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Administrators of community-based treatment programs are increasingly being required to utilize psychometrically validated instruments to measure the effectiveness of their interventions. However, developers of psychometric measures have often failed to report strategies relevant to the administration of these measures in nontraditional settings outside the therapy office. Moreover, with few exceptions, developers of evidence-based treatments (EBTs) have insufficiently disseminated methods for integrating assessment measures into treatment planning. Therefore, the purpose of this article is to review an assessment methodology that may be utilized to support EBT for individuals who are identified for substance abuse or related problem behaviors. The application of this methodology is demonstrated utilizing Family Behavior Therapy to exemplify "real world" scenarios involving adolescents and adults. Although many of these strategies are evidence supported, most are based on clinical experiences occurring in clinical trials and dissemination efforts within community settings.

Keywords: *Family Behavior Therapy; assessment; dissemination; drug abuse*

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Administrators of community-based treatment programs (CBTPs) are beginning to incorporate standardized measures into their assessment batteries (Barlow, 2005), thus enhancing their identification of clinical problems and evaluation of treatment outcomes. Several factors have made it possible for CBTPs to adopt psychometrically validated measures. These factors include the development of robust treatments capable of bringing about positive change in multiple problem areas and thus necessitating (a) multiple assessment methods, (b) emphasis on administrative ease when developing these measures, and (c) need to examine treatment outcome with precision (Kendall & Beidas, 2007). Unfortunately, few developers of evidence-based treatment programs (EBTs) have sufficiently described how they integrate assessment into treatment (Weisz, Chu, & Polo, 2004). Moreover, developers of assessment measures have exerted great effort in describing standardized methods of administration and psychometric support in normative populations. However, less described are details relevant to the selection and administration of these measures in diverse populations and nontraditional settings (Munoz & Mendelson, 2005). Along these lines, community programs typically accommodate a greater variety of clientele than in specified clinical trials, necessitating a greater assortment of assessment measures from which to parsimoniously choose. Lastly, there is a need to disseminate strategies influencing the effective integration of psychometrically validated assessment measures in conjunction with EBTs (Mash & Hunsley, 2005), including the dissemination of adaptations to accommodate the diversity of participant populations, both in the measures themselves, as well as the manner by which these measures are implemented.

As indicated in recent reviews of the substance abuse treatment literature (e.g., Bender, Springer, & Kim, 2006; Carroll & Onken, 2005; Dutra et al., 2008; Waldron & Turner, 2008), Family Behavior Therapy has consistently demonstrated positive treatment outcomes in controlled trials. Indeed, positive outcomes have been indicated according to the results of validated assessment measures in various problems, such as substance abuse in male and female adults, youth dually diagnosed with conduct disorders, depression, anxiety disorders, unemployment, family discord, and domestic violence. Target substances have included alcohol, marijuana and various "hard" drugs (e.g., cocaine, heroin, methamphetamine, PCP, barbiturates, benzodiazepines). Thus, FBT is likely to address problems that are seen in community samples. Along different lines, many of the psychometrically validated measures utilized to assess FBT are similar across clinical trials, and as will be seen below are consistent with those measures utilized in other EBTs. Therefore, FBT provides a good example of assessment and treatment integration for use in community contexts.

In this article, we will review issues that are relevant to the implementation of standardized assessment measures with persons who have evidenced illicit drug abuse and other associated problems. Each measure will be described while emphasizing its clinical application in FBT. Of course, many of the reviewed processes will be relevant to other EBTs, including methods of administering these measures in nontraditional settings that often present challenging circumstances. Common approaches to assess substance abuse outcomes in controlled intervention trials will be reviewed first.

Assessment Methods Utilized in Treatment Outcome Studies of Substance Abuse

As might be expected, there are a large number of studies that have investigated the effectiveness of various treatments designed to decrease substance abuse and dependence and other co-occurring problems in adults and adolescents. These studies have been extensively reviewed in articles that have appeared in the scientific literature over the past 6 years, as found in Psych Lit utilizing "substance" and "treatment" or "intervention" as keywords (e.g., Adams, Leukefeld, & Peden, 2008; Ashley, Marsden, & Brady, 2003; Bachman, Drainoni, & Tobias, 2004; Becker & Curry, 2008; Bender et al., 2006; Bradizza, Stasiewicz, & Paas, 2006; Brunette, Mueser, & Drake, 2004; Cleary, Hunt, Matheson, & Walter, 2009; Cropsey, Villalobos, & St. Clair, 2005; Deas, 2008; Drake, O'Neal, & Wallach, 2008; Dumaine, 2003; Dutra et al., 2008; Fitch, Stimson, Rhodes, & Poznyak, 2004; Greenfield et al., 2007; Hesse, 2009; Lussier, Heil, Mongeon, Badger, & Higgins 2006; Marshal et al., 2008; Meier, Barrowclough, & Donmall, 2005; Myrick & Brady, 2003; Nsimba, 2007; Parry-Jones, Vaughan, & Cox, 2006; Pelissier & Jones, 2005; Salloum & Jones, 2008; Sokhadze, Cannon, & Trudeau, 2008; Strada, Donohue, & Lefforge, 2006; Sun, 2006; Tait & Hulse, 2003; Waldron & Turner, 2008; Watkins, Hunter, Burnam, Pincus, & Nicholson, 2005; Waxmonsky & Wilens, 2005). These reviews vary in their approaches, using qualitative or quantitative methods, and examining various indicators of treatment effectiveness. However, one aspect that is not examined in many of these reviews regards the specific assessment measures that are used to evaluate outcomes. Indeed, the emphasis in not on selection and implementation of assessment procedures appropriate for evidence based treatments.

In Table 1, we provide a summary of 10 of the aforementioned reviews that reported on specific measures utilized to evaluate the effectiveness of substance abuse treatments. The table includes the number of studies reviewed in each article, general focus of the review, examined domains,

(text continues on p. 625)

Table 1
Summary of Outcome Measures Used to Assess Treatment Outcomes for Substance Use Disorders

Study	NSR	Focus of Review	Domains	Measures Used (# of studies using the measure)
Adams, Leukefeld, and Peden (2008)	7	SUDs in women offenders	D/A Use	Questionnaire/Interview (5); Months at risk for using (1); Addiction Severity Index-ASI (1); Urinalysis (1)
			Demog.	Questionnaire/Interview (4)
			Finances	Questionnaire/Interview (1)
			Health	Questionnaire/Interview (3)
			History	Questionnaire/Interview (1)
			Legal	Recidivism (Interview) (3); Questionnaire / Interview (3); Crime Days (1)
			Motivate	Circumstances, Motivation, Readiness, & Suitability Instruments (CMRS) (1); Questionnaire/Interview (1); Helping Alliance Questionnaire II (1); Treatment Needs Index (1)
			Participate	Adherence Competence Scale (1); Treatment adherence (determined by program completion and aftercare participation) (1)
			Psych.	Beck Depression Inventory (2); Questionnaire/Interview (2); CAPS-I for PTSD Diagnosis (1); Trauma History Questionnaire (1); Structured Clinical Interview for DSM-IV Disorders (SCID) (1); Composite International Diagnostic Interview (CIDI (1)
			Sexual	Frequency of re-incarceration (1); Sexual History Questionnaire/Interview (1)
			Violence	Questionnaire/Interview (3)
Bender, Springer, and Kim (2006)	10	Dual diagnosis in adolescents	D/A Use	Teen Addiction Severity Index: Substance Use (2); Personal Experiences Inventory: Alcohol / Marijuana and Other Drugs (2); Days using drugs and alcohol (2); Drug Use Scale (1)
			Legal	Frequency of arrest (1)
			Psych.	Adolescent Psychopathology Scale (1); Beck Depression Inventory (1); Child Behavior Checklist (1); Eyberg Problem Behavior Inventory (1); Trauma Symptom Checklist (1)
			Satisfact.	Life Satisfaction Scale (1)

(continued)

Table 1 (continued)

Study	NSR	Focus of Review	Domains	Measures Used (# of studies using the measure)
Hesse (2009)	5	SUDs and comorbid anxiety or depression	D/A Use	% Days abstinent (3)
			Psych.	Hamilton Rating Scale for Depression (4); Beck Depression Inventory (3); SCL-90-R (1)
Lussier et al. (2006)	38	Voucher-based reinforcement therapy	D/A Use	Time continuously abstinent (17); Biological samples (10); Abstinence as status (2); Relapse (1)
			Participate	Treatment attendance (6); Medication compliance (4)
Parry-Jones, Vaughan, and Cox (2006)	12	Substance misuse and traumatic brain injury	D/A Use	Quantity-Frequency-Variability Index (QFVI) (4); Short Michigan Alcoholism Screening Test (3); The CAGE Screening Questionnaire (1); General Health and History Questionnaire (GHHQ) (1)
Pelissier and Jones (2005)	17	Gender differences among SUDs	D/A Use	Self-reported substance use (13); Urinalysis (9)
Strada, Donohue, and Lefforge (2006); Sun (2006)	18	Ethnicity in adolescent substance abuse studies	D/A Use	Youth self-report/ interview (12); Urinalysis (10); Parent report/ interview (5); Time Line Follow Back (3); Addiction Severity Index/ Teen ASI (3); Index of Drug Severity (2); Personal Experience Inventory (2); Problem Oriented Screening Instrument (1); National Youth Survey (1)
			Demog.	Client Personal History Questionnaire (1); Client Oriented Data Acquisition Process (1)
			Esteem	Rosenberg Self-esteem Scale (1); Situational Confidence Questionnaire (1)
			Family	Family Environment Scale (3); Structural Family Tasks Ratings (3); Parent Happiness with Youth/Youth Happiness with Parent Scales (1); Family Role Task Scale (1); Parent-Adolescent Communication Scale (1); Parent-Child Relationship Problems Scale (1); Dyadic Adjustment Scale (1); Family Coping Strategies (1); Self-report Family Inventory (1); Family Assessment Measure (1);

(continued)

Table 1 (continued)

Study	NSR	Focus of Review	Domains	Measures Used (# of studies using the measure)
				Family Problem Assessment Scale (1); Family Adaptability and Cohesion Evaluation Scales (1); Kveback Family Sculpture Test (1); Dyadic Formation Inventory (1)
			Health	Global Health Pathology scale of the Beavers Interactional Competence Scales (1)
			Legal	Self-report criminal history (5); Arrest records (5); Arrest records (3); Legal involvement (1)
			Motivate	Motivated Strategies for Learning Questionnaire (1)
			Other	School performance (2); Social Problem Solving Inventory (2); Rational Thinking Questionnaire (1); Revised Dimensions of Temperament Survey (1)
			Participate	Teen Treatment Services Review (1)
			Psych.	Child Behavior Checklist (3); Behavior Problem Checklist (3); Psychiatric Status Schedule (3); Beck Depression Inventory (2); Diagnostic Interview Schedule for Children (2); Quay Problem Behavior Checklist (1); MMPI (1); Brief Symptom Inventory (1); Structured Clinical Interview for DSM-IV Disorders (SCID) (1); Diagnostic Interview for Children and Adolescents (1); Adolescent Diagnostic Interview (1); Eyberg Child Behavior Inventory (1); Emotional/ Psychological Problems Inventory (1)
			Satisfact.	Parent/ Youth Satisfaction Scales (1); Life Satisfaction Scale for Adolescents (1)
Sun (2006)	35	Women's substance abuse treatment	D/A Use	Addiction Severity Index (complete or some subscales) (10); Urinalysis (3); Severity of Opiate Dependence Questionnaire (1); Severity of Alcohol Dependence Questionnaire (1); Opiate Treatment Index (1); Alcohol and Drug Problem Inventory (1); Individual Assessment Profile (1); Birth outcomes (1)
			Demog.	Living Arrangement Questionnaire (1)
			Esteem	Rosenberg Self-Esteem Scale (2); Coopersmith Self-Esteem Inventory (1); Situational Confidence Questionnaire (1); Drug Taking Confidence Questionnaire (1); Index of Self-Esteem (1)

(continued)

Table 1 (continued)

Study	NSR	Focus of Review	Domains	Measures Used (# of studies using the measure)
			Family	Parenting and Childcare Questionnaire (1); Parenting Stress Index (1); Parenting Sense of Competence Scale (1)
			Legal	Number of arrests (unspecified method) (2); Educational and Status Offense Questionnaire (1)
			Other	Social Support Network Inventory (1); Social Support Questionnaire (1)
			Participate	Attendance/ Drop-out (8); Length of stay (inpatient) (3); Treatment Services Review (1)
			Psych.	Beck Depression Inventory (3); Brief Symptom Inventory (2); Missouri Symptom Checklist (1); Global Assessment of Functioning (GAF) (1); Structured Clinical Interview for DSM-IV Disorders (SCID) (1); Symptom Checklist (1); Center for Epidemiological Studies Depression Scale (1); Health and Daily Living Form Depression Scale (1)
Tait and Hulse (2003)	11	Substance use in adolescents	D/A Use	Self-report (9); Rutgers Alcohol Problem Inventory (RAPI) (4); Alcohol Dependence Scale (3); Quantity-Frequency-Peak Drinking (Q-F-P) scale (1); Daily Drinking Questionnaire (1); Fagerstrom Tolerance Questionnaire (1); Substance use screening instrument score (1)
			Participate	Treatment sessions attended (1); Counseling success score (1)
Waldron and Turner (2008)	17	SUDs in adolescents	D/A Use	Urine Drug Screen (13); Self Report (7); Timeline Followback (5); Collateral Reports (4); % Days Use (4); Global Appraisal of Individual Needs (3); Addiction Severity Index (1)

Note. NSR = Number of studies reviewed; SUDs = substance use disorders; D/A Use = drug and alcohol use; Demog. = demographic information; Esteem = self-esteem; Family = family functioning; Health = physical health / medical history; History = treatment history; Legal = legal and criminal history; Motivate = motivation for change; Participate = participation in treatment; Psych = psychiatric diagnosis or symptoms; Satisfact. = life satisfaction; Sexual = sexual history and HIV/Sexual Risk Behaviors; Violence = domestic violence.

specific measures used to assess each domain, and the number of studies that used the specific measures. The articles were included in Table 1 to assess the broad array of measures that have been utilized in treatment outcome research. We included the specific measures within 14 domains (i.e., Drug and Alcohol Use, Demographic Information, Participation in Treatment, Self-Esteem, Family Functioning, Psychiatric Diagnosis or Symptoms, Legal and Criminal History, Physical Health/Medical History, Domestic Violence, Sexual History and HIV/STD Sexual Risk Behaviors, Life Satisfaction, Treatment History, and Motivation for Change) to assist in determining what areas in substance abuse are most recognized. Not all reviews reported on each domain, with only a few focusing on a single domain. For example, Pelissier and Jones (2005) reported on only Drug and Alcohol Use measures. This suggests that while investigators are sensitive to various factors that co-occur with substance abuse, there is not a general consensus in which assessment methods to use. For instance, there is substantial variability from one study to the next in how each of the individual domains is evaluated. Probably the most consistent reports are in the Drug and Alcohol Use domain, where self-reports and urinalysis are the most commonly used methods of assessment. Other domains, such as Legal and Criminal History are determined through interview and review of available records (i.e., court records). Demographic information is obtained primarily through interview and self-reports, while the Psychiatric domain includes brief self-report measures to assess various symptoms (e.g., depression, anxiety) and parental reports of child behavior problems. This domain is also assessed utilizing structured clinical interviews to establish DSM-IV psychiatric diagnoses. Thus, prior studies have utilized multimethod approaches to assess the effectiveness of treatment across a variety of domains, with test selection guided by the unique aspects of the treatment as well as characteristics of the populations that are served. It is also apparent that for most domains, no standard assessment techniques predominate across studies. Measures also appear to be conducted based on local conventions using forms relevant to the particular investigative team, or needs of the community agency.

In the following sections we provide a description of assessment measures that are used to guide FBT and determine its treatment outcomes. While some information is provided regarding the psychometric properties of these instruments, this information is reviewed extensively elsewhere and so is not emphasized here. Rather, we focus much of our review on the implementation of these measures within the context of this EBT, emphasizing factors that arise in evaluation sessions and often impede the successful implementation of these measures. We provide a rationale for the measures vis-à-vis interpretation to guide treatment. The various strategies

are primarily based on our experiences in clinical trials and dissemination efforts in community settings.

Overview of FBT Intervention Components

FBT usually includes up to 20 treatment sessions scheduled to occur between 6 months and a year (see Donohue et al., in press, for review of FBT intervention components). One therapist implements FBT in outpatient settings, whereas two therapists implement FBT in client homes when substance abuse and other comorbid problems are severe and children are involved. Clients participate in a program orientation and utilize a standardized worksheet to establish behavioral goals that are incompatible with antecedents to various undesired behaviors, including substance use, HIV exposure, and poor parenting. Goal accomplishment is reinforced by significant others in a contingency management system. Clients select treatments from a menu of options, and are taught to utilize a problem-solving method to ameliorate potential emergencies that are identified at the start of each session. Stimulus control procedures are employed to teach clients to avoid and escape from antecedents to substance use and other problem behaviors, and to teach skills that facilitate more time spent with stimuli that are incompatible with substance use, HIV exposure, and poor parenting. There is a self control intervention that may be utilized to reduce problematic impulsive behaviors, and communication skills training to resolve conflicts and assist in requesting activities that do not involve drug use, risk for HIV, and poor parenting. Therapies are available to assist in obtaining desired employment and financial management. If parents abuse substances, their children are taught to differentially reinforce their desired parental behaviors, assist their parents, and "show-off" their personal qualities and skills so parents are more likely to spend time with them. Family members are taught to acknowledge reinforcing aspects of one another, and parents are taught to differentially reinforce desired behaviors in their children and ignore their undesired behaviors, manage noncompliance in their children, and utilize nonaversive discipline strategies. When therapy is implemented in the home, home tours are conducted to identify and remove home hazards and encourage cleanliness and aesthetic enhancements.

Overview of the FBT Assessment Approach

To evaluate the effectiveness of treatment within the FBT model, a battery of standardized assessment measures is administered prior to the

beginning of treatment, immediately after treatment is completed, and when it is necessary to examine generalization of treatment effects across time, several months after the cessation of treatment. Measures are also available for administration during treatment, such as urine testing to assess presence of illicit drugs and alcohol, rating scales to assess the extent of the referral's participation, and self- and adult significant other-reports of the number of days the client used substances, was employed, or attended school. Most of the measures described are recommended in community settings because they are standardized, have good psychometric support, require minimal training and are quick and easy to administer, score and interpret. Although the need to implement particular assessment measures will undoubtedly vary across sites to accommodate the unique aspects of program referrals, most substance abusing subgroups share relatively similar dysfunctional behaviors and emotions. Therefore, FBT assessors are trained to be prepared to implement a large battery of assessment measures, and subsequently select from this battery those instruments that are most relevant to the target population. Along these lines, this article will provide a description, rationale and clinical application of a relatively large battery of measures that may be used to assess a wide array of problem areas that are relevant to clients who are referred to FBT. Measures are primarily focused on the client's substance use, family relationships, satisfaction with factors relevant to treatment, stressors, service utilization, risk for contracting HIV, and mental health. When clients are parents who abuse substances, factors relevant to parenting and home safety are assessed, and when the client is an adolescent, youth problem behaviors are assessed. The specific measures in this battery were chosen based on several guidelines, including (a) the measure assesses an identified problem in the target population; (b) the measure evidences sufficient psychometric support in a sample of participants who were identified to abuse drugs (if measures do not exist with psychometric support, nonpsychometrically validated instruments can be utilized); (c) the measure is relatively brief and easy to score; (d) the measure is targeted in FBT. Thus, the measures used within the context of FBT are consistent with those reviewed in the studies in Table 1. However, some of the measures include nontraditional domains (e.g., home safety) due to the wide array of presenting problems that have been targeted in FBT. Most batteries require approximately 2 to 4 hours to administer, but are rarely implemented in their entirety in community settings for a variety of practical reasons. In the following sections, we provide general assessment strategies, and guidelines that are relevant to the selection of measures for use in

community-based agencies that are likely to utilize FBT, particularly those within child welfare and criminal justice. Psychometric and other information about the tests are also included.

Assessment Procedures

Home-based assessments are ideally conducted by two trained technicians with the referred client and an adult significant other of the client. Two assessors are encouraged for a number of reasons, including increased efficiency of the assessment process, and safety and management of household issues (e.g., child care) that impinge on the assessment process when implemented in the home. When two assessors are utilized, one assessor is identified as the primary assessor and is typically the most skilled and experienced of the two. The primary assessor is responsible for obtaining informed consent, providing a rationale for the assessment to the client and client's adult significant other, administering most of the measures, and ensuring that all measures are completed according to standardized procedures. The second assessor serves in a supportive role to the primary assessor, and may administer some of the assessment procedures as the situation demands, but has the chief responsibility of managing ancillary issues (e.g., child care) so that the assessment is conducted efficiently. One male and one female assessor are paired whenever possible to complete the assessments, which is particularly important as some of the assessment procedures, such as urine drug screening, require the assessor to be the same gender as the client. Clients range in age from young adolescents to senior citizens, and adult significant others vary, but usually include parents, spouses, or other intimate partners living with the client. Young children are involved in therapy when clients are parents, but not formally involved in the assessment process due to their limited ability to provide reliable information.

During home-based assessment sessions, primary assessors administer measures with clients while secondary assessors informally engage children in games or reads books, deter adult significant others from listening to confidential reports provided by clients, and conduct assessment measures with adult significant others. Whenever multiple young children are present, an older family member can be invited to assist in child management. In preparing for home-based assessment sessions, there are several ways to enhance safety for the assessors. For instance, the assessors are encouraged to ask clients if there are any dangerous areas between the client's home and the clinic, request that the client meet the assessors at the car (and

walk the assessors to the car after the assessment session), bring cell phones to the session, let clinic staff know in a telephone call when the assessment begins and is expected to end while the client and adult significant other observe, schedule sessions to occur prior to dusk, and verify directions on the Internet. Assessment measures are transported to the assessment session in a waterproof locked carrying case and are returned to the locked case when the assessment is completed.

When conducting evaluations, assessors adapt to the family's culture, particularly when assessment sessions are home-based (i.e., ask to remove shoes if family is not wearing them, accept offers for nonalcoholic beverages). However, it is also important that guidelines are formally reviewed with the client and significant other at the outset of home-based assessment sessions, including such things as no visitors, use of alcohol, watching television, and telephone use during the assessment. Depending on the measures selected, the initial evaluation will take between 1 and 4 hours to complete. The initial evaluation establishes a baseline to which post-treatment assessment results can be compared to assist in determining the effectiveness of FBT.

The assessment begins with a description of the FBT program to both the referral and significant other, after which consent is obtained, including potential risks, costs, program duration and session length, program contact information, voluntary participation, limits of confidentiality, and consent to be audiotaped recorded during treatment sessions (but not assessment sessions). The informed consent form is read aloud to assist in ensuring client comprehension, and the assessor queries for concerns or questions throughout reviewing the consent. A copy of the endorsed form is provided to the client who follows along as the assessor reads the content. In cases where the client is under the age of 18 years a similar consent form is obtained from the legal guardian, and "informed *assent*" is obtained from both the minor client and legal guardian.

Although assessment measures are administered in a standardized manner, it is important to appreciate that clients who are assessed in their homes may need to perform ancillary duties while being assessed, and there may be a need to accommodate situations that are unique to home based assessments. For instance, assessors may permit clients to answer questions while cooking dinner for children if the assessment session is conducted in the home, or simplify difficult vocabulary words to accommodate poor reading abilities. Also, because some children may be too young to complete paper and pencil assessment measures, and content is usually inappropriate for young

children, adult and adolescent clients are relied upon as the chief informants, and their adult significant others are queried as collateral informants. When conducting assessments in homes, it is also often the case that clients indicate they do not care if their significant other is present, which is especially likely in small apartments. If this occurs, it is important to insist that the test battery be administered privately to assist in achieving a better sense of reliability between significant other collateral informants and to assure the client's confidentiality. Indeed, clients often are unaware of the personal nature of some questions, such as HIV sexual risk behaviors.

Due to fears associated with disclosure of information that could result in negative legal consequences, clients often attempt to present themselves in an unrealistically favorable light. Therefore, steps are taken to offset these tendencies, such as explicitly dissociating the assessors from the referral agent, emphasizing confidentiality periodically throughout the assessment, differentiating corporal punishment from child abuse when parenting is relevant, indicating assessors are nonjudgmental and understand extenuating circumstances leading to referrals, reviewing the low probability of having records subpoenaed, reviewing therapist responses to court subpoenas, disclosing how the results of the assessments will be utilized and mandates to report child maltreatment and suicidal and homicidal intent.

Structured agendas are utilized to guide the administration of assessment measures. Some measures are applicable to adolescents, some to adults, and some both to adolescents and adults. When clients have children and are responsible for caretaking responsibilities, a sub-battery of measures relevant to child management, child abuse potential, conduct of their children, and home safety is administered. Some measures are exclusively administered to clients who evidence particular problem behaviors (e.g., parents of older youth who abuse substances are administered child behavior problem checklists). However, a structured interview is almost always used to assess demographic and clinical information, as well as standardized measures focused on the client's use of illicit drugs and alcohol, diagnosis, HIV risk behaviors, family functioning, antecedent stimuli that lead to undesired behaviors (e.g., drug use, HIV risk behaviors), ancillary services received by other professional organizations, and client satisfaction in life, with family, and with treatment. In addition, throughout treatment, therapists also assess the extent to which clients are compliant in therapy utilizing Likert scales. All information is recorded in a database, and interpreted in supervision prior to implementing FBT.

Adult and Adolescent-Focused Assessment Domains and Measures

Background Information

Background information relevant to treatment is gathered using a structured interview (administration time 3 to 5 minutes). Areas of focus usually include basic demographics (e.g., age, ethnicity, gender), educational and vocational experience, family dynamics (e.g., number of adults and children in the home), previous medical and mental health related disabilities, history of the presenting substance abuse problem, and other information customarily recommended by the funding agency or referral agency. This information provides a context in which to interpret assessment results, and may be useful in determining treatment program needs. For instance, if mothers with co-occurring mental disorders were found to prematurely discontinue treatment relative to mothers without co-occurring disorders, it might be necessary to adjust treatment to accommodate the unique needs of these mothers, or invest in the implementation of evidence-based engagement strategies.

Illiteracy Screen

The Wide Range Achievement Test Reading Comprehension subtest (WRAT-4; Wilkinson & Robertson, 2006; administration time 5 to10 minutes) may be used at the beginning of the assessment to assist in determining if clients are able to read and comprehend at a sixth-grade level, which is a requirement for completion of most of the paper and pencil self-report measures. Indeed, it is quite common for clients who have been found to abuse substances to have experienced relatively limited educational opportunities, and evidence learning disabilities and illiteracy. This assessment may be particularly relevant for clients who have limited education as reported when background information is collected. For those clients who are unable to read at the sixth-grade level, the assessors read all questionnaires to the clients to assure that limited reading abilities do not negatively influence the validity of the measures. Reliability coefficients reported in the WRAT-4 test manual include internal consistency reliability coefficients ranging from .87 to .96, alternate form immediate retest reliability coefficients ranging from .82 to .90, and alternate form delayed retest reliability coefficients ranging from .68 to .91. Furthermore, this

measure has been found to have moderately high convergent validity and acceptable concurrent validity (Wilkinson & Robertson, 2006).

While more extensive evaluation of cognitive abilities is not a standard part of FBT assessment, it is well known that neurocognitive deficits can interfere with treatment (Allen, Goldstein, & Seaton, 1997; Burgard, Donohue, Azrin, & Teichner, 2000). For example, memory deficits may limit the ability to learn and retain information that is presented as a component of substance use treatment. Deficits in executive function may likewise hinder the application of skills and problem-solving strategies learned in therapy and deter from achievement of behavioral goals (e.g., gainful employment). Therefore, neuropsychological functioning is important to consider in treatment planning for individuals with substance use disorders, particularly those who are at-risk to maltreat their children. Outside of formal neuropsychological evaluation, the WRAT-4 results may indicate that the client has a significant limitation comprehending the evaluation procedures (and information presented in therapy), thus hindering progress in the assessment. When frustration occurs due to difficulties in comprehension, assistance is offered in understanding the material, and clients are provided opportunities to take breaks. The results of the WRAT-4 also assist in assessing the appropriateness of making referrals to educational and vocational programs. Involvement in school or employment can be recorded in the FBT Behavioral Goals intervention component and rewarded in Contingency Management, and reading can be assigned as a "safe" assignment when conducting the FBT Stimulus Control intervention. The client can also be scheduled to read with adult significant others and children as a pleasant family activity.

Substance Use

Self-reports of the client's substance use are obtained using the Time-Line Follow-Back interview (TLFB; Sobell, Sobell, Klajner, Pavan, & Basian, 1986; administration time approximately 15 minutes). The TLFB utilizes a month-by-month calendar for the time period of interest. Given practical demands, we recommend assessing the 4 months prior to the day of assessment when outcome evaluation is important, and less time otherwise (i.e., 1 or 2 months). Significant memory anchor points (e.g., birthdays, vacation days, holidays, family events) are marked on the calendar to facilitate recall of the days in which the client used substances. After these events are recorded, the client is asked to indicate on the calendar which days illicit drugs and alcohol were used. In addition, reports of the frequency of drug and alcohol use are obtained from a collateral source, typically the

adult significant other, who completes the TLFB separately from the client (Babor, Cooney, & Lauerman, 1987). The TLFB method has been found to correspond closely with official records and reports of substance use, and test-retest reliability is good (Ehrman & Robbins, 1984; Sobell et al., 1986; Sobell, Sobell, & VanderSpek, 1979). More recent studies involving the TLFB have reported test-retest reliability coefficients ranging from .64 to .93 from 1 to 6 months preceding the day of assessment (Carey, 1997; Sacks, Drake, Williams, Banks, & Herrell, 2003). Carey (1997) compared responses on the TLFB to those on the Addiction Severity Index and found the two measures yielded excellent agreement. Donohue, Hill, Azrin, Cross, and Strada (2007) found youth and caregiver TLFB reports of marijuana, hard drugs, and alcohol use were all found to correlate significantly with urine screen results (interclass correlations ranging from .39 to .62 up to 6 months in the past).

It is also possible to utilize the TLFB method to enhance the accuracy of ancillary self-report information, including days attending school and work, frequency of child maltreatment and domestic violence incidents, days incarcerated, days institutionalized and frequency of HIV risk behaviors. Modifying the time period assessed or assessing additional information does not appear to negatively impact the psychometric properties of the TLFB (Donohue et al., 2004, 2007). Indeed, we have anecdotally found accuracy of the TLFB method to be enhanced when information from probation officers and caseworkers (i.e., drug testing results, official arrest, or child maltreatment reports) is inserted into the calendar prior to administration, as these events act as memory anchor points and may be utilized to "remind" clients of official reports.

It may be that significant others are particularly uncomfortable providing information about the client's use of illicit drugs. When significant others seem to be withholding information, they are reminded that the clients have provided consent for their significant others to provide such information to assist in understanding their patterns of substance use for use in their treatment. When clients are parents who have been found to maltreat their children, they may be concerned that if they report substance use or other undesired behaviors, a report will be made to the local Department of Family Services for child maltreatment because in many cases substance use was the basis of a previous maltreatment report. Assessors should be sensitive to these situations and reassure clients and their significant others that admitting to substance use does not, in and of itself, indicate a reportable incident of child maltreatment.

The results of the TLFB are reviewed in the FBT Program Orientation and act to guide treatment. In this process, the client is queried to point out antecedent stimuli that consistently have led to substance use as reported in the calendar. Particular days in the week or time periods that suggest higher and lower rates of use are pointed out, and the client is queried to indicate environmental circumstances that influenced substance use and nonuse to grasp a conceptual understanding of factors that are likely to maintain substance use in the future.

The TLFB calendar may also be used to assess on-going substance use between treatment sessions. However, unless memory deficits are indicated, or there is an extended time period between treatment sessions, the calendar with memory anchor points is unnecessary. In FBT behavioral goal setting and contingency contracting, significant others are also taught to recognize signs of drug use (e.g., smell of marijuana, dilation of pupils, unsteady gait), thereby enhancing accuracy of their on-going and post-treatment TLFB reports. During treatment, poly-substance abusers may deny "hard" drug (e.g., cocaine) use while disclosing marijuana or alcohol use, particularly in youth who evidence behavior disorders. Thus, it helps to specify if contingent rewards will be provided for abstinence from all substances or all drugs other than alcohol. Given the inherent biases of clients to deny substance use (and sometimes significant others when substance use of clients affects them, such as when the client and significant other are both referred by Child Protective Services) it is important to concurrently administer urine testing.

Urinalysis (Administration time 5 minutes). To obtain objective information regarding the presence or absence of substance use, urine samples are obtained from clients (Olmeztoprak, Donohue, & Allen, 2009). Samples are inexpensively tested using on-site enzyme immunoassay from Redwood Toxicology Laboratory. However, screening may also be conducted by independent laboratories using, for example, SYVA Emit enzyme amino acid assay techniques with positive immunoassay screens verified using gas chromatography for alcohol and thin layer chromatography for all other substances. The panel of substances tested varies across settings, but usually includes marijuana, cocaine, amphetamines, barbiturates, benzodiazepines, opiates, PCP, and methaqualone. Urinalysis is a reliable, quick, and cost-effective method for drug screening that correlates with TLFB reports retrospectively up to 6 months (Donohue et al., 2007). Alcohol use may also be tested using an inexpensive hand-held portable breathalyzer (Allen & Holman, 2009), which is particularly valuable when alcohol intoxication is suspected but the client denies use.

A set of standardized procedures is used to address the sensitive nature of urine testing, both with regard to detection of drug use and privacy issues in obtaining the urine sample. Prior to administering urinalysis, the client is informed that the test will be observed by an assessor of the same sex through a partially open bathroom door to ensure the test is completed correctly. Clients are informed that the results of these tests are used to guide FBT (if obtained before or during treatment) or assist in the evaluation of FBT effectiveness (if obtained post-treatment). The client is instructed to leave excess clothing that could be used to hide adulterants outside the bathroom, wash hands, fill the cup at least 1/3 with urine, and not flush the toilet or wash hands until the sample is provided to the assessor. The cup is checked to make sure it is the one provided to the client, and the temperature of the sample is checked and recorded using a temperature strip that is attached to the cup to make sure the temperature is within normal limits. A test pad is dipped into the urine and the results are recorded. Latex gloves are used when handling the urine specimen and when the test has been completed, the urine sample is poured into the toilet, and the specimen cup, drug test dip panel, and gloves are discarded in the trash. Specific urinalysis results are not disclosed prior to completing TLFB assessments because clients may deny drug usage if they are aware that the UA results are negative or may only report use of those substance for which positive results were obtained.

A number of problems commonly occur in urine testing. If the client is unable to urinate, the client is informed that a sample must be provided before the end of the session, is instructed to drink water or juice (a natural diuretic) throughout the evaluation, and the urinalysis is attempted later in the session. Although anecdotal, many clients report urination is facilitated by running water in the sink while attempting to urinate, and flushing toilets or wetting their hand with warm water prior to attempting to urinate. Because clients often do not want to disclose substance use, some may try to provide a bogus urine sample. To prevent this from happening, it is important to watch and listen for things that would permit a fake urine sample, including loose clothing that could conceal a container with the adulterate sample, dipping the specimen cup into the toilet to dilute the sample, opening cabinets or storage areas to retrieve adulterants (if implementing testing in the home), or switching specimen cups.

In some cases, the client will deny recent drug use after a positive UA. When this occurs, assessors should state in a matter-of-fact manner that the UA was positive and that the procedure is highly accurate, refraining from details regarding the specific substances that were positive on the test to avoid future under-reporting of substances that may have screened negative, but use actually did occur. Assessors should also convey a nonjudgmental attitude

and encourage a truthful response for the sake of enhancing collection accuracy and tailoring the treatment components to best address the client's unique needs and concerns.

When funding permits urinalysis to be used during treatment, it is important to make the provision of reinforcement established in behavioral contracting contingent on negative ("clean") urine testing. Each FBT session should begin by obtaining TLFB data, and then performing urine testing. This order of administration is preferred because client and significant other reports are not biased by testing results, although they know testing will occur. Clients and adult significant others are informed whether UA results were positive for substances or not to assist in guiding contingency management. However, whenever possible, clients are not informed about the results of specific drugs. This is important because many drugs are undetectable in less than a few days, and there is generally a bias to deny substance use. Thus, knowledge of the results of particular drugs may increase the likelihood of clients being able to determine the amount or frequency of drugs that may be used without detection.

When UA results are positive, and TLFB reports indicate no use, clients are informed the UA results were positive, and the client and significant other are queried to reexamine their reports. It should be mentioned that marijuana use is detectable for up to 1 or 2 weeks for most clients, but potentially up to 3 or 4 weeks if some conditions exist (e.g., chronic use, obese, sedentary). Thus, there is the possibility that marijuana (and potentially some hard drugs, depending on the length of time between treatment sessions) will be detected in urine testing when use did not occur since the time of last testing. When this happens it may be appropriate to view the THC level and assume no use if the level is lower in the previous administration. However, if the individual does not demonstrate progressively lower levels for 1 or 2 weeks thereafter, it is likely marijuana use is recurring. When TLFB reports are positive, and the urinalysis is negative, the urinalysis results should be deemphasized if possible to assist in preventing denial of substance use in the future. When results are negative, and TLFB data indicates abstinence, the therapist leads an enthusiastic celebration and assures that the predetermined positive consequences outlined in behavioral contracting occur.

Psychiatric Diagnosis

The Structured Clinical Interview for DSM-IV diagnosis (SCID-IV; First, Spitzer, Gibbon, & Williams, 2002; administration time 45 minutes to 120 minutes) is utilized to assess the major AXIS I mental disorders in the DSM-IV-TR. The SCID may be particularly useful when there is a high rate of

psychiatric comorbidity in the client population referred for treatment, or when psychiatric diagnosis is important to establish for insurance reimbursement or to qualify patients for services (e.g., Medicaid). It can be used to substantiate diagnoses of substance abuse and dependence, as well as identify other coexisting conditions that are important to consider in treatment planning. The SCID has good validity and reliability (Spitzer, Williams, Gibbon, & First, 1992), and it has demonstrated utility in clinical settings, as well as in controlled outcome studies involving drug abuse (e.g., Azrin et al., 2001). While considered by many to be the gold standard interview for DSM-IV-TR Axis I diagnoses, the SCID is unlike other measures in the FBT assessment battery, as it requires extensive training to administer in a reliable and valid manner, and can take up to 120 minutes to complete in complicated cases. These characteristics may limit its utility in community settings.

SCID diagnostic results are utilized in FBT in several ways. First, outcome studies have demonstrated clear benefits to medication management in some disorders, such as Bipolar Disorder, and Schizophrenia. When such diagnoses are indicated, a release of information is obtained to speak with the residing physician or psychiatrist to discuss appropriateness of prescribed medication, and if medication is warranted, establishing support from family members to assist in medication management. Medication management is then targeted in Behavioral Goals, reinforced in Contingency Contracting, and issues relevant to compliance with medication are reviewed in treatment (i.e., Basic Necessities, Self Control, Stimulus Control). Understanding particular symptoms associated with particular diagnoses also assist in determining which treatments to emphasize. For instance, social skill deficits associated with Major Depression, impulsive behaviors occurring in the manic phase of Bipolar Disorder, and upsetting thoughts in Schizophrenia can all be parsimoniously treated utilizing impulse control strategies that involve problem-solving and social skills training (i.e., Self Control). Indeed, these symptoms are often early antecedents in the behavioral response chain leading to drug use, so backward chaining can be used to determine their situational onset, at which point clients can be taught to initiate Self Control. Diagnostic information may also be useful in referring clients to appropriate ancillary resources.

Monitoring Ancillary Services Provided by Other Organizations

A key component of the FBT assessment method is the ongoing monitoring of services provided to clients by other agencies. From a clinical

services provision standpoint, this assessment element is critical but often overlooked, as it assists in providing a concrete demonstration of the effectiveness of FBT and other evidence based treatments in reducing costs incurred through professional services provided outside of the evidence based approaches. Monitoring service provision may be a complicated task due to unpredictability of the referral system, and the diverse array of potential services provided to these clients. However, assessment methods have been developed to assist in this process. In examining FBT, service utilization is identified using methods described by Chaffin and colleagues (2004) in which services are coded into distinct categories (e.g., individual psychotherapy, psychiatric medicine), and service categories are quantified utilizing referral information derived from the Local Use of Services Instrument (LUSI; Kolko, Selelyo, & Brown, 1999). In these procedures, informants are asked to rate whether services were received or not, and a frequency score is computed. Incorporating referral information from both scales is important because FBT clientele evidence a diverse spectrum of problem behaviors and needs.

Emergency management programs (i.e., Basic Necessities) may assist in monitoring the adequacy of services received by clients. For instance, if assessment methods indicate the client evidences a high frequency of services, but continues to report problems assuring their basic needs are being met when reviewing potential emergencies in the Basic Necessities intervention, it is likely the existing services (including FBT) are insufficient or perhaps inappropriate. One of the components in Basic Necessities involves teaching the client to examine positive and negative consequences to current conditions, such as services received, and to generate solutions to assist in resolving these issues. Being aware of existing services received, including their adequacy in maintaining basic necessities, permits FBT counselors to prompt clients to effectively explore other options and avoid duplication of care.

HIV Risk Behaviors

HIV risk behaviors include both drug risk behaviors and sexual behaviors that increase the client's likelihood of contracting HIV. These distinct forms of risk often interact to enhance potential for contracting HIV. For example, clients are more likely to engage in unsafe sexual practices when intoxicated. Also, clients may increase their risk of sexual exploitation (e.g., prostitution) or sexual assault while in the process of acquiring and using drugs. Thus, an assessment procedure that provides for the assessment of

sexual activity and drug use related risks, as well as the temporal relationships between these two types of risk, provides a good method for understanding the interactions between the two. Clients in high risk groups, including those who inject drugs, men who have sex with men, sexually active adolescents, and those with a history of prostitution, are particularly appropriate for these evaluations.

To assess drug use and sexual behaviors that increase risk for HIV, the HIV Risk Assessment Battery is used (RAB; Navaline et al., 1994; administration time 5-10 minutes). The RAB was originally developed for use in longitudinal studies of HIV transmission among intravenous drug users and is available in a number of different versions. We have used a form, which includes eight items that assess drug risk (e.g., intraveneous drug use, sharing needles) and 9 items that assess risky sexual behaviors (e.g., exchanging sex for drugs, multiple male partners). Higher scores have been associated with increased risk of HIV seroconversion.

In addition, the TLFB (see above) may be used to collect information regarding sexual behaviors that place the client at risk for contracting HIV. This method has been used in prior studies, and defines HIV risk days as those in which the client engaged in unprotected sex (Stein, Anderson, Charuvastra, & Friedmann, 2001; administration time 10-15 minutes). Because information regarding drug and alcohol use is also collected with the TLFB procedure, this method has the advantage of documenting the temporal relationship between risky sexual behavior and drug use, and allows quick calculation of the number of days in which substance use was associated with increased risky sexual behaviors.

During treatment, clients are informed that endorsed items on the RAB are associated with greater risk of HIV, and they are encouraged to establish goals that are incompatible with these behaviors. There is also a motivational interviewing procedure to encourage them to be tested for HIV (testing for HIV and other sexual risk behaviors is assessed in the TLFB), and behaviors that are incompatible with HIV are targeted in Stimulus Control and Self Control. Adult significant others are also encouraged to lower their HIV risk behaviors, and assist clients in accomplishing behaviors that are incompatible with HIV risk behaviors. Given the sensitive nature of the information reported on the RAB and the TLFB, it is important to provide a description to the client of the type of information that will be elicited prior to conducting these assessments. When administering these procedures to adolescents, it may also be necessary to inform the parents or guardians of the content of these evaluation procedures, and consider their feedback regarding the types of questions that may or may not be asked.

Client Satisfaction

The Client Satisfaction Questionnaire (CSQ-8; Larsen, Attkisson, Hargreaves, & Nguyon, 1979; administration time < 5 minutes) is an 8-item measure that has been used effectively in controlled outcome studies to assess satisfaction of clients with the services they receive (see Fals-Stewart, O'Farrell, & Birchler, 2001). Satisfaction ratings on the CSQ-8 correlate with treatment attendance and outcomes (Attkisson & Zwick, 1982). Attkisson and Zwick reported that internal consistency estimates for the measure have ranged from .87 to .93. The CSQ-8 is administered after the completion of each treatment session to evaluate overall satisfaction with the treatment process and methods. In addition, clients are provided an opportunity to rate their satisfaction with each intervention component utilizing a 7-point Likert-type scale (1 = *extremely unhelpful*, 7 = *unhelpful*). When helpfulness ratings are low, clients are queried to indicate how the respective interventions could be enhanced. Thus, these ratings facilitate opportunities for therapists to receive immediate feedback on an ongoing basis to assist in adapting intervention planning to address the unique needs and circumstances of each client, as well as the changing motivational sets of clients across time. Of course, the scale is also used to assess consumer satisfaction outcomes at the end of treatment.

Life Satisfaction

The Life Satisfaction Scale (LSS; Donohue et al., 2003; administration time < 2 minutes) includes 12 content items, and a single item that requires clients to rate their "overall life satisfaction." Content items assess the respondent's degree of happiness in 12 aspects of life (i.e., friendships, family, school, employment/work, fun activities, appearance, sex life/dating, drug use, alcohol use, money/material possessions, transportation, control over one's own life) using a 0% to 100% scale of happiness. The reliability and validity of this measure are excellent (Donohue et al., 2003). The instrument's simplicity enables it to be easily understood by clients, and its brevity permits it to be implemented throughout the course of treatment. Because those with substance use disorders who maltreat their children have multiple negative consequences associated with these conditions, assessment of life satisfaction provides important information relevant to treatment planning. In regard to treatment planning, content areas in which the client is least and most happy can be evaluated at a glance, and in relation to one another. Once problem areas are identified, treatment strategies

may be developed by asking the client what specific behavior changes might lead to 100% happiness in the respective area. Along these lines, this scale can be administered at the start of treatment sessions to guide intervention, or it can be used as a measure of treatment outcome.

Parent Satisfaction With Youth

The Parent Satisfaction with Youth Scale (PSYS; Donohue, Decato, Azrin, & Teichner, 2001; administration time < 2 minutes) consists of 11 content items that assess parents' degree of satisfaction with their youth in 11 behavioral domains (Communication, Friends and Activities, Curfew, Household Rules, School, Response to Rewards, Response to Discipline, Chores, Alcohol Use, Drug Use, Illicit Behavior) using a scale of 0% to 100% happiness. An additional item assesses the parent's "Overall Happiness." The scale may be administered to any parent seen in FBT, whether a client or significant other. Reliability and validity of this measure have been previously evaluated, and found to be excellent. The format is similar to the LSS above, so administration and treatment planning is developed in a similar manner. However, the PSYS may also be used to facilitate better communication and enhance family relationships. That is, when scores are low, the parent may be prompted to request things from the youth that are likely to raise the respective scores (e.g., "You indicated you are 20% happy with Juan's completion of chores. Use your Positive Request handout to request that Juan do the dishes before you get home").

Youth Satisfaction With Parents

The Youth Satisfaction with Parents Scale (YSPS; Decato, Donohue, Azrin, Teichner, & Crum, 2002; administration time < 2 minutes) consists of 11 content items that assess parents' degree of satisfaction with their youth in 11 behavioral domains (Communication, Friends and Activities, Curfew, Household Rules, School, Response to Rewards, Response to Discipline, Chores, Avoidance of Alcohol Use, Avoidance of Drug Use, Avoidance of Illegal Behavior) using a scale of 0% to 100% happiness. An additional item assesses the parent's "Overall Happiness" with the adolescent utilizing the same scale. The YSPS may be administered to any adolescent, whether a client or not. Reliability and validity of this measure have been previously evaluated and found to be good. The format and administration of the YSPS is identical to the PSYS (see above). Thus it may be similarly used in treatment (i.e., youth initiate positive requests

with their parents). It is also helpful to compare youth and parent responses to the YSPS and PSYS domains to gain an understanding of reciprocity in their relationship. For instance if a child is 100 % happy with curfew and the parent is 40% happy in this domain, this information suggests inequity in the relationship that may be a priority in treatment.

Youth Behavior Problems

The Youth Self Report (Achenbach, 1991; administration time = approx. 10 minutes) is a 112-item measure assessing adolescents' perceptions of their own competencies and problem behaviors. The YSR yields three summary scale scores (Total Behavior Problems, Externalizing Behavior Problems, Internalizing Behavior Problems), 10 Behavior Problem subscale scores (Social Problems, Thought Problems, Attention Problems, Aggressive, Delinquent Behavior, Withdrawn, Anxious/Depressed, Somatic Complaints, Self-Destructibility/Identity), and two Competence scale scores (Social, Activities). Reliability and validity of YSR are good (Achenbach, 1991). The YSR is an excellent outcome measure, covering a wide-array of problem behaviors, and particularly helpful when conceptualizing presenting concerns and planning treatment. We have found it too long to implement during treatment, although it is often helpful to administer this scale at the midpoint of therapy to determine the youth's response to treatment and guide treatment planning in the future. Anecdotally, we have found youth who score high in both external (i.e., Aggressive, Delinquent) and internal scales (i.e., Anxious/Depressed) respond well to assigning family activities in Stimulus Control, and interventions that facilitate positive feedback in the family (I've Got a Great Family, Reciprocity Awareness, Positive Request) while implementing programs that emphasize contingency management and disciplinary strategies (i.e., Contingency Contracting, Catching My Child Being Good, Positive Practice).

Child Behavior Checklist for Ages 6 to18 years (CBCL; Achenbach, 1991) (approximate time of administration = 10 minutes). This 118-item scale is completed by parents to assess the competencies and behavioral and emotional problems of their children. There are 20 competence items relevant to their child's activities, social relations, and school performance. Similar to the YSR (see above), the CBCL is usually administered before and after treatment, and sometimes midway through therapy to determine effectiveness of treatment and guide future treatment implementation. When time prohibits administration of both the YSR and CBCL, the CBCL is preferred when youth appear to be noncompliant and uninterested in therapy.

The Eyberg Child Behavior Inventory (Eyberg & Pincus, 1999; administration time = approximately 5 minutes) lists 36 disruptive behaviors, and the parent indicates on a seven-point scale (never to always) how often the child (2 to 16 years) exhibits each behavior (i.e., Intensity scale). In addition, a Problem scale may be derived to assess whether or not the parent perceives each of the behaviors as problematic (1 = *yes*; 0 = *no*). As indicated by the developers of this scale, its reliability is excellent, and its validity is adequate. We utilize this scale when adult clients have children younger than 6 years who need to be assessed (i.e., referral from Child Protective Services), or a comprehensive assessment of children between 6 and 16 years of age is unnecessary. In all other cases, we prefer to administer the CBCL due to its extensive psychometric support and multiple scales. Anecdotally, we have found that when the Intensity scale is low, but the Problem scale is elevated, clients require assistance in understanding child development, and appear to do well in child management programs that remove culpability from the child (i.e., Incidental Teaching, Positive Practice). When Intensity scores are elevated, and Problem scales are low, it may be important to encourage appropriate expectations and child disciplinary strategies (i.e., Child Compliance Training). Conducting an item analysis is also very useful for this measure, as many of the items are relevant to behavioral therapies (i.e., problems in toileting).

Family Functioning

Family Environment Scale (FES; Moos & Moos, 1984; administration time 5 to 10 minutes). As indicated in the aforementioned literature reviews, the FES Conflict and Cohesion scales appear to be particularly useful measures in substance abuse and child maltreatment (also see Donohue & Van Hasselt, 1999; Santisteban et al., 2003). The Conflict scale measures the extent to which family members are perceived to argue and disagree, whereas the Cohesion scale measures the extent to which the family is perceived to be harmonious and "close." Psychometric properties are good. However, in populations where illiteracy is relatively high, clients often report difficulties interpreting the questions. Therefore, we have edited the questions to make them more interpretable for use in FBT (e.g., eliminate double negatives, replace difficult vocabulary words). Low scores on this measure are addressed throughout FBT, but specifically in the I've Got a Great Family intervention (instructing family members to tell each other things that are loved, admired, and respected about each other) and interventions that involve communication skills training (e.g., Positive Request),

anger management (i.e., Self Control, Arousal Management) and scheduling pleasant family activities (Stimulus Control).

The Family Support Scale (FSS; Dunst, Jenkins, & Trivette, 1984; also see Cherniss & Herszog, 1996; administration time = 4 minutes) is an 18-item scale that measures perceived helpfulness of sources of support in raising children, such as support provided by significant others and organizations. Items are relevant to support provided by family (e.g., my parents, my spouse or partner's parents, my relatives/kin, my spouse or partner, my own children), and community (social groups/clubs, church members/minister, school/day care, and professional agencies, such as social services). The FSS has demonstrated adequate to moderately high reliability and validity (Cherniss & Herszog, 1996; Hanley, Tassé, Aman, & Pace, 1998).

Family support is obviously important when conducting family-based treatments. Low scores indicate therapists may need to emphasize review of potential emergencies during Basic Necessities, and proactively attempt to assist clients in soliciting additional support from referral agencies, such as food or day care services. Individuals who abuse substances are also at greater risk to become frustrated and terminate therapy prematurely. Therefore, individuals with lower FSS scores may need extratreatment support from Court systems to bring about external motivation. Clients with low FSS scores should also be encouraged to set Behavioral Goals to re-establish friendships that may have been dissolved due to excessive substance use, or to establish new friendships. Encouragement and positive feedback for establishing new friendships can be provided by therapists in Stimulus Control, and Catching My Child interventions can be adjusted to focus on reinforcing adults.

Parent-Focused Assessment Domains and Measures

Child Neglect and Abuse

Individuals who abuse substances are at increased risk of perpetrating child maltreatment, particularly in child welfare populations. Indeed, at least 50% of caregivers in the Child Protective Service system have been indicated to abuse illicit drugs. In FBT, three measures are relied upon to assess child maltreatment when children live in the home of caregivers who abuse substances and are deemed to be at-risk for child maltreatment. The Child Abuse Potential Inventory (CAPI; Milner, 1986; administration time 20 to 25 minutes) consists of 160-items designed to assist in assessing

potential for child neglect and abuse. It has been extensively utilized in both research and clinical settings. Along with three validity scales and an overall Abuse scale, the CAPI yields several factor scores associated with abuse (i.e., distress, rigidity, unhappiness, loneliness, problems with others, problems with child, problems with self, problems with family). Internal consistency estimates for the Physical Abuse scale range from 0.74 to 0.98, with values for other scales being slightly lower but adequate. Test-retest reliabilities up to 6-months range from 0.75 to 0.91 (Heinz & Grisso, 1996), and the measure is sensitive to treatment (e.g., Donohue & Van Hasselt, 1999). The CAPI has been shown to differentiate mothers known to neglect and abuse their children from those who do not (Milner, 1986). The CAPI may be used to determine the effects of FBT on child abuse potential, and we have found it useful in determining the extent to which child management interventions are likely to be warranted. When Abuse scales are relatively high in comparison to Lie scales (i.e., low), therapists should emphasize the collection of parental beliefs and provision of empathy during explication of rationales for FBT child management interventions. In fact, these parents are usually straightforward in letting assessors know they have strong traditional parenting beliefs (e.g., importance of corporal punishment). Moreover, they are often assertive clients who are not afraid to express their discontent with the FBT child management interventions, and will often refuse role-playing. Thus, it is especially important to solicit parents' thoughts about parenting practices prior to implementing therapies, including empathy for behavioral difficulties relevant to managing children and indication of commonalities between FBT interventions and their existing parenting strategies. Interestingly, however, these individuals appear to do well when therapies are implemented in vivo. That is, if a child is disobeying, the assessor might instruct the client to initiate an FBT parenting intervention with the child directly while instructional prompts are provided by the therapist as needed. A relatively high Lie scale is useful in determining persons who are attempting to under-report undesired parenting behaviors. Although anecdotal, high Lie scales appear to be a good sign in predicting parents who are motivated to participate actively in child management. That is, high Lie scores suggest it is important to these individuals that others (e.g., court) evaluate their parenting favorably. They may often be defensive and tangential when reviewing evidence-based child management interventions, but are relatively responsive to positive consequences for their desired behaviors.

Adult to Adult Violence

We use the TLFB (see detailed description above) to assess child maltreatment and adult-to-adult aggression. For the respective number of days in the assessment period (e.g., 120 days back) the significant other and client are separately asked to report the number of days the client's children were in DFS custody, and the number of days the client was reported to DFS or police for child neglect and child physical abuse. Whenever feasible, this information is validated through local child protective service agencies. Rationales are provided to minimize negative stigma associated with violence and increase the likelihood of reporting such behavior. For instance, as explicitly utilized by O'Farrell, Fals-Stewart and colleagues in their work, the following is stated, "The next questions are about family aggression. All families disagree and argue. Sometimes, these disagreements can build from a calm discussion to a more heated exchange which may include yelling, swearing, sulking, and so forth. In some instances or for some families, when the families disagree, they may engage in what is often referred to as angry touching." A list of behaviors ranging in severity from "throwing something" to "threatening with a knife" is then provided, and the client and significant other are separately queried to report the number of days any of these behaviors have occurred between adults in their home. In this way, true positives (self-reports of violence when it has occurred) are more likely to occur because there is no insinuation of blame. If violence is determined, violence is reviewed as a potential emergency in Basic Necessities, goals are established to perform behaviors that are incompatible with antecedents to violence, antecedents to violence are targeted in the Self-Control procedure, and the antecedents to violence are managed in Stimulus Control. Of course, communication skills training interventions are performed to prevent issues that often lead to violence, such as inequity in the relationship due to poor assertiveness skills in positively requesting desired actions and inability to resolve conflicts. Moreover, pleasant family activities are emphasized during Stimulus Control.

Home Safety and Beautification

Because substance abuse often leads to child neglect and home environments that are both dangerous and non-nurturing, a modified version of the Home Safety and Beautification Assessment Tour (HS-BAT; see Donohue & Van Hasselt, 1999; administration time 20 to 25 minutes) is utilized to assist in determining appropriateness of living conditions in the

client's home. HS-BAT items measure the severity of home hazards (e.g., toxins, electrical hazards), and extent to which the home is clean and facilitates personal and social growth in children through the presence of developmentally appropriate toys, books, and clothing. The HS-BAT is a derivative of the CLEAN-Checklist for Living Environments to Assess Neglect, as well as the Home Accident Prevention Inventory (Perczel, Lutzker , Greene, & McGimpsey, 1988; Teringer, Greene, & Lutzker, 1988). The HS-BAT requires a room-by-room tour of the home with the family. Prior to conducting the home tour, a rationale is provided to the family that explains home safety hazards are one of the leading causes of death and injury in young children, and the client is encouraged to permit a home safety tour inspection. Clients may initially object to conducting the tour, usually because they believe the rooms are not ready for inspection or that the tour is an invasion of privacy. In these situations, empathy is provided for expressed concerns and clients are encouraged to schedule tours later or exclude particular rooms or locations. Upon entering each room, each item is rated according to a four point scale by the assessor (i.e., 0 = *home hazard is absent*, 4 = *high priority for treatment*). In addition, the client and assessor independently rate overall "safety" and "appearance" of each room. Items receiving a rating of "4" are judged to pose an imminent threat to children living in the home, necessitating immediate intervention to correct the hazard. Items with ratings of 2 or 3 are targeted later in therapy (i.e., set as Behavioral Goals, reinforced in Contingency Management, and managed in subsequent Home Safety and Beautification intervention tours). When clients request to exclude particular rooms, the client is asked to provide the overall ratings, and indicate if there are any known hazards.

Child Management and Parenting

It is important to assess skills and attitudes that are relevant to child management, as well as the extent to which significant stressors distract them from effective caretaking responsibilities. The Adult-Adolescent Parenting Inventory-2 (AAPI-2; Bavolek & Keene, 2001; administration time 5 to 10 minutes) is administered to assist in understanding information relevant to the parent's belief system. The AAPI-2 is a 40-item self-report inventory that may be used to assess parents' inappropriate expectations of children, lack of empathy toward the needs of children, and reversing parent-child role responsibilities. Each of the scales have been found to discriminate between parenting behaviors of neglectful and abusive parents

and the behaviors of non-neglectful and non-abusive parents (see Bavolek & Keene, 2001). Conners, Whiteside-Mansell, Deere, Ledet, and Edwards (2006) reported alpha reliability coefficients of .50 to .85 for AAPI-2 scales, and significant correlations between subscales of most AAPI-2 and other instruments purporting to measure the same constructs. When AAPI scores are elevated, therapists should consider reviewing AAPI-2 results with clients during the structured FBT Program Orientation, including solicitation of the client's perceptions of the results, empathy, and disclosure of methods to address expressed concerns in the structured Treatment Plan. When scales are elevated it is also important for therapists to be particularly sensitive to avoiding statements that can be perceived as being judgmental or dogmatic. Rather, flexibility in approach should be emphasized, providing evidence-supported options, whenever possible.

The Parenting Stress Index Short Form (PSISF; Abidin, 1995; administration time 5 to 10 minutes) is a 36-item self-report measure of stress in the parent-child system. The PSISF yields scores reflecting Total Stress, Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child. Psychometric support is good, and mothers who neglect their children have higher PSISF scores than control mothers (Ethier & LaFreniere, 1993). High scores are addressed during the establishment of Behavioral Goals where there are prescribed prompts relevant to setting goals to decrease stressors ("You indicated particular stress in the area of parenting. Tell me what would need to be different to lower this stress?"). Accomplishment of goals aimed at decreasing identified stressors can then be targeted in Behavioral Goals, reinforced in Contingency Management, and managed in Stimulus Control. Self Control can be used to stop intrusive stress-related thoughts, and Communication skills training interventions can be used to prevent interpersonally based stressors.

Summary and Conclusions

The importance of standardized assessment procedures to evidence based practices has typically focused on demonstrating the efficacy of the interventions. Similarly, when conducting FBT, treatment efficacy is assessed using a battery of psychometrically sound assessment measures that include assessment of the client's substance use, risk for child maltreatment, child management skills, family relationship, service utilization, risk for HIV, and client satisfaction with treatment, their current circumstances, and family relationships. However, as described in the current article, these

measures are not only used to assess outcomes but provide results that have direct implications for treatment planning and are used to guide implementation of interventions as treatment progresses. It is hoped that this article will stimulate further study of the integration of assessment practices and treatment, which as supported above, is needed.

References

Abidin, R. (1995). *Parenting Stress Index* (3rd ed.). Lutz, FL: Psychological Assessment Resources.

Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington: University of Vermont.

Adams, S., Leukefeld, C. G., & Peden, A. R. (2008). Substance abuse treatment for women offenders: A research review. *Journal of Addictions Nursing, 19*, 61-75.

Allen, D. N., & Holman, C. (2009). Alcohol testing. In G. L. Fisher & N. A. Roget (Eds.), *Encyclopedia of substance abuse prevention, treatment, and recovery* (pp 56-62). Thousand Oaks, CA: Sage.

Allen, D. N., Goldstein, G., & Seaton, B. E. (1997). Cognitive rehabilitation of chronic alcohol abusers. *Neuropsychology Review, 7*, 21-39.

Ashley, O. S., Marsden, M. E., & Brady, T. M. (2003). Effectiveness of substance abuse treatment programming for women: A review. *American Journal of Drug and Alcohol Abuse, 29*, 19-53.

Attkisson, C. C., & Zwick, R. (1982). The client satisfaction questionnaire: Psychometric properties and correlations with service utilization and psychotherapy outcome. *Evaluation and Program Planning, 5*, 233-237.

Azrin, N. H., Donohue, B., Teichner, G., Crum, T., Howell, J., & DeCato, L. (2001). A controlled evaluation and description of individual-cognitive problem solving and family-behavioral therapies in conduct-disordered and substance dependent youth. *Journal of Child and Adolescent Substance Abuse, 11*, 1-43.

Babor, T. F., Cooney, N. L., & Lauerman, R. J. (1987). The dependence syndrome concept as a psychological theory of relapse behaviour: An empirical evaluation of alcoholic and opiate addicts. Special issue: Psychology and addiction. *British Journal of Addiction, 82*, 393-405.

Bachman, S. S., Drainoni, M. -L., & Tobias, C. (2004). Medicaid managed care, substance abuse treatment, and people with disabilities: Review of the literature. *Health & Social Work, 29*, 189-196.

Barlow, D. H. (2005). What's new about evidence-based assessment? *Psychological Assessment, 17*, 308-311.

Bavolek, S. J., & Keene, R. G. (2001). *Adult-Adolescent Parenting Inventory (AAPI-2): Administration and development handbook*. Park City, UT: Family Development Resources.

Becker, S. J., & Curry, J. F. (2008). Outpatient interventions for adolescent substance abuse: A quality of evidence review. *Journal of Consulting and Clinical Psychology, 76*, 531-543.

Bender, K., Springer, D. W., & Kim, J. S. (2006). Treatment effectiveness with dually diagnosed adolescents: A systematic review. *Brief Treatment and Crisis Intervention, 6*, 177-205.

Bradizza, C. M., Stasiewicz, P. R., & Paas, N. D. (2006). Relapse to alcohol and drug use among individuals diagnosed with co-occurring mental health and substance use disorders: A review. *Clinical Psychology Review, 26*, 162-178.

Brunette, M. F., Mueser, K. T., & Drake, R. E. (2004). A review of research on residential programs for people with severe mental illness and co-occurring substance use disorders. *Drug and Alcohol Review, 23*, 471-481.

Burgard, J., Donohue, B., Azrin, N. H., & Teichner, G. (2000). Prevalence and treatment of substance abuse in the mentally retarded population: An empirical review. *Journal of Psychoactive Drugs, 32*, 293-298.

Carey, K. B. (1997). Reliability and validity of the time-line follow-back interview among psychiatric outpatients: A preliminary report. *Psychology of Addictive Behaviors, 11*, 26-33.

Carroll, K. M., & Onken, L. S. (2005). Behavioral therapies for drug abuse. *American Journal of Psychiatry, 62*, 1452-1460.

Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brestan, E. V., Balachova, T., et al. (2004). Parent-Child Interaction Therapy with physically-abusive parents: Efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology, 72*, 500-510.

Cherniss, C., & Herzog, E. (1996). Impact of home-based therapy on maternal and child outcomes in disadvantaged adolescent mothers. *Family Relations, 45*, 72-79.

Cleary, M., Hunt, G. E., Matheson, S., & Walter, G. (2009). Psychosocial treatments for people with co-occurring severe mental illness and substance misuse: systematic review. *Journal of Advanced Nursing, 65*, 238-258.

Conners, N. A., Whiteside-Mansell, L., Deere, D., Ledet, T., & Edwards, M. C. (2006). Measuring the potential for child maltreatment: The reliability and validity of the Adult Adolescent Parenting Inventory-2. *Child Abuse & Neglect, 30*, 39-53.

Cropsey, K. L., Villalobos, G. C., & St. Clair, C. L. (2005). Pharmacotherapy treatment in substance-dependent correctional populations: A review. *Substance Use & Misuse, 40*, 1983-1999.

Deas, D. (2008). Evidence-based treatments for alcohol use disorders in adolescents. *Pediatrics, 121*, S348-S354.

Decato, L., Donohue, B., Azrin, N. H., Teichner, G., & Crum, T. (2002). Adolescents and their parents: A critical review of measures to assess their satisfaction with one another. *Journal of Clinical Psychology Review, 22*, 833-874.

Donohue, B., Azrin, N. H., Allen, D. N., Romero, V., Hill, H. H., Tracy, K., et al. (in press). Family Behavior Therapy for substance abuse: A Review of its intervention components and applicability. *Behavior Modification*.

Donohue, B., Azrin, N. H., Strada, M. J., Silver, N. C., Teichner, G., & Murphy, H. (2004). Psychometric evaluation of self and collateral Timeline Follow-Back reports of drug and alcohol use in a sample of drug abusing and conduct disordered adolescents and their parents. *Psychology of Addictive Behaviors, 18*, 184-189.

Donohue, B., Decato, L., Azrin, N. H., & Teichner, G. (2001). Satisfaction of parents with their substance abusing and conduct-disordered youth. *Behavior Modification, 25*, 21-43.

Donohue, B., Hill, H. H., Azrin, N. H., Cross, C., & Strada, M. J. (2007). Psychometric support for contemporaneous and retrospective youth and parent reports of adolescent marijuana use frequency in an adolescent outpatient treatment population. *Addictive Behaviors, 32*, 1787-1797.

Donohue, B., Teichner, G., Azrin, N. H., Weintraub, N., Crum, T. A., Murphy, L., et al. (2003). The initial reliability and validity of the Life Satisfaction Scale for Problem Youth in a

sample of drug abusing and conduct disordered youth. *Journal of Child and Family Studies, 12*, 453-464.

Donohue, B., & Van Hasselt, V. B. (1999). Development of an ecobehavioral treatment program for child maltreatment. *Behavioral Interventions, 14*, 55-82.

Drake, R. E., O'Neal, E. L., & Wallach, M. A. (2008). A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders. *Journal of Substance Abuse Treatment, 34*, 123-138.

Dumaine, M. L. (2003). Meta-analysis of interventions with co-occurring disorders of severe mental illness and substance abuse: Implications for social work practice. *Research on Social Work Practice, 13*, 142-165.

Dunst, C. J., Jenkins, V., & Trivette, C. M. (1984). Family Support Scale: Reliability and validity. *Journal of Individual, Family, and Community Wellness, 1*, 42-52.

Dutra, L., Stathopoulou, G., Basden, S. L., Leyro, T. M., Powers, M. B., & Otto, M. W. (2008). A meta-analytic review of psychosocial interventions for substance use disorders. *American Journal of Psychiatry, 165*, 179-187.

Ehrman, R. N., & Robbins, S. J. (1984). Reliability and validity of 6-month reports of cocaine and heroin use in a methadone population. *Journal of Consulting and Clinical Psychology, 62*, 843-850.

Ethier, L. S., & LaFreniere, P. J. (1993). Le stress des meres monoparentales en relation avec l'agressivite de l'enfant d'age prescolaire. *Journal International De Psychologie, 28*, 273-289.

Eyberg, S., & Pincus, D. (1999). *Eyberg Child Behavior Inventory & Sutter-Eyberg Student Behavior Inventory–Revised*. Odessa, FL: Psychological Assessment Resources.

Fals-Stewart, W., O'Farrell, T. J., & Birchler, G. R. (2001). Behavioral couples therapy for male methadone maintenance patients: Effects on drug-using behavior and relationship adjustment. *Behavioral Therapy, 32*, 391-411.

First, M. B., Spitzer, R. L, Gibbon, M., & Williams, J. B.W. (2002). *Structured clinical interview for DSM-IV-TR axis I disorders, research version, non-patient edition (SCID-I/NP)*. New York: Biometrics Research, New York State Psychiatric Institute.

Fitch, C., Stimson, G. V., Rhodes, T., & Poznyak, V. (2004). Rapid assessment: An international review of diffusion, practice and outcomes in the substance use field. *Social Science & Medicine, 59*, 1819-1830.

Greenfield, S. F., Brooks, A. J., Gordon, S. M., Green, C. A., Kropp, F., McHugh, R. K., et al. (2007). Substance abuse treatment entry, retention, and outcome in women: A review of the literature. *Drug and Alcohol Dependence, 86*, 1-21.

Hanley, B., Tassé, M. J., Aman, M. G., & Pace, P. (1998). Psychometric properties of the Family Support Scale with Head Start families. *Journal of Child and Family Studies, 7*, 69-77.

Heinz, M. C., & Grisso, T. (1996). Review of instruments assessing parenting competencies used in child custody evaluations. *Behavioral Sciences and the Law, 14*, 293-313.

Hesse, M. (2009). Integrated psychological treatment for substance use and co-morbid anxiety or depression vs. treatment for substance use alone. A systematic review of the published literature. *BMC Psychiatry, 9*. Retrieved April 24, 2009, from http://www.biomedcentral.com/1471-244X/9/6

Kendall, P. C., & Beidas, R. S. (2007). Smoothing the trail for dissemination of evidence-based practices for youth: Flexibility with fidelity. *Professional Psychology: Research and Practice, 38*, 13-20.

Kolko, D. J., Selelyo, J., & Brown, E. J. (1999). The treatment histories and service involvement of physically and sexually abusive families: description, correspondence, and clinical correlates. *Child Abuse and Neglect, 23*, 459-476.

Larsen, D. L., Attkisson, C. C., Hargreaves, T. D., & Nguyen, T. D. (1979). Assessment of client/patient satisfaction: Development of a general scale. *Evaluation of Program Planning, 2*, 197-207.

Lussier, J. P., Heil, S. H., Mongeon, J. A., Badger, G. J., & Higgins, S. T. (2006). A meta-analysis of voucher-based reinforcement therapy for substance use disorders. *Addiction, 101*, 192-203.

Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., et al. (2008). Sexual orientation and adolescent substance use: A meta-analysis and methodological review. *Addiction, 103*, 546-556.

Mash, E. J., & Hunsley, J. (2005). Evidence-based assessment of child and adolescent disorders: Issues and challenges. *Journal of Clinical Child and Adolescent Psychology, 34*, 362-379.

Meier, P. S., Barrowclough, C., & Donmall, M. C. (2005). The role of the therapeutic alliance in the treatment of substance misuse: A critical review of the literature. *Addiction, 100*, 304-316.

Milner, J. S. (1986). *The Child Abuse Potential Inventory: Manual* (2nd ed.). Webster, NC: Psytec.

Moos, R., & Moos, B. (1984). *Family environment scale.* Palo Alto, CA: Consulting Psychologists Press.

Munoz, R. F., & Mendelson, T. (2005). Toward evidence-based interventions for diverse populations: The San Francisco general hospital prevention and treatment manuals. *Journal of Consulting and Clinical Psychology, 73*, 790-799.

Myrick, H., & Brady, K. (2003). Current review of the comorbidity of affective, anxiety, and substance use disorders: Editorial Review. *Current Opinion in Psychiatry, 16*, 261-270.

Navaline, H. A., Snider, E. C., Petro, C. J., Tobin, D., Metzger, D., Alterman, A. I., et al. (1994). Preparations for AIDS vaccine trials: An automated version of the Risk Assessment Battery (RAB): Enhancing the assessment of risk behaviors. *AIDS Research and Human Retroviruses, 10*(Suppl. 2), 281-283.

Nsimba, S. E. D. (2007). Outpatient treatment programs: A review article on substances of abuse outpatients treatment outcomes in the United States. *Addictive Disorders & Their Treatment, 6*, 91-99.

Olmeztoprak, E., Donohue, B., & Allen, D. N. (2009). Urine testing. Client engagement. In G. L. Fisher & N. A. Roget (Eds.), *Encyclopedia of substance abuse prevention, treatment, and recovery* (pp. 982-985). Thousand Oaks, CA: Sage.

Parry-Jones, B. L., Vaughan, F. L., & Cox, W. M. (2006). Traumatic brain injury and substance misuse: A systematic review of prevalence and outcomes research (1994-2004). *Neuropsychological Rehabilitation, 16*, 537-560.

Pelissier, B., & Jones, N. (2005). A review of gender differences among substance abusers. *Crime and Delinquency, 51*, 343-372.

Sacks, J. A. Y., Drake, R. E., Williams, V. F., Banks, S. M., & Herrell, J. M. (2003). Utility of the time-line follow-back to assess substance use among homeless adults. *Journal of Nervous and Mental Disease, 191*, 145-153.

Salloum, I. M., & Jones, Y. O. (2008). Efficacy of pharmacotherapy for comorbid major depression and substance use disorders: A review. *Current Psychiatry Reviews, 4*, 14-27.

Santisteban, D. A., Coatsworth, J. D., Perez-Vidal, A. P., Kurtines, W. M., Schwartz, S. J., LaPerriere, A., et al. (2003). Efficacy of brief strategic family therapy in modifying Hispanic adolescent behavior problems and substance use. *Journal of Family Psychology, 1*, 121-133.

Sobell, M. B., Sobell, L. C., Klajner, F., Pavan, D., & Basian, E. (1986). The reliability of the timeline method of assessing normal drinker college students' recent drinking history: Utility for alcohol research. *Addictive Behaviors, II*, 149-162.

Sobell, M. B., Sobell, L. C., & VanderSpek, R. (1979). Relationships among clinical judgment, self-report, and breath-analysis measures of intoxication in alcoholics. *Journal of Consulting Clinical Psychology, 47*, 204-206.

Sokhadze, T. M., Cannon, R. L., & Trudeau, D. L. (2008). EEG biofeedback as a treatment for substance use disorders: Review, rating of efficacy, and recommendations for further research. *Applied Psychophysiology and Biofeedback, 33*, 1-28.

Spitzer, R. L., Williams, J. B., Gibbon, M., & First, M. B. (1992). The structured clinical interview for the DSM-III-R (SCID): I. History, rationale, and description. *Archives of General Psychiatry*, *49*, 624-629.

Stein, M. D., Anderson, B., Charuvastra, A., & Friedmann, P. D. (2001). Alcohol use and sexual risk taking among hazardously drinking drug injectors who attend needle exchange. *Alcoholism: Clinical and Experimental Research, 25*, 1487-1493.

Strada, M. J., Donohue, B., & Lefforge, N. L. (2006). Examination of ethnicity in controlled treatment outcome studies involving adolescent subsance abusers : A comprehensive literature review. *Psychology of Addictive Behaviors, 20*, 11-27.

Sun, A. -P. (2006). Program factors related to women's substance abuse treatment retention and other outcomes: A review and critique. *Journal of Substance Abuse Treatment, 30*, 1-20.

Tait, R. J., & Hulse, G. K. (2003). A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug. *Drug and Alcohol Review, 22*, 337-346.

Teringer, D. A., Greene, B. F., & Lutzker, J. R. (1984). Home safety: Development and evaluation of one component of an ecobehavioral treatment program for abused and neglected children. *Journal of Applied Analysis, 17*, 159-174.

Waldron, H. B., & Turner, C. W. (2008). Evidence-based psychosocial treatments for adolescent substance abuse. *Journal of Clinical Child & Adolescent Psychology, 37*, 238-261.

Watkins, K. E., Hunter, S. B., Burnam, M. A., Pincus, H. A., & Nicholson, G. (2005). Review of treatment recommendations for persons with a co-occurring affective or anxiety and substance use disorder. *Psychiatric Services, 56*, 913-926.

Waxmonsky, J. G., & Wilens, T. E. (2005). Pharmacotherapy of adolescent substance use disorders: A review of the literature. *Journal of Child and Adolescent Psychopharmacology, 15*, 810-825.

Weisz, J. R., Chu, B. C., & Polo, A. J. (2004). Treatment dissemination and evidence-based practice: Strengthening intervention through clinician-researcher collaboration. *Clinical Psychology: Science & Practice, 11*, 300-307.

Wilkinson, G., & Robertson, G. J. (2006). *Wide Range Achievement Test Professional Manual*. FL: Psychological Assessment Resources.

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