

Family Measures in Drug Abuse Prevention Research

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INTRODUCTION

In October 1996, the National Institute on Drug Abuse (NIDA) Prevention Research Branch convened experts in family-based prevention and intervention for a workshop titled "Measurement Issues for Family Prevention Intervention." This 2-day symposium was devoted to the discussion and identification of outstanding family measures appropriate for use in studies of drug abuse prevention and intervention with youth. Researchers from the Oregon Social Learning Center (OSLC), the University of Miami's Center for Family Studies, the Oregon Research Institute, the University of Washington/Social Development Research Group, the University of Utah, and individual researchers from highly respected research institutions across the country came together to discuss the challenges and complexities of family measurement in prevention intervention research and to nominate measures that adhere to basic standards of measurement. The five goals and objectives of this symposium were to (1) improve research and measurement in family-based interventions for the prevention of substance abuse, (2) increase sharing of knowledge of the best measures by domains and the most common family change variables, (3) increase awareness of barriers to measurement and possible solutions, (4) encourage the use of common measures to increase the generalizability of results across studies and to make meta-analysis more feasible, and (5) increase sensitivity to cultural issues in measurements and increase the use of more valid and reliable measures with ethnic populations.

Following is a summary of the issues and challenges that were discussed, the measures that were nominated as appropriate and sound instruments for prevention interventions with families, and the recommendations that were made for the measurement of family relationships. These recommendations are not meant to be a "gold standard" in family measurement, and they are clearly not the only promising family measures. Nominations are based on the group's collective experiences with high-risk children and problem families from different ethnic and socioeconomic backgrounds as well as the empirical literature in the field. These recommendations are meant to assist new and established

investigators in their search for adequate measures of family characteristics and functioning.

OVERALL RECOMMENDATIONS

The Family Measures Group understood its charge to be the specification of recommendations on family instruments that it considered to be the most valid, reliable, and change sensitive for important family variables in contemporary prevention research. Clearly, given the variability and complexity involved in defining the term “family,” this was a difficult task. Some of these challenges included multiple family forms and meanings of family, taking into account the different ways in which a family can be subdivided and measured, deciding on the most relevant dimensions of family life vis-a-vis prosocial and problem behavior development, and understanding and assessing families as part of an ecology that includes other social institutions with child socialization functions and influences. Considerable controversy and debate about these matters has occurred within conceptual (e.g., Do measures of family functioning exist with self reports only? [Fisher et al. 1985]; unit of study questions [choices over molar versus molecular levels of data][Christensen and Arrington 1987]), methodological (validity issues of measures without cultural sensitivity [McLoyd 1991]), and data-analytic (e.g., data aggregation, addressing data from group, and individual levels [Bray et al. 1995]) domains. The authors concurred with the need to divide the total group’s resources so that the molar level topics of family and parenting could receive sufficient attention. Recent research would endorse the notion that family and parenting measurement areas are distinct and should be treated as such in making research recommendations of this kind (Dakof 1996).

Problems arose when conclusions were drawn about constructs that were conceptualized and operationalized in diverse ways by different researchers. Inconsistencies in variable labels in family-based research to date has made interpretation of results difficult; family factors such as attachment, relationship quality, and even more behaviorally defined constructs such as monitoring and other aspects of parental discipline have come to mean different things in various research circles (Liddle and Dakof 1995). More precision and specification in the operationalization of the constructs of interest is critical in determining exactly which family variables are associated with child risk status and which aspects of the family environment are actually changing over the course of interventions. The group agreed that the adoption of common measures by different research groups is one avenue toward standardization of construct definition and family measurement.

The group emphasized the need to be informed by the context of the task. That is, measure recommendation or selection is done in a context of specificity, and what is best depends on the circumstances and the boundaries of the task. First, the theory of family and the theoretical framework that the researcher has adopted for studying families need primary consideration. Measure consideration and selection is also done with careful consideration of the population variations that might be present in the study to be conducted (e.g., cultural and ethnicity variations and previous demonstrations of the instrument's usefulness and validity with the population in the study). The purposes of the study are inextricably linked to measure consideration and selection. For example, measurement decisions might be based on the need to assess change in particular domains of the family as a result of interventions. Additionally, the nature of the interventions themselves are critical to consider in measure selection.

Interventions focusing on changing family interactions within the family, family interactions of key family members vis-a-vis extrafamilial members, and interventions intent on changing belief systems may require different measure strategies or methods. As Bray (1995) suggests in the introduction to the *Journal of Family Psychology* Special Section on methodological advances in family psychology research, measurement of change in family-based interventions is a complex matter.

Research on family psychology interventions faces problems common in other clinical psychology outcome research, with the ultimate goal being to determine which treatments are most effective. However, family psychology interventions are complicated by the fact that psychopathology is not viewed as being within an individual, but rather treatment usually focuses on multiple individuals, their interactions, and at times the social context of the interactions (e.g., school, hospital). Thus, the outcome of a successful treatment is measured not only by the change in the behavior of an identified patient but also in the interactions that are related to the problem behavior. This is not a minor or simple issue (Bray 1995).

Furthermore, the decision to employ measures needs to be guided by considerations of the sensitivity and validity of the instrument with family members at different developmental stages. Researchers within the specialty of developmental psychopathology (Achenbach 1990; Cicchetti 1993; Sroufe and Rutter 1984) have inspired major advances in the ways in which adaptation is conceptualized over time, rather than reliance on the traditional conceptualization of dysfunction as a static condition. However, researchers have much to learn about the measurement of family relationships, the impact of parenting techniques, and the perceptions of

family members with children at various developmental levels. This issue is particularly salient in intervention research, given that natural developmental processes occur conjointly with changes initiated within the intervention. Results of longitudinal studies tracking cohorts over the entire developmental span, such as the work currently being conducted at OSLC, will shed light on the suitability of instruments and the measurement of different child and family characteristics with individuals at different ages and developmental levels.

The group stressed the need to consider the assessment domain of the family as a complex and varied phenomenon and the need to be clear on which particular aspects of the family are of interest to the researcher (which, of course, follows the previous point about the consideration of family assessment measures in the context of particular studies, with specific questions, and certain populations in mind). Questions about best measures, as with all other aspects of research, are answered according to the way they are posed. Best measures of family are thus defined according to what is best for the kind of study and the particular dimensions and populations of interest.

Following this point, the group emphasized the heterogeneity that now exists in the family measurement specialty. Family research scientists have articulated a range of challenging conceptual, methodological, and data analytic issues (Bakeman and Casey 1995; Bank and Patterson 1992; Bray 1995; Cook 1993; Floyd et al. 1989; Gottman and Rushe 1993; Pinsof 1992). These challenges have been contextualized according to the specific aims of any given research inquiry. For example, some research questions may best be answered using self-report measures completed by multiple family members or members of the dyad of interest in a particular study (e.g., mothers and adolescents). Other studies, such as those that seek to understand the interactional processes that occur at critical developmental periods and how these interactional patterns may be transformed as a result of a particular intervention (e.g., conflict, negativity, poor problemsolving ability,) may require an entirely different measure strategy. Here, family interaction task measures, long a staple tradition in family measurement and family research, may be the instrument that fits best with the study's objectives. Observational coding systems are used to capture a variety of important family constructs in prevention and intervention research. For example, the family relationship construct within an observational tradition includes support, bonding, involvement, cohesion, attachment, relationship quality, closeness, and affective realm (overall valence of positiveness or negativity). Measurement systems such as the Family Process Code of the OSLC research group (Dishion et al. 1983, 1984), the Defensive and Supportive Communications Coding System (Alexander 1973), and the

Structural Family Systems Ratings of Szapocznik and associates (1985) assess many of the aforementioned dimensions by training expert raters to code family interactions. The observational versus self-report debate continues in the field, and some recent empirical work suggests that each perspective offers a unique source of information about family relationships (Cook and Goldstein 1993).

Issues related to striving to attain the ideal of the convergent validity between self-report and observational measures were discussed at length. Researchers from OSLC (Dishion et al. 1996) used a confirmatory factor analytic strategy to show that child reports, parent reports, and observer ratings of parenting constructs converge significantly, with problemsolving showing the highest level of convergence. However, each method also appeared to contribute unique variance to the measurement of parenting dimensions. The authors suggest that the method effects uncovered when different sources (child, parent, and observer) report on family or parenting dimensions are potentially meaningful and may differentially predict varying child outcomes. Continued investigation of method variance and the validity of self-report and observational methods in family measurement is an area of critical importance.

Following from this line of discussion, there was strong endorsement from the group of the multimethod, multi-informant, multidomain tradition, pioneered by such research teams as OSLC. The multitrait- multimethod approach of this research team has demonstrated the dangers of building theory and testing interventions by using a single or narrowly conceived measurement strategy (e.g., mother's report on child outcomes). Significantly, they have modeled a measurement tradition in the area of family measurement that is exemplary in its attention to theory construction and intervention testing using multiple measures of the construct in question. The group discussed the importance of a researcher's framework for making measurement decisions. The researcher's framework would take into account key dimensions of measurement decisionmaking such as the data source (since there are multiple members of and, thus, perspectives on family functioning, which may come from outside of the family, such as raters of family functioning [in the form of family interaction]), and the nature or type of data to be collected from the data source. Table 1 is an example of a framework derived from group discussion.

TABLE 1. *Researchers' framework.*

Source of Data	Type of Data	Construct	Measure
Youth	Self-report	Problem behavior	Youth Self-Report
Siblings	Self-report	Family positives (attachment, parent, or family support)	
Parent	Self-report	Child behavior	Child Behavior Checklist
Teacher	Self-report	Child behavior	Teacher report (Oregon Social Learning Center)
Parent-youth relationship	Observational	Relationship process and communication	Defensive and Supportive Communication Coding System

Examples of other data sources include peers, interviewers, and the intervener's perspective; examples of other methods include physiological measures (e.g., urine screens), school (grades/attendance records), juvenile justice (arrest/adjudication history), and health, and mental health records (placement history).

Choosing Appropriate Family Measures

Change Sensitivity of Family Measures. In studies that attempt to demonstrate change in family functioning as a result of a prevention intervention (which could be defined either in multiple self-report terms or in interactional terms [observers' ratings of changes in family interactional patterns]), it is critical to consider the change sensitivity of the measure and the extent to which the measure in question has been used in other intervention studies. Self-report measures that have shown promise in this area include the Family Environment Scale (FES) (Moos and Moos 1974) and the Conflict Behavior Questionnaire (Prinz 1976). Both of these measures have been widely used in prevention and intervention studies with clinical families and have shown sensitivity to change from pretest to posttest. The Parent Daily Report (Oregon Social Learning Center 1984), which obtains information from the parent on the child's daily behaviors and the parent's reactions to these behaviors, has demonstrated change sensitivity with clinical families. The advantage of

this measure is that it is a daily inventory of the child's behavior that takes only 10 to 15 minutes to complete and can provide a great deal of information about changes in the child's behavior over the course of and as a result of interventions. Researchers are interested in measuring short-term gains that occur within various phases of the intervention, changes that take place from intake to the end of treatment, and maintenance of treatment gains at followup points months and years after the intervention.

Observational coding systems that have demonstrated sensitivity to change in intervention studies include the Structural Family Systems Rating Scale (Szapocznik et al. 1985), the Family Process Code (Dishion et al. 1983), and the Defensive and Supportive Communication Coding System (Alexander 1973). The advantage of the Defensive and Supportive Communication Coding System is its ability to detect family changes that are associated with specific interventions within treatment.

Administration Issues and Psychometric Properties of Family Measures. The extent of the measures' development, their use in more than one or two research sites (particularly, use in sites other than the site at which it was first developed), and practical considerations should not be omitted in measure selection. The group nominated measures that have been used or are being incorporated into research programs at multiple sites, such as the FES (Moos and Moos 1974), the National Youth Survey (Elliott et al. 1985), and the Conflict Behavior Questionnaire (Prinz 1976). The use of measures with different samples who present with varying clinical problems and are assigned to a range of interventions provides evidence for its flexibility and its external validity. Particularly relevant to drug abuse prevention research is the previous use of these measures with high-risk ethnically diverse samples. Measures that have been extensively developed and used in a number of controlled studies are the most promising instruments available, offering information on psychometric properties, standard scores, and possibly cultural sensitivity.

Ease of administration (i.e., understandable to subjects, cost of training administrators of the measure), subject burden issues, and cost should also be factors in selecting appropriate measures. These issues are particularly relevant given the importance of gathering as much information as possible from different sources, and the potential cost and time of such comprehensive assessments (the multitrait-multimethod approach). The measures were chosen for use only if they demonstrated adequate psychometric properties with representative samples of youth and their families. For the most part, the authors present adequate reliability estimates on the scales and measures. The establishment of the validity of the instruments is an important area of improvement in future studies. Table 2 presents the current established psychometric properties of the measures. Internal consistency estimates, test-retest reliability scores, and interrater reliability figures on the instruments tend to be moderate to

high, with some scales and measures lacking important information concerning these issues.

Cultural Sensitivity of Family Measures. Perhaps the area of greatest concern and slowest progress in family measurement is the establishment of cultural sensitivity of available research instruments. Despite some excellent work in the area (Tolan et al. 1996*a*), very little is known about the differences in family conflict, parent-child relationships, and parenting behaviors in families of different ethnic and cultural backgrounds. This is in part due to the fact that the measures used in the majority of studies with problem children and their families have been developed and normed with mainly white middle-class samples. Researchers studying disadvantaged and minority samples have generally applied these measures without knowledge of the validity of these instruments with different populations. Attempts have been made to design measures with specific regard to cultural issues and themes (Szapocznik et al. 1985; Taylor 1996) and to develop measures targeting inner-city minority families (Gorman-Smith et al. 1996*b*). In addition, well-established measures are being validated in prevention and intervention studies with different populations (Sugland et al. 1995; VanHasselt et al. 1993). When issues of culture and ethnicity are taken into account, it is almost always in the study of African American and Hispanic families; the state of the field today is even less aware of the unique issues of other minority groups such as Native American and Asian American groups. Greater consideration of cultural issues is paramount in conducting prevention and intervention research with drug-abusing and delinquent youth.

Domains of Measurement in Drug Abuse Prevention Research

Family Factors and Adolescent Drug Use and Abuse. Researchers have made significant progress in identifying family factors that predict problem behaviors during childhood and adolescence (Hawkins et al. 1992). Family conflict and the quality of family relationships have been shown to be important factors in the development of problems during childhood and adolescence and were specified by the group as critical domains of measurement. Appropriate self-report measures of family conflict that have been used successfully in clinical trials with problem children and adolescents are the conflict scale of the FES and the Conflict Behavior Questionnaire. Both self-report measures have been widely used in research programs and have been cited in published studies. The Family Process Code and the Defensive Supportive Communication Coding System are observational measures that allow for assessment of the level of negative or conflicting interaction within the family. Each of these measures shows promise but has yet to be validated with minority families. Studies are currently being conducted at OSLC and the Center for Family Studies utilizing these instruments with more ethnically diverse samples.

Family relationship variables of interest in prevention intervention research with families include organization, emotional support, attachment relations, and level of disengagement. The OSLC Parent Interview and Parent Daily Report provide information regarding the parent's perceived quality of the relationship with the child and show promise as measures of family organization. Two scales from the Social Development Research Group's Student Survey, which was designed to measure risk and protective factors for substance abuse and delinquency during adolescence, measure family relationship variables: family attachment and opportunities for positive involvement. The Family Relations Scale has been developed and used in prevention studies with disadvantaged inner-city minority youth to measure changes in cohesion, beliefs, and structure following treatment. The Family Assessment Measure shows promise in demonstrating changes in global functioning during treatment.

Adolescent Substance Use, Attitudes, and Influences. In addition, measurement of the adolescent's substance use and abuse, peer substance use, parent substance use, and family norms regulating the child's behavior are important constructs in the study of family prevention intervention research. The group nominated well-established measures of substance use developed for national studies: the Monitoring the Future Study, National Youth Survey, and National Household Survey on Drug Abuse. These survey instruments have been validated on national probability samples with norms from various ethnic groups; however, measures used with nonclinical samples need to be appropriately applied with clinical samples. Parent substance use and abuse has been measured using the Alcohol Dependence Scale and the OSLC's Parent Interview. The University of Washington's Social Development Research Group (Arthur et al. 1995) Student Survey includes scales that measure parental attitudes favorable to antisocial behavior and rewards for conventional involvement and is recommended as appropriate for prevention intervention studies. Table 2 provides details on specific aspects of the nominated measures as well as overall strengths and weaknesses of the instruments.

The Family Measures Group provided a positive forum to discuss pressing issues related to the study of prevention interventions with high-risk youth and their families. Despite the complexities of defining and measuring families and incorporating information from different members, as well as the questions about cultural sensitivity and change of some measures, the field has made significant progress. Identifying appropriate, change-sensitive measures is a critical step in the advancement of family intervention science.

TABLE 2. *Summary of recommended family measures.*

Area	Contents
Title:	Family Environment Scale (FES)
Authors:	Moos and Moos (1974)
Target Population:	Has been used to study a wide variety of family types with both normal and psychiatrically impaired children and adolescents
Ages:	All family members including children ages 11 and older
Variable Scales:	<p>10 subscales (nine items each) within three family social climate dimensions: Relationship dimension: cohesion, expressiveness, conflict Personal growth dimension: independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis System maintenance dimension: organization, control</p> <p>Oregon Research Institute (ORI) (Metzler et al. 1994) reports good results using seven items from the adolescents' FES as a general measure of positive family relations</p>
Administration:	90-item, true-false self-report measure of individual family members' perceptions of the family environment; three separate forms: real, ideal, expectations
Barriers to Administration:	None

TABLE 2. *Summary of recommended family measures (continued).*

Area	Contents
Psychometric Properties:	Internal consistency of the 10 subscales ranges from 0.61-0.78; test-retest reliabilities range from 0.68-0.86 for 2 months and 0.52 to 0.89 for 12 months Adequately distinguishes normal and disturbed families, including families of delinquents vs. normal adolescents, drug abusers, families with young adolescents with behavior problems vs. normal adolescents, families with adolescent clients at a mental health clinic vs. nonclients ORI "Positive Family Relations" scale has shown internal consistencies of 0.81-0.86 with three separate samples
Languages:	English, Spanish, Czech, Chinese
Cultural Sensitivity:	Normed on several ethnic minority groups, including African-American families, a sample of Chinese families in Hong Kong, a sample of Czech families, and a sample of Spanish families
Subject Norms:	Standardized and normed on a sample of 1,125 normal (including single-parent families, multigenerational families, several geographic locations in the United States but predominantly higher socioeconomic class) and 500 distressed families (family member diagnosed with a psychiatric disorder); standard scores available from 1974 and 1981
Cost:	Self-scorable kit: \$42.10; Manual (3d ed.): \$40.10; Form R Item Booklets: \$22.90; Form I and E Item Booklets: \$34.30
Available From:	Consulting Psychologists Press, 3803 East Bayshore Road, Palo Alto, CA 94306 (800) 624-1765

Key References:	Bischof et al. (1995) Dixon (1986) Fowler (1981) Friedman and Utada (1992) Friedman et al. (1991) Ma and Leung (1990) Metzler et al. (1994) Moos and Moos (1981) Moos and Moos (1984) Moos and Moos (1986) Reichertz and Frankel (1990) Robertson and Hyde (1982)
Strengths:	Theoretically based; standardized and normed; comprehensive manual available; items are easy to understand for respondents; has been successfully used to predict positive outcome in adolescent drug abusers and their families following family therapy
Weaknesses:	Limited information provided about standardization sample; does not provide information on dyadic or individual functioning within the whole family; true-false format may not provide an adequate range of responses
Comments:	Used by ORI (Hops), CFS/CRADA, OSLC (OYS), Ohio University (Gordon), Spoth, SDRG (adapted)
Title:	Family Assessment Measure (FAM)-III
Authors:	Skinner et al. (1984)
Target Population:	Designed as a diagnostic tool for both research and clinical work with problem and nonproblem families, a measure of therapy process and outcome, as well as an instrument for basic research on family processes
Ages:	All family members older than 10 or 12

Variable Scales:	Three scales: general scale, dyadic-relationships scale, self-rating scale; family functioning is evaluated across seven dimensions: task accomplishment, role performance, communication, affective expression, affective involvement, control, values and norms (items reflecting each dimension appear within each of the three scales); social desirability scale and denial-defensiveness scale are also included
Administration:	Self-report scale completed by each family member; respondents must indicate how accurately each statement best describes their family (four possible responses: “strongly agree,” “agree,” “disagree,” and “strongly disagree”); general scale: 50 items; dyadic-relationships scale: 42 items; self-rating scale: 42 items; administration time = 20 to 60 minutes
Barriers to Administration:	Completion of form can take up to 1 hour with larger families
Psychometric Properties:	Internal consistency for general scale: 0.93 for adults, 0.94 for children; dyadic-relationships scale: 0.95 for adults, 0.94 for children; self-rating scale: 0.89 for adults, 0.86 for children; scales significantly differentiate problem (family member seeking professional help) and nonproblem families
Languages:	English, Spanish, French
Cultural Sensitivity:	Unclear
Subject Norms:	Standardized on 475 families (933 adults, 502 children), fairly representative across socioeconomic status (no information on ethnicity); 28% were problem families (one or more members having sought professional help)

Cost:	(As of April 1990): FAM Test Booklets (reusable): \$.50 each, FAM Answer Sheets (not reusable) \$.25 each, FAM Profile Sheets (for plotting FAM): \$.10 each, Brief FAM \$.25 each, FAM Administration & Interpretation Guide \$2 each, FAM Starter Kit \$7 each
Available From:	Dr. Harvey Skinner, Addiction Research Foundation, 33 Russell Street, Toronto, Ontario, Canada M5S 2S1 Forward orders directly to: FAM Project Coordinator, Addiction Research Foundation, 33 Russell Street, Toronto, Ontario, Canada M5S 2S1
Key References:	Skinner (1987) Skinner et al. (1983) Skinner et al. (1984) Steinhauer (1984) Steinhauer et al. (1984)
Strengths:	Easy to administer and score; profile forms allow for clinical interpretation of data; normative data and interpretive guidelines are available; three-level analysis of family functioning provides a unique contribution to family process measurement
Weaknesses:	Limited reliability and validity data
Comments:	Used by CFS (Liddle and Szapocznik)
Title:	Conflict Behavior Questionnaire (CBQ)
Authors:	Prinz (1976); Prinz et al. (1979)
Target Population:	Adolescents and their families
Ages:	10-18

Variable Scales:	Appraisal of the other and appraisal of the dyad, reflecting levels of distress family members experience as a result of their interactional patterns (adolescent from two-parent family receives scores on perceptions of both mother and father as well as perceptions of the dyads with mother and father separately)
Administration:	75-item (73-item for adolescents) true-false self-report measure completed by parents and adolescents; shorter forms (44-item and 20-item) are available that are highly correlated with the longer form
Barriers to Administration:	None; quick and efficient to administer and score
Psychometric Properties:	Internal consistency (coefficient alphas): 0.88 for mothers' report on adolescents, 0.90 for mothers' report on dyad, 0.95 for adolescents' report on mother, 0.94 for adolescents' report of dyad; percent of parent-adolescent agreement on similar items is 67% for distressed families and 84% for nondistressed families; test-retest correlations over 6-8 weeks: 0.57-0.61 for mothers and 0.85 for fathers; all scores have been found to discriminate distressed and nondistressed mothers, fathers, and adolescents; ORI reports excellent construct validity and Cronbach's alphas between 0.78 and 0.80 using 11 items from the child's report of CBQ (plus one item from the FES) to measure family conflict
Language:	English
Cultural Sensitivity:	Questionable, given that norms are not available for minority samples
Subject Norms:	Authors report that "preliminary norms" are available for distressed and nondistressed adolescents and parents (Robin and Foster 1984)—sample of white, middle-class urban and suburban families
Cost:	None

Available From:	Sharon Foster and Arthur Robin; actual scales and scoring procedures available in Foster and Robin (1988)
Key References:	Ary et al. (in press) Foster et al. (1983) Foster and Robin (1988) Metzler et al. (1994) Prinz (1976) Prinz et al. (1979) Robin and Foster (1984) Robin and Foster (1989)
Strengths:	Easy to administer and easy for subjects to complete; sensitive to treatment effects (skills training) over time in a sample of high-conflict families
Weaknesses:	True-false format may restrict the range of possible responses
Comments:	Used by CFS (Liddle and Szapocznik), ORI
Title:	Family Relations Scale
Authors:	Gorman-Smith et al. (1996 <i>b</i>)
Target Population:	Urban, ethnically diverse families with delinquent and drug-abusing children and adolescents
Ages:	Mainly used with young adolescents
Variable Scales:	Six scales: beliefs about the family (two subscales: importance of family relationships and beliefs about development); emotional cohesion; support; communication; shared deviant beliefs; organization
Administration:	35-item self-report measure completed by parent and adolescent
Barriers to Administration:	None

Psychometric Properties:	Internal consistencies (alpha reliability coefficients) range from 0.58 (communication) to 0.86 (beliefs about the family); factor structure of the scales indicate the following average alpha calculations for each scale: beliefs about the family: 0.92 (mother), 0.69 (child); cohesion: 0.69 (mother), 0.80 (child); support 0.75 (mother), 0.58 (child); organization 0.57 (mother), 0.57 (child); shared deviant beliefs 0.80 (mother), 0.71 (child)
Languages:	English, Spanish
Cultural Sensitivity:	The measure was developed specifically to provide an accurate measure of the functioning of ethnically diverse urban families, thus it is particularly promising as an appropriate and culturally sensitive instrument for currently underserved and poorly understood disadvantaged families; a panel of experts on African-American and Latino cultural issues reviewed and revised the instrument during its developmental stage
Subject Norms:	Unavailable; scale is being validated and normed in ongoing studies
Cost:	None
Available From:	P.H. Tolan, University of Illinois Institute for Juvenile Research
Key References:	Gorman-Smith et al. (1996a) Gorman-Smith et al. (1996b) Tolan et al. (1996a) Tolan et al. (1996b)
Strengths:	The measure is a promising tool for both clinical and research endeavors with ethnically diverse urban families with young problem adolescents, and high-risk, inner-city samples

Weaknesses:	The measure has yet to be adequately validated and tested in different research settings; has not been used with older adolescents
Comments:	Used in the Chicago Youth Development Study, CFS (Liddle, Szapocznik)
Title:	Structural Family Systems Rating Scale
Authors:	Szapocznik et al. (1985)
Target Population:	Adolescents with behavior problems and drug abuse and their families
Ages:	Appropriate for assessing families with children as young as 6 years old
Variable Scales:	Structure, resonance, developmental stage, identified patienthood, and conflict resolution, as well as a total score; subscale scores of parental alliance, parental leadership, and conflict resolution
Administration:	<p>Observation-based measure of family interaction that uses standardized administration and scoring procedures</p> <p>Two steps: (1) administer the standardized family tasks (about 20 minutes) and (2) conduct the structural family systems ratings (about 30 minutes)</p>
Barriers to Administration:	Training of raters is potentially time intensive
Psychometric Properties:	Authors report intraclass correlations indicating interrater reliabilities of 0.84 for total score and ranging from 0.48 to 0.86 on the dimensions of functioning; internal consistency of the total score is 0.87; interdimensional internal consistencies range from 0.69 to 0.89 (averaging 0.80); 1-month interval reliability checks performed by the same rater range from 0.83 to 0.98 along the scales

Languages:	Spanish, English
Cultural Sensitivity:	Developed for use with Hispanic families
Subject Norms:	Validated with over 500 clinical families
Cost:	None
Available From:	Jose Szapocznik, Ph.D., Center for Family Studies, Department of Psychiatry and Behavioral Sciences, University of Miami School of Medicine, Miami, FL
Key References:	Szapocznik and Kurtines (1989) Szapocznik et al. (1985) Szapocznik et al. (1986) Szapocznik et al. (1990) Szapocznik et al. (1991) Szapocznik et al. (1989 <i>a, b</i>)
Strengths:	Unique contribution to the integration of structural family theory, therapy, and assessment; efficient in terms of administration and time; useful as both a treatment evaluation instrument and diagnostic tool
Weaknesses:	Training of raters may be labor intensive and time intensive
Comments:	Used by CFS (Szapocznik, Santisteban)
Title:	Defensive and Supportive Communications Coding Manual (DSC)
Authors:	Alexander (1973)
Target Population:	Developed with delinquent and substance-abusing youth and their families; however, it is also appropriate to use as a measure of supportive and defensive communications in family therapy with more adaptive families

Ages:	Family members of all ages
Variable Scales:	Generic measure of communication, relationship process, and conflict/negativity in families Supportive: positive affection, empathy, positive interpretive, restatement, agreement Defensive/Pejorative: superiority/demanding, blaming/critical, sarcasm, disagreement, restatement, agreement Structuring: therapy-related exchange, control in therapy, requests for action, directing the flow
Administration:	Administration is very flexible; coding system is used on segments of therapy; has been used to analyze thought units, speech acts, and time intervals; coders (undergraduate level) require approximately 1 month of training; coding requires approximately one-half hour for each 10-minute segment of interaction
Barriers to Administration:	Training and coding may be time intensive, but less so than other coding systems
Psychometric Properties:	Interrater reliability established at 0.76-0.94; convergent and discriminant analyses have established support for the internal structure and validity of the measure Successfully discriminates delinquent and nondelinquent youth and their families, as well as adaptive and dysfunctional families
Language:	English
Cultural Sensitivity:	Measure has been used with African-American and Hispanic families with drug-abusing youth
Subject Norms:	Not available
Cost:	None
Available From:	Dr. James Alexander, Department of Psychology, University of Utah, Salt Lake City, UT

Key References:	Alexander (1973) Alexander and Barton (1994) Alexander et al. (1976) Alexander et al. (1995) Alexander et al. (1989) Barton et al. (1988) Mas et al. (1991) Newberry et al. (1991) Waldron et al. (1994)
Strengths:	This coding system is extremely flexible; training of raters is possible without excessive investment of time; it serves as one of the only valid measures of family process during therapy
Weaknesses:	Only measures one indicator of family process (negativity)
Comments:	Used by CFS/CRADA (Liddle et al.), Alexander and colleagues
Title:	Family Process Code (FPC)
Authors:	Original Family Interaction Coding System based on work by Reid (1978) and Patterson et al. (1969); Dishion et al. (1983, revised 1987)
Target Population:	Preadolescent antisocial children and their parents (families with high levels of aversive events and exchanges)
Ages:	Families with children 6-12 years of age; also used in prevention studies with young adolescents
Variable Scales:	Three dimensions: activity, content and valence Activity: work, play, read, eat, attend, unspecified Content: (25): 9 positive, 9 negative, 7 neutral; verbal, vocal, nonverbal, physical, compliance Valence: exuberant, positive, neutral, negative, unrestrained negative, sad affect

Administration:	<p>Families are observed in the home for 10-minute segments (trials) of interaction; in each trial a different family member is the focal subject and coding is restricted to that member's behaviors and interactions</p> <p>Families are oriented and prepared for the interaction and asked ahead of time to have all family members present and not to have visitors; entire administration takes about 60 minutes</p> <p>The FPC has also been used in the lab with a 25-minute structured interaction task involving a 5-minute warmup task in which the family plans an activity, and two 10-minute sessions in which the family discusses topics identified by parent and child beforehand as "hot" topics</p>
Barriers to Administration:	Home observation can be difficult (portable equipment can be costly); distractions are more likely than in the lab
Psychometric Properties:	<p>Original FICS: average interrater reliability 75%; code/code agreement ranged from 54% to 96%; codes shown to be stable across observers and over time (most variance attributable to subjects and subject X occasion interaction); measure clearly differentiates normal and clinic families; significantly correlated with self-report measure of family interaction (Parent Daily Report)</p> <p>FPC with 9- to 10-year-old boys (Dishion 1990): interobserver reliability of entire FPC code, 73.4%; average kappa, 0.52; parent discipline yielded alpha coefficients of 0.75-0.77 (mothers) and 0.74-0.82 (fathers); test-retest reliability of combined two-parent discipline, 0.68</p> <p>FPC with 10- to 14-year-olds (Dishion and Andrews 1995): interrater reliability for content, 86.4%; affective valence, 73.4%; overall weighted kappa of 0.69 reported on combined content and valence of each entry (ranging from 0.37-0.78)</p>
Language:	English

Cultural Sensitivity:	Unclear
Subject Norms:	FICS and FPC normed on both normal and clinic boys and girls (mean behavior rates)
Cost:	None
Available From:	Manual available from OSLC, 207 East Fifth Street, Eugene, OR 97401
Key References:	Dishion (1990) Dishion et al. (1983) Dishion and Andrews (1995) Dishion and Patterson (1992) Patterson (1982) Patterson et al. (1992) Reid (1978)
Strengths:	Developed specifically for use with clinic samples and designed to tap into coercive family processes; theoretically as well as empirically based manual development; has been used in a rigorous program of research that has followed conduct-disordered boys into adolescence
Weaknesses:	Designed and developed for children and preadolescents; not used as frequently with adolescents
Comments:	Used by OSLC
Title:	Parent Daily Report (PDR)
Authors:	Patterson et al. (1975); Patterson (1976); Chamberlain (1980); Dishion et al. (1984)
Target Population:	Parents of antisocial preadolescents and adolescents

Ages:	Used in waves starting with 9- to 10-year-old boys through senior year of high school
Variable Scales:	Designed to measure the daily incidence of the child's problem behaviors, including involvement in substance use, deviant peer groups, other problem behaviors, as well as parents' monitoring and discipline practices (reactions to these problem behaviors) Child problem behaviors, monitoring, limit setting, relationship quality, positive reinforcement
Administration:	Research assistant makes telephone calls to parent on 10 consecutive days or every other day for about 1 week at baseline (administration procedure can be modified to meet specific demands of each study); checklist takes about 10 minutes to complete
Barriers to Administration:	Potential difficulties contacting families on a daily basis
Psychometric Properties:	Distinguishes children in abusive families and nonabusive matched controls (Reid et al. 1987); across studies, PDR shows test-retest reliability ranging from 0.60-0.82, interobserver reliability ranging from 85% to 98%, concurrent validity with observational data collected using FPC in three separate studies (r, 0.48-0.69)
Language:	English
Cultural Sensitivity:	Measure used with predominantly European-American samples
Subject Norms:	Not available
Cost:	None
Available From:	OSLC, 207 East Fifth Street, Suite 202, Eugene, OR 97401

Key References:	Chamberlain (1980) Chamberlain and Reid (1987) Chamberlain and Reid (1994) Dishion et al. (1984) Patterson (1976) Patterson et al. (1975) Patterson et al. (1978) Reid et al. (1987)
Strengths:	Access to daily information about the child's behavior may greatly improve the accuracy of parents' reports; ability to trace changes over time is critical in treatment efficacy studies, and this method allows for analysis of trends in behavior change throughout the treatment process
Weaknesses:	Cultural sensitivity not yet established
Comments:	Used by OSLC, adapted by ORI
Title:	Parent Interview
Authors:	Oregon Social Learning Center (1984)
Target Population:	Parents of preadolescent and adolescent antisocial children
Ages:	Used with boys from ages 9 to 10 to senior year of high school
Variable Scales:	Different sections of the interview include monitoring, relationship, family problemsolving, positive reinforcement, discipline, youth's chores, youth's self-esteem, performance expectations for youth, demographics, religious practices, parent tobacco use, youth's employment adjustment, youth's sexual behavior, youth's social adjustment, youth's use of free time

Administration:	Interview takes approximately 45 minutes; interview can be modified depending on the type of study and questions of interest
Barriers to Administration:	None
Psychometric Properties:	3-month test-retest stability: monitoring, 0.70; limit setting, 0.65; relationship quality, 0.65; positive reinforcement, 0.57 Alpha coefficients: monitoring, 0.81; limit setting, 0.81; relationship quality, 0.85
Language:	English
Cultural Sensitivity:	Measure used with predominantly European-American samples
Subject Norms:	Not available
Cost:	None
Available From:	OSLC, 207 East Fifth Street, Suite 202, Eugene, OR 97401
Key References:	Dishion and Kavanagh (in press) Dishion et al. (1996) Patterson et al. (1992) Patterson et al. (1975) Patterson et al. (1978)
Strengths:	Flexibility of instrument; developed with problem children and preadolescents
Weaknesses:	Cultural sensitivity not yet established
Comments:	Used by OSLC, ORI, CFS (Szapocznik)

Title:	Family Participation Factor Scales
Authors:	Spoth and Redmond (1993 <i>a, b</i> ; 1995; Spoth et al. 1996); Social and Behavioral Research Center for Rural Health, Center for Family Research in Rural Mental Health, Iowa State University
Target Population:	Parents of children and adolescents potentially benefiting from participation in prevention services
Ages:	Used in samples of families with fifth, sixth, and seventh graders
Variable Scales:	A series of scales assessing factors that might influence family participation in family-focused interactions and related research activities
Administration:	Likert-type items concerning factors influencing family member participation (e.g., requiring child care to attend meetings, weeknight meetings five consecutive nights, 10-mile trip to meetings, parental beliefs about interventions)
Barriers to Administration:	None
Psychometric Properties:	Alpha reliabilities
Language:	English
Cultural Sensitivity:	Used with predominantly white rural samples
Subject Norms:	Not available
Cost:	None

Available From:	Richard Spoth, Institute for Social and Behavioral Research, Center for Family Research in Rural Mental Health, Iowa State University Research Park, Building 2, Suite 500, 2625 North Loop Drive, Iowa State University, Ames, IA 50010
Key References:	Spoth and Molgaard (1993) Spoth and Redmond (1993 <i>a, b</i>) Spoth and Redmond (1995) Spoth et al. (1993) Spoth et al. (1996)
Strengths:	Important construct that is especially relevant to positive outcomes in family-based interventions and intervention research with troubled adolescents (barriers to participation)
Weaknesses:	Not been used with inner-city families who potentially have the most serious barriers to participation in family-based interventions; limited psychometric data
Comments:	Used by Spoth, Kumpfer
Title:	Student Survey of Risk and Protective Factors and Prevalence of Alcohol, Tobacco, and Other Drug Use
Authors:	Hawkins et al. (1995)
Target Population:	General population of students
Ages:	Students in grades 6, 8, 10, 12

Variable Scales:	<p>Family relationships: family attachment (six items), opportunities for positive involvement (three items), recognition/rewards for conventional involvement (two items)</p> <p>Family norms: history of antisocial behavior (six items); attitudes toward antisocial behavior (six items); attitudes favorable toward alcohol and other drugs</p>
Administration:	Total instrument takes 40 minutes and is self-administered in the classroom
Barriers to Administration:	None
Psychometric Properties:	<p>High concurrent validity with other drug and alcohol use and delinquency; reliabilities of each scale by State, gender, and grade (and overall):</p> <p>Family attitudes-ASB: 0.72-0.84 (State), 0.75-0.79 (females-males), 0.75-0.80 (grade)</p> <p>Family attitudes-ATOD: 0.78-0.82 (State), 0.77-0.80 (females-males), 0.75-0.80 (grade), 0.80 (overall)</p> <p>Family history-ASB: 0.72-0.76 (State), 0.72-0.74 (females-males), 0.70-0.75 (grade), 0.73 (overall)</p> <p>Family attachment: 0.84-0.85 (State), 0.84-0.86 (females-males), 0.83-0.84 (grade), 0.84 (overall)</p> <p>Family-OPI: 0.70-0.79 (State), 0.77-0.75 (females-males), 0.72-0.77 (grade), 0.76 (overall)</p> <p>Family-RCI: 0.75-0.91 (State), 0.85-0.81 (females-males), 0.79-0.84 (grade), 0.86 (overall)</p>
Language:	English

Cultural Sensitivity:	Normed with different ethnic groups
Subject Norms:	Excellent standardization information available from over 100,000 students in Oregon, Kansas, Maine, South Carolina, and Washington
Cost:	\$1.40 per full survey including all family, community, peer (cost includes printing of forms, shipping, scoring, and development of database)
Available From:	Developmental Research and Programs (800-736-2630)
Key References:	Authors report that one paper with data on the survey and results is under review in <i>Journal of School Health</i> ; the following papers represent work leading up to development of the survey: Catalano et al. (1991) Hawkins and Catalano (1987) Hawkins and Catalano (1992) Hawkins et al. (1989) Hawkins et al. (1992)
Strengths:	Full survey is efficient and reliable among different ethnic groups (except Family Conflict scale); standardization done on wide range of children from various geographic locations
Weaknesses:	Family conflict scale is based on items from FES and should not be used given poor reliabilities among ethnic groups; not developed for or normed on clinic samples (only children who are in school)
Comments:	Used by University of Washington Social Development Research Group (Hawkins and colleagues)

Title:	National Youth Survey
Authors:	Elliot et al. (1985)
Target Population:	General population of junior high and high school students
Ages:	Used in studies of national samples with individuals ages 11 to 17; followups with individuals up to age 33
Variable Scales:	<p>Major scales: sociodemographics, strain, internal (personal) controls, external controls, normative orientation of institutions/groups, sanctioning networks, delinquent/criminal behavior, substance use, problem substance use, official justice system contacts, victimizations, sexual behavior, mental health, domestic violence</p> <p>Subscales of interest: Problem alcohol use, problem drug use, problem marijuana use, attitudes toward deviance, attitudes toward substance use, attitudes toward delinquency/crime, general delinquency, peer substance use; peer delinquency, peer pressure for substance use; peer involvement, quality of peer bond</p>
Administration:	Self-report measure is administered in group setting such as the classroom or individually with adolescent; 45-minute administration time
Barriers to Administration:	None
Psychometric Properties:	Internal consistencies of the scales: problem alcohol use, 0.73; problem drug use, 0.68; problem marijuana use, 0.65; attitudes toward deviance, 0.82; attitudes toward substance use, 0.79; attitudes toward delinquency/crime, 0.86; general delinquency, 0.75; peer substance use, 0.78; peer delinquency, 0.79; peer pressure for substance use, 0.73; peer involvement, 0.76; quality of peer bond, 0.73

Language:	English
Cultural Sensitivity:	National probability sample includes individuals from different ethnic groups
Subject Norms:	Information available from eight waves (14 years) of the National Youth Survey (N=1,172); national probability sample from all geographical locations in the United States
Cost:	None
Available From:	Behavioral Research Institute, Boulder, CO 303-492-1266
Key References:	Elliott et al. (1983) Elliott et al. (1985) Elliott et al. (1989) Esbensen and Elliott (1994)
Strengths:	Used in a wide range of studies with both clinic and “normal” adolescents; national norms available over a 14-year period for different ethnic groups; easy to administer and score
Weaknesses:	Originally designed for use in national probability studies, therefore the higher ranges of delinquency seen in clinical samples may be restricted
Comments:	Used by OSLC (OYS), Spoth, CFS (Liddle and Szapocznik), Gordon
Title:	National Household Survey on Drug Abuse
Authors:	Melnick; Substance Abuse and Mental Health Services Administration (SAMHSA)
Target Population:	Designed to measure the use of illicit drugs in the general U.S. population of individuals

Ages:	12 and older
Variable Scales:	Past-month use, past-year use, and lifetime use of the following drugs: marijuana, cocaine/crack, inhalants, hallucinogens/PCP, heroin, prescription drugs, alcohol (heavy alcohol use), cigarettes, smokeless tobacco
Administration:	Measure is generally administered as an in-person interview including self-administered items; entire interview takes about 1 hour
Barriers to Administration:	Length of entire interview may not be suitable in large research protocols with many measures
Psychometric Properties:	Not reported
Languages:	English, Spanish
Cultural Sensitivity:	Administered and normed on a random sample of the U.S. population, including major ethnic groups
Subject Norms:	National norms available by gender, ethnic group, geographical location (no norms for clinical groups)
Cost:	Not reported
Available From:	SAMHSA, Office of Applied Studies, 5600 Fishers Lane, Room 16C-06, Rockville, MD 20857 301-443-7980
Key References:	Greenblatt et al. (1995) Johnson et al. (1996) Substance Abuse and Mental Health Services Administration (1993 <i>a, b</i> ; 1994; 1995 <i>a, b, c</i> ; 1996 <i>a, b, c</i>)

Strengths:	National norms available on individuals in major ethnic groups, geographical locations, and SES classes
Weaknesses:	Not designed as a measure for clinical populations and may not be sensitive to more severe use
Comments:	Used by ORI (Hops)
Title:	Monitoring the Future Survey
Authors:	Johnston et al. (1975-present)
Target Population:	Designed to study changes in the attitudes and beliefs of the Nation's high school students and to monitor trends in drug use among the Nation's youth
Ages:	Originally designed for use with high school seniors; now administered to 8th and 10th graders as well; followup surveys done with each cohort every year into their early thirties
Variable Scales:	Cigarette use, alcohol use, marijuana use, other illicit drug use, perceived harmfulness of drugs, personal disapproval of drug use, attitudes regarding the legality of drug use, perceived attitudes of parents and friends, friends' use of drugs, perceived availability of drugs
Administration:	Can be group administered in the school setting (self-administration possible)
Barriers to Administration:	None

Psychometric Properties:	Authors report reliability estimates from three waves of longitudinal data: 0.89-0.91 for cigarette use (past 12 months); 0.86-0.91 for cigarette use (past 30 days); 0.84-0.89 for alcohol use (past 12 months); 0.72-0.78 for alcohol use (past 30 days); 0.89-0.91 for marijuana use (past 12 months); 0.78-0.84 for marijuana use (past 30 days); 0.70-0.87 for other illicit drug use (past 12 months); 0.49-0.72 for other illicit drug use (past 30 days); annualized stability estimates on followup surveys: 0.92-0.93 for cigarette use (both past 12 months and past 30 days); 0.88-0.91 for alcohol use (past 12 months); 0.86-0.88 (past 30 days); 0.88-0.90 for marijuana use (past 12 months and past 30 days); 0.81-0.90 for other illicit drug use (past 12 months); 0.76-0.82 (past 30 days)
Language:	English
Cultural Sensitivity:	National samples include individuals from all major ethnic groups in the United States
Subject Norms:	National norms available for high school seniors each year since 1974; norms available on 8th and 10th graders since 1991; norms also available for young adults as followups of the original samples
Cost:	Not available for sale
Available From:	Survey instrument not available for use; can be adapted for use in a study; contact Survey Research Center, 1355 Institute for Social Research, P.O. Box 1248, Ann Arbor, MI 48103 313-763-5043

Key References:	Bachman et al. (in press) Bachman et al. (1991) Johnston et al. (1995) Johnston et al. (1996 <i>a, b</i>) O'Malley et al. (1983) O'Malley et al. (1993) O'Malley et al. (1995) Schulenberg et al. (1994) Schulenberg et al. (1996 <i>a, b</i>) Wallace and Bachman (in press)
Strengths:	National norms available on high school students and young adults each year from 1974
Weaknesses:	May not be sensitive to levels of use in clinical populations; norms are not available for individuals with higher levels of use (clinical populations)—norms are also not applicable to samples in which many of the subjects do not attend school
Comments:	Serves as the standard for measurement of adolescent drug use and establishment of national high school norms
Title:	Alcohol Dependence Scale (ADS)
Authors:	Skinner and Horn (1984)
Target Population:	Designed to measure the severity of alcohol dependence among clinical groups of adult substance abusers and incarcerated offenders
Ages:	Has been used with adult populations aged 20 to late forties
Variable Scales:	Adapted from the Alcohol Use Inventory by Horn and Wanberg (1969), incorporating four scales from the original measure: loss of behavioral control, psychophysical withdrawal, psychoperceptual withdrawal, and obsessive-compulsive drinking

Administration:	25-item self-report scale that can be administered in questionnaire or interview format; takes less than 10 minutes to complete; computerized version available
Barriers to Administration:	None
Psychometric Properties:	Reliability and validity data are based on the original 29-item scale, which correlates highly with the 25-item scale (r, 0.96-0.99); internal consistency of the measure is reported between 0.85 and 0.94 with various samples; correlates with other measures of alcohol abuse and dependence, including the MAST and DSM-III diagnostic interviews
Languages:	English, French
Cultural Sensitivity:	No studies using the ADS with specific cultural groups
Subject Norms:	User's guide contains data and validation information from inpatient and outpatient clinical samples
Cost:	ADS Kit (user's guide and 25 questionnaires): \$15.00; user's guide: \$14.25; questionnaire: \$6.25
Available From:	Addiction Research Foundation, ARF Marketing Services, 33 Russell Street, Toronto, Ontario M5S 2S1 800-661-1111 Fax: 416-593-4694 MKTG@arf.org
Key References:	Horn and Wanberg (1969) Kivlahan et al. (1989) Skinner and Allen (1982) Skinner and Horn (1984) Ross et al. (1990)

Strengths:	Administration is quick and straightforward; designed and used with clinical adult samples
Weaknesses:	Cultural sensitivity not yet established
Comments:	Used by OSLC (OYS)

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