler in a car unattended for an extended time while

using cocaine at a friend's house. In this example, cocaine intoxication distracts the parent from attending to the needs of the child, resulting in the child being left in the car unsupervised. An indirect contribution of substance use leading to child neglect would be increased irritability due to chronic cocaine use. Irritability increases the likelihood of stress, which secondarily increases the likelihood of forgetting a sleeping child in a car seat during a hot summer day. In the preceding examples, drug use influences child neglect. However, child neglect may lead to drug use. For instance, guilt associated with child maltreatment may influence a parent to use drugs to temporarily eliminate aversive thoughts. For instance, as was mentioned above, child maltreatment and substance abuse share many antecedent stimuli, including stress, unemployment, irritability, substance abusing friends and significant others, poor assertiveness skills, criminal activity, family conflict, and dangerous living environments. The reciprocal relationship between parental substance abuse and child neglect supports the need to address these issues concurrently in treatment.

Existing Treatments for Child Neglect

Prior to the passage of the Child Abuse and Neglect Treatment Act in the 1970's few interventions for child maltreatment existed (Cohn & Daro, 1987). Indeed, as recently as 20 years ago, not a single empirically driven study had been conducted to evaluate effective treatments for child maltreatment (Cohen, Mannarino, Murray, & Igelman, 2006). Today there are multiple empirically supported treatments for physical and sexual abuse, but there are still few that specifically target child neglect. Most maltreated are treated by community therapists who tend to not utilize evidence-based treatments. The

treatments that are available are varied in regards to the type of services that are provided, and whether the victim or the perpetrator or both receive the services. Some programs are designed to reduce the negative consequences of the maltreatment with the child victims while others involve teaching the perpetrator more adaptive parenting practices and an understanding of the negative effects neglect has on a family. Therapy may be individual, family, or a combination of the two, and services are often comprehensive and involve multiple treatment components such as safety skills, communication, and parenting.

Child Focused Interventions

There are treatment programs that target the child victims of neglect, and outcome support for their efficacy is extremely limited. Most treatment programs for child victims are day treatments that provide group activities combined with individual therapy (Wolfe & Wekerle, 1993). Culp, Richardson, and Heide (1987) demonstrated that child victims involved in a therapeutic day treatment program that received group and individual treatment in conjunction with similar services provided to their parents showed improvements in fine motor, cognitive, social, and language skills. Culp, Little, & Letts (1991) studied the outcomes of a therapeutic day treatment program that focused on helping children develop relationships with teachers and peers, and how to recognize and cope with their own feelings. The program utilized group milieu therapy and individual treatment to increase the self concepts of children who were victims of neglect. Children demonstrated significant improvement in cognitive competence, and had high rates of maternal acceptance and peer acceptance compared to maltreated children that did not participate in the program. Children that were initially withdrawn demonstrated an increase in positive pro-social behaviors and responses to other children. Kolko (1996)

found that children who received a cognitive behavioral intervention reported less physical discipline being used on them, and a greater reduction in family problems.

Play therapy is commonly used with child victims of maltreatment. Resilient Peer Treatment is a form of play therapy that pairs resilient peers with socially withdrawn abused and/or neglected children to target social interaction skills and enhance positive play. Resilient peers are selected based on their ability to display a high level of positive play. Children were randomly assigned to either the resilient peer treatment or to a control condition (Fantuzzo et al., 1996). The control condition involved pairing a socially withdrawn abused and/or neglected child with a peer of average play ability. Both at two weeks and at two months post intervention, children who were paired with a resilient peer had significantly decreased their solo play and significantly increased in their positive interactive peer play. Further, the treatment group was rated significantly higher in social skills, self-control and interpersonal skills.

Perpetrator Focused Interventions

Perpetrators of child neglect tend to engage in behavioral problems such as poor impulse control, poor child management skills, and limited problem solving abilities (Swenson & Chaffin, 2006), and as a result most parent-focused interventions for child maltreatment tend to be of cognitive-behavioral orientation (CBT). Behavioral components are important because as mentioned previously many parents who engage in behaviors consistent with child neglect do so as a result of limited or deficient parenting skills and CBT programs provide the opportunity for parents to modify or learn new parenting behaviors. These programs involve skills training treatments, such as child management, anger management, and stress management. Child management skills

training involves educating parents about differential reinforcement, contingency management for their children, modeling and role-playing relatively non-aversive disciplines (i.e., Hanf's time out, Azrin's positive practice), teaching problem solving skills, and providing corrective feedback (Wolfe & Wekerle, 1993). Fantuzzo et al. (2007) conducted a randomized field trial to test the effectiveness of an intervention designed to enhance the prosocial interaction and psychological well being of parents with histories of child maltreatment. Parents received either 10 group training sessions focusing on the relationship between stress and social support or control conditions. Parents who received the intervention reported significantly lower levels of stress and higher levels of social activity than parents in the control condition.

Abuse-Focused Cognitive Behavioral Therapy (AF-CBT, Kolko & Swenson, 2002) targets parenting skills or practices, including increasing the use of positive child management practices and reducing the use of harsh and coercive discipline practices. AF-CBT concurrently targets the abused child's externalized behavior problems, and attempts to increase their prosocial behaviors and improve peer interactions. Child-directed components include the following: socialization to models of stress and CBT, cognitive processing of the referral incident, distortions, and other misattributions about the incident. Parent components include psychoeducation about child abuse laws, child safety courses, affect regulation skills including identification of abuse-specific triggers, stress management, and anger control; coping skills discussions (healthy vs. unhealthy coping) and training to address everyday problems. Kolko (1996) randomly assigned 55 physically abused children between 6 and 13 years old to AF-CBT, abuse-focused family therapy, or routine community services. This study demonstrated that children receiving

AF-CBT experienced a greater decrease in problems with enemies in the neighborhood and school than children receiving family therapy or routine community treatment and families receiving AF-CBT experienced significantly greater decreases in parental anger and physical discipline. Families receiving AF-CBT or family therapy had significantly greater improvements in child externalizing behavior, parental distress and abuse risk, and family conflict and cohesion compared to those who received routine community services.

Cognitive treatment components focus on changing maladaptive thought patterns to more appropriate thought patterns in order to reduce the risk of engaging in child maltreatment. Self control and anger control techniques are employed to assist parents in controlling their arousal levels and impulses. These interventions are designed to teach parents to detect arousal changes, to replace anger producing thoughts with more appropriate thoughts, and to use self-control in high risk situations or situations in the past that involved negative parenting practices. For example, a mother who is identified to neglect her infant by not changing dirty diapers would be taught to recognize maladaptive thought patterns pertinent to this behavior (i.e., the baby can wait to be changed until later) and adopt more appropriate thinking patterns (i.e., if I do not change the diaper now, the baby may get a rash). Studies of cognitive behavioral treatments show that there is a high rate of success for caregivers (Wolfe & Wekerle, 1993). Those who receive CBT are likely to reduce behaviors and thoughts that predispose them to engage in child neglect. Specifically, improvements in parenting skills are often evident, as well as an increased ability to positively interact with children (Wolfe & Wekerle, 1993).

Follow-up data show newly established pro-social behaviors are maintained, and there is a low rate of recidivism.

Comprehensive Treatment Approaches

Based on the model proposed by Brofenbrenner (1979) many researchers believe the occurrence of abuse and neglect is a result of problems across multiple contexts (Swenson & Chaffin, 2006). Many treatment programs for child neglect are comprehensive, which mean the programs attempt to address multiple factors associated with child neglect and provide a wide range of services such as family support, home safety, managing finances, job search skills, and enhancing family communication (Barone, Greene & Lutzker, 1986; Brunk, Henggeler, Whelan, 1987; Hughes & Gottlieb, 2004; Lutzker, 1994). Cohn and Daro (1987) reviewed 89 treatment programs targeting child abuse and neglect, and found treatment programs that provided parent education, household management, and vocational skills produced significant effects in decreasing the risk of future child abuse and neglect indicating comprehensive services are extremely beneficial. In uncontrolled studies, evidence shows child-neglecting parents are responsive to treatments aimed at reducing home hazards, improving home cleanliness, hygiene, nutrition, and teaching child stimulation have been shown to be particularly effective in this population (Paget et al., 1993). Some comprehensive programs are home based, and generally occur in families where child maltreatment is more severe. Home based therapy is based on the belief that providing services in the home increases the likelihood of generalizabilty for the family since treatment would be occurring in their natural environment.

Project 12 Ways is a home based comprehensive intervention that promotes an eco-behavioral approach to child maltreatment and offers multifaceted services including parent training, stress reduction, problem solving, assertiveness training, social support, home safety, nutrition, leisure skills, job finding, alcoholism treatment referral, and behavior management (Wesch & Lutzker, 1991). A study that evaluated the effectiveness of Project 12 ways demonstrated a significantly greater reduction of child maltreatment in families that received the home-based ecobehavioral intervention than the control group (Lutzker, 1994). Project 12 Ways also demonstrated an improvement in home cleanliness, emotional health of parents, and an improvement in parent's child rearing skills. The results of this study are promising, but the study was an uncontrolled trail. Chaffin (2004) insists that research on the treatment for child maltreatment should utilize a randomized control trial design to truly assess the benefits of a multifaceted home based treatment program for child neglect.

One limitation of comprehensive services is that it can be difficult to determine if all the components contributed to the improvement, or if only certain components were necessary. Watson-Percel, Lutzker, Greene, and McGimpsey (1988) examined the home safety component of Project 12 ways and demonstrated improvements in a small sample of families. Improvements were objectively documented in regards to the family's home cleanliness and safety. For example, one family's home contained a large amount of garbage, dirty clothes, spoiled food, foul odor, pest infestation, and human feces on floor. For this family the initial treatment target was the bathroom because of its small size, which made it easier to clean, thus increasing the likelihood of the family being able to meet their treatment goal. The mother was given instructions about cleaning to ensure she

had appropriate skills training for the task, and results showed significant improvements in all rooms of the home. For the bathroom the total clean items averaged 13% at baseline, and rose to 95% during maintenance. Improvements were found for other rooms in the home that were almost as significant as improvements for the bathroom. Similar home cleanliness rates were demonstrated for the other participants of this study. Future studies exploring the benefits of certain components of comprehensive treatments need to be randomized. In addition, other research designs such as multiple baseline design could be utilized to help illustrate the effectiveness of specific interventions in a comprehensive treatment program.

Project SafeCare, utilizes cognitive behavioral interventions and social support to improve parenting skills (Gershater-Molko, Lutzker, & Wesch, 2003). Increasing social support is a necessary because studies have found that mothers with poor social support had a higher likelihood of maltreating their children than mothers who had social support (Sidebotham & Heron, 2006). This project was an uncontrolled in-home intervention for parents reported for, or at risk for, child abuse and neglect that evaluated the effectiveness of 3 of the 12 Project 12 ways components. Specifically, the child health care, parent-child interaction, and home safety skills components were evaluated. Each intervention was found to be highly effective in improving parental functioning and home safety, and parents reported they were highly satisfied with the services they received. The results also indicated that targeting home safety and parenting skills could reduce the occurrence of child neglect as participants in Project SafeCare had significantly lower reports of child neglect than families that did not participate in the program.

Different from many manualized programs, Project SafeCare allowed for flexibility in the presentation of interventions to the participant. Therapist were able to use clinical judgment to tailor specific treatments to the individual needs of participants. The inability of most manualized programs to do this is often cited as a problem or limitation. This ability to select treatments based on the participant's needs or preference should be incorporated into future treatment programs and may increase participant satisfaction.

Multisystemic therapy (MST), which was developed by Henggeler and colleagues, is consistent with the eco-behavioral model (Henggeler, Borduin et al., 1991). The theory underlying Multisystemic Therapy is that child behavior problems are impacted by multiple systems indicating the type of therapeutic intervention varies depending on the unique needs of the family system (Henggeler et al., 1991). Similar to the aforementioned interventions MST emphasizes parent education, involves multiple family members, is home based, and adjusts standardized formats to be consistent with unique family needs.

In the initial study eight abusive and eight neglectful families were randomly assigned to receive eight sessions of MST, and ten abusive and seven neglectful families completed eight sessions of parent training (Brunk, Henggeler, Whelan, 1987). MST included informal parent education regarding child management strategies, appropriate expectations for child behavior, teaching neglectful parents to perform executive functions, and attempts to improve relations with the extended family. The clinicians served as advocates for families with outside agencies, and made attempts to enhance the social perspective-taking abilities of the family members. Results of this study indicated that the interventions improved both neglectful and abusive parents global psychiatric

functioning and overall stress, however neither MST nor the parenting training program interventions resulted in significant improvement in family functioning. MST resulted in significantly enhanced parent-child interactions, as compared with parents who received parent training. Due to the low number of subjects no definitive conclusions regarding the effectiveness of this treatment can be made. Nevertheless, the results of this study, and the aforementioned studies by Lutzker and his colleagues, suggest home-based family interventions and parent training are worthy of further scientific exploration.

Webster-Stratton's parenting program appears promising for the treatment of child neglect (Webster-Stratton, 1989). The program is a standardized video based modeling intervention that teaches parents how to play with their children, to use praise and give reinforcement, set appropriate limits, and how to handle undesired behaviors. Parents work in groups of up to eight people for a total of eight sessions that last approximately 2 hours each session. A randomized clinical trial involving the program examined maltreating mothers' ability to learn to provide three positive parenting conditions (i.e., involvement, autonomy-support, structure) (Hughes & Gottlieb, 2004). Of the mothers 30% showed clinically significant improvements including being more involved with their children, and feeling more satisfied with their social support than mothers who were in the wait list control group. The results of this study provide support for the success of behaviorally oriented interventions in high-risk population and also demonstrate the relationship between treatment success and perceived social support. The benefits demonstrated in this study are similar to others and illustrates the importance of the inclusion of interventions to strengthen social supports.

Parent-Child Interaction Therapy (PCIT) was modified for use with child maltreatment to assist in increasing positive parenting behaviors (i.e., utilize more positive parenting behaviors such as increasing praise to their children) and improve parent-child interactions (Eyberg & Robinson, 1982). Specifically, parents learn how to interact with their children in a way that strengthens the parent-child relationship mostly utilizing behavior management skills with their children. Parents learn these new skills by being coached with specific instructions and feedback from their therapist. When compared to more traditional wrap around treatment services (i.e., intensive case manager to coordinate additional services such as medical care and transportation) PCIT was found to be superior (Chaffin et al., 2004).

Donohue and Van Hasselt (1999) provide preliminary efficacy for Family Behavior Therapy in the treatment of caregivers of children who have been neglected. The study included 47 primary caregivers of maltreated children with half of these children reported for neglect. Family Behavior Therapy consisted of 16 home-based sessions scheduled on a weekly basis, and all family members living in the home were encouraged to participate. Interventions utilized included role-playing, behavioral rehearsal, and descriptive reinforcement strategies, with all therapies implemented successively and cumulatively. That is, after each intervention is introduced, it is reviewed during all subsequent sessions to a decreasing extent. Child interventions focused on teaching children to identify early cues to violence, interpersonal safety skills, decrease risk of harm to self, and how engage in escape or avoidance strategies. Concurrently, caregivers learned to identify early signs of abuse and were taught positive methods to reinforce desired behaviors and contingency management strategies.

Therapists followed a treatment manual (see Donohue, Van Hasselt, Miller, & Hersen, 1997) and utilized prompting checklists. Caregivers demonstrated significant improvements in most measures, and at post-treatment, relative to pre-treatment, caregivers perceived their children as being significantly more adaptable, less demanding, perceived themselves as less depressed and socially isolated, and were more satisfied with their children. The results of this study suggest the empirically derived Family Behavior Therapy components are promising in the treatment of neglecting mothers and their children.

Although studies show promise in treating child neglect it is important to consider the difficulties treating this population including high attrition rates in treatment studies, and a great deal of instability in the personal lives (i.e., family violence, involvement in the justice system, lack of job stability, lack of social support, mental health issues, poverty). Thus, results from treatment studies demonstrate possibilities for successful treatment, however many studies in this literature demonstrate modest improvements, have high attrition rates, or do not demonstrate long term effects in eliminating child neglect. Most treatment outcome studies evidence participant attrition, whereby some participants do not complete the study. Attrition rates are difficult to estimate because they vary due to multiple factors, such as the severity of the problem under study, treatment session frequency, type of diagnosis, and duration of treatment. Another factor that can influence attrition is motivation and those who are not motivated for treatment, such as participant's who may be court ordered to receive treatment, tend to have higher attrition rates. Gershater-Molko et al., (2003) found an attrition rate of 58% in a study for the treatment of child abuse and neglect. In this study more than half of participants that met

criteria either did not consent for treatment or dropped out even before completing the baseline assessment. This attrition rate is very similar to the attrition rates found in other studies of child maltreatment Indeed, in studies utilizing the ecobehavioral treatment approach which is conceptually similar to Family Behavior therapy attrition rates range from 45% to 77% (e.g., Corcoran, 2000; Hansen, Warner-Rogers, &Hecht, 1998; Donohue & Van Hasselt, 1999).The attrition rates for substance abuse treatment tend to be lower, ranging from 10% to 40% (Azrin, et al., 1994, 2001).

Existing Treatments for Drug Abuse

There are currently a number of treatments available for drug abuse and dependence that have demonstrated efficacy in treatment outcome studies. Treatment outcome research for substance abuse is far advanced when compared to child neglect, and has found that cognitive and behavioral approaches are most effective for substance disorders. Similar to the issue of child maltreatment interventions for substance disorders that include family members or significant others demonstrate promising results.

Motivational Interviewing (MI), and the manualized adaption Motivational Enhancement Therapy (MET), are brief client centered interventions that are designed to increase and sustain the client's motivation to abstain from drug use and participate in treatment (Moos, 2007). These interventions occur prior to treatment, during the first treatment session, or for up to the first five treatment sessions. Most studies of MI and MET have focused on alcohol users, and the few studies with illicit substance users demonstrate mixed results. Bear et al. (2007) examined the effectiveness of motivational interviewing and found treatment utilization was significantly higher for those that

received the intervention. Santa Ana, Wulfert, and Nieter (2007) examined the effect of motivational interviewing on the compliance of seeking aftercare in patients released from inpatient substance abuse treatment. Results indicated patients who received motivational interviewing attended significantly more aftercare treatment sessions, and engaged in less substance use than the control group. Stotts and Schmitz (2001) examined the effectiveness of motivational interviewing with a cocaine dependent sample and found receiving the brief intervention led to an increased use of coping strategies and fewer cocaine positive urine samples. Conflicting results were found by Miller, Yahne, and Tonigan (2003) who also examined motivational interviewing with individuals suffering from substance disorders. Their study found no difference between groups indicating no positive effects of receiving motivational interviewing.

Dennis et al. (2004) examined the effectiveness of brief Motivational Enhancement Therapy plus Cognitive Behavioral Therapy (MET/CBT) with adolescent drug users. The intervention was designed to help individuals attend to and decrease their urges for cannabis and alcohol. Results demonstrated improvements during the 12 months following the intervention including days of abstinence and percent of adolescents in recovery. Peterson et al. (2006) examined the effectiveness of a brief motivational intervention with substance using homeless adolescents. Youths who received the motivational intervention reported reduced drug use other than marijuana at 1-month follow-up compared with youths in the control group. The effectiveness of motivational enhancement therapy (MET) compared to treatment as usual for increasing retention and reducing substance use was evaluated in a multisite randomized clinical trial and MET resulted in reductions in drug use at 12 weeks compared to treatment as usual(Ball et al.,

2007). Borsari and Carey (2000) conducted a randomized controlled trial of a one session motivational intervention for binge drinkers. The brief intervention provided students with feedback regarding their own alcohol consumption, perceived drinking norms, alcohol related problems, and situations associated with heavy drinking. At a 6 week follow-up participants demonstrated a significant reduction in number of drinks consumed each week, number of times drinking in the past month, and frequency of binge drinking in the past month.

Twelve step programs, such as Narcotic Anonymous, are based on the principles of Alcoholics Anonymous and view addiction as a chronic, progressive illness characterized by loss of control and denial. These programs offer structured support and focus on helping clients admit they have a problem, and are generally recommend after the successful completion of a treatment program (Moos, 2007). Evidence suggests that attendance is minimal and a high percentage of individuals referred to twelve step programs drop out (Cloud, Rowan, Wulff, & Golder, 2007). Gossop, Stewart, and Marsden (2008) evaluated participation in Narcotics Anonymous and Alcoholics Anonymous (NA/AA) on substance use outcomes after completing residential treatment. Results indicated positive effects for opiate and stimulant abusers at follow up. However, abstinence from other drugs did not occur. Results from this study and similar studies indicate improvement in twelve step services is needed.

Another drug treatment option is drug court, which involves regular court hearings, intensive judicial monitoring, provision of substance abuse treatment, and frequent drug tests (Center for Substance Abuse Treatment, 2004). For parents involved in the child welfare system there are Family Treatment Drug Courts, which work with parents to get

clean as part of their plan for reunification with their children. The courts provide additional structure to parents who receive substance abuse treatment from partnering treatment providers. Green, Furrer, Worcel, Burrus, and Finigan (2007) studied the effectiveness of Family Treatment Drug Courts and found that participants entered treatment more quickly, stayed in treatment longer, were more likely to successfully complete treatment, and were more likely to be reunified with their children. Although the results appear promising it is unclear the specific components of drug court that are responsible for the positive outcomes. Further controlled and randomized studies are needed.

Addictive behavior is an acquired habit or pattern, which has been ameliorated for many individuals by utilizing learning based treatments (Finney & Moos, 2002). Cognitive Behavioral Therapy (CBT) has been rated as one of the most effective treatments for substance abuse (see Rotgers, Morgenstern & Walter, 2003). The focus of cognitive behavioral interventions is altering the cognitive and behavioral processes that lead to substance use by identifying and modifying maladaptive behavioral patterns and thoughts processes. CBT interventions assume any behavior that is learned can be relearned, reshaped, or eliminated through the same learning process. Kaminer et al. (1998) compared CBT group therapy to interactional group therapy (IT) in adolescents dually diagnosed with a substance use disorder and a psychiatric disorder. Results demonstrated a significant reduction in severity of substance use in participants who were assigned to CBT, and long term gains were found for substance abuse and family functioning.

The cognitive component identifies and modifies maladaptive patterns that can reduce or eliminate negative feelings that are often antecedents to substance abuse (Beck, Wright, Newman, & Liese, 1993). CBT also emphasizes building the skills necessary to cope in high-risk situations that can lead to relapse such as stressful situations and environmental triggers. Social skills' training includes identifying high-risk situations, and behavioral strategies to assist in coping with stressors. Coping strategies vary, but often involve the management of urges to use drugs, improvement of drug refusal skills, and teaching problem solving skills. Research has shown treatments that emphasize social skills training components are related to long-term positive outcomes (Rotgers, Morgenstern & Walter, 2003). The behavioral component is based on the principles of operant and classical condition and assumes the substance use behaviors are learned and are a part of the user's environment. Behavioral interventions focus on replacing drug seeking behaviors or behaviors that contribute to drug use cycle with new adaptive behaviors that promote abstinence.

Relapse prevention is focused on the development of self control strategies and teaching clients to identify drug use triggers and practice coping strategies for drug urges (Chiauzzi, 1991). Factors for drug relapse include negative and positive emotional states, social pressure, testing of personal control, and interpersonal conflict. Relapse prevention may include teaching clients how to avoid and anticipate drug related cues through cognitive remediation (e.g., positive self-statements, enhancement of outcome expectancy, self efficacy), lifestyle modification (e.g., exercise, relaxation, time management), and skill building (e.g., role playing, self monitoring, relapse rehearsal; George, 1990).

In controlled trials Behavioral Couples Therapy (BCT) has consistently demonstrated increased family satisfaction, and reductions in drug abuse (Fals-Stewart et al., 1996, 2000, 2001). Behavioral Couples Therapy focuses on the active recruitment of significant others to assist in the treatment of the identified substance abuser. This treatment focuses on increasing social support especially support from family members. Other BCT treatment components include management of drug urges, avoidance of exposure to drug related stimuli, assistance in coping with relapse, drug refusal skills training, behavioral contracting, strategies to prevent violence, and communication skills training. A pilot study examined preliminary effects of Parent Skills Training with Behavioral Couples Therapy on children's behavioral functioning with couples entering treatment for alcohol abuse and dependence (Winters et al., 2001). Couples were assigned either to Parent Skills Training with Behavioral Couples Therapy, Behavioral Couples Therapy, or individual based treatment. Parents who completed Parent Skills Training with Behavioral Couples Therapy reported significant improvement of their children's internalizing and externalizing behaviors. In addition, BCT resulted in greater reduction of use, and greater improvement in relationship satisfaction. Finally, results indicated that female substance abusers appear to particularly prefer the treatment components that focus on family support and family cohesion.

Another intervention is Integrated Family and Cognitive-Behavioral Therapy (IFCBT), which is a new family-based behavioral intervention that has led to improvements in several areas of family functioning including problem-solving, learning strategy skills, and reductions in drug use (Latimer, Winters, D'zurilla, and Nichols, 2003). This treatment program offers many treatment components that could be modified

to address risk factors in perpetrators of child neglect. For example, a common characteristic in perpetrators of child neglect is difficulty with problems solving. This intervention specifically addresses deficits with this skill and led to improvements in problem solving abilities.

Henggler et al. (1991) found home-based Multi Systemic Therapy led to significantly lower rates of drug-related arrests at post-treatment assessment, as compared with individual counseling, in youth who were referred for drug use problems. These findings support the utilization of home-based family therapies in drug abusing and dependent adolescents and suggest potential similar benefits with adults. Thus, treatment outcome studies in adolescents have demonstrated family based interventions efficacy to reduce drug use. Adolescent delinquents who met diagnostic criteria for substance abuse or dependence were randomly assigned to receive home based MST or treatment as usual (Henggeler, Pickrel, Brondino, & Crouch, 1996). In the MST condition 98% of the families completed a full course of treatment, which lasted an average of 130 days. In contrast, 78% of the families assigned to treatment through the usual community services received no mental health or substance abuse treatment in the months after referral. The four year outcomes of multisystemic therapy (MST) therapy were examined and found significant long term effects (Henggeler, Clingempeel, Brondino, & Pickrel, 2002). Specifically, when compared to adolescents from the control group adolescents who completed MST had fewer (0.15 versus 0.57) convictions per year, and higher rates (55% vs. 28%) of abstinence from marijuana.

Multiple studies have demonstrated the efficacy of Family Behavior Therapy in drug abusers (Santisteban et al., 2003; Latimer, Winters, D'zurilla, and Nichols, 2003). In

addition, 93% of drug treatment programs indicated in a national survey that family therapy was the treatment of choice with drug abusers (Coleman & Davis, 1978). Controlled treatment outcome studies in adolescent drug abusers have indicated that therapies with family involvement are effective in reducing the use of drugs (see Myers, Brown, & Vik, 1999). Behavioral family therapy includes empirically validated procedures such as behavioral contracting with effective components of family therapy such as involvement of immediate family members.

Brief Strategic Family Therapy (BSFT) is a time-limited family-based approach to adolescent substance use and related problems that has been empirically demonstrated to reduce drug use frequency, according to the urinalysis results (Santisteban et al., 2003). Specifically, BSFT resulted in statistically significant post treatment differences in rates for conduct disorder, marijuana use, and family functioning. This intervention has had success in enlisting family members to increase support provided to the client, and in improvements in overall family functioning. The techniques used to increase support could be applied to mothers founded for child neglect as well. As mentioned previously, increasing social support appears to be correlated with success in treatment in child neglect as well as in substance abuse.

Multidimensional Family Therapy (MDFT) is a family-based treatment developed for adolescents with substance use and related behavioral and emotional problems that has been shown to be effective in several studies (Liddle et al., 2001). Treatment focuses on increasing prosocial behaviors, positive social networks, anti-drug behaviors and attitudes, and increasing family interactions. Liddle et al. (2001) compared Adolescent Group Therapy and MDFT in adolescents and found the youth in the MDFT group had

statistically significant reduction in drug use at post treatment and the difference was greater than the other group. In addition, MDFT participants demonstrated clinically significant improvements in family functioning at post treatment. Similar improvements have been demonstrated in Conjoint Family Therapy (CFT) (e.g., Szapocznik et al., 1983). This is another treatment program that demonstrated the effectiveness of having family participation in treatment. This study also illustrated the benefits of social support in the reduction of drug use.

Functional Family Therapy (FFT) is a short term family based intervention for youths and their family's focuses on multiple systems in the youth's life (Sexton & Alexander, 2000). This treatment program is designed to identify the reason the youth uses drugs and help the youth replace the drug use behavior with more adaptive behaviors. Waldron et al (2001) evaluated FFT compared to Cognitive Behavior Therapy (CBT), FFT+ CBT, and a psychoeducational group for treating adolescent drug use. Results of the study indicate that the FFT group and the joint group were the only groups to demonstrate reductions in marijuana at post treatment that were maintained at a 3 month follow-up.

The Purdue Brief Family Therapy (PBFT) program is a behavioral family therapy treatment program for substance abusing adolescents. Lewis, Peircy, Sprenkle, and Trepper (1990) examined the PBFT program, which is a 12-session program that integrates the most effective elements of structural, strategic, functional, and behavioral family therapies and was designed to help adolescents terminate drug use. In addition, the program was designed to increase the functioning, communication, and cohesiveness within the adolescent's family. The goal of including the family was to increase the understanding about the relational patterns and interpersonal dynamics that contribute to

the drug use, and to create a healthier environment that would be less likely to trigger drug use. Once the patterns and dynamics were identified the family learned ways to modify the dynamics in ways that would reduce drug use. Results found that 54.6% of the participants had significant decreases in drug use, or had abstained from drug use. Often neglecting mothers have difficulty communicating their needs to their significant others (i.e., need for support, need for help caring for child, financial needs) and interventions similar to those in this study could be applied to that population.

McMahon et al. (1994) examined Family Behavior Therapy (FBT) and Supportive Therapy in a controlled treatment outcome study in drug users. FBT is an intervention utilized to address adolescent drug use and associated problems, and it based on a behavioral conceptualization of drug use (Donohue & Azrin, 2001). FBT included interventions to control urges to use drugs, communication skills training, stimulus control of drug associated stimuli, behavioral contracting, and job finding skills training. Supportive therapy consisted of discussion of drug abuse issues. Drug use was reduced to a differentially greater extent for participants who received FBT compared to subjects who received Supportive Therapy, as measured in terms of number of days of drug use, and urinalysis results. The mean number of months of drug abstinence for all participants who received Family Behavior Therapy was 6.36 months compared to 2.80 months for Supportive Therapy. Results of a 9 month follow up indicated that 71% of Supportive Therapy participants and 42% of Family Behavior Therapy participants were using drugs at follow-up. This study demonstrated long lasting positive effects for FBT in adult and adolescent drug abusers.

A second study with Family Behavior Therapy (FBT) and drug users consisted exclusively of adolescents (Azrin et al., 1994). Results indicated that participants who were randomly assigned to receive FBT significantly decreased their drug use more than participants who received Supportive Therapy (ST) as measured by urinalysis, or days of drug use using urinalysis. Significant improvements were also found for FBT participants compared with ST participants, for depression, alcohol use, conduct problems, schoolwork attendance, parent satisfaction with youth, and youth satisfaction with parents. Thus, this pilot study suggested adolescents are particularly responsive to FBT compared with ST.

A third controlled treatment outcome study (Azrin et al., 2001) examined the effectiveness of Family Behavior Therapy (FBT) compared to an Individualized Cognitive Problem-Solving (ICPS) treatment in youths diagnosed with conduct disorder and drug abuse disorder. Participants were youths referred by individuals in the juvenile justice system (i.e., judges, probation officers, administrators) that had used marijuana at least once and most had used alcohol or illicit drugs. The two treatments were 6 months in duration, an equal number of sessions, an equal session length of 90 minutes, contained structured sessions that were guided by a treatment manual, and involved the use of praise for the participant. Interventions used in the FBT program included behavioral contracting, control of drug stimuli, self control of drug urges, and communication skills training. The Individual Cognitive Problem-Solving Therapy (ICPS) was based on theory, empirical research, and previously developed problem-solving methods that have been shown to improve self-control and problem- solving deficits in youths and adults with aggressive and defiant behaviors (D' Zurilla, 1986;

D'Zurilla & Goldfried, 1971; Kazdin et al., 1989; Kazdin, 1987; Richard & Dodge, 1982). Youth in both intervention conditions demonstrated significant decreases in their average number of self-reported days using illicit drugs per month, improved problem solving skills, increases in parents' satisfaction with their drug use, increases in youths' satisfaction with their parents, from the 6 months preceding treatment to the 6 months during treatment. In addition, the improvements were maintained at the time of the follow up assessment.

Similar to the treatment of child neglect there are various difficulties treating individuals suffering from substance disorders. These difficulties include high co-morbidity rates, problems with support systems, involvement in the justice system, and difficulties maintaining employment. Although many studies indicate improvement many do not demonstrate long term improvement. In addition, high attrition rates and low motivation for change are well documented for this population making it difficult to evaluate treatment effectiveness.

Family Behavior Therapy for Substance Abuse and Child Neglect

Presently, there are no published treatment outcome studies of mothers with substance disorders that have been reported or substantiated for neglecting their children. Previous research has shown Family Behavior Therapy (FBT) has led to significant reduction in drug use and has demonstrated promise with caregivers and victims of child neglect, thus a Family Behavior Therapy treatment to address both issues may be beneficial and produce significant improvements in both areas of dysfunction. Suggested interventions for this population include techniques that address parenting such as addressing parental expectations and misconceptions about children, and treatments that

target impulse control (Kienberger Jaudes, Ekwo, & Voorhis, 1995; Magura & Laudet, 1996; Wolfe, 1993). Programs that are comprehensive and home based may be the most advantageous for this population. Olds & Kitzman (1993) suggest that parents are particularly responsive to home visitation programs, especially young mothers who experience an exceptional amount of stress. The proposed benefits for home-based interventions include the ability to incorporate children into treatment, elimination of the need for child care, elimination of problems due to transportation issues (e.g. lack of a car), and it allows the therapist to more effectively assist the family in acquiring and implementing home safety skills (Donohue, Ammerman, & Zelis, 1998). In addition, the home-based intervention program may increase the probability of the families generalizing the interventions.

Description of Treatment Manuals

Treatment manuals were initially introduced to provide clinicians with specific guidelines for treatment implementation, to aid in training therapists in a particular treatment, and to standardize specific treatment approaches (Carroll & Nuro, 2002; Strupp & Anderson, 1997). Since their introduction, treatment manuals are believed to have revolutionized psychotherapy research as evidenced by the major role manuals play in empirical research (Luborsky & DeRubies, 1984). Presently, the majority of efficacy research requires the utilization of treatment manuals. Treatment manuals have resulted in the creation of detailed descriptions and step-by-step instructions regarding how a clinician should implement a specific therapeutic intervention.

Manuals are extremely diverse and vary in their level of structure (i.e., highly structured, outline), and how many strategies or interventions are included (Wilson, 1998). Because manuals are so varied the level of usefulness for individual treatment manuals is also varied and depends a great deal on what the developers have included. Studies of components clinicians believe should be incorporated into all treatment manuals include practical advice on problems encountered, more detailed descriptions of specific techniques, and in-session worksheets (Najavits, Weiss, Shaw, and Dierberger, 2000). Treatment manuals are useless if the clinician is not implementing the manual in the form the treatment developer intended. Thus to ensure proper implementation quality assurance procedures, ongoing training, organizational consultation, and feedback regarding treatment adherence must occur (Henggeler & Schoenwald, 2002).

Although treatment manuals have existed for some time many practitioners are unfamiliar with what they include and how to utilize manuals in their own clinical practice. Baumann et al. (2006) assessed clinicians serving families involved in child maltreatments attitudes regarding manualized treatment. Over 60% of clinicians reported they believed using manualized treatments for child abuse was important, and almost half reported utilizing manuals themselves in treatment. Advantages to utilizing treatment manuals include adding structure to treatment sessions, improving therapeutic skills, and providing additional information regarding specific techniques to use in therapy. Treatment manuals are a tool that can bring focus and direction to treatment and use of manuals often results in consistent delivery of the intervention by different therapists in different settings because therapists may be trained to a common standard of treatment delivery (Morley, Shapiro, & Biggs, 2004). This reduction of variability is especially

important for inexperienced therapists (Crits-Christoph, 1991). Manuals help the therapist set appropriate treatment goals, and guide the overall structure for the treatment process (Lock & Le Grange, 2001). For example, manuals help the therapist create objective goals for treatment and set a specific time frame to meet the goals. Treatment manuals also assist the therapist in understanding the intervention (i.e., specifically how to implement techniques, goal of intervention) and increase adherence to the treatment protocol. In addition, following treatment manuals increases accountability and increases the likelihood the therapist will provide a rationale, goals of therapy, and feedback to the client (Wilson, 1998). Accountability by therapists also promotes innovation and future treatment development from issues that arise in treatment.

Another major advantage of treatment manuals is the ability to be a valuable training tool. Treatment manuals facilitate therapist training, and are necessary for treatment evaluation (Kendall & Beidas, 2007). A manual increase a therapists, especially a new therapist's, ability to provide therapeutically useful services as quickly as possible, and it is believed this ability reduces anxiety and increase self confidence (Moras, 1993). Using treatment manuals for training increases the likelihood that the trainee and the supervisor are communicating clearly and provides a template for clear feedback and redirection.

Disadvantages cited by therapists of treatment manuals include a lack of consideration of the uniqueness of each case and rigidity in treatment delivery. Indeed, critics of treatment manuals have reported that manuals prevent clinical creativity and prevent the client from being viewed as an individual. Many critics of manuals state that there is often no flexibility in treatment manuals to address the individual needs of a client, but is instead a one size fits all approach (Henin, Otot, & Reilly-Harrington, 2001).

In addition, manuals are also viewed by some as not generalizable and non-inclusive of considerations of the complex clinical pictures found in community mental health settings (Wilson, 1998). Another critique of treatment manuals is that the researchers tend to pay little or no attention to the needs of the end users and manuals can prevent the ability to establish the therapist-client relationship (Hunsley & Rumstein-McKean, 1999; Kendall & Beidas, 2007). For example, manuals tend to be developed for treatments ranging from 12 to 25 sessions. However, most clinicians see their clients for fewer sessions than that as the result of client drop out and reimbursement limitations. Of course, this may act to prove that manuals may assist in patient retention. Some critics of treatment manuals report there is no compelling evidence that the use of manuals improves clinical outcomes for clients (Norcross, 1999). Indeed, many clinicians believe research that examines the efficacy of treatment manuals fail to consider the effect of the individual therapist and the therapist interpersonal skills.

These criticisms have led others to make sound recommendations to others regarding effective utilization of manuals. For instance, some argue to include "real-world" examples of how to deal with difficult clinical situations (Hunsley & Rumstein-McKean, 1999). Others recommend that manuals include a problems section in which common problems and their solutions are described and should be updated by the treatment developer as more experience with clients and feedback in supervision occurs (Moras, 1993). Training with treatment manuals could be enhanced with the use of visual and audio aids. For example, trainings could utilize video reenactments from case transcripts or audiotapes from sessions and should include both correct and incorrect treatment implementation (Moras, 1993). It is important for treatment manuals to allow for clinical

flexibility and must address a variety of clinical issues including changes in motivation, co-morbid conditions, and problems in the client-therapist relationship (Dobson & Hamilton, 2006). McCulloch and McMurran (2007) surveyed a sample of treatment providers to assess their opinions of features of a good treatment manual. Results demonstrated clearly stated aims and objectives, solutions to potential problems, detailed instructions, and examples were most important. The survey also found that participants favored manuals with choices and flexibility with instructions indicating what must be completed for treatment adherence, and handouts should be easily reproduced (i.e. electronic copy).

Treatment Manual Development

Onken and colleges (1997) proposed a three-stage model of behavioral therapy research that begins with clinical ideas and innovation, and is culminated in controlled outcome research and dissemination. Stage I involves pilot and feasibility testing, manual writing, training, program development, and adherence and protocol measure development for the newly developed treatment. Stage II consists of a randomized clinical trial that is conducted to evaluate the newly created manualized treatment. Lastly, in stage III treatment issues such as generalizability of the treatment (i.e., will this treatment be effective with different patients or settings), implementation issues (i.e., what kind of treatment is need for practitioners), cost effectiveness issues (i.e., what is the cost of implementing this treatment), and marketing issues (i.e., how acceptable is a new treatment to clients or practitioners) are addressed and clarified.

Carroll and Nuro (2002) have proposed a stage model for the explicit development of treatment manuals. This model consists of three stages starting with the development of

the treatment manual (stage I), efficacy research utilizing the treatment manual (stage II), and implementation and effectiveness research with the treatment manual (stage III). Stage I, the manual development phase, requires creativity and originality. This stage is to specify the treatment, and determine its feasibility and efficacy. Basic structural elements that should be addressed at this stage are duration of the treatment, format of the treatment (i.e., family versus individual), number of sessions, length of sessions, and level of manual flexibility. Stage II is utilized to determine if the intervention in a standardized form is beneficial to individuals in the target population. Generally, by this stage of development the manual has been examined in at least one pilot study. Indeed, the therapist experience with the treatment, review of session tapes, and analysis of outcome data can be used to improve the content areas and to address issues or problems that could not have been conceived of before the actual clinical implementation of the treatment. It is during stage III that the manual is applied to diverse settings with a diverse group of individuals from the target population. At this point the treatment developer should have a clear understanding of how the treatment should and should not vary among diverse populations. A stage III manual should also include information regarding adaptations to the treatment that can be made for clients typically encountered in clinical settings to increase the likelihood that certain mental health provides will utilize the treatment manual.

Development of a Treatment Manual for Child Neglect and Substance Abuse

Following the aforementioned guidelines a treatment manual to address child neglect and substance abuse simultaneously was developed in preparation for the present study. The manual was based on the integration and modification of two empirically derived

Family Behavior Therapy interventions. The drug abuse components were derived from a family-based behavioral treatment program that demonstrated effectiveness in reducing adolescent drug use in controlled trials (Azrin, Aciemo et al., 1996; Azrin, Donohue et al., 1994; Azrin, Donohue et al., 2001; Azrin, McMahon et al., 1994). The child neglect components were derived from a family-based treatment program that demonstrated preliminary efficacy in a sample that included caregivers of neglected children (Donohue & Van Hasselt, 1999). The development of the treatment manual was separated into four distinct phases: integration and modification of existing treatment manuals, review and edits of drafts of the treatment manual, role plays of the treatment manual, and implementation with a case study.

A research team consisting of 12 undergraduate and graduate students, as well as a doctoral level research advisor assembled for 90 minutes on a weekly basis for approximately 9 months to develop the treatment manual. The team was comprised of individuals who were relatively inexperienced in providing treatment services to the target populations. The research team was diverse in their ethnicity, age, employment and clinical research/practice background. The diverse composition of the team increases the likelihood that the resulting manual was culturally sensitive and applicable to a more diverse population.

In the first phase, existing published Family Behavior Therapy manuals were combined and modified to form a treatment aimed at addressing both parental substance abuse and child neglect simultaneously. The original manuals were read and aspects of each manual were integrated based on clinical experience and theory. After the manuals were integrated modifications and additional components were added to some of the

modules of the manual and new modules were also developed. Once the manual was integrated and modified, the researcher reviewed and edited the initial draft to ensure the manual was clear and simple to follow. After this initial review more specific instructions and clearer examples were added to the draft of the modules. The modules each include a brief overview of the intervention, rationale for the treatment method, and specific steps for treatment implementation with examples. In addition, therapist-prompting lists were created for each intervention to serve as a therapist self report of treatment adherence.

Phase 2 involved reviewing and editing the manual with the team members. In this phase a team of research assistants were asked to review and edit each module of the manual, and provide any feedback or suggestions to improve the module at the research team meetings. In the weekly meetings, team members reviewed the revised manual, and determined via consensus if additional reviewing and editing was required. Once the team decided the edits were complete the manual draft was evaluated in role-plays involving simulations of client treatment sessions to determine areas that required further modification. In the role-plays, members of the research team took turns playing the role of the therapist, and the role of the client. The clinical feasibility of the intervention was assessed through the role-play process. Aspects of the manual that did not meet the goal of the therapeutic intervention, or in which the therapist encountered difficulty in their attempts to implements the manual were edited to eliminate these problems. That is, after each role-play, the research team discussed ease of administration and potential revisions to protocol. Problems encountered during this process were reviewed until a solution was identified.

The FBT program included various interventions from the original manuals. Family Relationship Enhancement and Communication Skills Training were included to teach families how to more positively communicate with each other, and how to effectively deal with anger. This procedure teaches family member to ask for reinforcers in a positive and appropriate manner, which is important because it increases the chances that requesting reinforcers will occur leading to the decrease in neglect (e.g., asking a family member to clean up dog feces so child does not crawl through the feces), and drug use behaviors (e.g., asking friends to go someplace other than a party). Home Safety and Beautification Tours were included because there was a high probability that participant homes were had home hazards that were unsafe for children. This intervention teaches participants to identify hazards in the home, and to identify ways to make the home more beautiful and stimulating. Stimulus Control assists participants in decreasing their exposure to drugs and to increase the amount of time they spend engaging in healthy activities with their children. Self Control is implemented with the goal of assisting participants to decrease their impulses to use drugs and/or engage in neglect associated behaviors. Child Management skills were included because it is highly likely that the participants lack effective parenting skills. Participants were taught to use differential reinforcement, and how to discipline undesired behavior by telling the child that the undesired behavior.

Final Phase of Manual Development

The final phase of manual development consisted of implementation of the developed manual with a participating family referred by Clark County Family Services. The mother was a 24-year-old African American female referred to child protective services

for drug use during pregnancy. The mother's identified drug of choice was methamphetamine. The participant reported she had been referred to child protective services because she had used drugs on the day her daughter was born. The participant had no prior history of reports to family services in the state of Nevada. However, the participant did report one of her other children was also exposed to drugs in utero. The clinical picture for the participant was complicated by unemployment, domestic violence, and problems with her primary support group. Child neglect behaviors included lack of food, an unclean and unsafe home, limited essential for caring for a baby including formula and diapers, and inadequate supervision of her three children.

Strategies were employed to ensure the integrity of treatment manuals utilized during the session, which included written documentation by the therapist of techniques used for each session, audio taping of all sessions, on-going clinical supervision, review of all audible audiotapes, and corrective feedback to therapists. In addition, detailed protocol checklists were utilized by therapists to determine therapist adherence and competence. Along this vein, therapists first indicated on each protocol checklist whether each therapy task was performed. The therapists were subsequently provided feedback regarding their ability to follow the protocol checklists in supervision consequent to the supervisor's review of randomly selected sessions. If any issues in treatment occurred (i.e., therapist drift) the therapist received feedback from her supervisor regarding methods of maintaining treatment protocol adherence.

Results of the Uncontrolled Case Study

Much was learned from the case study, and modifications to the FBT treatment program were made. For instance, emergency situations occurred that prevented

treatment delivery as prescribed, including the client being evicted, the occurrence of domestic violence, and lack of financial resources. After the aforementioned emergencies and life-threatening issues occurred, it was determined that there was a need to develop a standardized method to address these situations. A treatment module entitled Basic Necessities and Safety Assurance was created to assess the status of various situations that put the participant and her family at risk of not being safe. This module was implemented at the beginning of each session, with the participant indicating if various emergency situations (i.e., overdue bills, lack of food, and adult to adult aggression) were not present, might soon occur, or were occurring. For situations endorsed as occurring, the therapist postponed the regular session agenda, and assisted the participant in brainstorming solutions to prevent future harm. Items the participant endorsed as having the potential to soon occur was added to the participant's at risk stimulus control list to be reviewed every week until the issue was resolved.

Formal assessment before and after treatment was not assessed utilizing standardized measures because the chief focus of the trial was to determine its feasibility. However, the participant's responses to satisfaction questionnaires indicated that she was "extremely confident" that the FBT program assisted her in eliminating the issues for which she was receiving treatment, and would that she would be "extremely confident" in recommending the treatment to a friend. The participant reported the services were of "high quality," and that she was "very satisfied" with the services she received. The participant also endorsed some of her goals were unmet, perhaps due to inflexibility in the treatment plan. For instance, the order treatments were implemented were pre-determined. Thus, it was determined that in future cases the order of implementation

should be guided by participants. Thus, a menu-type treatment plan was developed that would permit participants to rank order the order of intervention planning.

The final version of the manual includes a general program description, and contains various treatment modules that address different skills. The interventions include Treatment Planning, Stimulus Control, Communication Skills, Child Management, Self Control, Safety Assurance, Home Safety and Beatification, Financial Management, and Family Support). Each treatment module contains a rationale, therapist goals for the intervention, materials required to complete the intervention, overview of the intervention, procedural steps, participant worksheets, guidelines for reviewing the homework, and a therapist prompting list. After 12 months of extensive manual development, and utilization of the manual in a pilot case, the FBT treatment program appeared to be promising and to feasibly be capable of concurrently treating parental substance abuse and child neglect.

Methodological Issues in Conducting Treatment Studies

Threats to Internal Validity

To make statements about a cause and effect relationship, the experimenter must have experimental control, which occurs when a cause and effect relationship between the independent variable and the dependent variable is established, and other possible explanations for the finding have been ruled out (Christ, 2007). Internal validity is the extent to which the design of the study eliminated bias and permits the researcher to draw a casual inference between the treatment and outcome (Mulder, Frampton, Joyce, & Porter, 2003). Campbell and Stanley (1963) identified threats to internal validity, which

include history, selection, maturation, testing, instrumentation, statistical regression to the mean, mortality, and interactions among the aforementioned threats. History refers to events outside of the study that may influence the subject's performance on the dependent variable. Events such as changes in politics, changes in the local economy, and changes that impact the subject's ability to take part in the study can influence the research findings. Selection refers to reasons why participants were involved in the study and how that may impact study outcomes. Maturation is change in the participant's behaviors that is not the result of the manipulation in the experiment, but the result of the passage of time. Testing is the influence of testing, observations, or measurement on the dependent variable. This can threaten internal validity when multiple assessments of the same variable are given during the study. Instrumentation refers to changes in how the variables are assessed such as a change in an observer across assessment probes. Mortality is the loss of participants in a research study. Statistical regression to the mean states that extreme values trend toward more typical levels over repeated assessments. In other words, participants whose scores are extreme at the pre-treatment assessment tend to have scores closer to the mean at post-treatment assessment, which can inflate or deflate the results regarding effectiveness of the intervention.

External validity refers to the extent to which the results can be generalized to other circumstances such as other populations or settings (Cook & Rumrill, 2005). It is important to note that when conducting treatment outcome research, attempts to enhance internal validity can reduce the external validity of the treatment. Thus, treatment developers must balance the tension between internal and external validity.

Treatment Designs for Outcome Research

There are multiple designs that can be utilized when conducting research on treatment effectiveness. A single case design involves the study of one subject who is assessed before and after treatment to determine the effects of the treatment (Onghena, 2005). The uncontrolled single case design offers many advantages including being cost-effective, and having the ability to gather useful information during the initial evaluations of treatments. It is often the first design that is utilized in earlier piloting of interventions. Major limitations of this design are that it does not control for many extra-treatment factors (i.e., things outside experimental control that have an influence on the independent variable), and allows for difficulties in interpreting the effects of treatment. Uncontrolled single case designs were utilized in a pilot study to determine the effectiveness of the developed Family Behavior Therapy program. The evidence from the single subject design was largely anecdotal, as other things associated with the passage of time may have accounted for improved outcomes.

A reversal design involves establishing a baseline of behavior, then implementing the treatment. After the treatment is implemented the subject is assessed to determine if there has been improvement in the target behavior. The treatment is then removed and the subject is assessed again to see if the behavior reverses back towards the baseline level (Ferron, 2005). A reversal design was not appropriate for this study due to ethical concerns. That is, this population is in need of services for very dangerous problems, including substance abuse and child neglect. Removing services before they were able to consistently change repertoires could result in harm to the participant and her children. It was also inappropriate to utilize this design because of the type of treatment being

provided. Unlike other treatment programs, such as medication treatment, this treatment focuses on building the participants skills in avoiding drugs and improving parenting practices. It was likely that once the skill had been developed the participant would maintain the skill during the withdrawal phase making it impossible to draw study conclusions.

Multiple baseline designs are a type of single subject design that can be economically used to examine the effects of treatment across subjects, across multiple behaviors, or across multiple settings (Ferron & Scott, 2005). For a multiple baseline design, a baseline is established and interventions are subsequently implemented at different times. Treatment effects are demonstrated when changes in a specified behavior are observed after the implementation of the intervention that targets that behavior. A multiple baseline across subjects design was not appropriate for this study because the baseline would have needed to be extended for at least one of the participants, which would delay treatment longer than would be ethically appropriate. Also, if there was a long delay in treatment, child protective services caseworkers may have been less likely to refer their clients both initially and in the future to the study. Multiple baselines across settings were not appropriate for this study as the presenting problems (i.e., drug use, child neglect) naturally occur in multiple settings and the treatments were skill based, thus hypothesized to generalize to multiple settings. A multiple baseline across behaviors design was chosen as the ideal experimental design because it permits participants to be administered treatments early in the experimental process, and dangerous behaviors can be selected for intervention early (see Specific Aims of the Study below).

Specific Aims and Hypothesis of the Case Studies

Two separate case studies were conducted to evaluate various FBT treatment components. This study utilized multiple baseline across behaviors because this is the best design to prioritize dangerous behaviors (i.e., target dangerous behaviors first), and reduce the amount of time for baseline (i.e., delay in treatment provision). For the first case examination, an initial baseline was established for home safety, family support, family cohesion, and family conflict. These behaviors were then monitored during treatment using probe assessments. For the second case examination, initial baseline was established for drug use, family support, family cohesion, and family conflict. These behaviors were then monitored during treatment using probe assessments. The results of this study were expected to demonstrate the effectiveness of five treatment modules from the FBT program specific for child neglect and drug abuse. Specifically, the hypotheses of this study were

1) Implementation of Home Safety and Beatification will significantly reduce home hazards and enhance home appearance.
2) Implementation of Self Control, Stimulus Control, and Behavioral Goal Setting will reduce the participant's drug use.
3) Implementation of Communication Skills Training modules will anecdotally improve communication within the family.

CHAPTER 3

RESEARCH METHODS

Overview

This study consisted of two cases evaluated utilizing multiple baseline designs (across behaviors). Study considerations common to both cases are described first, followed separately by case specific factors. The first section describes study inclusions/ exclusionary criteria. Both cases were administered similar assessment measures and treatment components, which are reviewed, including methods for managing expected attrition. Case specific methodological information follows for each case separately, including participant demographics, description of the presenting problem, description of probe assessment measures, and description of the respective study design.

Study In/exclusionary Criteria

Two participating mothers were identified by Clark County Family Services. The mothers were referred to the FBT program due to identified drug use and having been reported to this agency for child neglect. Although not the reason for referral to FBT, both cases involved domestic violence. Both participants used illicit drugs 4 months prior to the baseline assessment, did not evidence history of sexual abuse, resided locally for at least 4 months with no plans to move for the next six months, were not receiving formal drug abuse counseling during the pre-treatment assessment (which avoided confounds due to pre-existing treatment), were living with the neglected child at least at the beginning of the intervention, had at least one adult significant other willing to participate

in treatment, and were formally diagnosed with Substance Abuse or Dependence during the study pre-treatment assessment.

Assessment Process and Measures

Comprehensive Pre- and Post-Treatment Assessment

The assessment phases consisted of administering a comprehensive battery of tests during the first baseline session, a few select measures from this comprehensive battery every 3 weeks in probe sessions immediately prior to each treatment session, and the same comprehensive battery of tests 1 week following treatment. Assessments were conducted by blind assessors who were doctoral students enrolled in a clinical psychology program. Assessors received intensive training under the supervision of a neuropsychologist. This training involved studying the assessment manual, modeling and behavioral rehearsals in simulated sessions, and rating videotaped interviews with participants. During role-plays assessors received corrective feedback and recommendations for improvement.

Assessments were conducted in the participant's home and performed according to standardized procedures. Questionnaires were read to the participants due to high expected rates of poor reading abilities. The participants' significant others participated in home safety tours, and completed the Timeline Follow-Back assessment as collateral sources of information (see Measures section below). The first administration of this comprehensive assessment battery, lasting 4 hours, was the participants' first in-person contact with FBT program staff, occurring approximately one week prior to treatment and again one week post treatment. The battery includes the following:

Structured Clinical Interview for DSM-IV (SCID-IV: Spitzer, Williams, Gibbon, & First, 1992) is a structured diagnostic interview utilized to assess a variety of DSM-IV disorders. In this study the SCID-IV was used to establish a current and lifetime diagnosis of substance use disorders. In addition, it was used to identify other co-morbid Axis I disorders. This interview has demonstrated good clinical utility in controlled outcome studies involving drug dependent populations (e.g., Azrin et al., 2001). Good estimates of validity and reliability for the SCID-IV have been reported in youth and adult administrations of this test (Spitzer, Williams, Gibbon, & First, 1992), and it has demonstrated good clinical utility in controlled outcome studies involving drug abuse (e.g., Azrin et al., 2001).

Short Form of Mother-Child Neglect Scale (MCNS: Lounds, Borkowski, & Whiteman, 2004) is an 8-item, 4-point Likert-type scale used to measure perceptions of neglectful behaviors of mothers towards their children. Example items include "I kept my child clean," and "I helped my child when he or she had problems." The range of scores is 8 to 32, with a higher score indicating the occurrence of more neglectful parenting behaviors. The short form is highly correlated (r=.96) with the original 20 item version, and its internal consistency is .90 (Lounds, Borkowski, & Whiteman, 2004). The short form has demonstrated significant correlations with maternal histories of neglect, quality of mother-child interactions in standardized behavioral observations, and self-reported child abuse potential (Lounds et al., 2004).

Home Safety and Beautification Checklist (HSBC: Donohue & Van Hasselt,1999) was utilized to assess living conditions in the home including home hazards (i.e., toxins, electrical hazards, sharp objects, heavy objects, small objects, home access, adequate

temperature control, adequate food/nutrition), home cleanliness and beautification, and home equipment and materials that facilitate personal and social growth for children (i.e., household items, adequate toys, children books, clothing, and home decorations). The checklist yields a total hazard score for each room, and an overall hazard score for the house. Higher scores indicate greater number of home hazards and beatification issues identified by a tour of the participant's home. Although the measure appears to have good face validity its validity and reliability are untested.

Time Line Follow-Back interview (TLFB: Sobell, Sobell, Klajner, Paven, & Basian, 1986) was utilized to gather reports of the participant's frequency of illicit drug. This measure was completed by the participant and a significant other separately. Significant events (e.g., birthdays, vacation days, and holidays) were marked on month by month calendars going back four months from the date of the assessment. The events were used as memory anchor points to facilitate recall of the days in which substances were used. Participants and their significant others were asked to indicate on the calendar which days illicit drugs, were used including the specific drug(s) that were used. The scores are calculated by totally the number of days an item is reported (i.e., number of days drug use is self reported). The TLFB method has been found to correspond closely with official records and reports by substance abusers, and test-retest reliability is good (Ehman & Robbins, 1984; Sobell et al., 1986). TLFB has also demonstrated convergent validity with contemporaneous measures of substance use (i.e. urine testing) (Donohue et al., 2007).

Urine Drug Screens were obtained from participants under the supervision of a same-gender certified research assistant. A 9-panel screen utilizing conventional cut-offs was

used to determine use of the following substances: alcohol, THC (marijuana), cocaine, amphetamines, barbiturates, benzodiazepines, opiates, PCP, and methaqualone.

Adult-Adolescent Parenting Inventory-2 (AAPI-2: Bavolek & Keene, 2001) is a 40-item self-report inventory administered to assess parenting strengths and weaknesses in five domains: Inappropriate Expectations of Children, Parental Lack of Empathy towards Child's Needs, Strong Belief in the Use of Corporal Punishment as a Means of Discipline, Reversing Parent-Child Role Responsibilities, and Oppressing Children's Power and Independence. A 5-point Likert scale response format was utilized (i.e., strongly agree, agree, strongly disagree). Responses are given a numerical value of 1-5 with higher scores indicating parental strengths and lower scores indicating areas of weakness. Example items include "Children should do what they're told to do. It's that simple," "Babies need to learn how to be considerate of the needs of their mother," and "Children can learn good discipline without being spanked." Each of the five sub-scales of the AAPI-2 shows significant diagnostic and discriminatory validity, have demonstrated excellent internal consistency (Chronbach's alphas>.88), and have been found to discriminate between parenting behaviors of non-neglectful, neglectful, and neglectful and abusive parents (see Bavolek & Keene, 2001).

Parenting Stress Index Short Form (PSISF: Abidin, 1990) is a 36-item self-report measure of stress in the parent-child system. Three scales were derived including: Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child. Psychometric properties are good in child maltreatment populations (Abidin, 1990). A 5-point Likert scale response format was utilized (i.e., strongly agree, agree, strongly disagree) with higher scores indicating higher levels of perceived parenting stress. The

clinical cut off for Total Stress is above 90, and a defensive responding score of 24 indicates the individual may be responding in a defensive manner and caution should be exercised when interpreting the results. Example items include "I often have the feeling that I cannot handle things very well," "I find myself giving up more of my life to meet my children's needs than I ever expected," and "I feel trapped by my responsibilities as a parent." Test-retest reliability for each of the scales ranged from .68 to .85, its internal consistency was good (.80 to .91), and short-form scales are highly correlated with respective scales in full length PSI (see Abidin, 1995). Studies have demonstrated that negligent mothers have reported higher PSI scores than control mothers (Ethier et al., 1993).

The Child Abuse Potential Inventory (CAPI; Milner, 1986) consists of 160-items designed to detect persons who engage in child abuse behavior, thus identifying children at risk for maltreatment. Participants respond agree or disagree to statements, such as "Children should never be bad" and "I always try to check on my child when it's crying." An Abuse Potential Scale along with validity scales (i.e. Lie, Random Response) was calculated. The clinical cut off score for the Abuse Potential scale is 215, which indicates significant potential for abuse to occur. CAPI factor scores assess areas relevant to abuse (i.e., distress, rigidity, unhappiness, loneliness, problems with others, problems with child, and problems with self, problems with family). The CAPI is a widely utilized, and has been shown to have good internal consistency, good test-retest reliability, and good validity (Blinn-Pike & Mingus, 2000; Milner, 1986).

The Cohesion and Conflict subscales of the Family Environment Scale (Moos & Moos, 1984) were administered in this study due to their relevance in substance abuse

(Santisteban et al., 2003). The Cohesion subscale measures the degree of commitment, help, and support family members provide for one and other. The higher the score the more perceived cohesion there is in the family. The Conflict subscale measures the amount of openly expressed anger and conflict among family members, with higher scores being indicative of greater levels of anger expression and perceived conflict in the family. Participants mark statements such as "Family members really help and support each other" or "We fight a lot in our family" as true or false. The psychometric properties are well established, including good convergent validity (Moos & Moos, 1984; Sanford, Bingham, & Zucker, 1999).

The Family Support Scale (Dunst, Jenkins, & Trivette, 1984) is an 18-item 5-point Likert-type scale that measures the helpfulness of significant others to the participant in raising her children. The measure was used to assess the relative contribution of family members participating, and not participating, in treatment. Subscale scores range from 0 to 9 with higher scores indicating higher family support received. This study utilized the Spouse and In Laws subscale which measures support from the spouses parents, spouse's relatives, and the participant's spouse, and the Own Parents Subscale which measures support from the participant's parents and relatives. This measure has demonstrated good psychometric properties including reliability and validity (see Cherniss & Herszog, 1996). Internal consistency reliabilities are in the moderate range from .35 to .76 for the subscales and .80 for the total FSS (Taylor, Crowley, & White, 1993).

Abbreviated Probe Assessments

On-going data was gathered in abbreviated 30-minute probe assessments that were conducted once every three weeks starting after the first administration of the

comprehensive battery. The measures utilized in the abbreviated battery varied for the specific studies and were selected based on the targeted behaviors. Therefore, they are described below when discussing each case.

Description of Family Behavior Therapy Program and Various Contextual Factors Relevant to the Implementation of Treatment

Family Behavior Therapy was performed by two trained psychology research assistants who were employed by the Achievement Center at the University of Nevada, Las Vegas. Therapists completed intensive training for FBT under the supervision of a licensed clinical psychologist certified in FBT. Training involved studying protocol steps, reviewing detailed treatment modules, and intensive role-plays. During training role-plays therapists received corrective feedback and recommendations for improvements in treatment delivery. Prior to certification as an FBT program therapist, individuals were required to conduct all intervention protocols with at least 90% protocol adherence (i.e., measure of treatment integrity) during simulated role-plays. The primary clinician for both cases was a graduate student obtaining her degree in clinical psychology, and a secondary undergraduate clinician with one year experience with FBT served as a co-counselor during treatment sessions.

Strategies were employed to ensure content in the treatments were administered with integrity. Therapists documented the employment of techniques used during treatment sessions via detailed protocol checklists that indicate the specific steps necessary for effective employment of treatment procedures, all sessions were audio-taped to permit their review during on-going weekly clinical supervision, and corrective feedback was

provided to therapists during supervision sessions. The protocol checklists were used to determine therapist adherence and competence, and each therapist indicated on each protocol checklist whether every therapy component was performed. In supervision, therapists were provided feedback regarding their ability to follow the protocol checklist and performance in session. If any issues, such as therapist drift occurred, the therapist received feedback from the supervisor regarding how to return to the treatment protocol.

The FBT treatment program consists of 20 sessions occurring 1 to 2 times a week over a 6 month time period. Each session was 90 to 120 minutes in duration; with longer sessions occurring during the first few weeks of treatment. The Family Behavior Therapy program is a home based treatment program that includes the participant, her children, and adult significant others. FBT contains multiple interventions organized into treatment modules that include Treatment Planning, Stimulus Control, Communication Skills Training, Child Management, Self Control, Basic Necessities and Safety Assurance, Home Safety and Beatification, Behavioral Goal Setting, Job Club, Arousal Management, and Financial Management. The modules were designed to be implemented successively and cumulatively. Each treatment module includes a treatment rationale, therapist goals for the intervention, materials required to complete the module, an overview of the intervention, procedural steps, practice worksheets, how to review the homework in the following session, and a therapist prompting form. With assistance from therapists, participants select the order in which the interventions are implemented. However, in this study participants were unable to select the order of interventions during the first 8 weeks of treatment due to experimental methodology, but did determine the order of intervention administration in the final 12 weeks of therapy.

Description of Family Behavior Therapy Interventions

The Treatment Planning module was used to help the participants identify ways the treatment interventions may helpful, and to assist in determining when each of the treatments would be implemented. Participants selected from a menu type list of treatment rationales what treatment modules were a first priority, second priority, and so forth.

Stimulus Control assists participants in increasing their time spent with safe people, places, and situations because individuals who spend time in at risk situations or around at risk people are more likely to engage in drug use, or behaviors consistent with child neglect. This intervention helped the participants to identify safe situations and plan to spend time in those situations. It also taught the participants how to address risky situations or people to increase their ability to avoid drug use and engage in more positive parenting behaviors, and how to plan to spend their time doing positive activities.

The Home Safety and Beautification module requires the therapist to tour the participants' home and identify home hazards and cleanliness issues. In addition, the therapist provided descriptive feedback to the participants about ways to eliminate hazards and increase the cleanliness and appearance of the home. Parents of neglected children have been found to be unaware of potential hazards, and often the homes of this population are messy and lacking important items, such as age appropriate toys, adequate clothing, and decorations. The goal of this intervention was to increase awareness of home hazards, and make the home a safer, more stimulating, environment for the child.

Self Control is aimed at teaching participants how to decrease their impulses to use drugs and decrease behaviors consistent with child neglect. This intervention helps clients

become more aware of the triggers for impulsive behavior and taught the participants to interrupt thoughts, urges, and physical sensations related to drug use and behaviors consistent with child neglect. Participants were taught a series of steps to control their thoughts and behaviors.

Child Management is aimed at teaching participants new parenting skills including utilizing non-aversive punishment, teaching children more desirable behaviors, ignoring undesirable behavior, and positively reinforcing children when they engage in desirable behaviors.

The Communication Skill Training module teaches families with dysfunctional communication patterns more appropriate ways to communicate to increase the rate of positive exchange between family members. Participants and their families were taught to take the time to identify and share things that are appreciated, and to ask for a specific action such as support in a positive manner.

The Arousal Management module was designed to decrease negative interactions within the family. This intervention is often used in conjunction with the communication skills. The participants were taught techniques to decrease their level of anger or arousal including relaxation skills.

The Basic Necessities and Safety module was utilized to teach the participants how to be aware of the status of certain basic necessities, and how to handle emergency situations that may occur. This intervention begins with an assessment of possible emergency situations such as adult to adult aggression or violence, not having enough food, past due bills, unsanitary conditions in the home, and court hearings. When items

are endorsed “present” or “may soon occur,” the therapist works with the participant to brainstorm solutions.

The Job Club module assists participants in learning ways to obtain satisfying jobs opportunities. In addition, the therapist teaches the participant job interviewing skills, and provides support to the participant during the process of getting a job.

The Financial Planning module was utilized to teach participant how to effectively manage their finances. Participants learn how to effectively assess their financial situation and create a budget. The participant also brainstorms solution for debt situations, and ways to establish savings.

Managing Attrition

As indicated in the literature review above, attrition was expected to occur. Therefore, enlistment procedures were utilized to assist with premature treatment termination. This intervention involved an enlistment team specialist calling the participants after each treatment session to ensure they felt their treatment needs were being met. During these calls the enlistment specialist would assess how the participant felt about treatment, if there were any issues that needed to be addressed in the following session, and if were any issues with the therapist or treatment in general. The enlistment specialist would also speak to the participant’s significant other about the aforementioned topic areas. In addition, therapists called the participant prior to every session to ensure the participant could make the appointment, and when the participant could not attend the session, it was rescheduled. If the participant had to reschedule the appointment, the therapists attempted to reschedule within a day or two of the original appointment to reduce the time between

sessions. Another strategy involved on-going assessment of plans to move during the Basic Necessities intervention. Although drop-out rates in this population are relatively high, the two participants completed the program with only 2 no shows and 6 cancellations between them.

Study 1

Case Introduction

Emily is a 42-year-old African American female referred for in-home Family Behavior Therapy (FBT) by child protective services (CPS). At the time of the referral, Emily was living with her 60-year-old African American husband, and their 3-year-old daughter. Emily had two older daughters that did not reside in her home at the time of baseline assessment because they had been placed in the care of Emily's mother and older sister by CPS due to severe child neglect (her parental rights for the older daughters had been terminated prior to the referral). Her youngest daughter was in her custody because she was born after the neglect incidents involving her older children had occurred.

Presenting Problem

Emily was referred to the FBT program for perpetrating child neglect and engaging in substance abuse. Emily was arrested for assault with a deadly weapon, and the referral to child protective services was made by the arresting officer. Emily was accused of stabbing her husband in the stomach during a domestic dispute. The arresting officer referred Emily to the Department of Family Services because he believed she was intoxicated during her supervision of her daughter. The child protective services report

indicated that Emily's daughter was not being properly supervised as evidence by the violence in the home, lack of home cleanliness, and Emily's substance use. During the child protection services investigation Emily tested positive for "crack" cocaine and was open about her extensive history of substance dependence. Shortly after this investigation, Emily was again reported for child neglect due to burns on her daughter's leg. Emily reported the injuries occurred when her daughter tried to get hot soup off the stove.

The case plan established by the Department of Family Services indicated that Emily's treatment should focus on arousal management, impulse control, medication management, communication skills training, and parent training. Emily reported that she was interested in learning new ways to cope with stress and "stay clean from drugs to keep the family together." Indeed, although she indicated that she was initially upset for being reported to Family Services; her greatest motivation to pursue therapy was that she did not want to "lose" her husband and youngest daughter due to continued drug use.

History

Emily was raised by her mother with the help of her older sister, and she reported having a positive relationship with both of these women. Emily reported that she did not have a relationship with her father, and his current whereabouts were unknown. At the time treatment began, Emily's sister was living with their mother and helping raise Emily's older daughters. Emily stated her mother and sister were helpful, and she felt supported by them. However, she also stated they were often upset with her behavior, and their expressions of disappointment served to trigger drug urges.

As indicated by Emily, her drug and alcohol use began in adolescence. When she was 16-years-old she attempted suicide for the first time, which appeared to co-occur with severe depression. It was at this time that she began using marijuana. At the age of 18 she became a single mother, and was able to care for her daughter for several years before she lost custody of her. Emily experienced many stressors in her early life including becoming a single mother, living in poverty, and experiencing mental health issues. At the age of 24 years Emily was diagnosed with Bipolar Disorder and received extensive counseling and medication management for this disorder, including prescriptions for Seroquel, Ambian, and Depakote. She remained on these medications for about a year before she reportedly substituted these medications with "crack" cocaine. She reported that using "crack" cocaine helped her cycle out of depressive states and cope with life stressors (e.g., physically abusive boyfriend). She attempted suicide for a second time when she was 25-years-old, setting her bedroom on fire while she remained in her bed. Firemen were able to get Emily out of the room safely. However, she was charged with arson, and consequently hospitalized for depression and substance dependence for one year. It was at this time she lost custody of her first child. After her hospitalization, Emily was able to maintain employment, abstain from drugs, and developed social relationships with abstinent friends. She married her current husband, and had their 1st child in her mid thirties and their 2nd child, in her late thirties. Emily suffered a drug relapse after the birth of her second daughter, which resulted in her losing parental rights for her soon after her birth. However, she was able to get clean and stop using crack cocaine a year before the birth of her 3rd child. Shortly after the birth of her third child she discontinued her medication, and began using crack cocaine until she was referred to this study.

Emily reported her drug use created problems in her personal and professional life including job loss, financial stress, legal problems, problems in her relationships, and the loss of parental rights to her oldest daughters. At the time treatment was initiated in the present study, Emily's family was experiencing financial difficulties that were exacerbated by her utilizing the family's financial resources to purchase drugs and alcohol. Emily reported that when she discontinued her medication for bipolar disorder she has experienced difficulty maintaining a job, controlling her anger, and had legal problems (i.e., arrested for arson, assault with a deadly weapon). Emily reported her relationship with her husband and other family members was strained because her family "resented" her drug use and the consequences that had occurred (i.e., removal of her children from the home). Emily spent very little time with her youngest daughter, and left most of the parenting to her husband. Indeed, her daughter would call her Emily instead of "mother," but did call her father "dad." Her youngest daughter was observed interacting with her father including sitting with him, talking to him, playing with him, and complying with his directives. However, she paid little attention to Emily, and often ignored her commands.

Assessment Measures

The first baseline assessment included the pre-treatment comprehensive assessment battery. The assessment probes were abbreviated versions of this assessment battery and included the Family Support Scale, Family Environment Scale, and the Home Safety and Beautification Checklist. The final probe session was the post-treatment assessment conducted after the termination of treatment, and included the comprehensive assessment battery.

Study Design

Emily's treatment was evaluated utilizing a controlled multiple baseline across behaviors experimental design. An initial baseline was established for the number of identified hazards in her home, perceived level of family support, perceived level of family cohesion, and perceived level of family conflict. These behaviors were then monitored throughout treatment in probe assessments. One week after Emily completed the comprehensive pre-assessment battery she participated in the first phase of the study, which was the completion of 2 non-directive intervention sessions during the subsequent 2 weeks. She participated in an abbreviated probe assessment for the first time one week after the completion of the 2 non-directive sessions (i.e., immediately prior to receiving the Home Safety and Beautification intervention component; HSB). This probe session made it possible to establish a two point baseline. In the second phase of the study, Emily completed three sessions of the Home Safety and Beautification intervention scheduled to occur once every week. She then completed the 2nd abbreviated probe assessment (i.e., phase 2 post HSB assessment). Subsequent to the 2nd probe assessment three sessions of Communication Skills Training modules were implemented in addition to the Home Safety and Beautification modules. After 3 weeks, a 3rd abbreviated probe assessment was completed (i.e., phase 3 post Communication Skills assessment). Following the 3rd abbreviated probe assessment, Phase 4 began was initiated in which Emily was administered 12 sessions of the remaining FBT intervention components as well as the previously taught skill interventions. After the 12 sessions Emily was administered the comprehensive post treatment assessment. This design permits the controlled evaluation of Home Safety and Beautification, and the anecdotal examination of the effects of

Communication Skills intervention and the comprehensive FBT program. Home Safety and Beautification would be considered efficacious if home hazards were markedly reduced in Phase 2, and changes in measure of family functioning did not occur, or were minimal, from Phase 1 to Phase 2. Further support for both HSB and communication skills training would be found if family functioning improved in Phase 3 assessment. Of course, anecdotal support for FBT would be found to exist if there were substantial improvements in general functioning from pre- to post-treatment assessment.

Study 2

Case Introduction

Rebecca is a 20-year-old Caucasian female referred for in-home Family Behavior Therapy (FBT) by the department of child protective services. At the time of the referral Rebecca was living with her parents, 18-year-old sister, and her 14-month-old daughter, Patricia. Rebecca's parents were awarded temporary parental rights of Patricia. However, Rebecca and her parents were hopeful Rebecca would regain her parental rights by completing treatment.

Presenting Problem

Rebecca was referred to the FBT program for perpetrating child neglect and engaging in substance abuse. The incident leading to the referral was Rebecca's parents calling the police because she was under the influence of alcohol and marijuana while she was alone with her daughter. During the investigation by child protection services Rebecca tested positive for marijuana, and self reported heavy use of alcohol. Rebecca's parents were given temporary custody of her daughter, Patricia, resulting in her case with child

protective services being closed. However, in order for Rebecca to regain her parental rights, she was required to successfully complete a treatment program, and remain abstinent from drugs. At the time of the referral, Rebecca and her parents believed Rebecca would benefit from treatment that focused on learning arousal management strategies, impulse control for her drug urges, effective communication skills, and child management skills. In her pre-screen interview Rebecca endorsed a desire to learn strategies to assist her in "staying clean" from drugs, and improve her self esteem.

History

Rebecca was raised by her parents. At the time of referral, Rebecca had an older sister who was married with a child, an older half-brother that rarely had contact with the family, and a younger sister that lived with Rebecca and her parents. Rebecca reported having a good relationship with her parents, and with her younger sister. However, there was a reported history of "emotional abuse" and "domestic violence" between Rebecca and her father. Approximately one month before treatment began there was a physical altercation between Rebecca and her father that resulted in her father being arrested for domestic violence. Rebecca reported that she wanted to have a "good" relationship with her father, but that he frequently became very angry and violent. She viewed violence as one of her triggers for drug use. Other triggers for drug use included her thoughts related to disappointing her family, and her feelings of guilt about not being "the best mom she could be."

Rebecca's marijuana use began when she was 13-years-old and in the eighth grade. She was expelled from middle school after being caught smoking marijuana on campus, and was home-schooled for the rest of that school year. It was during that time that she

began using methamphetamine and cocaine. Rebecca reported that she initiated drug use because she had low self esteem, and wanted to "fit in." Rebecca also reported she had multiple family members with either current or past drug addictions, including her father, older half-brother, and older sister. Indeed, she sometimes used drugs with her family members, and retrospectively reported that using with her family made her feel closer to them. She also reported periods of mild depression prior to the onset of her drug use, which included feelings of hopelessness and worthlessness.

She described herself as being dependent on these drugs 5 years after their onset. It was at this time that she discovered she was pregnant with her daughter. During her pregnancy she reportedly stopped all drug and alcohol use. She was able to maintain abstinence for approximately 8 months after the birth of her daughter, at which time she reinitiated marijuana use. She was soon using marijuana daily and often while supervising her daughter. Rebecca's drug use caused significant problems between her and her family. She indicated that she resented her family for often expressing discontent with her parenting, particularly regarding the lack of attention she expressed with her daughter.

With regard to treatment history, when she was 18 years–old she participated in 24 days of residential treatment for stimulant dependence, and then participated in narcotics anonymous for several months thereafter. She indicated that both treatments were unsuccessful. Rebecca reported that her child neglect case was at first upsetting, but subsequently realized the benefits of obtaining help for her substance use and gain new parenting skills. Rebecca stated her greatest motivation for change was that she did not want to lose her daughter, and that she no longer wanted to be addicted to drugs.

Assessment Measures

During the first baseline session, the aforementioned comprehensive assessment battery was administered. The assessment probes were abbreviated versions of the assessment battery and included only the Family Support Scale, Family Environment Scale, Time Line Follow Back, and urine drug screen. The final probe session was the post-treatment comprehensive assessment battery.

Study Design

Rebecca's treatment was evaluated utilizing a controlled multiple baseline across behaviors experimental design. An initial baseline was established for drug use, perceived level of family support, perceived level of family cohesion, and perceived level of family conflict. These behaviors were then monitored during treatment using probe assessments. One week after Rebecca completed the comprehensive pre-assessment battery she participated in the first phase of the study, which was the completion of two non-directive intervention sessions completed during two weeks. She participated in an abbreviated probe assessment for the first time one week later (i.e., immediately prior to receiving the Stimulus Control, Behavioral Goal Setting, and Self Control modules for drug urges). This probe session established a two point baseline. In the second phase of the evaluation, Rebecca completed three sessions of Stimulus Control, Behavioral Goal Setting, and Self Control modules for drug urges. After the completion of the three sessions targeting drug urges, Rebecca completed the 2nd abbreviated probe assessment (i.e. phase 2 after Stimulus Control, Behavioral Goal Setting, and Self Control assessment). Subsequent to the 2nd probe assessment the Communication Skills Training modules were implemented in addition to the Stimulus Control, Behavioral Goal Setting,

and Self Control modules for drug urges. After 3 weeks, a 3rd abbreviated probe assessment was completed (i.e., phase 3 post Communication Skills assessment). Following the 3rd abbreviated probe assessment, an additional 3 weeks of Communication Skills Training modules in addition to the Stimulus Control, Behavioral Goal Setting, and Self Control modules for drug urges were implemented. Phase 4 began and Rebecca was administered 9 sessions of the remaining FBT intervention components while continuing to receive the previously implemented therapies. After 9 sessions, Rebecca was administered the comprehensive post treatment assessment. This design permits the controlled evaluation of Stimulus Control, Behavioral Goal Setting, and Self Control modules for drug urges, and the anecdotal examination of the effects of Communication Skills intervention and comprehensive FBT. Stimulus Control, Behavioral Goal Setting, and Self Control modules for drug urges would be considered efficacious if drug use was reduced in Phase 2, and changes in measure of family functioning did not occur, or were minimal, from Phase 1 to Phase 2. Further, support for Stimulus Control, Behavioral Goal Setting, and Self Control modules for drug urges and communication skills training would be found if family functioning improved in Phase 3 assessment. Anecdotal support for FBT would be found to exist if there were substantial improvements in general functioning from pre- to post-treatment assessment.

CHAPTER 4

RESULTS

Study 1

Pre-Treatment Assessment Results

Figure 1 depicts the results of the Pre-treatment assessment, three probe assessments, and Post treatment assessment for the Home Safety and Beautification Scale, Family Support Scale, and the Family Environment Scale. Tables 1 through 7 include results of the Pre-treatment and Post treatment assessments for Timeline Follow Back, Child Abuse Potential Inventory, Parenting Stress Index, Adult-Adolescent Parenting Inventory, Urinalysis, and the Mother-Child Neglect Scale. The Pre-Treatment Assessment was conducted at Emily's residence, and required approximately 4 hours to complete.

Emily's results on the SCID-IV indicated that she met DSM-IV criteria for current Major Depressive Disorder, Alcohol Dependence, Panic Disorder, Specific Phobia, and Generalized Anxiety Disorder (see Table 1). In addition, she met lifetime criteria for Cocaine Dependence and Bipolar I Disorder. Emily reported on the Timeline Follow Back that she had used 5 days of "crack" cocaine, and 4 days of alcohol (23 alcoholic beverages) in the past 4 months, which was consistent with the positive results of the urine drug screen for cocaine (see Table 2). In the three weeks prior to treatment Emily reported using crack cocaine 3 times and drinking 1 time (3 alcoholic beverages).

The Home Safety and Beautification home tour identified 23 hazards of which 16 hazards were selected to be targeted in treatment. The other 7 hazards were not included because their amelioration depended on the landlord (i.e., installation of a heater cover,

replacing a cracked window, fixing a broken lock on the back door, fixing the trim on a bedroom door, and fixing a window that would not lock). The hazards identified included accessible electrical outlets, counters and other surfaces not clean in the kitchen, floors not clean, household items are not put away, four food groups not present, unlimited sweets, empty fridge except for condiments, air quality was stuffy and too hot, tub not clean, counters not clean in the bathroom, decorations absent from the bathroom, door trim is off and nails are accessible, floors were not clean, tub not clean, toilet not clean, lack of age appropriate toys, and windows that would not lock.

Her responses to the Spouse, In-Laws and Own Family subscales of the Family Support Scale (i.e., 9 for each scale), indicated that Emily felt she had good support in these areas, whereas her responses to the Family Environment Scale indicated that Emily's family was "conflict oriented." Her score on the Cohesion (i.e., standard score = 45), and Conflict (standard score = 60) subscales were about a half standard deviation below and a standard deviation above the mean, respectively. Thus, she perceived her family as having somewhat low in cohesion, and high in conflict. Emily also reported on the CAPI that she was experiencing problems in her familial relationships, viewed relationships as a source of pain, and was having general difficulty in her social relationships (see Table 3).

An examination of the validity scales of the Child Abuse Potential Inventory indicated Emily's Lie score was elevated, suggesting she was attempting to present herself in an overly positive manner. Even with those attempts Emily's abuse score was still elevated indicating her children were at risk for child maltreatment. Emily's scores on the Distress factor subscale, which measures personal adjustment problems, were

elevated above the clinical level, suggesting Emily was feeling frustrated, sad, lonely, depressed, worried, and "out-of-control."

The Parenting Stress Index scores indicated Emily was experiencing clinically significant stress within her role as a parent (see Table 5). Her scores indicated she had an impaired sense of parenting competency, conflict with her child's other parent, lack of social support, and was depressed. The Parent-Child Dysfunction subscale was also elevated above the 90th percentile, indicating that she felt her child did not meet her expectations, and she did not find her interactions with her child reinforcing. Indeed, parents who score in this range tend to view themselves as rejected and alienated by their children. This score suggested the bond between Emily and her daughter was either threatened, or had never been adequately established, which was consistent with behavioral observations occurring during the assessment session.

Emily's scores on the Adult-Adolescent Parenting Inventory (AAPI) were low on the following subscales: Parental Lack of Empathy towards Children's Needs, Strong Belief in the Use of Corporal Punishment as a Means of Discipline, Reversing Parent-Child Role Responsibilities, and Oppressing Children's Power and Independence. Her responses suggested Emily perceived she was not meeting the needs of her children, had a strong belief in hitting children to get them to follow rules, had a family with limited communication, perceived children as existing to meet her social or emotional needs, and tended to view children with power or independence as threatening.

Emily's score on the Mother-Child Neglect Scale did not indicate neglectful parenting behaviors. However, Emily evidenced defensive responding on other measures

that assessed parenting behaviors, so it is possible she engaged in a similar pattern of responding on this measure, particularly given its strong face validity.

Behavioral Case Conceptualization

The onset of Emily's substance abuse was triggered at an early age by significant life stressors that were exacerbated by various antecedent conditions and risk factors. Relevant to stressors, her family frequently used abusive language and violence as a method of communication. Therefore, the threat of being victimized by violence or witnessing family members being victimized influenced her to be anxious and depressed, which in turn contributed to her being distraught, and unable to focus on productive goal-oriented behavior (e.g., school work). She also received substantial negative feedback from her parents, who did not support her in extracurricular activities that were incompatible with substance use (e.g., participation in sport leagues). Given her relatively young age, she was developmentally and physically limited in her abilities to effectively cope with these circumstances. Instead, she resorted to substance use to physiologically numb aversive feelings, and escape and avoid her parents and other authority figures who were perceived to be overly critical. Thus, escape and avoidance strategies were reinforced both negatively (withdrawal of aversive stimuli) and positively (peer acceptance), and led to unmonitored delinquent activities with peers who abused substances. Other antecedents to substance use included her poor problem-solving skills that would have likely assisted her in generating non-substance use associated behaviors, poor communication skills that could have assisted her in the improvement of

relationships with people who acted to buffer substance use (i.e., parents, authority figures, coaches), and low self-esteem that might have motivated her to seek out friendships with non-drug associated peers.

As she entered her senior adolescence, she experienced dysfunctional feelings associated with Bipolar Disorder, such as rapid mood swings, depression, anger, and anxiety. She also evidenced several skill deficits that led to problems with others. For instance, when she could not get her way, she reacted with aggression (i.e., yelling, swearing, and physical violence). Emily reported that drug use helped her to feel more "normal and balanced." Indeed, she reported using cocaine to reduce depressive mood swings and increase her ability to focus on completing her day to day responsibilities (i.e. child care, cleaning the house). In addition, when the effects of drugs wore off, Emily reported an escalation of depressed feelings and irritability, which contributed to poor relationships and accompanying stress. Along these lines, Emily appeared to have great insight in realizing her main triggers to substance use were experiencing negative emotions, dysfunctional thoughts, and ineffective communication skills. The intoxicating effects of substance use also resulted in her experiencing difficulties controlling her impulses, and making poor decisions, including ignoring her caretaking responsibilities, and engaging in activities that were illegal. When sober, she reported intense feelings of guilt and worthlessness that stemmed from her believing she was a "bad" parent. Of course, these thoughts acted to increase her level of stress, and trigger substance use. Substance dependence also acted to influence child neglect in several ways. This behavior distracted her from caretaking responsibilities, and decreased her motivation to establish safety plans for her children. Child neglect was also influenced by the modeling

of child neglect by her parents, having limited money to purchase safety equipment, lack of family support in safety management, and not being aware of home safety hazards and solutions.

Treatment plan

Two main problem areas were identified as requiring immediate attention. In FBT, the participant typically chooses the order in which FBT intervention components are implemented from a menu of therapy options. However, the primary reasons for conducting this study were to examine efficacy of the Home Safety and Beautification intervention component, and substantiate the efficacy of communication skills training. Home safety hazards were targeted first to assist in assuring the safety of Emily's children. Home Safety was also a chief target in therapy because Emily had received multiple referrals to child protective services for safety and cleanliness issues, there were a relatively high number of identified home hazards, and home injuries are a leading cause of death for young children. Communication skills training components (i.e., communication guidelines, positive request, scheduling pleasant family activities) were subsequently targeted to decrease home conflict, increase positive exchange and support, and improve relationships in the family. It was hypothesized that by increasing positive communication exchange in the family there would be a decrease in familial stress, through family support. Indeed, arguments lead to stress, which in turn acts as an antecedent to drugs and child neglect. Communication increases the likelihood mothers will be able to appropriately solicit desired reinforcers, improve their familial relationships, and increase their desire to spend more time with children, which is incompatible with child neglect. Once Home Safety and Communication Skill

interventions were introduced, the remaining FBT modules were initiated. The specific order to which these FBT modules were administered depended on Emily's selection in the treatment plan, input from the therapists, and her pre-assessment results. The order of implementation for the remaining modules was Basic Necessities, Behavioral Goal Setting, Stimulus Control, Self Control, Arousal Management, Child Management Skills Training, Job Club, and Financial Planning. Treatment implementation was successive and cumulative.

Participatory Assessment

Emily completed 20 sessions, with each session lasting 90-120 minutes. For most sessions, Emily had a least one significant other present. For 80% of the sessions at least one child was present. Emily's daughter-in-law, who gained temporary custody of Emily's daughter during the course of treatment, attended the last 5 treatment sessions. Emily completed the program in six months (85% of scheduled sessions were completed). She was always motivated and highly compliant during treatment, as evidenced by her participation in role-plays and high rate of homework completion (90%).

Evaluation of Study 1

Phase 1: Baseline/Non-Directive Discussions (study weeks 1 and 2)

Emily's treatment began with two non-directive discussions that included information gathering regarding her report to child protective services, family history, and history of substance abuse and dependence. Emily provided information relevant to the child neglect report, her perceptions about her referral to child protective services, treatment

goals in her case plan from child protective services, and concerns with her caseworker. Emily was provided support and empathy, and offered assistance interacting with her caseworker (i.e., therapist would attend treatment team meetings, attend court hearings). A history of Emily's mental illness including past diagnosis and past treatment experiences was obtained. During these non-directive discussions the therapists did *not* provide advice or suggestions relevant to change in behavior. Rather, the therapist style was focused on assessing details involved in the participant's treatment plan, and provision of genuine empathy.

Phase 1: Abbreviated Probe Assessment Results (week 3)

Results from the Home Safety Checklist identified 14 home hazards, which were almost identical to those identified in the initial comprehensive pre-treatment assessment (see Figure 1). The Conflict Subscale score on the Family Environment Scale remained the same from the pre-treatment assessment to Phase 1. That is, Emily perceived a high level of conflict in her family. On the Cohesion subscale, Emily endorsed a slight improvement, which was not expected because the communication interventions had not been introduced at this time. The Family Support subscales showed a decrease in her perception of support from her spouse, spouse's family, and her own family.

Phase 2: Home Safety and Beautification (study weeks 3, 4, and 5)

Three sessions of the Home Safety and Beautification were conducted following the two non-directive sessions. Emily and her family actively participated in the intervention, and chose to include all rooms in the home tour. Therapists utilized the Home Safety and Beautification checklist to assist in the identification of potential home hazards and cleanliness issues. This checklist assessed for the presence of items including home and

health hazards (e.g., uncovered electrical outlets, broken locks, toxins), home cleanliness and beautification (e.g., floors unclean, surfaces unclean, lack of decorations), and having materials that facilitate personal and social growth for children (e.g., age appropriate toys, books, size appropriate clothing). Therapists toured the home with Emily and her family and praised the family when potential hazards were ameliorated prior to the session. In addition, Emily and her family were prompted to identify hazards and cleanliness issues for each room toured. For identified hazards, the therapists worked with the family to immediately remedy the hazard, and if this was not possible, develop a safety plan to correct the hazard by the next treatment session. The first tour identified hazards including accessible electrical outlets, counters and other surfaces not clean, floors not clean, household items not put away, four food groups not present, unlimited sweets, ants in the bathroom, tub not clean, decorations absent from the bathroom, door trim was off and nails were accessible, and windows would not lock. During the tour Emily exhibited good insight into the importance of having a safe and clean home, as evidenced by her ability to recognize hazards generally before she was prompted.

During the 2nd week another tour was completed, and it was discovered that Emily and her family had eliminated most of the home hazards that were identified in the previous session. Moreover, they repainted several rooms, bought decorations for the living room and bathroom, re-arranged furniture in the living room to provide more space for their children to play, and showcased artwork drawn by their daughter. Within three weeks a total of three home tours were performed. All of the potential hazards that were deemed a “high priority,” and most of the other hazards, were eliminated.

Phase 2: Abbreviated Probe Assessment Results (week 6)

Results of the assessment probe that occurred after the three Home Safety and Beautification intervention sessions indicated a significant improvement in home safety, stable perceptions of low family support from spouse and in laws, slight increase in perceptions of support from own family, stable level of perceived family Cohesion, and a slight decrease in Family Conflict (see Figure 1). Identified home hazards and messes were reduced by 70% from baseline. As expected, results on the Family Support Scale indicated no change in Emily's perceived support from her spouse and in laws, and slight improvement in perceived support from Emily's own family. There was no change in the Cohesion subscale of the Family Environment Scale, and a slight decrease in her perception of Conflict in the family. Emily's scores were consistent with the hypothesized findings for this phase of the study.

Phase 3: Communication Skills Training and Home Safety and Beautification (study weeks 6, 7, and 8)

Three sessions of the Communication Skills Training modules win addition to the Home Safety and Beautification intervention were completed following three weeks of solely Home Safety and Beautification. Communication Skills Training included three sub-components (i.e., Reciprocity Awareness, Positive Request, and Arousal Management) that were reviewed successively and cumulatively. The Reciprocity Awareness (I've Got a Great Family) module was implemented to increase awareness of reinforcers provided by other family members, assist each family member in appreciating how family members reinforce each other, and ultimately increase the rate of positive verbal exchange. Increasing positive exchange in families is believed to lower familial

stress and communication problems that often trigger drug use and child neglect. Family members listed things that others had done for them that were appreciated, and after the list was developed all family members took turns expressing appreciation to one another. The therapist then provided praise and feedback about the interactions, and taught family members how to utilize appreciation reminders to one another on a regular basis. Emily and her family reported that they enjoyed and were extremely eager to express appreciation reminders to each other. Indeed, the first time this intervention was reviewed Emily gave her daughter a spontaneous hug, and Emily and her husband became teary eyed when they exchanged their statements.

The Positive Request module was utilized to teach Emily and her family members to ask for reinforcers in a positive and appropriate manner. Emily was taught to make requests from her family members to perform duties that are incompatible with child neglect (e.g., asking a family member to help her clean up the house so her daughter does not live in a dirty home), and drug use (e.g., asking friends to go someplace other than a party where drug use is present). Emily and her husband were compliant, motivated, and did exceptionally well in the role-plays. After only a few treatment sessions' substantial improvement in communication between Emily and her husband were observed as evidenced by more appropriate requests for support being made in session. Emily stated feeling safe with her husband, and felt able to be more open regarding her drug urges. Indeed, she was very excited during a session because she had openly stated to her husband she was experiencing an urge to use drugs, and made a positive request that he spend time with her so she did not use drugs. Her husband reported that he was happy

and surprised Emily shared her feelings and urges with him, and that he was able to assist her in “staying clean.”

Arousal Management was utilized to decrease negative emotions experienced in Emily’s family. Emily and her husband were taught to identify anger early, and subsequently engage in behaviors that are incompatible with negative arousal (i.e., deep breath, relax, state problem in a neutral, non-blaming way, blame something in the situation, state something that may have been done to contribute to the annoying behavior). During sessions Emily and her husband were asked to recall a situation that was frustrating or upsetting and complete the aforementioned steps as practice. Emily stated she found the breathing exercise to be helpful in reducing her anger outside of sessions.

Phase 3: Abbreviated Probe Assessment Results (week 9)

After the third session of Communication Skills Training results on the Family Support Scale indicated an increase in support from Spouse and In Laws, and an improvement in support from Emily’s own family from previous probe assessments. On the Family Environment Scale (Cohesion subscale) there was no change from earlier probe assessments (see Figure 1). There was no change in the perception of conflict in the family. It is hypothesized that conflict score did not decrease as a result of Emily admitting to her therapists and caseworker that she suffered from a drug relapse. Emily and her husband were very upset about the possible consequences of her relapse, which included the loss of custody of her daughter. As would be expected this created conflict between Emily and her husband, as well as an increase in overall tension in the family.

On the Home Safety Checklist Emily had remedied 3 out of the 5 hazards identified in Phase 2. However, there were 3 new home safety and cleanliness issues identified.

Phase 4: Remaining Family Behavior Therapy Interventions (study weeks 9 to 20)

After the aforementioned 3 weeks of Communication Skills Training with Home Safety and Beautification, the remaining interventions were implemented successively and cumulatively.

Behavioral Goal Setting was utilized to assist Emily in establishing and updating goals relevant to eliminating her presenting problems. Emily reviewed a list of common antecedents to child neglect and substance abuse and selected treatment goals. Emily's goals included to keep healthy snacks in the home, avoid cigarettes, effectively manage or stop bad memories, avoid alcohol use, manage drug cravings and urges, effectively manage stress, stay busy doing things that do not involve drugs, effectively manage savings and avoid having large sums of cash easily available, to stay happy and satisfied, to take medications for Bipolar disorder every day, and to make sure her child eats 3 meals a day every day. Each week her husband provided support and reinforcement to Emily for meeting her goals. In addition, she often completed additional goals in between sessions on her own, such as finding a job and repairing her car so she no longer needed a ride to work from her mother. Each week Emily set many goals and had a 90% completion rate. Her husband also had a 90% rate of providing support to her for the completion of focus goals.

The Stimulus Control module was utilized to teach Emily to identify safe and at risk situations, and to avoid people, places, and situations that put her at-risk to use drugs, make it difficult for her to effectively manage her kids, and increase her risk of getting

HIV. Based on her assessment it appeared Emily had an understanding of her drug triggers, but lacked the necessary skills to control or avoid triggers once they were identified. This intervention taught Emily to arrange her environment to spend more time with people, places, and situations that did not involve drugs or HIV risk behaviors, and made it easier for her to effectively take care of children. First, Emily and her significant other were asked to list as many people, places, and situations that she could remember in which Emily had used drugs in the past. Her list included various friends, relatives, her drug dealer, getting angry, arguing, drinking alcohol, being sad, having lots of cash, and being home alone. Emily was then asked to make a safe list that included people, places, and situations in which Emily had not used drugs. This list included spending time with her children, shopping, taking the children to events, eating out, going bowling, going to the movies, talking walks, and family gatherings. Every week the list was reviewed to assess how Emily was able to cope with risky situations, and how she was able to increase time spent in safe situations. Initially Emily's risk list had more people and situations than on the safe list. However, Emily made significant progress eliminating people and places that put her at risk to relapse by utilizing skills she learned in the FBT program including planning time with safe associations. By the end of treatment Emily's environment included only a few people, places, and situations that were on her at risk list. In addition, she had added multiple new safe items, including a job, going to church, and new hobbies such as taking walks on the weekends.

Basic Necessities was utilized to ensure Emily and her family was safe and healthy, and their basic needs were met prior to engaging in other FBT components. At the beginning of each session Emily reviewed a list of potential problems that threatened the

safety and well-being of her family, such as not being able to pay bills or rent, substance use, absence of healthy foods, and domestic violence. She also indicated if these things were present or soon to occur. If an item was endorsed, Emily and her husband engaged in problem solving to manage the issue, including utilization of other FBT components. During treatment, one instance of domestic violence was endorsed (Emily indicated her husband had been removed from the home after she called police to report the incident). Emily reported her husband had struck her when they were intoxicated because they were upset they had lost custody of their youngest daughter due to a recent drug relapse. Both Emily and her husband had a difficult time coping with the removal of their daughter, and after the incident of domestic violence she indicated she wanted to divorce her husband. The therapist met with Emily and her husband to discuss their options, at which time the therapist provided the suggestion if they decided to stay in the marriage to utilize the communication FBT components as a coping strategy, and increase their support of one another during this difficult time. As a result of the emergency session, there was increased focus on communication skills training to facilitate an open healthy dialogue that would reduce negative feelings and help Emily be more open about her drug triggers, and ask for support from her family.

Child Management Skills (i.e., Catching My Child Being Good/Ignoring Undesired Behaviors, Positive Request, and Child Compliance Training) were utilized to assist Emily in learning strategies to be more consistent in her disciplinary methods, and improve her daughter's compliance. Emily was taught to descriptively praise her children through modeling, role plays, and in vivo trials. During these trails, Emily was provided praise and corrective feedback from therapists whenever needed. Emily was assigned to

practice “catching her child being good” and to ignore undesired behavior that did not result in damage to property or harm to self or others in between sessions. Since the child had been removed from custody the child’s guardian agreed to bring her daughter to the sessions so she could practice her skills. There was significant improvement observed in Emily’s ability to make positive statements to her daughter, and teach her desirable behaviors.

Financial Management was used to address Emily’s goal of more effectively managing her finances. First, a list of Emily’s monthly expenses was created to identify deficits or surplus. The therapist utilized problem-solving to assist her in brainstorming solutions to increase each method of income and decrease each expense. She also brainstormed other methods of increasing family income such as reducing excess spending and getting a job. To assist Emily to gain employment Job Club was utilized to teach her to initiate calls to potential employers and skills for successful job interviews. Emily did extremely well in the role-plays in session, and was able to obtain 2 job interviews within two weeks. Both Emily and her husband reported a reduction in financial stress at the end of treatment as a result of Emily obtaining a full time job, and because of the money management skills they were now utilizing.

The Self Control module was introduced after the removal of Emily’s daughter from the home. This intervention was utilized to teach Emily to control impulses and urges that increase the likelihood of using drugs, and rash decisions when managing children. It was also taught to Emily and her husband as an effective coping strategy for their emotions including feelings of anger and anxiety. Emily was taught to recognize her first thought to engage in undesired behavior, and then engage in a series of conceptually sound

strategies, including thought stopping, rehearsing negative consequences that could occur if the undesired behavior were to occur, brief relaxation, problem-solving, imagining the implementation of the chosen solution, and reviewing positive consequences for having performed desired actions. Emily and her husband were having a difficult time coping with their feelings, and this intervention was extremely beneficial to both of them. They both demonstrated great effort to learn this skill as evidenced by their eagerness to practice the skill in session, and applying the Self Control skill outside of the sessions.

Phase 4: Comprehensive FBT Post-Treatment Assessment Results

The post assessment was conducted at Emily's residence, and took approximately three hours to complete. Her post treatment results were generally positive. Emily had a full time job at the time of the post assessment. Her post assessment was scheduled for two sessions over a three week time span.

Emily's results on the SCID-IV indicated that she did not meet current criteria for any DSM-IV diagnosis. As expected, she met criteria for lifetime Cocaine Dependence, Alcohol Dependence, Generalized Anxiety Dependence, and Bipolar Disorder. On her Timeline Follow back Emily reported 1 day of alcohol use and 1 day of crack cocaine use during the six months she was in treatment, which was supported by her negative urine drug screen results.

In the post treatment Home Safety and Beautification tour, 9 home hazard items were endorsed, with most of these being related to cleanliness (see Figure 1), such as unclean floors and counters. Emily reported the issues were the result of her being ill. Another possibility is that Emily was not as concerned with child safety since her daughter had

been removed from her home, which may have been why there were hazards such as an uncovered electrical outlet, and shaving razor left in the shower.

Emily reported a slight reduction in family support from her Spouse and In Laws, and from her Own Family after treatment was terminated (see Figure 1). This may have been the result of less involvement from other family members because therapy was over. Another possibility was that due to her busy work schedule, Emily did not have as much time to spend with her family as she had previously. Nevertheless, although these subscales were slightly lower than they were prior to treatment, they were still indicative of high levels of perceived social support. Emily's results on the Family Environment Scale indicated no significant change in perceived Cohesion, or perceived family Conflict (see Figure 1). Emily's level of perceived family Cohesion on the Family Environment scale was maintained at the non-clinical level, while her Conflict score was no longer elevated (see Figure 1).

The Child Abuse Potential Inventory validity scales were indicative that she approached the questions in an open and honest manner (see Table 4). Emily's Distress scores were below clinical levels suggesting she was not feeling frustrated, sad, lonely, depressed, worried, or out-of-control. The Rigidity subscale was, elevated indicating Emily felt that children need strict rules, and should follow those rules. This may have been elevated at post because her daughter was living with another family member, and Emily had stated she wanted her daughter to be well behaved to make the experience less stressful for the temporary guardian. Her Problems with Family subscale score was not elevated, indicating Emily was not experiencing problems in her familial relationships. The Problems from Others subscale was elevated as compared with baseline, perhaps due

to her negative interactions with caseworkers and judges. Indeed, Emily often expressed frustration with her current child protective services caseworker. Emily's score on the Mother-Child Neglect Scale did not indicate neglectful parenting behaviors. However, it is important to note Emily could not answer all the questions because her daughter was not in her physical custody.

The Parenting Stress Index was not clinically significant, indicating that she was not experiencing stress in her role as a parent (see Table 4). These results may have been because the child was not in Emily's physical custody at the time. However, there was an improvement on all three subscales indicating Emily felt an improvement in her sense of parenting competency, a reduction in depression, found her interaction with her daughter reinforcing, and experienced an improved bond with her daughter. Results on the Adult-Adolescent Parenting Inventory (AAPI) indicated that after treatment Emily had a more realistic understanding of her daughter's developmental capabilities, as compared with pre-treatment assessment. Her subscale scores on Parental Lack of Empathy Towards Children's Needs, and Strong Belief in the Use of Corporal Punishment as a Means of Discipline remained the same. On the Reversing Parent-Child Role Responsibilities subscale there was improvement indicating Emily saw her daughter less as existing to meet her social needs, and more as a child with whom should be cared for by her.

Complicating Factors during Treatment

Like many clients within the child welfare system with a substance disorder, Emily evidenced difficulties that complicated her treatment plan, such as periods of low motivation for treatment, domestic violence, financial and legal concerns. At the onset of treatment Emily reported a high level of motivation and a desire to learn skills that would

assist her in abstaining from drugs, obtaining a job, improving her parenting skills, and enhance the communication in her family. During the course of treatment Emily maintained a high level of motivation and commitment as evidenced by her consistent attendance and high compliance ratings. However, she did experience a reduction in motivation after a drug relapse. She reported feeling "defeated" by her drug use, and dissolution in her marriage. Indeed, the removal of her daughter might have prevented level of conflict in Emily's family from decreasing as much as was hypothesized. The therapist empathized with her concerns, and assisted her in refocusing her efforts on learning strategies that would increase her chances of regaining custody of her child. She indicated the loss of her child was a "blessing in disguise" because it increased her motivation, and permitted her ample time to "get her life together." The participant was fortunate to have a family member who was willing to care for her daughter and attend FBT sessions, which improved consistency of child management between these households. Legal issues were a concern, as her caseworker was primarily responsible for making sure Emily's children were safe. By providing support and empathy as well as reestablishing a commitment from Emily and her husband, Emily was able to overcome her motivation issues and appeared to experience an increase in motivation for positive change. Motivation was also enhanced by encouraging her to choose which goals she wanted to focus on during each upcoming week, and having a significant other provides her pre-determined rewards for accomplishing her goals.

After her drug relapse, the caseworker recommended termination of parental rights to Emily's judge, while the therapist recommended Emily is given a chance to regain custody of her children if she continued to participate well in treatment. The therapist

mentioned relapses are common in drug dependence, particularly initially in treatment. The judge agreed with the therapist, and Emily's motivation for therapy improved to its highest level since entering treatment.

Study 2

Pre-Treatment Assessment Results

Figure 2 includes a summary of the results of the Pre-treatment assessment, 3 Probe assessments, and Post treatment assessment for the Family Support Scale, Timeline Follow Back, Urinalysis, and the Family Environment Scale. Tables 8 through 14 include the Pre-treatment assessment, and Post treatment assessment results for Child Abuse Potential Inventory, Parenting Stress Index, Adult-Adolescent Parenting Inventory, and the Mother-Child Neglect Scale. The Pre-Treatment assessment was conducted at Rebecca's residence and took approximately 4 hours to complete.

Rebecca's results on the SCID-IV indicated that she met the DSM-IV current criteria for Alcohol Dependence and Cannabis Dependence. She also met lifetime criteria for Methamphetamine Dependence (see Table 8). Rebecca reported on the Timeline Follow Back 13 days of using marijuana, and 7 days of drinking alcohol (approximately 21 alcoholic beverages). For the three weeks prior to treatment Rebecca and her significant other reported 6 days of marijuana use and 4 days of alcohol use (approximately 10 alcoholic beverages) (see Figure 2). The TLFB results were consistent with the results of the urine drug screen, which was positive for marijuana.

The Home Safety and Beautification home tour identified 8 hazards, of which one was ameliorated immediately because of the seriousness of the hazard. Rebecca's father

owned a firearm which was identified during the tour to be unloaded and kept in the nightstand (see Table 9). The firearm was moved to a top shelf in the closet where it would be safely out of reach of children. The other hazards were surfaces not clean in the kitchen and bathroom, unstable furniture in the living room and bedrooms, and floors not clean in the living room.

Her responses to the Own Family subscale of the Family Support Scale indicated that Rebecca felt she had good support from her family, but identified a need to increase the support from her family and friends. In addition, her responses to the Family Environment Scale indicated that her family was experiencing high levels of Conflict (e.g. fights a lot, becomes angry often, and solves problems with arguments and violence). However, Rebecca's results also indicated that she perceived her family as somewhat Cohesive. Rebecca also reported in the CAPI that she was experiencing problems in her familial relationships, viewed relationships as a source of pain, and was having general difficulty in her social relationships.

An examination of the validity scale of the CAPI indicated that Rebecca answered questions openly and honestly (see Table 11). While her score on the Abuse scale fell just below the clinical cut off, her scores indicated she believed children need strict rules, should be neat and obedient, and as a result may express these beliefs through more forceful treatment of her daughter (see Table 12). Rebecca's score on the Mother-Child Neglect Scale did not indicate neglectful parenting behaviors. However, it is important to consider the potential impact the strong face validity might have on the responses given to this measure.

The Parenting Stress Index scores indicated that Rebecca was not experiencing clinically significant stress within her role as a parent and that she did not have an impaired sense of parenting competency; conflict with the child's other parent, a lack of social support, or feelings of depression (see table 13 and 14). Her stress scores may have been low because she received help from her parents and sister who spent as much time as she did caring for her daughter.

Rebecca's scores on the Adult-Adolescent Parenting Inventory (AAPI) suggest she had difficulty meeting the needs of her children, had a strong belief in hitting children to get them to follow the rules, had a family with limited communication, and tended to view children with power or independence as threatening. However, she also appeared to understand and accept the needs of her child, understanding that she could not meet her own needs at the expense of her child's needs.

Behavioral Case Conceptualization

Rebecca's substance abuse is conceptualized from a cognitive behavioral perspective. Her substance use was initiated when she was relatively young and developmentally immature. She reported poor coping skills, particularly in stressful situations. She also evidenced depression, and interpersonal problems within her family and peer group that were maintained by a pattern of negative coercion. Later in life, Rebecca utilized substances to numb guilt regarding her parenting practices and stress in her relationships. Indeed, she reported using drugs to "numb" her emotions. In addition, when the positive effects of the drug wore off, Rebecca reported feeling more depressed, creating a cycle for which substance use was maintained through negative reinforcement, resulting in her dependence on marijuana. She also evidenced several skill deficits that led to problems

with others. For instance, she typically reacted to negative situations with aggression (i.e., yelling, swearing, and physical violence), and lacked confidence and positive assertion skills necessary to meet abstinent friends. Rebecca reported her main triggers to substance use were experiencing negative emotions, negative thoughts about herself (e.g., "I will never be a good mother," "I am a loser"), and arguments with her family members that often resulted in domestic violence. Her drug use influenced her to make ineffective decisions that often resulted in Rebecca ignoring her caretaking responsibilities, leaving her frustrated family members responsible for her daughter.

Treatment plan

Two main problem areas were identified as requiring immediate attention. Drug urges were targeted first to assist in ensuring safety for the participant and her child. The implemented interventions that targeted drug urges were Stimulus Control, Behavioral Goal Setting, and Self Control. Communication skills training components (i.e., communication guidelines, positive request, scheduling pleasant family activities) were subsequently targeted to decrease the high level of conflict, increase positive exchange and support, and improve the relationships in the family. Although the greatest conflict was between Rebecca and her father, the entire family engaged in maladaptive communication patterns. Increasing positive exchange in the family assists in the reduction of stimuli that trigger drug use and child neglect, such as violence. Reduction of drug use and child neglect is often the result of a decrease in stress, and an increase in support within the family. Along these lines, arguments usually lead to stress, which subsequently increases the risk of using drugs or neglecting children. Therefore, this skill is important because it increases the likelihood mothers will be able to appropriately

solicit desired reinforcers, improve their familial relationships, and increase their desire to spend more time with children, which is incompatible with child neglect. After the pre-selected interventions were introduced, the remaining FBT modules were initiated with the participant. The order for implementation for the remaining FBT modules was determined by the participant's selection on the treatment plan, input from the therapists, and the pre-assessment results. The order of implementation for the remaining modules Basic Necessities, Behavioral Goal Setting for positive parenting behaviors and HIV risk prevention behaviors, Arousal Management, Child Management Skills Training, Job Club, and Financial Planning.

Participatory Assessment

Rebecca completed 20 sessions with each session lasting 90 to 120 minutes. In each session, Rebecca had a least one significant other present. Indeed, she often had multiple family members present including her mother, father, older sister, younger sister, and her daughter. Rebecca completed the FBT program within 6 months and had above average attendance (90%). She was very motivated and compliant, as evidenced by her participation in role-plays in session and her high rate of homework completion (96%).

Evaluation of Study 2

Phase 1: Baseline/Non-Directive Discussions (study weeks 1 and 2)

Rebecca's treatment began with two non-directive discussions that included information gathering regarding her report to child protective services, family history, and history of substance abuse and dependence. The participant was solicited about her understanding of the child neglect report, her perceptions about her referral to child

protective services, treatment goals in her case plan from child protective services, concerns if any with her caseworker, and the FBT program. Rebecca was provided support and empathy, and offered assistance interacting with her caseworker (i.e. therapist would attend treatment team meetings, attend court hearings). Rebecca was asked to provide information about her family, including information about family members she grew up with and her relationships with those individuals. Finally, a history of Rebecca's drug use was obtained. During the non-directive discussions the therapists did *not* provide advice or suggestions relevant to change in behavior. Rather, the therapist style was focused on assessing details involved in the participant's treatment plan, and provision of genuine empathy.

Phase 1: Abbreviated Probe Assessment Results (week 3)

Results from the urine drug screen were positive for marijuana, which was consistent with Rebecca's self report on the TLFB, of one day of marijuana use (see Figure 2). The Conflict and Cohesion subscale scores derived from the Family Environment Scale both decreased meaning she reported a decrease in perceived conflict, but also a decrease in perceived cohesion. Interestingly, on the Family Support Scale, Rebecca reported a slight increase in support from her family. This increase was not expected, but could have been the result of Rebecca feeling supported about her recent commitment to therapy, and her family's participation. This support could also have resulted in the decrease in perceived family conflict. However, the tension in the family and limited time spent together outside of the session might have resulted in Rebecca's perceived slight loss of family cohesion.

Phase 2: Behavioral Goals, Stimulus Control, and Self Control for Drug Urges (study weeks 3, 4, and 5)

Three sessions of Behavioral Goal Setting, Stimulus Control, and Self Control interventions targeting drug urges were conducted following the two non-directive sessions. Behavioral Goal Setting was utilized during treatment to assist Rebecca in establishing goals relevant to decreasing her drug use. For this intervention Rebecca created a list of goals, and received support from her significant other when she completed her weekly goals. Rebecca's goals included to avoid alcohol use, to not keep drug paraphernalia in the house, to go back to school, to keep busy, and to effectively manage her drug cravings. Each week Rebecca set many goals, and evidenced a 95% completion rate. In addition, she often added goals between sessions on her own that she was able to accomplish, such as getting her driver's license and getting her GED. Her family had a 90% rate of providing support to her every week to help her complete her focus goals. Rebecca put a great deal of effort into this intervention as evidenced by her innovations to the homework forms. Because Rebecca has documented problems with her memory, she would often experience difficulty reporting how she was able to meet her goals for the previous week. The form originally asked the participant simply to mark off an item as a focus goal for the week and to put a check mark next to the item once completed. Rebecca began writing next to the item all the things she did to attempt to complete the goal. Because she found doing this to be very helpful, and it was an addition that would benefit other participants, a change was made to the form creating a space for future participants to list how they attempted to complete their goals.

Stimulus Control was utilized to teach Rebecca to identify safe and at risk situations, and learn to avoid people, places, and situations that put her at-risk to use drugs. First, Rebecca and her significant others were asked to list people, places, and situations that were associated with Rebecca's prior drug use. Her list included various friends, relatives, her drug dealer, being at a park, getting angry, arguing, drinking alcohol, being bored, and being with her boyfriend. An extensive a list of people, places, and situations for which Rebecca indicated she had not used drugs was constructed, including various family members, going to church, taking a bath, shopping, eating out, family gatherings, going to the movies, journaling, cleaning, and going to her grandmother's house. Every week the list was reviewed to assess if Rebecca was able to abstain from marijuana use, and how she was able to increase time spent in safe situations. Rebecca was also taught how to arrange her environment to spend more time with people, places, and situations that did not involve drugs. Rebecca lacked the ability to understand her drug triggers and skills to avoid these triggers, or to effectively cope with triggers that could not be avoided. In the beginning of treatment, she had numerous items on her at risk list, and most of her time was spent with those items. Although it was difficult for her, she did eliminate the majority of risky people in her life. When she was unable to avoid stimuli completely, such as her boyfriend, she practiced using FBT techniques (i.e., Self Control see below) to control potential drug urges.

Self Control was utilized to teach Rebecca to control impulses and urges that increased her likelihood of using drugs. This skill involves identifying the first thought to use drugs and when that thought occurs thinking about the negative consequences of drug use, utilizing relaxation exercises, identifying alternatives to drug use, imagining doing a

drug incompatible behavior, imagine telling someone you were able to manage a craving, and the listing the positive consequences for not using drugs. Rebecca was very active in the role-plays for this module, and was exceptional at listing off alternative behaviors and identifying the first thought to use drugs. She reported many instances of using this procedure outside of the session, and reported feeling it was effective in helping her control her drug urges.

Phase 2: Abbreviated Probe Assessment Results (week 6)

Results from the assessment probe that occurred after the three Self Control, Stimulus Control, and Behavioral Goal Setting sessions indicated no changes in Rebecca's perceived family cohesion, or perceived family support (See Figure 2). There was an unexpected slight reduction in perceived family conflict. Results from her urine drug screen were positive for marijuana, which was consistent with her reported use on the TLFB. Although these were not the results expected, Rebecca had admitted to a relapse during a treatment session.

Phase 3: Communication Skills Training and Behavioral Goals, Stimulus Control, and Self Control for Drug Urges (study weeks 6, 7, 8,9,10, and 11)

Three sessions of Communication Skills training with Behavioral Goals, Stimulus Control, and Self Control were completed following three weeks of solely the interventions for drug urges. Communication Skills Training included three sub-components (i.e., Reciprocity Awareness, Positive Request, and Arousal Management) that were reviewed successively and cumulatively. Reciprocity Awareness was designed to increase each family member's awareness of the reinforcers provided by other family members, and ultimately increase the rate of positive verbal exchange. This increase in

positive exchange assists in the reduction of stimuli that trigger drug use and child neglect by decreasing stress and increasing support within the participant's family. Family members listed things that other people in their family had done for them that were appreciated, and after the list was developed, all family members expressed appreciation to one another. The therapist then provided feedback about the interactions, and taught family members how to utilize appreciation reminders. Rebecca and her family were extremely involved in expressing appreciation reminders to each other in treatment sessions. Indeed, each session was extremely emotional for all family members, and they all appeared eager to exchange appreciation reminders and often hugged each other after the appreciative statements were performed.

The Positive Request procedure teaches family members to ask for reinforcers in a positive and appropriate manner. Rebecca was taught to make requests of her family members to perform duties that are incompatible with child neglect (e.g. asking a family member to supervise her daughter while she goes to a friend's house), and drug use (e.g. asking family member to go with her to risky places such as certain nearby stores and parks). Rebecca and her parents were extremely involved in the role-plays, as evidenced by their multiple attempts in session to master the skills and eagerness to attempt the role-play. Role plays included Rebecca making a positive request of her family members to go with her to at risk places such as the mini mart or the nearby Wal-Mart where she was often approached to buy marijuana. Rebecca's family members made requests that she come home on time and not bring marijuana to the house. Improvement in family communication was immediately apparent, and reported from all family members.

Rebecca's mother reported an improvement in family communication that she felt resulted in a decrease in stress in the home environment.

Arousal Management was utilized to decrease negative interactions were present in Rebecca's family. Rebecca and her father were taught to identify anger early, and subsequently engage in behaviors that are incompatible with negative arousal (i.e., deep breath, relax, state problem in a neutral, non-blaming way, blame something in the situation, state something that may have been done to contribute to the annoying behavior). Rebecca reported that she really enjoyed the breathing and found that step alone to be helpful during and outside of sessions.

Phase 3: Abbreviated Probe Assessment Results (study weeks 9 and 12)

Results indicated a decrease in perceived Cohesion, increase in Conflict, and no change in family support (see Figure 2). Rebecca reported 6 days of marijuana use on her Time Line Follow Back, which was consistent with positive results on the urine drug screen for marijuana. The results are believed to reflect a complicating factor that occurred a few days prior to the probe session. As a result of this incident it was decided that instead of continuing on with the remaining FBT modules to continue with Communication Skills Training in addition to Self Control, Stimulus Control, and Behavioral Goals for drug urges for three more treatment sessions. Following the additional three sessions a fourth assessment probe was completed. Results indicated a dramatic improvement in perceived family cohesion. There was also a slight decrease in perceived family conflict and slight increase in family support. Rebecca reported one day of marijuana use, and did test positive for marijuana on the urine drug screen.

Phase 4: Remaining Family Behavior Therapy Interventions (study weeks 12-20)

After the aforementioned 6 weeks of Communication Skills Training, the remaining interventions were implemented successively and cumulatively.

The Basic Necessities module was utilized to ensure that Rebecca and her family were safe and healthy, and their basic needs were met prior to engaging in other FBT components. At the beginning of each session Rebecca reviewed a list of potential problems that threatened the safety and well-being of her family, such as not being able to pay bills or rent, substance use, absence of healthy foods, and domestic violence and indicated if these things were present or soon to occur. If an item was endorsed Rebecca and her family member engaged in problem solving to deal with the issue including utilizing other FBT components. Rebecca had little difficulty during the six months of treatment maintaining basic necessities for herself and her daughter in large part due to the active role her mother had in caretaking for Rebecca and her daughter. However, this intervention did serve to assist Rebecca in becoming more independent and more responsible, as evidenced by her taking over the responsibility for managing her money, paying her bills, and doing the grocery shopping for her and her daughter.

The Child Management Skills (i.e., Catching My Child Being Good/Ignoring Undesired Behaviors, Positive Request, and Child Compliance Training) modules were utilized to address Rebecca's desire to learn strategies to be more consistent in her disciplinary methods, improve her children's compliance to her requests, and become the primary caregiver for her daughter. First, the Catching My Child Being Good intervention was introduced in which Rebecca learned how to ignore undesired behavior that her daughter engaged in that did not result in damage to property or harm to self or

others. Rebecca had difficulty providing reinforcement to her daughter, and was taught how to praise her daughter when she was engaging in a desired behavior. Rebecca was also taught how to effectively discipline her daughter without the use of corporal punishment (e.g., time out procedure).

In vivo practice sessions were utilized in which the therapist gave Rebecca immediate feedback during the trials. The therapist would sit close to Rebecca and provide reinforcement and suggestions without her daughter being aware of the feedback Rebecca was receiving. Rebecca was extremely eager to learn new parenting strategies, and was highly compliant in session including actively engaging in role plays and in vivo trials.

For the parenting modules, Rebecca again went beyond what was expected, which demonstrated her desire to learn the new skills. For these modules participants are given tracking sheets to write down how they were able to catch their children being good, any attempts for positive practice that were made, and any times compliance training was utilized. Rebecca created her own chart on poster board and made it a game with her daughter. Every time her daughter engaged in a desirable behavior, Rebecca attempted to praise her daughter and gave her daughter a sticker to put on the chart. There was significant improvement observed in Rebecca's ability to make positive statements to her daughter, the quality of the interactions, and an increase in desirable behaviors from her daughter. In the sessions prior to the child management interventions, Rebecca's daughter spent most of her time with Rebecca's sister or mother. However, once Rebecca's praise for her daughter increased, there was a noticeable difference in their affective bond. For example, Rebecca was upset at the beginning of treatment because her daughter often called her "Rebecca" instead of "mom." By the end of treatment her

daughter was referring to Rebecca as “mommy” during treatment sessions, and spent most of her time with Rebecca.

The Financial Planning module was used to address Rebecca’s goal of more effectively managing and organizing her finances. Rebecca utilized this skill to help her plan each month for her regular bills, and save additional money. First, a list of Rebecca’s monthly expenses was created to identify deficits or surplus. The therapist utilized problem-solving to assist her in brainstorming solutions to increase each method of income, and decrease each expense. She also brainstormed other methods of increasing family income such as reducing excess spending and going back to school to obtain a better paying job.

Phase 4: Comprehensive FBT Post-Treatment Assessment Results

The post assessment was conducted at Rebecca’s residence, and took approximately three hours to complete. Rebecca’s results on the SCID-IV indicated that she did not meet current criteria for any DSM-IV diagnosis. On her Timeline Follow back Rebecca reported using marijuana once since the last probe assessment. The drug use happened one month before the comprehensive post-treatment assessment, and indicated that Rebecca had been able to maintain sobriety for 35 days. This was the longest she had been sober since her pregnancy. It is also important to note that Rebecca reported her marijuana use did not occur when she was caring for her daughter (which was verified by her family). Rebecca’s urinalysis results were negative for all illicit substances at the time of the post assessment. The post treatment Home Safety and Beautification tour identified 6 home hazards and cleanliness issues. The issues identified were low risk and low priority items.

Rebecca's level of perceived family Cohesion on the Family Environment Scale indicated that she felt her family was extremely cohesive (see Figure 2). Rebecca also reported a dramatic reduction in perceived family conflict from the comprehensive pre-treatment assessment. Rebecca reported a slight reduction in perceived support. This reduction might be the result of the loss of the consistent support from family members attending and participating in treatment sessions.

An examination of the validity scales of the Child Abuse Potential Inventory indicated Rebecca's answered the questions openly and honestly. The Abuse Potential score was significantly below clinical cut offs. Rebecca did not believe children need strict discipline, or that she evidenced problems in her family, or problems with others. Rebecca's score on the Mother-Child Neglect Scale did not indicate neglectful parenting behaviors.

The Parenting Stress Index scores indicated Rebecca was not experiencing clinically significant stress within her role as a parent (see Table 11). Indeed, Rebecca did not have an impaired sense of parenting competency; conflict with the child's other parent, lack of social support, and depression. There was a slight increase in her stress score, which may have resulted from Rebecca taking on more parenting responsibilities. Although her parental stress slightly increased there was an equal decrease in parental distress which indicates that she felt stress without feeling worried or out of control.

Rebecca's scores on the Adult-Adolescent Parenting Inventory (AAPI) suggest Rebecca experienced difficulty meeting the needs of her daughter, believed in spanking as a discipline method, and viewed children with power or independence as threatening.

Her scores indicated that she understood the role of the parent and the role of the child, and realized she was supposed to care for her daughter, not the other way around.

Complicating Factors during Treatment

Rebecca demonstrated excellent attendance and missed only two scheduled treatment sessions due to a medical illness. Rebecca was also exceptional in regards to rescheduling appointments and notifying therapists ahead of time if she was not going to be able to make the session. Although her attendance was good, Rebecca had difficulty maintaining high levels of motivation. At the onset of treatment Rebecca reported a high level of motivation for positive change in various aspects of her life. However, she often expressed feelings of disappointment in regards to her frequent relapses. Rebecca spontaneously reported several times that she felt "too weak to get clean" and that sobriety was not "worth the effort." By providing a statement of support and personal empowerment to Rebecca, as well as challenging these irrational beliefs, Rebecca was able overcome these periods of low motivation.

Six days before the third scheduled assessment probe session, Rebecca's boyfriend, whom her family felt was a bad influence on Rebecca, informed her that he would be moving and wanted her to spend his last five days with him. She informed her parents she would be gone for a few hours and did not return for five days. During that time she admitted to drinking and using marijuana. Understandably, this incident was a short-term setback in treatment. However, after Rebecca returned home she apologized to her family and recommitted to the program and her sobriety.

CHAPTER 5

DISCUSSION

The present study was conducted to evaluate components of a newly developed Family Behavior Therapy (FBT) program for child neglect and parental substance abuse utilizing controlled single case methodology. Family Behavior Therapy, which is an integration of two published interventions, was selected because of promising results in outcome studies with substance abuse, anecdotal support with child neglect, and promising results from an uncontrolled trial with a mother founded for child neglect and substance abuse. This study examined multiple interventions that are designed to reduce illicit drug use and child neglect behaviors by utilizing multiple baseline methodology (i.e., multiple baseline across behaviors) because this is an ideal design to prioritize dangerous behaviors (i.e., target dangerous behaviors first), and reduce the amount of time in baseline (i.e., delay in treatment provision).

Study Attrition Rates

Although drop-out rates in this population are relatively high, only two referrals to the FBT program were required meaning both of the referrals from CPS completed the program and no additional referrals were needed. In addition, the two participants completed the program with only two no shows and six cancellations between them. For the first case examination, an initial baseline was established for home safety, family support, family cohesion, and family conflict. These behaviors were then monitored during treatment using probe assessments. For the second case examination, an initial

baseline was established for drug use, family support, family cohesion, and family conflict. These behaviors were then monitored during treatment using probe assessments. The results of this study were expected to demonstrate the effectiveness of five modules from the FBT program specific for child neglect and drug abuse. Specifically, it was hypothesized that 1) Implementation of Home Safety and Beatification would significantly reduce home hazards and enhance home appearance 2) Implementation of Self Control, Stimulus Control, and Behavioral Goal Setting would reduce drug use and 3) Communication Skills Training modules would anecdotally improve communication within the family.

Summary of Findings

As hypothesized, in the first case study, the Home Safety and Beatification intervention significantly reduced home hazards and enhanced the home appearance. Following three treatment sessions of Home Safety and Beautification, results from the assessment probe indicated a significant improvement in home safety. Specifically, identified home hazards and messes were reduced by 70% from baseline. All of the potential hazards that were deemed a high priority, and most other hazards, had been eliminated. In addition to eliminating the majority of cleanliness issues and home hazards by the second session of Home Safety and Beautification the participant had significantly improved the aesthetics of her home by repainting several rooms, adding decorations to the living room and bathroom, re-arranged furniture in the living room to provide more space for her daughter to play, and showcased artwork drawn by her daughter throughout the house.

Results from the second case study did not support the hypothesis that Self Control, Stimulus Control, and Behavioral Goal Setting alone would result in the reduction of drug use. Study results appeared to suggest that the implementation of the entire FBT program was necessary for the cessation of drug use. For instance, during the early phases of treatment the participant repeatedly reported relapses and tested positive for marijuana in her urine drug screens. However, during phase 4, which is the implementation of the entire FBT program, the participant no longer reported relapses. Following phase 4, the participant had her first clean drug screen, and did not self report any marijuana use. It may also be, however, that the participant required an extended period of treatment prior to achieving abstinence.

Both participants had families with high levels of perceived conflict, low levels of perceived family cohesion, and limited family support prior to treatment. For study one the participant reported improvements in communication. However, the improvements in family functioning were not as significant as hypothesized to occur. This might have occurred because complicating factors (e.g., removal of child from home resulting from the participant experiencing a relapse) were likely to be more significant than the effects of treatment. By the post-treatment assessment, the participant's results indicated improvement in cohesion, and slight improvement in perceived family conflict relative to baseline. Similarly, in the second study, there were complicating factors that appeared to delay the hypothesized outcomes from being observed. However, when an additional three sessions of Communication Skills Training was provided to the participant and her family, expected outcomes were observed. Specifically, results indicated a dramatic improvement in perceived family cohesion, and a slight decrease in perceived family

conflict and slight increase in family support. Following the completion of treatment, results indicated that the participant's level of perceived family cohesion indicated that she felt her family was extremely cohesive and there was a dramatic reduction in perceived family conflict from the pre-treatment assessment.

In addition to the hypothesized outcomes, both participants demonstrated other significant improvements following the implementation of the comprehensive FBT program. Both participants met DSM-IV current criteria for multiple disorders prior to treatment, and both did not meet current criteria for any disorders following treatment. Both participants had clean drug screens following treatment, which was consistent with indications of no drug use as per self- and significant-other reports. In both studies, the participants made significant progress, eliminating people and places that put them at risk to relapse, and added many new safe items, including going to work, going to church, and new hobbies such as taking walks on the weekends and spending more time with family. Both participants evidenced improvement in parenting practices, as observed in their ability to make positive statements to their daughters, their teaching techniques, and mother-child attachments. In study 1, the participant experienced a significant reduction in parental distress, and both participants reported a reduction in potential for child abuse and neglect, according to a standardized questionnaire. Both participants demonstrated improvements in parenting competency, improved bond with their child, and found their interactions with their daughters to be reinforcing. By the end of treatment, both participants were close to regaining their parental rights of their children. The participant that was diagnosed with Bipolar Disorder reported better adherence to her medication. Both participants demonstrated an increased ability to manage their finances, and both

had made long-term goals to continue after treatment to improve their financial situation. Indeed, one participant initiated a new job, and the other enrolled in community college, during treatment. Both participants demonstrated improvements in their ability to recognize maladaptive thoughts, and engaged in strategies to control their urges to use drugs. In regards to domestic violence, both participants self reported that domestic violence no longer occurred by the end of treatment.

In summary the present study evaluated components of a newly developed Family Behavior Therapy (FBT) program for child neglect and parental substance abuse. Results demonstrated the efficacy of the Home Safety and Beautification module to significantly reduce home hazards, modest efficacy of Communication Skills Training in reducing conflict and increasing cohesion. Most measures were markedly improved by the completion of comprehensive FBT, and these improvements did not appear to be due to these participants presenting themselves in a favorable light, as indicated by the validity scales. For instance, both participants demonstrated significant improvements in their ability to cope with stress, ability to control urges to use drugs, improvement in parenting skills, improvements in relationships with others, and an increase in financial stability.

These findings are consistent with other studies that have found positive results in comprehensive treatment approaches for use in similar difficult populations (Barone, Greene & Lutzker, 1986; Brunk, Henggeler, Whelan, 1987; Henggeler, Clingempeel, Brondino, & Pickrel, 2002; Hughes & Gottlieb, 2004; Lutzker, 1994). Results support the conclusion that family behavior therapy is a promising treatment approach in co-morbid drug abuse and child neglect. FBT appeared to lead to an increase in positive child management practices, and these improvements were seen subsequent to only a few

treatment sessions targeting parenting practices. Of great importance, this is the first outcome study, albeit with limited control, to explicitly address domestic violence, unemployment, child neglect, and substance dependence concurrently. Finally, based on the high attendance rate found in both cases, despite exceptionally poor attendance rates in other samples (see Lefforge, Donohue, & Strada, 2007) this study provides additional support for the use of home based services that are complemented by enlistment and engagement programming.

Threats to Internal Validity

To make statements about a cause and effect relationship, the experimenter must have experimental control, which occurs when a cause and effect relationship between the independent variable and the dependent variable is established, and other possible explanations for the finding have been ruled out (Christ, 2007). Internal validity is the extent to which the design of the study eliminated bias, and allows the researcher to draw a casual inference between the treatment and outcome (Mulder, Frampton, Joyce, & Porter, 2003). It is important to note that when conducting research on treatment outcome, attempts to enhance internal validity can reduce the external validity of the treatment. External validity refers to the extent to which the results can be generalized to other circumstances such as other populations or settings (Cook & Rumrill, 2005). In a multiple baseline design experimental control is demonstrated when the data show change only after an intervention has been implemented and the baseline is stable.

Multiple baseline methodology is designed to assess and rule out the influence of extraneous variables and increase internal validity. Although participants reported high

motivation for change there were external factors that may have influenced their completion of the study. Specifically, the participant's needed to complete a treatment program to regain custody of their children, and one participant was court ordered to complete a treatment program. It is possible that without the involvement of the court or child protective services the participants may not have completed the FBT treatment program. However, the completion rate for this study was 100%, which is dramatically higher than reported rates in other court mandates populations. Indeed, studies with court mandated participants tend to have the highest attrition rates (Gershater-Molko et al., 2003). The participant's demographic information and history were consistent with the population of substance abusing mothers founded for child neglect. However, the participants were diverse, in this study, thus assisting in generalizability of results. Related to the completion rate, mortality was not a threat to internal validity because there were no participants that failed to complete the study.

Testing can be problematic when utilizing a multiple baseline design. However, if sufficient data is collected, the researcher can determine if outcome effects have occurred as hypothesized. In this study, standardized assessment probes were conducted immediately prior to each treatment session every time. The assessors were trained to administer the assessment measures in a neutral, non-emotional, manner, and provided the same rationale and instructions for each assessment. To standardize instrumentation, attempts were made to have one observer complete all assessments. The first case study had one assessor throughout, but due to scheduling difficulties the second case study had two different assessors. However, the second case study did not include subjective assessment measures, limiting the impact on internal validity. In addition, the multiple

probe design improves the assessment of internal validity by selectively probing for data at critical points in the study (Christ, 2007).

History can be a problem with any study. However a multiple baseline design allows the experimenter chances to detect these effects (Christ, 2007). For the first case study the removal of her child from her custody, and for the second case study the 5 days spent with her boyfriend may have influenced their performance on targeted behaviors. Specifically, these incidents may have decreased the participant's motivation for change. However, because these incidents were brief it is likely their impact on internal validity was limited. The incidents may inform future studies as potential complicating factors for treatment to be aware of and plan to reduce the occurrence and impact on treatment.

Maturation is change in the participant's behaviors that is not the result of the manipulation in the experiment, but result from the passage of time. The short time in this study (i.e., 6 months) was unlikely to affect physical maturation, although life experiences may have influenced developmental maturation, and thus may have impacted internal validity. However, it is unlikely this effect was significant.

Another way to minimize threats to internal validity is to utilize random assignment of participants to experimental conditions. Random assignment with a large number of participants is considered the superior experimental research design in treatment outcome research. However, Corrigan and Salzer (2003) report random assignment may have an impact on engagement and participation. For instance, recruitment can be impacted because some individuals may rule themselves out of participating in the study if they believe they may be assigned to a treatment that is not beneficial for them. Corrigan and Salver (2003) describe the behavioral and cognitive consequences that can occur when

individuals enter a study for help, but get randomly assigned to a condition they perceive does not help them. It is important to consider that people make their own decisions about whether or not they need help, who to get help from, and what kind of help they need. If participant treatment preferences are ignored participants may threaten mortality by dropping out or be unengaged in treatment. In addition, there is an ethical obligation to provide needed services to individuals and not deny them treatment that would benefit them. In this study, random assignment was not utilized, primarily due to ethical concerns in the early phase of treatment development.

Demand Characteristics

Another threat to internal validity is demand characteristics, which occurs when a research subject is aware of what the experimenter expects to find, and subjects change their behavior as a result. Often the subject will change their behavior to conform to what they believe the experimenter expects to find. Therefore, the subjects may feel obligated to provide information based on what they perceive the therapist wants to hear. This change in behavior can produce extraneous variables and can alter the results of an experiment. For example, the subjects may report feeling better, or using less drugs, than is actually true. In this study, assessment information was gathered from multiple persons, including a caseworker, judge, family members of participants, and a therapist. Validity scales were utilized, as was objective urinalysis testing.

To reduce demand characteristics specific statements were read prior to each assessment probe regarding the experimenter's desire to not want the subject to provide answers they think the experimenter wants to hear. That is, participants were informed they should not feel obligated to provide certain scores on assessment measures, but

rather provide honest information to help the therapist better address the subject and their family's needs. Before the assessment was administered, the assessor would explain to the subjects that the goal of the assessment is to identify areas of strength and growth for the participants so they can receive the best services possible. The statement was also made before the therapist asks each participant for a rating of helpfulness for interventions after they are introduced. To assist in controlling demand characteristics due to potential fears that information will be shared with the caseworker and the judge, the limits of confidentiality were extensively reviewed, including specific progress indicators that will be provided to these persons, including their compliance in treatment, and performance in role-plays during treatment.

A multiple baseline design assists in controlling demand characteristics because the experimental design makes it easier to determine when treatment effects are expected to occur, and for what outcome measure. If demand characteristics were present, they usually are indicated during the first probe session, and these effects are maintained throughout the study. Indeed, in these studies both participants appeared to have reported more favorable results on the initial assessment, as consistent with scores on their validity scales. However, the remaining assessment results were varied and appeared to be more honest. Similarly, when two or more uncorrelated behaviors are measured, and only one behavior has been targeted, such as in multiple baseline research, it is expected that only the target behavior will demonstrate changes consequent to treatment. There were instances of slight improvement in behaviors when not expected. In general these changes were marked only when the behavior was targeted in treatment.

Study Limitations

One limitation of this study is an unpredicted loss of experimental control. Control was lost when unexpected complicating factors occurred during the evaluation of Communication Skills Training, as an example. Complicating factors may be common in the population being tested. Although attempts were made to regain control, future randomized trials will inevitably be necessary to definitively prove the benefits of the Communication Skills Training treatment components. Interpretation of study findings is obfuscated to some extent because some of the baseline scores were already in the Normal range of functioning. Thus, it is difficult to determine if the FBT interventions were functionally effective due to potential ceiling effects.

Another possible limitation of this study is that both participants had only one child who was between the ages of 2 and 5. The cases might have been more difficult if the participants had more than one child and the children were of varying ages as different age groups present different challenges to parents. It is possible that stress associated with more than one child would have impacted the clients participation in treatment (e.g., session attendance, motivation), or their ability to complete practice assignments between sessions. In order to accurately determine the generalizability and benefits of the program participant's with more children and with varying ages would is needed.

The criteria of this study required the participant to have no plans to move in the next 6 months. This criterion was made to reduce the likelihood that the participants would leave town and not complete the treatment program. This criterion may limit generalizability to treatment in other settings such as community mental health clinics. In most settings treatment providers cannot exclude people who may be considering

moving. Thus our dropout rate may have been positively affected by this criterion, and this criterion limits our ability to say other treatment providers would also find similar low drop rates without this criteria.

Finally, this study did not collect long term outcome data (e.g., follow up), and as a result the long term benefits of the FBT program are unknown. It is possible that the positive effects of the FBT program were not maintained, or were maintained to a lesser degree than immediately following the completion of the treatment program. Therefore, we are unable to determine the long term benefits and additional studies should conduct follow up assessments over a longer period of time.

Future Directions

Future studies should evaluate the effectiveness of the remaining FBT treatment components. These controlled evaluations would provide additional information regarding the benefits of the other treatment components, and if a component is not found to contribute to the participant meeting their treatment goals the component must be modified or eliminated from the treatment program. In addition, the long term effects of the complete FBT program should also be evaluated. This study provided preliminary support for the effectiveness of the FBT program with individuals with co-morbid mental disorders (e.g., Bipolar Disorder). Future studies evaluating the program's effectiveness with other disorders should be conducted. This would provide information regarding the ability to apply this treatment program to a more general population.

Although children were included in several components of the FBT program, additional components that target the child victim and other children in the home should

be developed. Research has demonstrated the benefits to programs that target the child victim directly (Culp, Richardson, & Heide, 1987; Culp, Little, & Letts, 199; Fantuzzo, Sutton-Smith, Atkins, Meyers, Stevenson, Coolahan, Weiss, & Manz, 1996; Kolko, 1996). However there is also limited research on these programs indicating the child components would need to undergo extensive evaluation. Child-focused interventions that show promise are interventions that focus on helping children develop relationships with others, cope with their feelings, and play therapy to enhance positive play (Culp, Little, & Letts, 1991; Fantuzzo et al., 1996). Finally, because of the high number of home hazards identified, an intervention that teaches children to identify hazards and ways to avoid or prevent the hazard, may be beneficial.

Additional studies comparing FBT to treatment as usual are advised as a necessary second step in the evaluation of this treatment program. FBT should be compared to existing services to demonstrate that the program offers definitive promise and results in improvements greater than or similar to what is already available to participants. Also, studies must be created to be more generalizable than traditional outcome studies, and allow for greater flexibility (Addis, 2002). Specifically, research should be more general to ensure the results can be replicated in a wider range of service delivery environments. Evaluating the program in a variety of practice settings might be particularly important in demonstrating its generalizability.

Finally, if additional studies of the FBT program continue to demonstrate its effectiveness, dissemination studies of FBT will need to be conducted to determine its effectiveness in community settings. Addis (2002) provided suggestion for dissemination of clinical products to mental health providers, including making the developed program

available to the public, providing training on treatment manuals, assessment of newly trained therapist protocol adherence, and evaluation and remediation or systemic issues within an organization that may hinder treatment implementation.

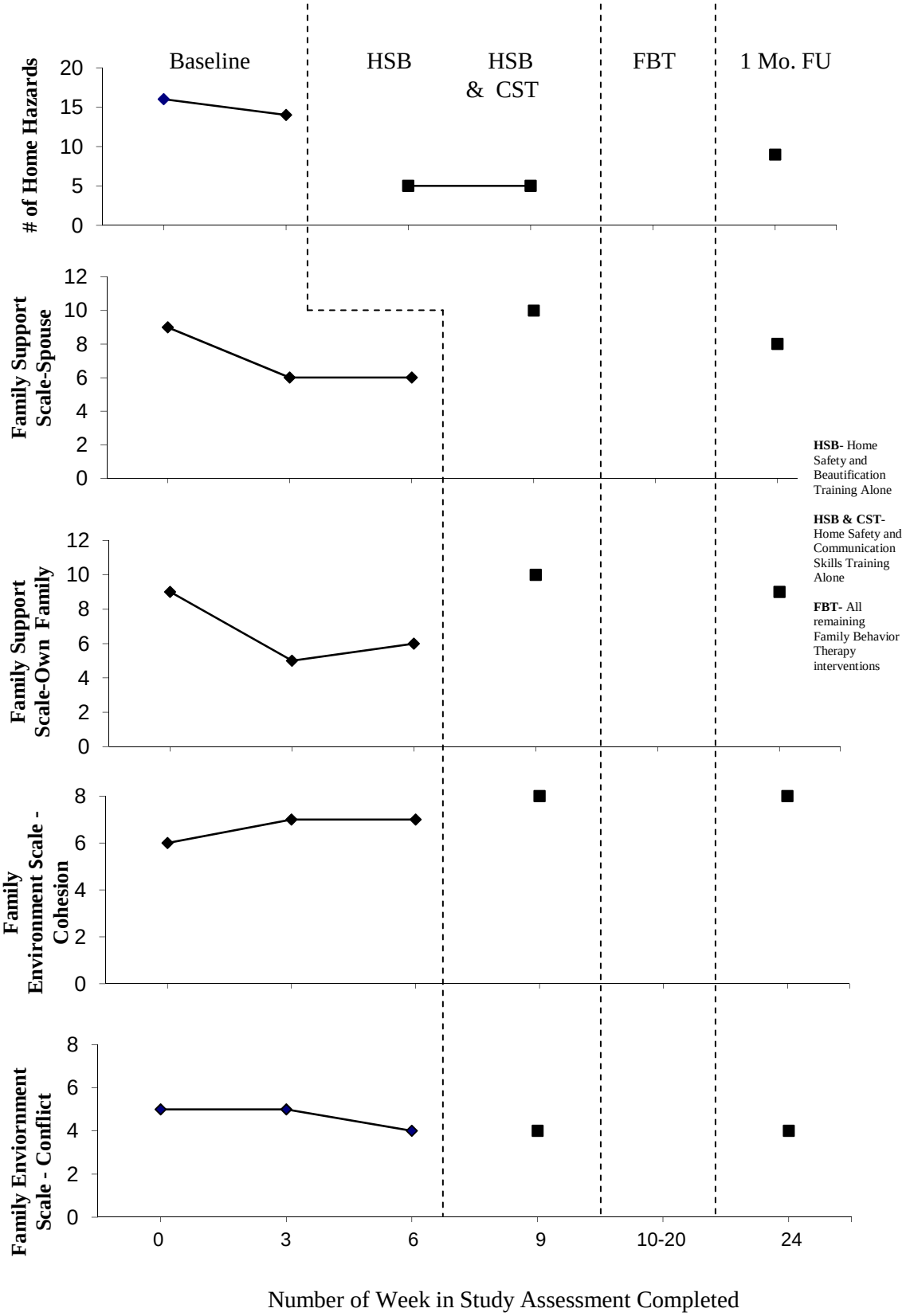

Figure 1. Examination of home hazards, family support, and family environment across baseline, treatment, and 1 month follow-up.

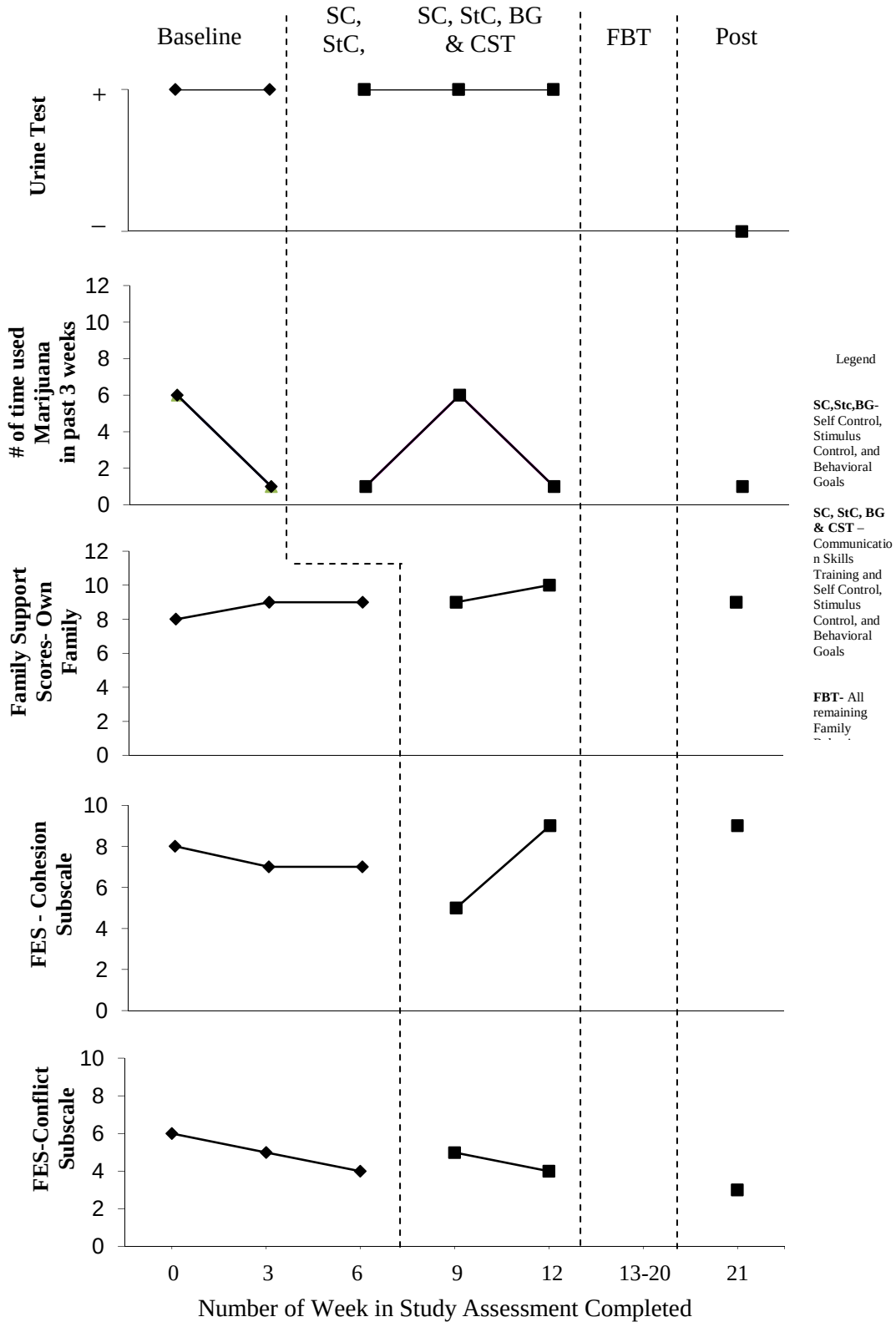

Figure 2. Examination of drug use, family support, and family environment across baseline, treatment, and post treatment.

Table 1

Measures of Mood in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
CAPI/ Unhappiness	9	22
SCID-IV/Bipolar Disorder	Present (Current)	Present (Lifetime)
SCID-IV/Alcohol Dependence	Present (Current)	Present (Lifetime)
SCID-IV/Cocaine Dependence	Present (Lifetime)	Present (Lifetime)
SCID-IV/Specific Phobia	Present (Current)	Absent
SCID-IV/Generalized Anxiety Disorder	Present (Current)	Present (Lifetime)
SCID-IV/Panic Disorder	Present (Current)	Absent

Note: CAPI = Child Abuse Potential Inventory; SCID-IV = Structured Clinical Interview for DSM-IV

Table 2

Measures of Substance Use in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
TLFB/Alcohol Use	4 days	0 days
TLFB/Cocaine Use	5 days	1 day
UA/Cocaine	Present	Absent
UA/Alcohol	Absent	Absent

Note: TLFB = Timeline Follow-Back, scores represent number of days of substance use during previous 4 months from time of assessment; UA = Urine Analysis, labels represent presence or absence of drugs.

Table 3

Measures of Problems with Family and Others in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
CAPI/ Problems w/ Family	18*	6
CAPI/ Problems from Others	21*	21*

Note: CAPI = Child Abuse Potential Inventory;
*denotes scores that are significantly elevated

Table 4

Measures of Validity Scores in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
CAPI/Lie	9*	6
CAPI/Random Responding	3	2
PSI/ Defensive Responding	25*	20

Note: CAPI = Child Abuse Potential Inventory(Clinical cut off for Lie scale is 9, for Random Responding scale is 6); PSI-S = Parenting Stress Index Short Form (Clinical cut off for Defensive Responding scale is 24)
*denotes scores that are significantly elevated

Table 5

Measures of Stress in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
CAPI/ Distress	206*	114
PSI-S/Parental Distress	39*	32
PSI-S/Total Stress	102*	81

Note: CAPI = Child Abuse Potential Inventory; PSI-S = Parenting Stress Index Short Form
*denotes scores that are significantly elevated

Table 6

Measures of Problems with Children in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
CAPI/ Problems w/ Child and Self	10	0
PSI-S/Child Dysfunction interaction	30*	26
PSI-S/Difficult Child	33*	23

Note: CAPI = Child Abuse Potential Inventory; PSI-S = Parenting Stress Index Short Form
*denotes scores that are significantly elevated

Table 7

Measures of Child Abuse Potential in Participant 1 as Assessed During Pre-Treatment and 1 Month Follow-Up

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	1 Month Follow-Up
CAPI/Abuse	288*	198

Note: CAPI = Child Abuse Potential Inventory
*denotes scores that are significantly elevated

Table 8

Measures of Mood in Participant 2 as Assessed During Pre-Treatment and Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post Treatment
CAPI/ Unhappiness	3	0
SCID-IV/Major Depressive Disorder	Absent	Absent
SCID-IV/Bipolar Disorder	Absent	Absent
SCID-IV/Alcohol Dependence	Present (Current)	Present (Lifetime)
SCID-IV/ Methamphetamine Dependence	Present (Lifetime)	Present (Lifetime)
SCID-IV/Marijuana Dependence	Present (Current)	Present (Lifetime)
SCID-IV/Generalized Anxiety Disorder	Absent	Absent
SCID-IV/Panic Disorder	Absent	Absent

Table 9

Measures of Home Safety in Participant 2 as Assessed During Pre-Treatment and 1 Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post-Treatment
HSBS	8	6

Note: HSBS = Home Safety and Beautification Scale, scores represent number of home hazards identified via a tour of the home

Table 10

Measures of Problems with Family and Others in Participant 2 as Assessed During Pre-Treatment and Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post Treatment
CAPI/ Problems w/ Family	32*	0
CAPI/ Problems from Others	21*	12

Note: CAPI = Child Abuse Potential Inventory;
*denotes significant elevations

Table 11

Measures of Validity Scores in Participant 2 as Assessed During Pre-Treatment and 1 Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post Treatment
CAPI/Lie	4	4
CAPI/Random Responding	2	1
PSI/ Defensive Responding	20	22

Note: CAPI = Child Abuse Potential Inventory(Clinical cut off for Lie scale is 9, for Random Responding scale is 6); PSI-S = Parenting Stress Index Short Form (Clinical cut off for Defensive Responding scale is 24)
*denotes scores that are significantly elevated

Table 12

Measures of Abuse and Neglect Potential in Participant 2 as Assessed During Pre-Treatment and Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post Treatment
CAPI/ Abuse	200	100
AAPI/ Parental Lack of Empathy	1	1
MCNS/ Total Score	6	5

Note: CAPI = Child Abuse Potential Inventory; AAPI = Adult Adolescent Parenting Inventory, MCNS = Mother- Child Neglect Scale

Table 13

Measures of Problems with Children in Participant 2 as Assessed During Pre-Treatment and Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post Treatment
CAPI/ Problems w/ Child and Self	1	1
PSI-S/Child Dysfunction interaction	21	25
PSI-S/Difficult Child	21	23

Note: CAPI = Child Abuse Potential Inventory; PSI-S = Parenting Stress Index Short Form

Table 14

Measures of Stress in Participant 2 as Assessed During Pre-Treatment and Post Treatment

	Time Assessed	
Outcome Measure/Subscale	Pre-Treatment	Post Treatment
CAPI/ Distress	101	64
PSI-S/Parental Distress	32	26
PSI-S/Total Stress	73	82

Note: CAPI = Child Abuse Potential Inventory; PSI-S = Parenting Stress Index Short Form

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