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ORIGINAL ARTICLE

Treatment of Concurrent Substance Dependence, Child Neglect and Domestic Violence: A Single Case Examination Involving Family Behavior Therapy

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Abstract Although child neglect and substance abuse co-occur in greater than 60% of child protective service cases, intervention outcome studies are deplorably lacking. Therefore, a home-based Family Behavior Therapy is described in the treatment of a woman evidencing child neglect, substance dependence, domestic violence and other co-occurring problems. Treatment included contingency management, self control, stimulus control, communication and child management skills training exercises, and financial management components. Results indicated improvements in child abuse potential, home hazards, domestic violence, and drug use, which were substantiated by objective urinalysis testing, and tours of her home. Validity checks indicated the participant was being truthful in her responses to standardized questionnaires, and assessors were "blind" to study intent. Limitations (i.e., lack of experimental control and follow-up data collection) of this case example are discussed in light of these results.

Keywords Domestic violence · Substance dependence · Child neglect · Family Behavior Therapy

Theoretical and Research Basis

Approximately 3 million children in the United States are maltreated each year, with child neglect accounting for more than half of these cases (United States Department of Health and Human Services [USDHHS] 2006). Home hazards are the leading cause of death and serious injury in children younger than 5 years; and substance abuse has been indicated in at least 60% of the homes for which child maltreatment has been found to occur (see National Clearinghouse on Child Abuse and Neglect Information [NCCANCH] 2003). Parental drug use puts children at increased risk for child neglect, and problems associated with concurrent drug abuse and child neglect include poor family relationships, unemployment, lack of support from family and friends, child behavior problems and parenting skill deficits, and substance use disorders are associated with increased rates of domestic violence (Stuart et al. 2003). When substance use disorders co-occur with psychological disorders, treatment becomes complicated, as dually diagnosed individuals are often resistant to treatment and experience legal difficulties (DeBernardo et al. 2002).

Family Behavior Therapy (FBT) has been shown to decrease many of the aforementioned problems, including drug abuse, school and work unemployment, behavior problems, psychopathology, and family discord in controlled trials (Azrin et al. 1996; Azrin et al. 1994a; Azrin et al. 2001; Azrin et al. 1994b). Its interventions are chiefly aimed at teaching substance abusers to avoid or manage stimuli that often precede substance use, such as arguments, anger, places where drugs are present, depression, and anxiety. Many of the antecedent stimuli associated with drug abuse are also precursors to child neglect. For instance, arguments and negative emotions (e.g., depression, anxiety, anger) may cause parents to be distracted from caretaking activities. Thus, avoiding or effectively managing antecedents to drug use may assist in the elimination of child neglect. Similarly, child neglect and drug abuse are facilitated by a lack of awareness or

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remoteness of negative consequences. Thus, behavioral interventions may be effective in treating co-morbid child neglect and substance abuse. An uncontrolled trial of an Eco-behavioral treatment application (Lutzker and Rice 1984) conducted by Donohue and Van Hasselt (1999) in caregivers of maltreated children provides preliminarily support for FBT in child abuse and neglect. Therefore, the current single case examination was conducted to develop and initially examine the feasibility of FBT in co-morbid child neglect and substance dependence.

Case Introduction

Diana is a 20-year-old Caucasian female referred to treatment by the local department of family services for child neglect (Child Protective Services). At the time of referral, Diana was living with her parents, 18-year-old sister, and her 14-month-old daughter, Patricia. Diana's parents were awarded temporary parental rights of Patricia, but were hopeful Diana would regain her parental rights by completing treatment. She provided written informed consent, and study procedures were approved by the University's institutional review board for the protection of human subjects.

Presenting Complaints

Diana was referred for perpetration of child neglect and illicit substance use. The specific incident involved Diana's parents calling the police because she was under the influence of alcohol and marijuana while she was alone with her daughter. Diana's parent's reported that Diana evidenced difficulty caring for her daughter and unless instructed by her mother would forget to feed her, often allowing her daughter to remain in dirty diapers and dirty clothes. During the investigation by child protection services Diana tested positive for marijuana, and self reported heavy use of alcohol. Diana's parents were given temporary custody of her daughter, Patricia, resulting in her case with child protective services being closed. However, in order for Diana 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, Diana and her parents believed Diana 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 Diana endorsed a desire to learn strategies to assist her in "staying clean" from drugs, and increase her self-esteem.

History

Diana was raised by her parents. At the time of referral, Diana 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 Diana and her parents. Diana reported having a good relationship with her parents, and with her younger sister. However, she indicated that her father was emotionally abusive and perpetuated domestic violence. Approximately one month before the initiation of treatment, there was a physical altercation between Diana and her father that resulted in her father being arrested for domestic violence. Diana reported that she wanted to have a "good" relationship with her father, but that he frequently became very angry and violent. She believed violence was a trigger for her drug use. Other triggers for drug use included thoughts related to her disappointing family members, and her feelings of guilt pertaining to her not being "the best mom she could be."

Diana'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. She reported she was a "follower" and had a difficult time making new friends despite recognizing the negative impact her peers had on her life at that time. It was during this time that she began using methamphetamine and cocaine. Diana reported that she initiated drug use because she had low self-esteem, and wanted to "fit in." Diana also reported that 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 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. Diana's drug use caused problems in her family, and she resented her family for often expressing discontent with her parenting, particularly regarding the lack of attention she expressed with her daughter.

When she was 18 years old, she participated in 24 days of residential treatment for stimulant dependence, and Narcotics Anonymous for several months thereafter. She indicated that both treatments were unsuccessful. Diana reported that the aforementioned child neglect case was at

first upsetting, but later realized the benefits of obtaining help for her substance use. Diana stated her greatest motivation for therapy was that she did not want to lose her daughter, and that she no longer wanted to be addicted to drugs.

Assessment

Comprehensive Pre- and Post-Treatment Assessment

Assessments were conducted by blind assessors who were doctoral students enrolled in a clinical psychology program. Assessments were conducted in the participant's parents home, in which the participant, her mother, her father, her daughter, and her youngest sister lived. A comprehensive assessment with the participant, and participant's mother and father occurred one week prior to treatment and about 1 month post treatment. This comprehensive battery included the following methods:

Structured Clinical Interview for DSM-IV (SCID-IV; First et al. 2002) 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, as well as to identify other co-morbid Axis I disorders.

Home Safety and Beautification Assessment Tour (HS-BAT; Donohue and Van Hasselt 1999) The HS-BAT is a derivative of the CLEAN-Checklist for Living Environments to Assess Neglect, as well as the Home Accident Prevention Inventory (Teringer et al. 1984). The HS-BAT was utilized to assess living conditions in the home including the frequency of home hazards (e.g., toxins, electrical hazards, sharp objects) and unsanitary or untidy conditions.

Time Line Follow-Back interview (TLFB; Sobell et al. 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 are marked on calendars going back in time from the respective date of the assessment, usually up to 4 months prior to assessment. These events are used to facilitate participant recall of the days in which substances are used. Number of days using substances (e.g., marijuana) is tallied for the four months prior to the assessment.

Urine Drug Screen (Redwood Toxicology, Inc) consisted of a 9-panel screen with conventional cut-offs to determine the presence or absence of alcohol, THC (marijuana), cocaine, amphetamines, barbiturates, benzodiazepines, opiates, PCP, and methaqualone.

Parenting Stress Index Short Form (PSISF; Abidin 1995) is a 36-item self-report measure of stress in the parent-child system. Three subscales (i.e., Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child) and a Total Stress scale may be derived. The Total Stress clinical cut-off used to determine significance is above 90, and a Defensive Responding score of 24 indicates the individual may be responding in a defensive manner.

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. 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). There are also scales to assess the extent to which the participants are presenting themselves in a favorable light (i.e., lie, random responding). Higher scores indicate greater problems.

The Cohesion and Conflict subscales of the Family Environment Scale (Moos and Moos 1984) were administered in this study due to their relevance in substance abuse. The Cohesion subscale measures the degree of commitment, help, and support family members provide for one and other. Higher raw scores indicate greater cohesion 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 in the family.

Pre-Treatment Assessment Results

Table 1 depicts baseline session results for the SCID-IV, Time Line Follow Back, urine drug screen analyses, HS-BAT, Conflict and Cohesion subscales of the Family Environment Scale, Child Abuse Potential Inventory, Parenting Stress Index.

Diana's results on the SCID-IV indicated that she met the DSM-IV current criteria for Alcohol, and Cannabis Dependence, and lifetime criteria for Methamphetamine Dependence and Cocaine Dependence, although she did not meet any current criteria for methamphetamine or cocaine dependence, and denied use of these substances over the prior four months. She did not meet DSM-IV criteria for any other Axis I disorder. During the four months prior to baseline, Diana reported on the Timeline Follow Back 10 days of using marijuana, and 9 days of drinking alcohol (approximately 19 alcoholic beverages). The TLFB results were consistent with the results of pre-treatment urine drug screen (collected during this initial pre-treatment assessment battery, and immediately following the two Assess-

Table 1 Pre-treatment and post treatment raw scores on study outcome measures

Outcome Measure/Subscale	Time Assessed	
	Pre-Treatment	Post-Treatment
Home Safety and Beautification Scale		
Number of Hazards	5	0
Problems with children		
CAPI Problems with Child and Self	1	1
PSI-S Child Dysfunction interaction	20	25
PSI-S Difficult Child	21	29
Problems with Family and Others		
CAPI Problems with Family	32	0
CAPI Problems from Others	21	12
Subjective Distress		
CAPI Distress	101	64
PSI-S Parental Distress	32	26
PSI-S Total Stress	73	80
Child Abuse and Neglect Potential		
CAPI Abuse	200	100
Mood		
CAPI Unhappiness	3	0
Substance use, abuse and dependence		
TLFB (4 months back)		
Marijuana	10 days	2 days
Alcohol (# of Drinks/Days of Use)	19 drinks/9 days	1 drink/1 day
Urinalysis	Positive	Negative
SCID-IV Alcohol Dependence	Present (Current)	Present (Lifetime)
SCID-IV Marijuana Dependence	Present (Current)	Present (Lifetime)
SCID-IV Methamphetamine Dependence	Present (Lifetime)	Present (Lifetime)
SCID-IV Cocaine Dependence	Present (Lifetime)	Present (Lifetime)
Response Validity		
CAPI Lie	4	4
CAPI Random Responding	2	1
PSI-S Defensive Responding	20	16

ment Interviews, see below), which was positive for marijuana. The HS-BAT identified 5 hazards, of which one was ameliorated immediately because of the seriousness of the hazard (i.e., Diana's father owned a firearm which was identified during the tour to be unloaded and kept in the nightstand. It was moved to a top shelf in the closet where it would be safely out of reach of children.). Four other hazards were identified, including access to cleaning supplies in two rooms and unstable furniture in the living room and bedroom that could have fallen over and injured the child. Other lesser concerns were surfaces not clean in the kitchen and bathroom, and a dirty floor in the living room. Her responses to the Family Environment Scale indicated that her family was experiencing non-significant Conflict (e.g., fights a lot, becomes angry often, and solves problems with arguments and violence). However, she perceived her family as somewhat cohesive (e.g., supportive, helpful, and attempting to rebuild relationships).

Diana 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 Diana answered questions openly and honestly, which was substantiated by her PSI Defensive Responding subscale score. Importantly, her responses to the CAPI Abuse scale was significantly elevated, and 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. The Parenting Stress Index scores suggested Diana 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. 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.

Pre-Treatment Assessment Interviews

To establish rapport and gather information relevant to the implementation of FBT, two clinical interview sessions were conducted within the two weeks following the administration of the pre-treatment assessment battery (see above). These interviews were focused on assessing the participant's perspectives of child protective services, family history, and history of substance abuse and dependence. Diana 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, concerns with her caseworker, and upcoming FBT. Diana was provided support and empathy, and offered assistance interacting with her caseworker (i.e., therapist would attend treatment team meetings, attend court hearings). Information about her family included how family members grew up and her relationships with those individuals. A history of Diana's drug use was obtained. During these non-directive discussions, the therapists did *not* provide advice or suggestions relevant to change in behavior. Rather, the therapist's style was focused on assessing details involved in the participant's treatment plan, and provision of genuine empathy.

Case Conceptualization

Diana's substance abuse was conceptualized from a cognitive-behavioral perspective. That is, 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. Her friends and family modeled the use of substances to relieve stress and encourage positive interaction. Later in life, Diana utilized substances to temporarily eliminate thoughts related to guilt about 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, Diana 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 (e.g., yelling, swearing, physical violence), and lacked confidence and positive assertion skills necessary to meet abstinent friends. Diana 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 Diana ignoring her caretaking responsibilities, leaving her frustrated family members responsible for her daughter. Thus, her problems were conceptualized as being acquired through a combination of learned behaviors, including modeling of undesired behaviors (e.g., aggression, drug use), and both negative (e.g., temporary elimination of thoughts associated with anxiety and distress) and positive reinforcement (e.g., pleasant physiological effects of drugs, social acceptance).

Treatment Plan

All therapy sessions were implemented in the Diana's home. Two main problem areas were identified as requiring immediate attention. Drug use was targeted first to assist in ensuring safety for the participant and her child. Stimulus Control, Behavioral Goal Setting, and Self Control were implemented to address drug use. Communication Skills Training components (i.e., communication guidelines, positive request, scheduling pleasant family activities) were subsequently targeted to decrease conflict, increase positive exchange and support, and improve relationships in the family. Although the greatest conflict was between Diana 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. 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. The remaining FBT modules were primarily selected by the participant, and included: 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.

Family Behavior Therapy

Three sessions of Behavioral Goal Setting, Stimulus Control, and Self Control interventions targeting substance use were conducted during phase two. Behavioral Goal Setting was utilized during treatment to assist Diana in establishing goals relevant to decreasing her drug use. For this intervention, Diana created a list of goals, and received a reward from her significant other when she completed her weekly goals. Diana'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 Diana completed most of her goals. She often added goals between sessions on her own, such as getting her driver's license and getting her GED. Family members were able to provide her prescribed rewards 90% of the time when she completed her goals.

Stimulus Control was utilized to teach Diana to identify safe and at-risk situations, and learn to avoid people, places, and situations that put her at-risk to use drugs. First, Diana and her significant others were asked to list people, places, and situations that involved 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 Diana 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 Diana was able to abstain from marijuana use, and how she was able to increase time spent in safe situations. Diana was also taught how to arrange her environment to spend more time with people, places, and situations that did not involve drugs. Diana had difficulties recognizing drug triggers and did not appear to have skill sets (i.e., assertion skills) to avoid drug triggers or 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. 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 Diana to effectively manage 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. Diana was very active in her Self Control trials, and was able to effectively list alternative behaviors. She reported many instances of using this procedure in her home environment.

Communication Skills Training was implemented, and included three sub-components (Reciprocity Awareness, Positive Request, and Arousal Management). Poor communication is conceptualized to trigger substance use and child neglect by increasing stress and decreasing family support relevant to engaging in family-based activities that are incompatible with drug use. Reciprocity Awareness was designed to increase each family member's awareness of the reinforcers provided by one another, and ultimately increase their positive verbal exchange. 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 to utilize appreciation reminders (e.g., "Did you like how I mowed the lawn?"). Diana and her family were extremely involved in expressing appreciation reminders to each other in treatment sessions. Indeed, family members often cried when expressing their appreciation, and often hugged each other after appreciative statements.

Diana 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 a family member to go with her to risky places such as certain nearby stores and parks). Diana and her parents were extremely involved in the role-plays, as evidenced by their eagerness to attempt role-plays. Role-plays included Diana making a positive request of her family members to go with her to "at-risk" places, such as the mini mart, where she was often approached to buy marijuana. Diana'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. Diana's mother reported an improvement in family communication.

Arousal management was used to decrease negative interactions that occurred between Diana and her family. Diana 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). Diana reported that she particularly enjoyed the breathing exercises.

A *Basic Necessities* module was utilized to ensure that Diana 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, Diana 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 Diana and her family member engaged in problem solving to deal with the issue including utilizing other FBT components. Diana had little difficulty maintaining basic necessities for herself and her daughter due to assistance from her mother.

Child Management Skills (Catching My Child Being Good/Ignoring Undesired Behaviors, Positive Request, and

Child Compliance Training) modules were utilized to address Diana'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 Diana 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. Diana had difficulty reinforcing her daughter, and was taught how to descriptively praise her daughter when she was engaging in a desired behavior. Diana was also taught how to effectively discipline her daughter without the use of corporal punishment (e.g., time out, response cost).

In vivo practice sessions were utilized in which the therapist gave Diana immediate feedback during the trials. The therapist would sit close to Diana and provide suggestions without her daughter being aware of the feedback Diana was receiving by having the therapist sit behind her and speak at a low level that was inaudible to her daughter. Diana was extremely eager to learn new parenting strategies, and was highly compliant in session, including actively engaging in role plays and *in vivo* practice under the supervision of the therapist.

In the parenting modules, participants are given tracking sheets to record 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. Diana created her own chart on poster board and every time her daughter engaged in a desirable behavior, Diana provided praise and gave her daughter a sticker to put on the chart. There was significant improvement observed in Diana's provision of positive statements to her daughter, the quality of their interactions, and an increase in desirable behaviors from her daughter. In the sessions prior to the child management interventions, Diana's daughter spent most of her time with Diana's sister or mother. However, Diana's praise of her daughter was associated with noticeable improvement in their affective bond. For example, Diana was upset at the beginning of treatment because her daughter often called her "Diana" instead of "mom." By the end of treatment her daughter was referring to Diana as "mommy" during treatment sessions, and spent much of her time with Diana.

A *Financial Planning* module was used to address Diana's goal of more effectively managing and organizing her finances. Diana utilized this skill to help her plan each month for her household bills, and save money. First, a list of Diana's monthly expenses was created to identify the extent of her deficits. The therapist utilized problem-solving to assist her in brainstorming solutions to increase each method of income, and decrease each identified 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.

Assessment of Participation In Therapy

Diana completed 20 sessions with each session lasting 90 to 120 min. In each session, Diana 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. Diana completed the FBT program within 6 months, attending all but 2 of her scheduled sessions. She was very motivated and compliant, as evidenced by her participation in role-plays during session and her high rate of homework completion (96%).

Post-Treatment Assessment Results

The post assessment was conducted at Diana's residence, and took approximately three hours to complete (see summary of results in Table 1). An examination of the validity scales of the CAPI and PSI indicated Diana's answered questions openly and honestly. Her results on the SCID-IV indicated that she did not meet current criteria for any DSM-IV disorder. On her Timeline Follow back, Diana reported using marijuana once during treatment, which happened 35 days prior to the comprehensive post-treatment assessment session. This was the longest time period she had reported being abstinent in several years. It is also important to note that Diana reported her marijuana use did not occur when she was caring for her daughter (which was verified by her family). Diana's urinalysis results were negative for all illicit substances.

The post-treatment Home Safety and Beautification tour identified no home hazards and four cleanliness issues, including floors not clean in two rooms, household items left out, and a light bulb missing in one room. The issues identified were low risk items. Diana's level of perceived family Cohesion and Conflict (Family Environment Scale) were slightly improved. Her CAPI Abuse score was significantly below clinical cut offs, dropping 100 points. Thus she no longer reported that children need strict discipline, and no longer evidenced problems in her family or with others. The Parenting Stress Index scores indicated Diana was not experiencing clinically significant stress within her role as a parent. Indeed, Diana did not have an impaired sense of parenting competency, conflict with her significant other, lack of social support, and depression. There was a slight increase in her PSI Total Stress score, which may have resulted from Diana taking on more parenting responsibilities. However, her CAPI Distress scale suggested this potential elevation did not appear to increase risk of child maltreatment potential. Importantly, she did not seem to improve in the area of child behavior

problems, although these scores were already consistent with non-child maltreating parents.

Complicating Factors

Glancing at Table 1, it appears Diana made substantial improvements in key areas subsequent to her participation in FBT. Indeed, objective measures (urinalysis testing, home tours) and standardized validity scales appeared to substantiate findings that she significantly decreased her abuse potential, illicit drug and alcohol use, severity of home hazards, problems with family and others, and to a small extent, her family conflict and cohesion. However, it is important to emphasize this case example was an initial piloting of one of the first applications of behavioral therapies to concurrent drug abuse and child maltreatment. Thus, the lack of follow-up assessment and control offered in randomized trials precludes the drawing of any definitive conclusions specific to this case. For instance, it is unknown whether problems will resurface, or if apparent treatment effects were actually due to factors associated with the passage of time.

This case example does, however, assist in identifying a standardized method of integrating evidence supported therapies in the treatment of an individual with severe pathology. Moreover, this initial examination illuminates relatively unexplored areas that family-based researchers and practitioners will need to consider when working with extremely complicated cases, such as Diana, in the future. For instance, in treating child neglect and drug abuse, mental health professionals will need to manage severely problematic co-existing disorders and difficulties that have a long-standing history, such as mood disorders, criminal behavior, poverty, child noncompliance, marital discord, and domestic violence. They will also need to skillfully address these issues within a context that is incompatible with the establishment of clear and specific goals, e.g., lack of family support due to severed relationships, noncompliance to therapy assignments, low or sporadic motivation to change problematic behavior problems, impoverished living conditions that abruptly change, maintaining diplomacy among multiple professional systems with differing objectives, establishing policies relevant to frequent mandated breaches of confidentiality, and determining when it is ethically appropriate to terminate therapy within this culture.

Treatment Implications for the Case

During the first several months of treatment, the participant reported lapses, requiring 3.5 months to maintain sobriety, which was about the time all directive interventions were initiated for the first time. She met current DSM-IV criteria for Marijuana and Alcohol Dependence at the pre-treatment assessment, but not the post-treatment assessment. Process measures were also improved according to her self-report (i.e., eliminating people and places that put her at risk to relapse, added safe items, employment, church, and new hobbies, spending more time with family). There were evidenced improvements in parenting practices, as observed in her ability to make positive statements to her daughter, and improvements in the mother-child attachment. In addition, the participant demonstrated improvements in parenting competency, bonding with her children, and reported that interactions with her daughters were more reinforcing than at the start of treatment. She demonstrated an enhanced ability to manage her finances, improved her ability to recognize maladaptive thoughts, and engaged in strategies to control her urges to use drugs. She reported that behaviors associated with domestic violence were no longer occurring within her family. These results suggest FBT may be an effective intervention for drug and alcohol abuse, child maltreatment potential, and problems with family and others. However, as noted above, it is not possible to definitively determine if these improvements were due to the specific effects of intervention Nevertheless, the dramatic effects found in reducing child maltreatment potential and abstinence from all substances in this case study, suggests FBT is worthy of future study in the treatment of co-morbid child neglect and substance dependence, which is a population that has been neglected in the treatment outcome literature.

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