

*Measurement & Description of
Children with Emotional Disturbances*

Chapter 9

Chapter 9: Measurement & Description of Children with Emotional Disturbances

Factors Associated with Inpatient Length of Stay for Children and Adolescents

Introduction

Little is known about the factors that may be associated with inpatient length of stay (LOS) for children and adolescents. Recent studies of trends in psychiatric services for children and adolescents reveal that admissions to psychiatric hospitals have increased in the last two decades (Burns, 1991; Pottick, et al., 1993) at the same time that average LOS has decreased (Borchardt & Garfinkel, 1991). Shorter LOS is probably due both to increased financial pressures and to the recently developed consensus that for children and adolescents, hospitalization should only be used as a last resort when children have a severe psychiatric problem or when home and community-based services are inadequate (e. g., Stroul and Friedman, 1988).

Ideally, we need to discover the optimum LOS for children and adolescents with specific problems and service needs, and then tailor inpatient programs to provide these services within the context of comprehensive home and community-based outpatient programs. Of course, the present reality falls short of this ideal, and it is likely that LOS is influenced by numerous factors in addition to patient needs.

This research asks: What are the factors associated with inpatient LOS? We analyzed population data collected by The Menninger Clinic on 743 children and adolescents admitted to,

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and discharged from, inpatient care from 1984-1995. We then tested how the following factors were associated with LOS: a) background factors, b) predisposing family factors, c) predisposing child factors, d) illness factors, which include presenting problems and diagnosis, and e) current inpatient treatment factors. These factors are based on Andersen and Newman's (1973) and Andersen's (1995) model of health care utilization.

This study builds on our prior work (Pottick, Hansell, & Cornsweet-Barber, 1995a; Pottick, Hansell, Gutterman, & White, 1995b) where we tested multiple variable models to predict inpatient or outpatient care and length of stay for children and adolescents. There, analyses were based on 1986 nationally representative data collected by the National Institute of Mental Health on utilization of mental health facilities in the United States (Manderscheid & Sonnenschien, 1990). The final model for predictors of LOS in the national data accounts for only 16% of the variance.

The Menninger Clinic data set contains more detailed variables than the national one, and therefore offers the opportunity to deepen our understanding of the dynamics of inpatient LOS. In particular, the Menninger data set has detailed information on the characteristics of the families of children and adolescents who are hospitalized. It also contains detailed information on characteristics of the child that may have a bearing on the length of hospitalization, such as previous medications and number of prior hospitalizations. Thus, the Menninger data include additional family and child characteristics which may be especially relevant for those researchers and program planners who are attempting to understand inpatient service utilization.

Method

Data Source

Participants were 743 children and adolescents admitted to, and discharged from, The Menninger Clinic between 1984 and 1995. The complete data set was comprised of two separate data sets from the Children's Hospital Patient Data Base: Admission data and Discharge data.

Analyses

First, we examined the distribution on all the measured variables and conducted correlational analyses to explore potential multicollinearity problems. Then, simultaneous regression analyses were conducted on the data to understand the factors that were associated with length of stay. We enter the variables in blocks representing theoretically distinct domains of (a) demographic factors, (b) predisposing child factors, (c) predisposing family factors, (d) predisposing treatment factors, (e) presenting problem factors, (f) diagnosis factors and (g) current inpatient treatment factors.

Measures

Length of Stay (LOS). The dependent measure is the number of days from hospital admission to discharge. The mean LOS was 147 days, with a standard deviation of 210 days, and a range of 1 to 1706 days. For the regression analyses, we applied a logarithmic transformation to LOS, which reduces the skewness to an acceptable level (skewness= .21; standard error=.09).

Demographic Factors. We include age, gender, and race (white vs. other) in the first block of the regression.

Predisposing Child Factors. The second block of variables entered in the regression consists of six variables that reflect characteristics of children's history that might predispose them to longer LOS.

Inpatient Length of Stay

These are: history of poor academic performance, existence of a learning disability, whether the child repeated a grade, history of self-mutilation, lethality of prior suicide attempts, and Axis 5 diagnosis.

Predisposing Family Factors. The third block of factors consists of characteristics of the family that might be associated with LOS. Five variables are entered: family structure (two adult vs. one adult), family SES, number of foster home placements, and whether there was a history of abusing the child sexually and physically.

Predisposing Treatment Factors. The fourth block consists of four variables: number of prior hospitalizations, previous outpatient treatment, number of years in the mental health service system, and prior medications.

Presenting Problems Factors. The data set also includes psychological and behavioral symptoms present within the last month prior to admission; two indices are constructed (psychological symptoms: seventeen items; behavioral symptoms: twenty seven items), and they are added to the full regression model in the sixth block.

Diagnosis Factors. The sixth block of variables consists of psychiatric diagnosis using DSM-III-R or DSM-IV illness codes. In these preliminary analyses, discharge, rather than admission, diagnoses are used since they are considered more reliable. We group the codes into five exclusive categories: psychotic disorders, personality disorders, conduct/behavior disorders, affective disorders, and other disorders. Four linearly dependent dummy variables are created for the regression analyses, with affective disorders as the reference category.

Current Treatment Factors. Finally, the seventh block includes treatment factors available in the data set. We included whether or not each patient received medications while on the inpatient unit.

Results

In the first block of demographic characteristics, age, race, and gender were not significantly associated with LOS.

The second block of variables consisted of predisposing characteristics related to the child's history and it contributed 4% to the variance in LOS, with lethality of suicide attempt and poor academic performance significantly associated with LOS.

The third block of variables consisted of family history factors, and it too contributed significantly to LOS. Children and adolescents from single adult families, and from lower SES families had higher LOS than those without those characteristics. Family history factors accounted for 6% of the variance in LOS.

The fourth block of variables contained predisposing treatment factors. The number of prior hospitalizations had a significant effect on LOS, controlling for demographics, predisposing child factors and family history. This block accounted for 19% of the variance in LOS.

The fifth block of variables consisted of psychological and behavioral symptoms prior to admission, and they were not associated with LOS.

The sixth block of variables were the four dummy variables for psychiatric diagnosis (contrasted with the reference category of affective disorders). In contrast to children and adolescents with affective disorders, those with personality disorders and other disorders had significantly longer LOS. There were no differences in LOS for youths with psychotic disorders and conduct disorders in comparison to those with affective disorders. Controlling on the demographics and predisposing family and child factors, and symptoms, diagnostic category accounted for 7% of the variance in LOS.

The seventh block included inpatient medication, and it did not contribute to inpatient LOS.

The full model accounted for 36% of the variance in LOS when all of the variables in the analysis were included at the end of the seventh block. Controlling for all the variables in the earlier blocks, the final model retained five significant factors associated with inpatient LOS: single family household, lower family SES, child's number of previous hospitalizations; and the illness diagnosis of personality disorder and other disorders (in contrast to affective disorder).

Discussion

This study tested multiple variable models which included demographic factors; predisposing child, family and treatment factors; illness factors (presenting problems and diagnosis); and inpatient treatment factors. It builds on our previous efforts to investigate the correlates of inpatient LOS from nationally representative data collected by the NIMH (Pottick, Hansell, Gaboda & Gutterman, 1995b). Using the Menninger data, we found that the final model of demographic factors, predisposing family and child factors, need (illness) factors, and current treatment factors accounted for 36% of the variance in LOS. This is in contrast to our previous findings from the national data where predictor variables accounted for only 16% of the total variance in LOS.

In the single facility studied here, overall findings reveal that previous hospitalization, illness diagnosis, and family factors were associated with LOS, while predisposing child characteristics, serious presenting problems and inpatient medications were not, controlling for all factors. It may be that factors that lead children and adolescents to inpatient care are different from factors that require that they remain in care for extended periods of time.

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Inpatient Length of Stay

Table 1
Regressions of Child Inpatient Length of Stay (Logged) on Background, Family, History,
Presenting Problems, Diagnosis, and Treatment Factors
(n = 615)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Background							
Age	.07	.03	.01	-.05	-.05	-.07	-.07
Male	-.01	.01	.04	.01	.01	.03	.03
White	.01	-.01	-.02	.00	.00	.01	.01
Predisposing Child Factors							
Lethality Suicide Attempt		.14***	.12**	-.02	-.02	-.01	-.01
Self Mutilation		.07	.06	.02	.03	.01	.01
Learning Disability		.03	.02	.03	.03	.03	.03
Repeated School Grade		-.02	.00	.00	-.01	-.01	-.01
Poor Academic Perform		.14***	.12**	.07	.07	.06	.06
Axis 5 Highest Past Year		-.04	-.04	.00	.01	.01	.01
Predisposing Family Factors							
Intact Family Structure			-.21***	-.13***	-.13***	-.11**	-.11**
Family SES			-.16***	-.12***	-.12**	-.11**	-.11**
Foster Home Placements			-.07	-.03	-.03	-.02	-.02
History Sexual Abuse			.07	.02	.03	.01	.01
History Physical Abuse			-.07	-.07	-.07	-.05	-.05
Predisposing Treatment							
Prior Psych Inpatient				.48***	.48***	.41***	.41***
Prior Psych Outpatient				.01	.01	-.01	-.01
Years in MH System				.05	.04	.01	.01
Prior Medications				.01	.01	.00	.00
Presenting Problems							
Behavioral Problems					-.02	-.02	-.02
Psychological Problems					-.06	-.03	-.03
Diagnosis							
Personality Disorders						.32***	.32***
Conduct Disorders						.02	.03
Psychotic Disorders						.06	.06
Other Disorders						.11**	.11**
Treatment							
Inpatient Medication							.02
<i>R</i> ² Change	.00	.04***	.06***	.19***	.00	.07***	.00
Total Adjusted <i>R</i> ²	.00	.04***	.10***	.28***	.29***	.36***	.36***

Note: Standardized betas are shown.

* *p* < .05

** *p* < .01

*** *p* < .001

Table 2
Distributions of Selected Variables
(n = 743)

	Mean	SD	Minimum	Maximum
Length of Stay (days)	147.25	210.49	1	1,706
Logged Length of Stay	4.06	1.39	0	7.44
Age	14.04	2.62	4	18
Family SES	2.67	1.16	1	9
# Psych Hospitalizations	1.25	1.58	0	11
Years in Mental Health System	3.57	3.46	0	16
	Percentage			
Male	52.0			
White	92.1			
Intact Family Structure	27.9			
Prior Outpatient Treatment	92.7			
Self Mutilating Behavior	29.2			
Learning Disability	76.6			
Prior Medications	65.9			
Repeated School Grade	19.7			
Poor Academic Performance	69.4			
Physically Abused	23.3			
Sexually Abused	25.7			
Personality Disorders	34.8			
Affective Disorders	31.5			
Conduct Disorders	18.3			
Psychotic Disorders	9.2			
Other Disorders	6.2			
Inpatient Medications	69.9			

Evaluating System of Care Clinical Outcomes by Youth Risk Profiles

Introduction

Because child-serving agencies operating in isolation may be overburdened by single-handedly addressing the multiple and diverse challenges of youths with emotional and behavioral disorders (EBD) and their families, collaborative systems of care have been established to provide comprehensive interventions with reduced costs, fragmentation, and duplication (Illback, Neill, Call, & Andis, 1993; Stroul & Friedman, 1986). However, preliminary studies examining the effects of systems of care on the behavioral and emotional status of participating youths have shown mixed results.

Investigators have found that despite an increase in consumer satisfaction measures, systems of care are unlikely to better affect short-term clinical or functional outcomes than traditional services available to youths with EBD (Bickman, 1996; Bickman et al., 1995). These preliminary findings have not been received without debate, however (e.g., Behar, 1997; DeLeon & Williams, 1997; Hoagwood, 1997; Weisz, Han, & Valeri, 1997). Before it is concluded that systems of care do not produce uniquely positive clinical outcomes, additional research is needed.

Among various competing hypotheses that challenge previous findings is the idea that prior studies have aggregated potentially differential outcomes across all youths. These circumstances are analogous to early investigations of psychotherapy that found it ineffective when combining and analyzing the

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results of all types of practicing theories co-mingled with all types of clients (Eysenck, 1952). As with later studies that recognized the need to examine specific types of therapy for clients presenting particular problems and needs (e.g., Kiesler, 1966; Paul, 1967; Franks, 1969), it may be possible that these innovative systems of service delivery differentially affect positive results dependent on client profiles.

Specifically defining the characteristics of the target populations served in systems of care has been recognized as a vital preliminary step in empirically determining the most effective interventions (Burns & Friedman, 1990; Epstein et al., 1993; Kutash, Duchnowski, & Sondheimer, 1994; Quinn, Newman, & Cumblad, 1995). It is possible that certain interventions or sequences of services may be more effective with specific subpopulations that vary by factors such as age, ethnicity, risk factors, behavioral characteristics, and functioning. The present study, therefore, sought to determine: (a) if youths referred to a system of care present differing profiles of impairment and corresponding needs; and (b) whether differential clinical outcomes may be associated with these specific profiles of sociodemographic and behavioral characteristics.

Method

Setting

This study was conducted in Santa Barbara County, a coastal community of 390,000 that includes both suburban and rural populations. Approximately 86,000 children live in the county and are identified as 52% Caucasian, 40% Latino (specifically Mexican and Central American immigrants), 5% Asian/Pacific Islander, and 3% African-American (Damery, Furlong, Casas, & Corral, 1996).

Santa Barbara County was one of 22 sites nationwide to receive a federal grant from the Center for Mental Health Services to develop and evaluate a Multiagency Integrated System of Care

(MISC) serving youths with EBD and their families. MISC coordinates services among family members, County Mental Health, Probation, Child Protective Services (CPS), Public Health, non-profit organizations, and public schools to provide a research-driven, family-focused, comprehensive continuum of community-based services.

Participants

Participants were 128 youths (97 males, 31 females) constituting the first wave of referrals into MISC— those deemed by their referral agencies as most in need of immediate, intensive, and coordinated services. The mean age of the youths was 14.2 years ($SD = 2.9$), and they represented the major ethnic groups in the community, with some over-representation of Latino/as and African-Americans (43% Latino/a, 39% Caucasian, 15% African-American, and 2% Asian/Native American). Youths entering from the Probation gateway accounted for 63% of the sample followed by CPS (15%), Public Health (13%), Mental Health (8%), and public schools (2%). Probation referrals were over-represented because this agency was the first to co-locate staff and refer clients for MISC services.

Data Collection

Data were gathered by trained social workers, probation officers, public health nurses, and mental health personnel in the context of a comprehensive assessment of each MISC participant. Descriptive data including demographics, risk factors and behavioral consequences that were used in a cluster analysis to create profile types are explained in detail in Rosenblatt, Robertson, Bates, Wood, Furlong, and Sosna (in press). The two standardized instruments used to measure clinical outcomes for the present study are presented below.

Child Behavior Checklist (CBCL). A general index of recent problem behaviors as perceived by the youth's caregiver was obtained using the *Child*

Clinical Outcomes by Risk Profiles

Behavior Checklist (Achenbach, 1991). The CBCL is comprised of eight syndrome scales and three summary scale scores. The *Internalizing* index is a summary score derived from the *Withdrawn, Somatic Complaints*, and *Anxious/Depressed* scales; the *Externalizing* index is derived from the *Delinquent Behavior* and *Aggressive Behavior* scales; and the *Total Problem Scale* index is derived from a summary of all of the syndrome scales.

Child and Adolescent Functional Assessment Scale (CAFAS). The degree of disruption in the youth's current functioning as perceived by a clinician or other trained rater was assessed using the *Child and Adolescent Functional Assessment Scale* (Hodges, 1990). Raters consider the extent to which the youth is impaired in functioning in five psychosocial domains. A *Total Score* index is generated from the sum of these five scales and can range from 0 (no impairment) to 150 (highest impairment). For the current study, only the three *Role Performance* subscales, the *Substance Use* scale, and the *Total Score* index were used in the analyses in order to reduce duplication of measurements acquired from other sources aforementioned.

Results

Deriving Profiles of Referred Youths

In the first analysis, a two-step clustering procedure as detailed in Rosenblatt et al. (in press) was conducted to determine profiles of distinct types of MISC participants. The solution yielded four groups of comparable sizes with theoretically meaningful differences in behavioral and risk profiles. The means and standard deviations of the independent measures for each profile are shown in Table 1. Brief characterizations of each profile are presented below.

Youths in Profile 1 ($n = 40$) may be characterized as *Troubling*. They exhibited chronic and severely disruptive behavior that impacted the community as shown by a high number of contacts with law

enforcement, school disciplinary incidences, and rate of gang involvement. Compared to other clusters, these youths were the oldest on average and exhibited multiple child and family risk factors, but they presented less behavioral and emotional disturbance as measured by the CBCL.

Youths in Profile 2 ($n = 26$) may be characterized as *At-Risk*. They exhibited multiple risk factors but did not demonstrate as many overt behavioral and emotional problems nor functional impairment as youths in the other groups. *At-Risk* youths had a mean age of 13.6 years and had fewer incidences of juvenile justice and school disciplinary actions. However, they had high rates of abuse, substance use, and running away.

Youths in Profile 3 ($n = 30$) may be characterized as *Troubled* because they tended to have behavioral difficulties that disrupted functioning in the home and school. They were also the youngest of the groups with a mean age of 11.6 years. *Troubled* youths received high scores on CBCL summary scales and indications of moderate impairment on CAFAS scales. Interestingly, none of the youths in this cluster exhibited impairment stemming from substance use, but they did experience a moderate number of school disciplinary problems. In addition, they had the lowest mean number of risk factors but exhibited the highest rates of family mental illness and violence.

Youths in Profile 4 ($n = 32$) may be characterized as both *Troubled and Troubling*. They were clearly the most impacted as indicated by their high number of child and family risks, functional impairments across settings, incidences of behavior problems, and rates of arrests and gang involvement. These youths were relatively older with a mean age of 15.2 years. They had severe functional impairment in their home and school/work roles as perceived by their caseworkers and the highest scores on all of the summary indexes of the CBCL.

Preliminary Outcomes Associated with Youth Profiles

In the second analysis, clinical and functional outcomes as measured by mean scores on the CBCL and CAFAS were compared when data were: (a) aggregated across profile types, and (b) clustered by profile types. Although the focus of this preliminary study was simply to examine trends in mean score changes, more comprehensive analyses may be found in a subsequent study by Rosenblatt (1997).

Six-month outcome data were available for 75 youths. As shown in Table 2 and Figure 1, results on the CBCL demonstrated some change from intake to six-month follow-up when participants' results were combined. When profile types were considered in the data, however, differential results were evident. Outcomes for youths in the *Troubled* and the *Troubled and Troubling* groups had the highest clinical scores at intake and appeared to show the greatest improvement. In contrast, youths in the *Troubling* group presented lower mean scores than the aggregated group at intake, yet caregivers rated them as demonstrating substantial improvement in their functioning at six months. Finally, youths in the *At-Risk* group demonstrated little change in their CBCL outcome scores.

As shown in Table 2 and Figure 2, results on the CAFAS demonstrated some change from intake to six-month follow-up when all participants' results were combined. When profile types were considered in the data, however, differential results were again evident. Outcomes for youths in the *Troubled and Troubling* and *Troubling* groups demonstrated extremely high clinical scores at intake and improved dramatically at the six-month follow-up. Those youths associated with the *Troubled* group presented lower mean scores than the aggregated group at intake, yet clinicians still rated them as demonstrating substantial improvement in their functioning at six

months. Finally, youths in the *At-Risk* cluster demonstrated little change in their CAFAS outcome scores.

Discussion and Implications

The Santa Barbara County system of care model was designed to be responsive to the needs of the community, and participating agencies were able to refer their most challenging clients without further eligibility screening. Thus, locales not implementing philosophically and programmatically identical systems may not serve youths with similar profile types. Caution must be practiced when generalizing the results to other communities; nevertheless, there are important preliminary findings that have implications for all system of care efforts.

In this study, agencies referred youths with a full range of troubled, troubling, at-risk, and multiple-need profiles into the system of care. Results indicated that differential clinical and functional outcomes in the system of care were associated with these four distinct dimensions of need. Understanding the characteristics of the different types of youths referred for services will help to precisely tailor services to meet the consumers' strengths and needs as well as to accurately describe their associated outcomes. Future efforts to examine further the conditions and interventions under which systems of care might facilitate positive outcomes are warranted.

Clinical Outcomes by Risk Profiles

Table 1
Results of Discriminant Analysis Predicting Profile Type

Variable	Profile Type				<i>F</i> (3,142)	
	Troubled (<i>n</i> = 30)	Troubling (<i>n</i> = 40)	Troubled & Troubling (<i>n</i> = 32)	At- risk (<i>n</i> = 26)		
Risk Factors						
Child	<i>M</i>	1.7 ^a	3.3 ^{b,c}	3.9 ^c	2.4 ^{a,b}	9.81 ^{**}
	<i>SD</i>	(1.6)	(1.8)	(1.5)	(1.9)	
Family	<i>M</i>	2.4	3.0	2.9	3.4	2.15
	<i>SD</i>	(1.5)	(1.7)	(1.5)	(1.5)	
Behavioral Consequences						
Arrests	<i>M</i>	0.3 ^b	3.4 ^a	2.9 ^{a,c}	1.7 ^{b,c}	9.92 ^{**}
	<i>SD</i>	(0.7)	(3.0)	(3.3)	(1.5)	
School Discipline	<i>M</i>	4.5	7.6	6.3	6.4	0.21
	<i>SD</i>	(10.4)	(23.4)	(11.7)	(9.3)	
CBCL						
Internalizing	<i>M</i>	19.5 ^a	8.2 ^b	21.3 ^a	9.0 ^b	34.80 ^{**}
	<i>SD</i>	(7.5)	(5.0)	(7.9)	(6.1)	
Externalizing	<i>M</i>	31.1 ^a	15.0 ^b	38.1 ^c	12.0 ^b	56.27 ^{**}
	<i>SD</i>	(10.8)	(8.7)	(9.8)	(8.1)	
Total Problem	<i>M</i>	75.9 ^a	33.3 ^b	87.2 ^a	31.6 ^b	65.33 ^{**}
	<i>SD</i>	(22.1)	(16.2)	(22.8)	(19.4)	
CAFAS						
School/Work Role	<i>M</i>	23.3 ^a	23.0 ^a	26.3 ^a	9.2 ^b	24.70 ^{**}
	<i>SD</i>	(7.6)	(8.5)	(9.1)	(6.3)	
Home Role	<i>M</i>	20.0 ^a	22.8 ^a	28.8 ^b	10.8 ^c	22.18 ^{**}
	<i>SD</i>	(9.8)	(9.9)	(3.4)	(8.9)	
Community Role	<i>M</i>	13.7 ^a	22.5 ^b	20.6 ^b	10.0 ^a	14.09 ^{**}
	<i>SD</i>	(10.3)	(6.7)	(8.0)	(10.2)	
Substance Use	<i>M</i>	0.0 ^a	17.5 ^b	22.5 ^b	3.5 ^a	53.00 ^{**}
	<i>SD</i>	(0.0)	(11.7)	(8.8)	(5.6)	
Total Score	<i>M</i>	68.0 ^a	84.8 ^b	100.6 ^c	39.6 ^d	87.53 ^{**}
	<i>SD</i>	(12.7)	(16.5)	(15.4)	(14.3)	

^{a,b,c,d} Row values with different superscripts are statistically different from each other (Tukey's HSD, $p < .05$). Row values without superscripts are not statistically different from others.

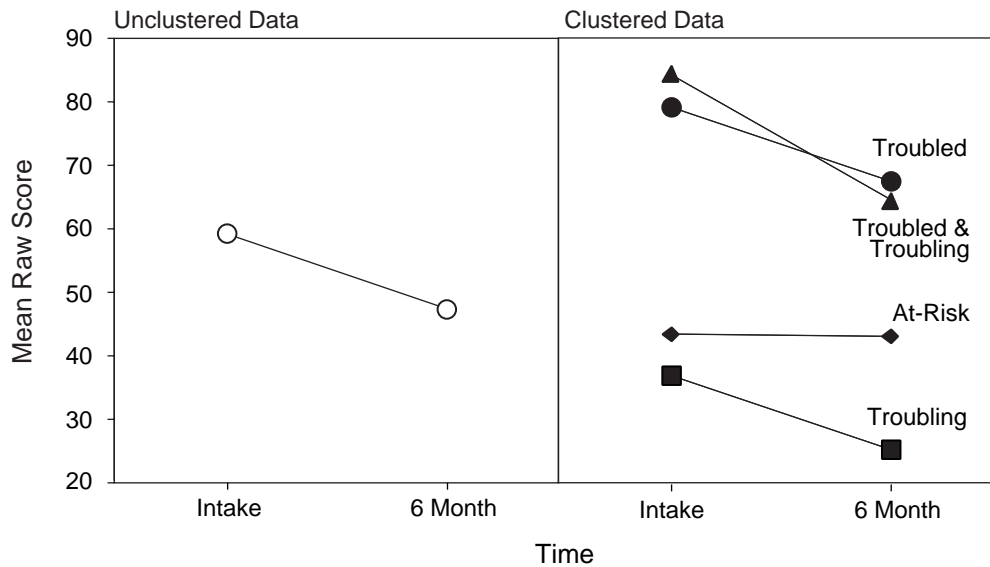
^{**} $p < .0001$.

Table 2
CBCL and CAFAS Mean Scores by Group at Intake and Follow-Up

Group	n	Total Problem CBCL		Total Scale CAFAS	
		M	SD	M	SD
Total Sample	75	59.20	19.1	80.18	14.8
Intake		47.18	24.4	64.27	28.5
6-Month					
Troubling	27	37.00	16.4	87.87	14.5
Intake		25.33	17.1	66.30	26.6
6-Month					
At-Risk	13	43.33	19.7	36.15	16.1
Intake		42.89	25.2	36.92	30.1
6-Month					
Troubled	14	79.11	22.8	69.29	13.9
Intake		67.53	29.4	55.71	29.5
6-Month					
T & T*	21	84.30	19.7	104.80	15.0
Intake		64.35	30.1	84.29	29.3
6-Month					

* Denotes troubled & troubling group.

Figure 1
CBCL Outcomes from Aggregated Data and by Profile Type
Total Problem CBCL

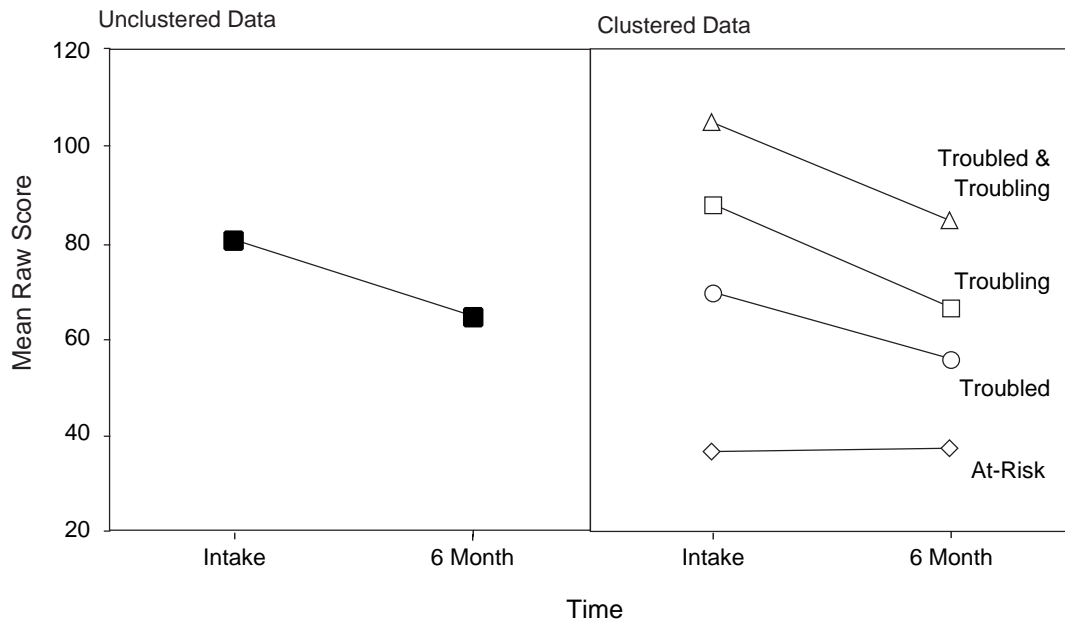


Clinical Outcomes by Risk Profiles

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Figure 2
CAFAS Outcomes from Aggregated Data and by Profile Type
CAFAS Total Score



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A System of Care: Data Analysis and Quality Improvement Implications

Introduction

Data has been collected for the Center for Mental Health Services project in North Carolina (PEN-PAL) as part of the national evaluation of service system development at grantee sites. The PEN-PAL project has been based in three eastern North Carolina Counties— Pitt, Edgecombe and Nash—and has created a partnership with East Carolina University's Public-Academic Liaison. Hence, the acronym PEN-PAL was adopted. Data collected by PEN-PAL for this purpose was used as a quality improvement mechanism to identify trends. Analysis of this data for quality improvement had several purposes: feedback to administrators and treatment providers; assurance that data collection procedures were accurate, timely and meaningful; and assessment of the progress of the project at a point in time to allow for interim corrections.

Method

For this evaluation, the subjects were participants in PEN-PAL ($N = 157$), with a mean age of 11.2 years (± 2.7), 62% male, and a racial distribution 69% African-American and 31% Caucasian. Data from the CMHS national evaluation protocol was examined to answer questions related to project quality. The questions are listed in Table 1.

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Table 1
Quality Assurance Questions

1. Are children with internalizing problems included in the project?
2. Is substance abuse a recognized problem for this sample?
3. Do children in the project have significant difficulties functioning at home, school and in the community?
4. Are the problem behaviors of sufficient severity to justify inclusion in the project?
5. Are children in the project recognized to have difficulties in regular school placement?
6. Is the system of care culturally competent?
7. How empowered are families upon entry to the system of care?

Data was reviewed from several instruments and scales: Educational Indicators, Juvenile Justice Indicators, Child Behavior Checklist (CBCL; Achenbach, 1991), Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1994) and Family Empowerment Scale (FES; Portland State University, 1993). The educational and juvenile justice instruments include specific data that relate to the respective area of functioning, such as days suspended and class placement from the Educational Indicators, and number of contacts with the law from the Juvenile Justice Indicator. The CAFAS provides scores to indicate levels of functionality at home, school and in the community, and also provides a set of symptom/behavior scales. A score of 20 on a CAFAS sub-scale indicates the presence of several symptoms with a moderate level of impairment. The CBCL is a behavior checklist completed by parents that itemizes 112 childhood behaviors. The behaviors are rated on a scale of 0= *never*, 1= *sometimes*, and 2= *most of the time*. A *t*-score of 63 is considered as the cut-off for categorization of "clinical range." The FES is completed by parents/

caregivers to indicate their comfort level asking for and receiving services in the system of care. The intuitive outcome for this scale is that families become more empowered over time if the system of care is successful. The FES includes questions that rate an understanding of the system of care, and an ability to effect change, on a scale from 1 to 5 (*most empowered*).

Results

Seventy-one percent of the sample presented with disruptive, externalizing problems. Only 8% of the sample presented with suicidality, sadness or anxiety, and less than 1% cited substance abuse as the primary problem.

The CAFAS role performance scores were above 20 only on the school performance scale. The Community and Home Role Performance subscales were below 20, at 5.3 and 16 respectively. The Symptom/Behavior subscales were all below the cut-off score of twenty, with only Behavior Towards Others approaching a level of moderate impairment with a score of eighteen.

On the CBCL, the Total Problem Score was above the clinical cut-off for 83% of the subjects. Based on school placement data, 25% of subjects in the non-clinical range were not in regular classes.

The mean number of school suspension days was 2 days (± 4.3), with 2.2 days (± 4.9) for African-American students, and 1.3 days (± 2.7) for Caucasian students. This was not a significant difference ($t = -1.5$, $p = 0.14$, $df 137.71$).

Families acknowledged a high level of empowerment at entry in the system. The mean score for the entire scale was 3.9 (± 0.04).

Discussion

These data are important to help PEN-PAL understand who is being served and how well. The primary mission of PEN-PAL is to prevent out-of-home placement, and certain similarities would be expected among youths at-risk for such placement. Examination of PEN-PAL participants' presenting problems raised two contrasting quality concerns. A small, but important percentage (8%) of youths served by PEN-PAL endorsed suicidality, sadness or anxiety as their primary presenting problem. It is somewhat counterintuitive that anxiety as a presenting complaint could place a child at risk for removal from home. Similarly, other than for safety issues, in what context would suicidality as a primary problem lead to out of home placement? On the other hand, if sound reasons exist to serve these individuals in PEN-PAL, then are children with this kind of problem under-recognized? The same concern could be raised about substance abuse (1%), and whether the project under-identifies children with substance abuse problems. Furthermore, a mean age in the preteen range suggests that older adolescents with serious substance abuse issues have not been referred to this project. To address these questions, it may be necessary to solicit information from the referring clinicians.

Low ratings on the CAFAS are essentially incompatible with placement in PEN-PAL. There are two quality-related explanations. One possibility is that clinicians are under-rating impairment in functioning. This would indicate a need for further training on the instrument. The other possibility is that children accepted to the project may not have sufficient severity of problems to justify inclusion.

Treatment providers can be asked for clinical correlations to determine if low CBCL scores are valid. The 17% of subjects scoring in the non-clinical range either are functioning too well for inclusion in

the project, or care givers may not recognize the severity of behavioral problems. If these "non-clinical" children are not in regular, mainstream school classes, it is unlikely that they would score in the non-clinical range on the CBCL.

Cultural competence is a concept that has been poorly operationalized. However, any suggestion of racial bias in the data could indicate problems with cultural competence for the system of care. School suspension days were examined to see if any overt bias emerged. This measure may certainly lack sufficient sensitivity to detect a low prevalence of bias. Nonetheless it may be one of many indicators that could be used to evaluate or screen for cultural competence.

The elevated baseline FES scores were unexpected since the use of this scale is based on the assumption that scores would begin low, and improve as families become empowered. One explanation could be that families initially were intimidated by the system, and had difficulty providing any negative feedback about the system of care. This finding led to the first interim correction. Family advocates were assigned to help care givers in the completion of the FES. It is expected this will lead to more valid reporting.

A continuing commitment to evaluate quality concerns is necessary to monitor the evolving results of the system of care. These efforts at the local level help to ensure correct data collection, provide feedback to administrators and treatment providers, and allow for interim corrections.

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Functional Impairment of Children Treated at Community Mental Health Centers

Introduction

Classifying children and teens treated in community mental health centers (CMHC) for presence or absence of serious emotional disorder (SED) has been of concern to policy makers and others. Level of severity has been suggested as one means to make the distinction and assist in determining service eligibility. To address the dearth of data in this area and to meet Indiana's commitment under the early federal PL99-660, a survey was developed to identify juveniles in the mental health system with a SED. The operational definition used for the survey employed criteria developed for the Children and Adolescents Services System Program (CASSP) and the State P.L.99-660 Plan.

The operational definition consisted of the following components: (a) age range 0-17 years; (b) moderate or severe impairment in at least 2 of 8 functional areas (self care, language skills, learning, self direction, functioning in family environment, functioning in school/community environments, dangerousness to self/others, alcohol/drug use) 1 of which is severe; (c) a duration of at least 12 months; (e) a DSM-III-R or ICD-9 diagnosis; and (f) involvement with, or need for services from at least 2 human service agencies. Throughout this summary, this definition is referred to along with the variations to it which illustrate the impact of criteria on percentages of children qualifying for public support depending on how broadly or narrowly eligibility is defined if functional levels are employed.

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This summary describes results from 10,437 forms completed by clinicians concerning youngsters through age 17 years who were receiving CMHC services during FY 1991 and 1992. Impairment and duration of impairment for eight Child & Adolescent Service System (CASSP)-related functional areas are detailed. The reliability of this data is documented through the independent sampling of randomly selected client records by a trained reviewer. Half the youngsters had moderate to severe functional impairment in one or more areas for one year or longer. The effect of varying number or areas of functional impairment, severity and duration of impaired functioning in determining the presence of serious emotional disorder (SED) are discussed. Strict and broadened definitions for SED resulted in 8.8% and 69% of the youngsters, respectively, meeting eligibility criteria for services. Such considerations have increasing importance in the era of managed mental health care and restricted levels of resources.

Method

The survey form included a severity index and a measure of duration for level of functional impairment in eight related areas: self care (SC); language (LA); learning (LE); self-direction and behavioral controls (SDBC); capacity to live in a family environment (H); capacity to function in school/community (S/C); dangerousness (D); and alcohol/drug use (CD). Broad descriptions for rating functioning levels of each CASSP-related area from *none*, *mild*, *moderate* and *severe* were provided. The scale also contained sections detailing demographic features, diagnostic categories (DSM or ICD), past and current service needs, and a measure of risk for SED. The form was to be completed by the clinician for children and teens enrolled in FY 91 and for each youth entering a CMHC by the fourth visit (FY 92).

Survey data were entered into a data set. The Statistical Package for Social Sciences (SPSS) was utilized to analyze information from the data base, including:

- basic demographics of youngsters for whom forms were completed;
- number of children classified as SED employing the State Division of Mental Health (DMH) criteria (i.e., moderate or severe impairment in at least 2 of the eight functional areas, one of which needed to be severe; and both areas of impairment present for at least 12 months duration; a DSM-III-R or ICD-9 diagnosis; and involvement with or need for services from at least one human service agency besides mental health); and
- results of applying more and less stringent criteria across dimensions of number of functional impairment areas, severity, duration, and service use for the sample as a whole.

Scale reliability was determined by developing operational definitions for each of the 8 functional impairment areas. A sampling procedure was devised to randomly select representative CMHCs for client record review by a research technician trained to an acceptable level of reliability on key scale items. A senior child and adolescent psychiatrist independently reviewed 15% of the selected case records to assure that rater "drift" did not occur. From the 15 of 30 participating CMHCs, 220 cases from FY 92 were randomly selected proportionate to the number of forms completed and returned by those centers. In order to assure adequate representation of the children meeting DMH criteria for SED, the computer was programmed, in the randomization process, to select one-half of the cases to meet the SED (DMH) criteria (defined above), while the remaining half were randomly selected from the general population of non-SED (DMH) subjects. Reviewers were blind to the original ratings. Records were reviewed from the date of last

Impairment Levels of Children at CMHC

enrollment to the survey completion date. The raw data from the 220 cases selected for chart review were reentered to determine reliability of the data entry process.

Results

Of the 10,437 forms completed on youngsters seen during FY 91 (4,357) and FY 92 (5,938): 4,355 surveys concerned children ages 0-12 years; 4,588 concerned adolescents ages 13-17 years. The racial/ethnic makeup of the sample was: White, 9,167 (82.7%); Black, 889 (8.0%); Hispanic, 127 (1.2%); other, 49 (< 1%); and unknown, 205 (1.9%). There were 5,734 males and 4,486 females.

There was 71% agreement between the independent rater and CMHC clinicians for classifying children with SED (75/105, respectively); and 82% agreement for classifying non-SED children who failed to meet CMHC SED criteria (77/94, respectively). Overall Reliability of 76% for the SED items related to functional level and duration of dysfunction was found to be acceptable (Petti, Way, Patrick & Phillips, 1994). Of the 8 functional areas, percent agreement ranged from 59% for S/C to 90% for CD. The Kappa statistic and Z scores of significance ranged from 1.79 to 7.51. Only SC failed to reach a statistically significant ($p < .05$, two-tailed, Kappa statistic) correlation. The correlation for duration (less than versus greater than 6 months) had percent agreement Z scores of 2.39 to 5.0 (all indicating statistically significant positive correlations ($p < 0.05$). Acceptable Kappa statistics were found between the reviewer and the senior child psychiatrist.

For the entire sample population (see Table 1), 1838 (17.6%) had no or mild impairment in any single area of functioning for at least 6 months in duration and no involvement in at least one other human service agency. But the remainder, 8,599 (82.4%), reportedly had moderate or severe dysfunction in one or more functional areas and service needs besides mental health.

If the duration criteria were extended to one year in length (see Table 1) more children would not have met criteria for at least one moderate or severely impaired area (50.9%, $N = 5114$). Thirty-three percent of children presenting to CMHCs had at least two areas of moderate to severe dysfunction over a 12 month period and the requisite service needs.

Of the entire population sample of children, 1,459 (14%) were identified as meeting the DMH criteria for SED (i.e., moderate or severe impairment in at least 2 of the eight functional areas, one of which needed to be severe; and both areas of impairment present for at least 12 months duration; a DSM-III-R or ICD-9 diagnosis; and involvement

Table 1
CMHC Youths With Moderate to Severe Impairment
Population Sample Size
($n = 10437$)

Areas Of Impairment (Sample Size)	Duration At Least 6 Months		Duration Extended To 1 Year	
	<i>n</i>	%	<i>n</i>	%
Mild/Unmet Criteria	1838	17.60%	5323	51.00%
Single Area	1399	13.40%	1680	16.10%
Two Areas	1482	14.20%	1054	10.10%
Three Areas	1691	16.20%	939	9.00%
Four Areas	1544	14.80%	720	6.90%
Five Areas	1232	11.80%	428	4.10%
Six Areas	793	7.60%	209	2.00%
Seven Areas	386	3.70%	84	0.80%
Eight Areas	72	0.70%		

with or need for services from at least one human service agency besides mental health; see Table 2). The involved areas of dysfunction in these children are shown in Table 3.

Changing the requirement to one or more areas of severe impairment would increase the yield to 14.9% ($N = 1563$) from the original 14%. The bulk of these youngsters would fall in the range of 3 to 5 areas of moderate or severe impairment, with 18.2% ($N = 284$) having one severe and a severe plus a severe or moderate second area of impairment. The

distribution of numbers and percentages are similar for the other criteria sets.

Broadening the SED definition to require three areas of *moderate or severe* impairment increases the SED yield to 18.8% ($N = 1959$). Over 36% of this group would meet this minimum criteria (see Table 4).

But narrowing the criteria to at least two areas of severe impairment results in a decrease to 8.8% ($N = 919$) of the sample.

Table 2
Impairment Areas in Youths Meeting DMH Criteria
($n = 1459/10,437$)

Number of Areas	Number of Subjects	Percent of Sample
Two	180	12.33%
Three	330	22.60%
Four	400	27.40%
Five	303	20.80%
Six to Eight	241	16.90%

Table 3
Involved Areas of Impairment In Youths Meeting DMH Criteria
with Moderate or Severe Impairment
($n = 1459$)

Area	Number of Youths	Percent of Sample
Self Dir./Behav. Control	1396	96%
School/Community	1198	82%
Family Environment	1086	74%
Learning	699	48%
Danger Self/Others	540	37%
Self Care	539	37%
Language Skills	287	20%
Drug/Alcohol Abuse	283	19%

Discussion

This study describes the level of impairment experienced across several areas of functioning by children and teens receiving services from community mental health centers. The manner in which the federal government and states define SED has great ramifications and can result in a greater than seven-fold difference in eligibility for services. Narrow state definitions will result in fewer children qualifying for services. The result is likely to be decreased funding and fewer public sector clinicians caring for the most severely ill or dysfunctional youngsters. Those remaining clinicians under these conditions will require additional training and continuing education to provide adequate service to a more severely ill and impaired group than is currently being served. This research is restricted by limitations inherent in a chart review study. We believe that impairment was more frequently under-reported than the converse. A prospective study employing more standardized instruments (e.g., the CAFAS, Hodges, 1991; the CAPA, Columbia Impairment scale, etc.) should provide even more compelling data in this area.

Table 4
CMHC Youths With At Least Three Areas of Moderate or Greater Impairment
(n = 1959)

Areas of Impairment Sample	Number of Youths	Percent of Sample
Three Areas	713	36.00%
Four Areas	599	30.60%
Five Areas	371	18.90%
Six or More	276	14.20%

*Symposium:
The Youth Services Project:
Mental Health Service
Through Public Service
Sectors*

***Introduction:
The Youth Services Project***

This symposium summary addresses key elements of a longitudinal (1994-1996) study of mental health services. This study examined the mental health needs of 791 adolescents from four types of services sectors that typically function as gateways to mental health services: education, child welfare, juvenile justice, and primary health. The first summary details issues involved in tracking youth longitudinally, the second describes a study of the reasons youth sought help from these various “gateway” sectors, who helped them, and the types of services they used over a two year period. The third summary explores teen attitudes to see how their beliefs and values correlated to service use and mental health. This study also compares beliefs and attitudes across gender, race/ethnicity, class and other demographics. As an exemplar for applying research to practice, the final summary addresses the incidence of Post Traumatic Stress Disorders in Wave One of the total study.

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Tracking Urban Adolescents Longitudinally: Lessons from the Field

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Introduction

The Youth Services Project (YSP), funded by the National Institute of Mental Health, examined adolescent mental health needs and use of mental health services over a 2 year period (1994-1996). Highly structured interviews were conducted with 791 adolescents, ages 13 to 17, who were recruited from four public service sectors that operate as gateways to mental health services: child welfare, education, juvenile justice, and primary health care; 85% of the sample (i.e., 675 youths) was successfully followed and re-interviewed.

The project expected the youths to be very transient and challenging to track. Approximately 25% of the youths had been recruited from the child welfare sector, with 11% living in a shelter or group home at the time of their first interview and 26% reporting that they had lived in a foster home at some point in their lives. Twelve percent of the youths lived with relatives other than a biological parent. A majority of the youths were from lower socioeconomic status families, with 15% living in families dependent upon public assistance. Families living in poverty may be subjected to frequent moves and terminations in phone service due to difficulties in paying rent and utility bills. Approximately 25% of the original sample was known to have moved two or more times, with some youths moving up to eight times within the 2-year period.

Expected life cycle changes also made it difficult to track some of the youths, including entering the armed forces or college; aging out of the juvenile justice, child welfare, and/or public education systems; establishing their own residence away from family; and leaving the local area.

Methods

Multiple tracking strategies were employed by the Youth Services Project to stay in touch with the youths over the 2-year period: (a) administrative liaisons with each gateway sector; (b) detailed future contact forms; (c) multiple mailings to the youths; (d) use of AFDC records; (e) public records; (f) locator

Symposium: The Youth Services Project

services in the armed forces; (g) drive-by searches; and (h) professional tracking searches.

Administrative liaisons within each gateway sector were secured prior to the grant's submission for assistance with project planning, the recruitment of participants, and ongoing tracking of youths. Each sector was compensated for their assistance in the form of financial support for equipment or staff training. The child welfare and juvenile justice sectors were particularly helpful in providing project staff with address and phone number changes of youths from these sectors. Administrative support from the liaisons enabled child welfare caseworkers and deputy juvenile officers from the juvenile justice sector to update project staff on the whereabouts of project participants on their caseloads.

A detailed future contact form was completed with all youths during the first wave of interviews to assist in tracking them for wave two. The quality of the training provided to the interviewers determined the quality of the information obtained on the future contact form. Youths were asked for their own date of birth, social security number, address and phone number, school and place of employment, nicknames and aliases, and favorite location to hang out. Additionally, youths were asked for the addresses and phone numbers of multiple nuclear and extended family members, particularly mother (including mother's maiden name), grandmothers, and aunts, as female relatives were more often aware of the youth's location than male relatives. Youths were also asked for the names, addresses, and phone numbers of friends and other adults such as social workers, deputy juvenile officers, and ministers. In retrospect, the project should have asked for mother's date of birth and social security number at the time of securing written parental consent for the youth's interview. This information would have helped with tracking some youths through their mothers using criminal records, AFDC records, and credit records.

Bright and colorful birthday and December holiday cards were sent to all project participants in order to track the youths through the postal service and to maintain a relationship with them in preparation for the wave two interview. A consistent theme and logo were used to remind the youths of their participation. Attached to each card was a penny and the message, "A penny for your thoughts," followed by a request to hear from them about any special news or if they just wanted to say hello. Enclosed was a miniature pencil and a return card self-addressed to the Youth Services Project that provided space for the youth's name, address, phone number, and a return message. The return card could be folded over to maintain confidentiality. Each card also mentioned how much the YSP was looking forward to the upcoming second interview. All cards and subsequent letters to the youths were mailed with a "Do Not Forward: Address Correction Required" instruction for the U.S. Postal Service. The project thus obtained address changes of the participating youths whose families registered their forwarding addresses with the post office. If the card was returned by the postal service as undeliverable, the future contact form was used to track the youth through family members and friends. If these were unsuccessful, the liaison was contacted. If the card was returned with a new forwarding address, it was re-mailed to the youth.

Tracking some of the youths may have been easier if the project had increased the number of mailings in between the two waves (e.g., Valentine's Day cards and wishes for a Happy and Healthy Summer). Additionally, only 10% to 15% of the youths sent back their postcards with a return message. Following up by phone with a random sample of the youths who did not return the cards may have eased tracking later on. Project staff could have placed phone calls to these youths to confirm that they had received the card and to check on any address and phone number changes.

Long-standing relationships between the George Warren Brown School of Social Work and the public service sectors enabled YSP to utilize such avenues as AFDC rolls in order to track young mothers through their own records and some other participants through their mothers' records. Job Corps' records department assisted the project in contacting those youths who were known to have entered the program. However, public records in Missouri were either not easily accessed or helpful given the information the project had available. Missouri prohibits public access of birth records. Information on deaths was acquired by providing the appropriate office with a list of names, social security numbers, and dates of birth of the youths in question. Adult criminal and civil court records did not prove fruitful, due in part to the absence of social security numbers and dates of birth on civil records and only a couple matches were found on adult criminal records.

Because of the decentralized nature of the correctional system, with city, county, state, and federal institutions, it was difficult to find youths who had entered the correctional system unless a friend or family member told project staff the name of the institution, or unless the youth had entered a state facility. All persons sentenced to state institutions in Missouri are first processed through a central diagnostic and evaluation facility. In retrospect, liaisons within the different correctional systems should have been developed when the other administrative liaisons were recruited.

When youths were unable to be located through any of the other methods, drive-by searches were conducted by specially trained interviewers who wore identifying badges. The interviewers went to the youth's last known address and questioned current residents and neighbors in a nonthreatening, straightforward manner, about the youth's and/or family's current whereabouts. The interviewers

provided sufficient information about the purpose of the query to allay any suspicions or fears and to protect the confidentiality of the youth in terms of the mental health nature of the project. Interviewers varied the time of day they visited the residence and they checked for mail and trash pickup as signs of occupancy. Persistence was critical to success.

Least useful were two professional tracking services: a private investigative firm and a national research and retrieval service that claimed it had access to credit histories and a range of public records. The effectiveness of these services was tested by asking them to locate 10 hard-to-find youths. New information was only received on one youth and this turned out to be unproductive.

In the course of tracking and reinterviewing the adolescents, project staff learned several additional and important lessons. When youths called the project office to schedule their interview, they were always asked for their current address and phone number. Project staff quickly learned that some youths moved from week to week. Although multiple calls were made to youths by the interviewers to remind them of their appointments, interviews were frequently missed and needed to be rescheduled. For this reason, youths were interviewed immediately following their phone call to the office whenever possible. "Can you do it right now?" became a frequent request by project staff when youths contacted the office. Persistence was also critical. Although interviewers left many messages for youths at their homes, these calls were seldom returned by the youths, regardless of the quality of information left by the interviewers. Instead, it was more fruitful to place multiple calls in an attempt to catch the youths at home.

Discussion

The utilization of administrative liaisons at gateway public service sectors and the consistent use of multiple tracking strategies over a 2-year period helped the Youth Services Project reinterview 85% of a highly transient sample of urban adolescents. These tracking methods may assist other researchers in successfully conducting longitudinal studies with populations of adolescents

Service Provision Through Gateway Sectors: Who, What and Where?

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Introduction

Our longitudinal study examines the use of mental health services by adolescents from four gateway service sectors that typically link youths with mental health services: education, child welfare, primary health care, and juvenile justice. We examine the reasons youths sought help from the sectors, the problems for which they sought help, who helped them, and the types of services they used over a two year period.

Methods

The Youth Services Project, funded by the National Institute of Mental Health, examined adolescents' mental health needs, and use of mental health services. In 1994, the Youth Services Project interviewed 791 youths from the juvenile justice, education, primary health care, and child welfare sectors (approximately 200 each); gathered anonymous tallies of the mental health of youths using each sector; and conducted focus groups with providers from each sector. All youths were from the city of St. Louis. All four gateway service sectors were in a position to screen youths for mental health

problems and to either provide some mental health services or refer to services elsewhere. In 1996, the project re-interviewed 85% of the youths, adding detailed questions about any service needs and use since the first interview.

Sample. The Youth Services Project recruited subjects with the aid of service providers, by having interviewers approach youths in the service sector waiting rooms, and by letters and posters requesting volunteers from each sector's service users. Trained professional interviewers administered individual interviews, averaging 55 minutes in length, to each respondent.

In 1994, the subjects were all between 13 and 17 years of age, with a mean age of 15.3 years. Thirteen percent were white, 86% Black, and 1% other. Forty-three percent were male. The occupation of the parent who provided the most financial support to the family in the last 6 months determined the youth's socioeconomic status. Accordingly, 15% received welfare, 39% were employed as laborers or semiskilled workers, 23% had blue collar jobs, 14 % white collar jobs, and 8% held professional positions. Fifty-three percent of the children lived in families headed by a mother only, 14% in two parent families, 15 % in foster or group care, 12% with nonparent relatives, and 6% elsewhere. There were no sociodemographic differences between those interviewed in 1994 and those re-interviewed in 1996, except that the youths re-interviewed were more likely to be female (60%).

Instruments. Highly structured interview protocols yielded data concerning demographics; social and academic behaviors; mental health; and service use; as well as family, social, and community environments.

Measures of depression, conduct disorder, and substance (alcohol and drug) abuse or dependence came from the Diagnostic Interview Schedule for Children-Revised (DISC-R: Schaffer, Schwab-Stone, Fisher, Cohen et al., 1993). The DISC-R allows two

separate operationalizations of mental health problems: 1). A diagnosis of disorder based on computer algorithms that combine symptoms according to the criteria in DSM-IV; and 2). A count of serious symptoms (e.g., those lasting 2 weeks or more, or those which interfere significantly with the youth's life).

Information about suicidality was derived from questions in the DISC Depression section that asked about thoughts of death, suicide plans, and suicide attempts in the last six months.

Analyses. Univariate and bivariate analyses present the association between rates of problem behavior, rates of services use from different sectors, for different mental health/behavioral issues, from different professionals, and types of services provided.

Results

Youths problems. Table 1 presents percentages for the following: (a) the percent of interviewees identified as meeting criteria for diagnoses of a mental health problem, and, (b) the percent of interviewees who were having significant symptoms of such a problem.

In general, regardless of the sector from which we recruited the youths, in the last 6 months, half or more youths experienced 3 or more depression symptoms (46.9% from the education sector to 72.1% from the child welfare sector) and 3 or more conduct disorder symptoms (36.9% from the health sector to 73.5% from the juvenile justice sector). The percentages of youths having 3 or more substance dependence/abuse symptoms ranged from 8.9% (the health sector) to 38.6% (the juvenile justice sector). The range for suicidality was 6.9% (the health sector) to 17.3% (the child welfare sector).

In terms of psychiatric diagnoses, the percentages of youths meeting criteria for a diagnosis of depression ranged from 7.7% (the educational sector) to

16.8% (the child welfare sector). For conduct disorder, the range was 8.2% (the educational sector) to 29.6% (the juvenile justice sector). Finally, for substance dependence/abuse, the range was 4.8% (the educational sector) to 26.5% (the juvenile justice sector).

The distribution of problems by 1996 was substantially the same, although problems with higher rates tended to regress to the mean rates of disorders. (see Figure 1).

Table 1
Service Needs in 1994

Mental Health Problem	% of youths with self-reported problems	
	Diagnosis:	Significant symptoms:
Child Welfare Sector (n = 197)		
Drug/Alcohol	16.8	25.4
Conduct Disorder	16.8	53.8
Suicide	na	17.3
Depression	16.8	72.1
Other	na	na
Health Sector (n = 203)		
Drug/Alcohol	5.4	8.9
Conduct Disorder	8.4	36.9
Suicide	na	6.9
Depression	12.3	55.2
Other	na	na
Juvenile Justice Sector (n = 189)		
Drug/Alcohol	26.5	38.6
Conduct Disorder	29.6	73.5
Suicide	na	12.2
Depression	12.2	59.8
Other	na	na
Education Sector (n = 207)		
Drug/Alcohol	4.8	17.4
Conduct Disorder	8.2	51.2
Suicide	na	8.2
Depression	7.7	46.9
Other	na	na

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By 1996, one quarter of the youths met criteria for at least one mental health disorder (depression, conduct disorder, substance abuse/dependence), half had 3 or more symptoms for at least one disorder (but did not meet criteria), and the remaining quarter had neither diagnoses nor significant symptoms.

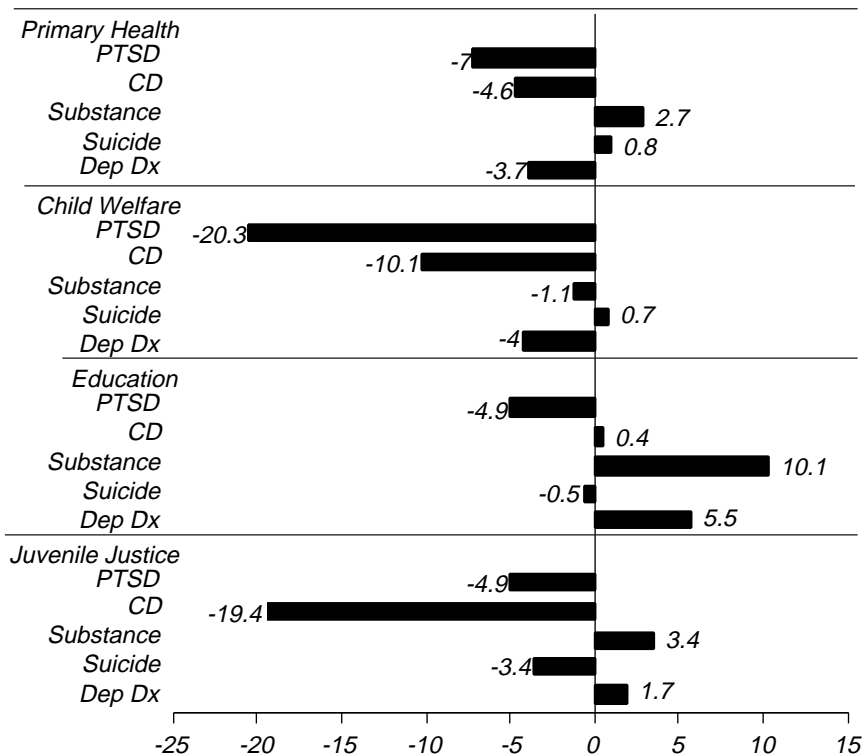
Service seeking. As Figure 2 demonstrates, the seeking of help from specialty mental health providers (e.g., psychiatrists, or professionals employed by the mental health sector) or from nonspecialty mental health providers (e.g., social workers and counselors) or from other helpers (e.g., teachers and coaches) was unrelated to the severity of a youth's illness. Although there was no difference in help

seeking by youths who had only symptoms and youths who had diagnoses, they sought more help than did youths who had no problems at all.

Regardless of the severity of the mental health problems among the adolescents receiving services, social workers from gateway sectors provided services to more youths than did specialty mental health and other professionals. Of those youths reporting a major mental health diagnosis in 1994, 26.9% received services from a nonspecialty mental health provider between Wave 1 and Wave 2. Of those with major depression, 26.8% received services from a social worker; conduct disorder, 30.5%; and substance abuse or dependence, 30.1%. Specialty mental health providers served only 16.7% of the

youths with a major diagnosis, ranging from 13.7% of those with conduct disorder to 19.5% of youths with major depression. Other non-mental health professionals provided services to 19.3% of the youths with a diagnosis, ranging from 14.6% of the youths with major depression to 28.4% of the youths with conduct disorder. Of those youths reporting three or more serious symptoms of a mental health problem, 21.9% received services from a nonspecialty mental health provider, ranging from 22.5% of those with severe behavioral problems to 24.8% of those with substance abuse symptoms. When comparing the gateway sectors on the provision of nonspecialty mental health services, the child welfare sector was more likely to provide nonspecialty mental health provider services to youths with major mental health diagnosis

Figure 1
Change in Disorders Between 1994 and 1996
by Sector of Origin



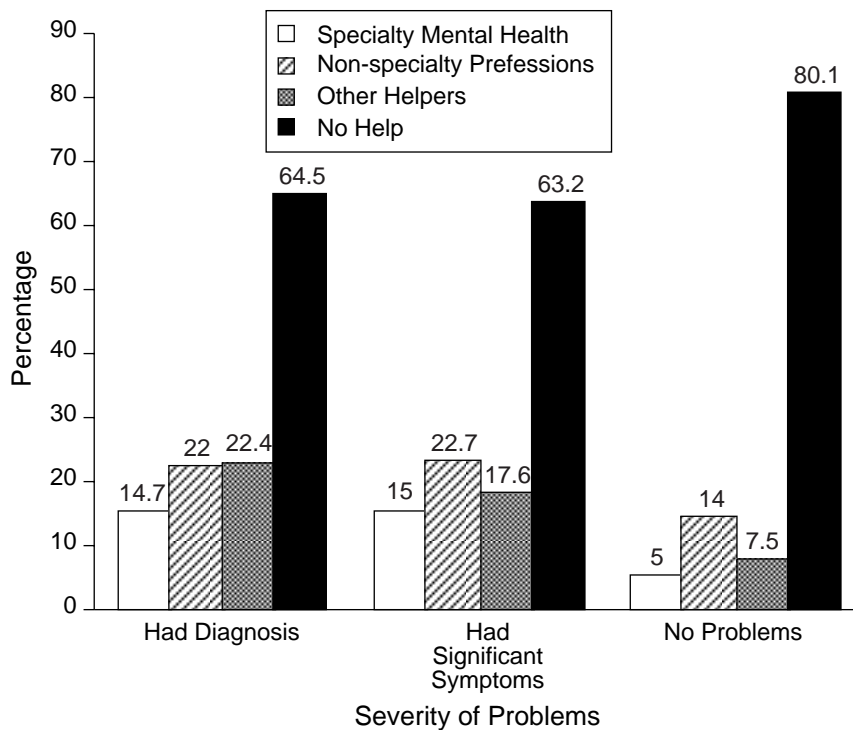
(35% versus 20%-28%) and significant symptoms (33.3% versus 15%-21%) than the other sectors, the latter being significant ($\chi^2 = 17.66, df=3, p<.001$).

Discussion

The interviews showed that significant numbers of youths from each of the four sectors had mental health problems: both diagnoses and significant symptoms. However, only a limited percentage of youths sought services, and the seeking of services was not necessarily related to the need for services, or to the provider’s mental health orientation. Nevertheless, over a two-year period, youths who met criteria for disorders or had only symptoms were more likely than youths with no problems to find some kind of mental health services. Most such services were provided by nonspecialty mental health providers or

by non-mental health providers. Further, those public sectors with the highest staffing patterns of nonspecialty mental health providers offered the most services. This study provides critical information about the need for involving and training a variety of professionals in the assessment and provision of mental health services.

Figure Two
Type of Professional Providing Mental Health Services, by Problem Severity



Stigma, Self-efficacy, Normative Beliefs, and Ethnicity in Service Use

Eric Hadley-Ives, M.S.W., & Arlene Rubin Stiffman, Ph.D.

Introduction

Theories explaining service use or barriers to service often include normative beliefs as characteristics that influence help-seeking. Young people will be more willing to seek help if they believe the people whose opinions they value would approve of such actions. Teens are presumably less likely to get help they need when they believe their parents and peers would not support their seeking professional help or services. Teen beliefs concerning the effectiveness of professional help should also presumably influence service use. The theoretical role of self-efficacy is less clear. Youth with higher mental health self-efficacy might believe they could solve problems without help, but higher self-efficacy could also correlate to confidence and a willingness or determination to find help.

Although these psychological variables are important in theory, empirical studies have not yet determined how such psychological variables fit into service use patterns across various demographic groups. The Youth Services Project's survey measured teen attitudes in order to gain some insight into how adolescents' beliefs and values correlated to service use and mental health. The study also provided an opportunity to compare beliefs and attitudes across gender, race, class, and other characteristics.

Methods

The Youth Services Project, funded by the National Institute for Mental Health, examined adolescents' mental health needs and use of mental health services in 1994. The study interviewed 85% of the original sample two years later. In the 1994

first wave of data collection the Youth Services Project interviewed 791 youths from St. Louis City juvenile justice, education, primary health care and child welfare sectors (approximately 200 from each). All four gateway service sectors were in a position to screen youths for mental health problems and to either provide some mental health services or refer to services elsewhere. In the 1996 second wave of data collection the Youth Services Project interviewed over 675 of these same youths. Again youths reported their contact with professionals from service gateway sectors and service providers.

Standardized instruments administered through highly structured interview protocols yielded data concerning demographics; social and academic behaviors; mental health; and family, social and community environments. Measures of mental health problems came from the Diagnostic Interview Schedule for Children-Revised (DISC-R; Schaffer, Schwab-Stone, Fisher, Cohen et al., 1993). Several items in the second wave instrument probed help-seeking and mental health self efficacy; beliefs about counseling effectiveness; perceptions of parental and peer help-seeking behavior; and fears of stigma associated with seeking professional help.

Results

Stigma and perceived help-seeking norms.

Only 5% of the sample expressed agreement with any statements about fear of stigma. Fewer than 4% of 360 youths who did not use services said embarrassment, shame, or fear of negative reactions by friends and family played any role in their not seeking services. About 20% of the sample reported several symptoms or met diagnosis criteria in at least one of the mental health problem areas, but did not receive mental health services. Of this troubled but unserved 20%, fewer than 5% (a group that represented less than 2% of the total sample) reported any fear of stigma. However, since this stigma-fearing group was higher in symptom counts of mental health problems, it is

possible that stigma played a part in dissuading this small group with relatively greater need from getting services.

Service Use. Contrary to research expectations, attitudes and beliefs concerning counseling did not generally have significant correlations to service use in the study's second wave. Only youths with lower mental health self-efficacy were more likely to have received help ($t = 2.4, p < .02$). Confidence in counseling and service effectiveness was significantly higher for females ($df=253, t=-2.17, p = .01$). Since youths with high mental health self-efficacy were less likely to have received services, it is possible that over-confidence could be a barrier to some youths' receiving services. Doubt in the ability of counselors to help did not seem to work as a barrier to service use. Since in general youths had high confidence in counselors and agreed that counselors could help them with problems, yet so many youths (even those with problems) did not use services, low perceptions of help-seeking norms, or use of alternatives to mental health services, could add to over-confidence as more plausible reasons for youths' not getting services.

Race and Gender. Race showed only one significant relationship to the various attitudes and beliefs expressed by our sample. African-American youths were less likely to perceive that their parents would use counselors when they needed help ($\chi^2 = 9.8, p = .02$). However, gender did show strong and significant relationships to many of the psychological constructs. Girls were more likely to agree to the statement that it would help to see a counselor if they were having problems ($\chi^2 = 5.9; p = .01$). Boys were more likely ($\chi^2 = 15.3; p = .001$) to agree with the statement that a person should work out his own problems and only get counseling as a last resort. In general there were no significant differences between males and females in questions about confidence in one's own ability to handle difficult situations or feelings.

Service Use and Mental Health Self-Efficacy.

The youth expressed strong confidence in their ability to handle problems and find help if they needed it. About 90% agreed they could keep their worries under control. Almost all of the sample (97%) agreed with the statement that they could make themselves behave better, although youths with high counts of conduct disorder symptoms were less likely to agree ($\chi^2 = 27.8, p = .001$). About 95% believed they could resist using alcohol or drugs, even in the company of friends who were using these. About 78% believed they could avoid getting into a fight, even with someone who was challenging them. In questions concerning their ability to find someone to help them, tell friends about problems, make appointments with professionals, or find professional help when they needed it, 80% to 95% responded that they believed they could find or get the help they needed.

Confidence in Services. Although the youth in this study expressed much confidence in counselors, a considerable minority reported parents or peers who were skeptical. Eighty percent of the youth agreed with the statement that counselors help people, but 42% said their friends believed counselors do no good. About 23% reported parents shared this skeptical opinion of counselors. When asked specifically if counselors could help prevent suicide about 72% agreed they could. A smaller majority of 56% agreed that counselors could help stop teen drugs or alcohol use. About 61% of the sample agreed with the statement, "I think a counselor could help me solve my problems." The percentage of youth agreeing to this and similar statements was significantly lower for youths with mental health problems. Youths who met diagnosis criteria for depression, conduct disorder, or substance abuse were less confident in counselor abilities, just as they were less confident in their own mental health self-efficacy and less likely to perceive social norms that encouraged seeking professional help for mental health problems.

Discussion

Is stigma really a problem, or do we now have a youth culture that accepts professional assistance for emotional problems? Our data suggest that fear of stigma is not a major problem impeding youth access to mental health services. Our data also show little support for the idea that youth have a low opinion of mental health services and counselors; on the contrary, they seem to believe counselors are helpful and do good work. Most of the young people in this study believe counselors can help them, believe they can contact counselors, feel unafraid of stigma, and believe that in certain cases their friends would want them to see counselors. Despite this, 20% of the sample could clearly have benefited from services but did not receive professional help. Ten percent of the sample agreed that counselors could help them, had mental health problems, and yet received no services and contacted no gateway professionals. Researchers need to learn more about why people fail to get help even when beliefs and values should theoretically encourage them to find help. Our findings suggest one problem may be unrealistically high mental health self-efficacy.

Researchers evaluating interventions or education programs which attempt to improve mental health skills should be aware that in our sample we found that youths with the most problems had the poorest opinions of their own mental health self-efficacy as well as the possibility that counselors could help. Most of our sample, regardless of gender, race, mental health status, or service use experience believed they could resist peer pressure, improve behavior, control worries, and find help when necessary.

Exemplar for Applying Research to Practice: Post Traumatic Stress Disorder

Sharon D. Johnson, M.S.W., & Arlene Rubin Stiffman, Ph.D.

Introduction

Adolescents experience many events in their lives that create stress. One particular stress producing situation for adolescents is their exposures to traumatic events. This exposure in turn receives a great deal of attention in research on adolescent functioning (e.g., Weist, Freedman Paskewitz, Proescher & Flaherty, 1995). The focus of this research is often on the nature of the exposure and how this can subsequently lead to the development of post traumatic stress disorder (Burton, Foy, Bwanausi, Johnson, & Moore, 1994) or on actual symptom type and severity (Haviland, Soone, & Woods, 1995). Research on the role of perceived helping relationships beyond family support is also emerging (e.g., Schonert-Reichl & Muller, 1996). The need for further exploration into the support networks for youth who experience traumatic stress guides the focus of this study. It is important that youths who are exposed to frequent trauma have positive support networks at various levels in order to cope with these experiences.

This summary illustrates an application of mental health services to provision of mental health services. It provides an overview of factors related to post traumatic stress symptoms and discusses how adolescents' perception of positive support may influence their decisions to seek professional help for such a disorder. Based on previous research on adolescent stress, we hypothesize that personally experiencing a traumatic event captures the most variance in a model of post traumatic stress symptoms. We also believe that the presence of positive support networks (family, peer, and professional) signifi-

cantly influences the number of symptoms reported. Studies indicate that youth can benefit from the family network when coping with serious personal events (Gore & Aseltine, 1995; Weist et al, 1995).

Methods

This study is based on data collected in Wave one of the Youth Services Project examining the mental health needs and utilization of services by 791 youths. An index of post traumatic stress symptoms is derived from information obtained using a modified version of the Diagnostic Interview Schedule (DIS: Robins, Helzer, Croughan, & Ratcliff, 1981). Respondents were asked to identify any extremely frightening or upsetting events they had experience and to report any specific symptoms they had in relation to the event. We examine both the bivariate and the multivariate associations between post traumatic stress symptoms and variables representing personally experienced trauma, witnessed trauma, family support, positive professional support, positive friend support, negative peer behavior, and gender.

Events categorized as personally experienced trauma were being arrested or jailed, being forced from home, narrowly escaping danger, causing someone’s death or injury, being in a natural disaster, being in a car crash, being assaulted or raped, or being attacked or beaten. Those events classified as witnessed events included having a family member or friend attempt suicide, having a family member or friend die, and seeing a person killed. The measures of helpful professional support and helpful friend support were culled from the youths’ indication of the presence of a professional/friend with whom they could call upon at

anytime to discuss their problems and their perceptions of the helpfulness of these relationships. The measure of family support involved feelings the youths had about the dependability of their family.

Results

Our analyses revealed that approximately 67% (530) of the youths had recently experienced a traumatic event. The most frequently experienced trauma for males was narrowly escaping danger and for females it was being arrested or jailed. As shown in Table 1, overall, males had more personal experiences of trauma ($m = 3.65$ vs. 2.77). A high percentage of youths, 87%, reported witnessing a traumatic event. The most frequently witnessed event for males and females was the death of a family member or friend.

Of those youths reporting a traumatic event, over 84% reported having subsequent post traumatic stress symptoms. Forty-nine percent of the youths reported 3 or more post traumatic stress symptoms. As shown in Table 2, of those youths reporting symptoms, the symptoms most displayed were remembering the traumatic event. Although males

Table 1
Frequency of Traumatic Events

Personally Experienced Trauma <i>n</i> = 530; 67%		Witnessed Trauma <i>n</i> = 686; 87%	
Event	%	Event	%
Arrested/Jailed	48	Family/Friend Attempt Suicide	27
Forced from home	31	Family/Friend Dying	91
Escaping Danger	49	Seeing Person Killed	64
Causing Death/Injury	11		
Natural Disaster	7		
Car Crash	28		
Attacked/Beaten	36		
Assaulted/Raped	19		

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had significantly more traumatic experiences, overall females reported significantly more post traumatic stress symptoms ($m = 3.03$ vs. 2.50). Only 33% of those youths with traumatic symptoms reported that they told a professional or doctor about their symptoms.

As seen in Table 3, nearly all bivariate relationships are significant to post traumatic stress with the exception of having helpful professional support which is not significant. Regression analysis reveals that the model predicting post traumatic

symptoms only explains 16% of the variance in symptoms ($F = 22.58$, $p = .0001$). This is an important finding as we ask youths about symptoms that are a result of traumatic events which are also included in the model. We should note that other analyses, not presented here, reveal that mental health issues such as depression and alcohol use substantially increase the amount of variance explained by the model.

Personally experiencing a trauma and witnessing a trauma are equally significant to predicting post traumatic stress symptoms when both are included in the model. Negative peer influence captures the most unique variance in the model (4%). Helpful friend support captures unique variance, however the relationship in the model is positive, indicating that as perceived positive friend support increases, so do symptoms. This relationship is not moderated by the presence of negative peer influences as indicated by an insignificant interaction term added to the model. Thus, family support (3%) is the only support network that serves to reduce the occurrence of traumatic stress in these youths as indicated by a negative relationship in the model.

Table 2
Post Traumatic Stress Symptoms
 $n = 596$

Event	%
Avoid reminders	51
Ashamed of being alive	11
Trouble concentrating	44
Jumpy/easily startled	36
Difficulty w/ normal feelings	36
Nightmares/reliving	42
Keep remembering event	77

Table 3
Regression Analyses
Dependent Variable: Post Traumatic Stress Symptoms

Independent Variables	Bivariate r^2	beta	Multivariate Unique r^2
Personally experienced trauma	.02*	.55	.01*
Witnessed trauma	.01*	1.02	.01*
Family support	.08**	-.11	.03**
Helpful Professional Support	ns		
Helpful friend support	.01*	.55	.01*
Negative peer influence	.09**	.09	.04**
Gender	.01*	.42	.01*

* $p < .05$

** $p < .0001$

Model: $R^2 = .16$
 $F = 22.58^*$
 $SS = 579$
 $df = 6$

Discussion

In assessing mental health service needs, we find that many adolescents experience symptoms of post traumatic stress yet do not receive help from a professional. Further, we find that youths' perceptions of positive peer support is somehow contributing to the occurrence of symptoms of traumatic stress. Our research has several implications for mental health service providers in assessing, monitoring and implementing services for youths. When considering the adolescent client who is exposed to trauma, it is

important to assess the trauma regardless of whether or not youths witnessed or personally experienced the event. The development of post traumatic stress symptoms may be exaggerated by the presence of other mental health issues such as depression and substance use. It is also important to explore the possibility that other life events may be impacting symptoms and that the traumatic event is serving as a trigger to other issues in the adolescent's life.

Providers should explore the relationship and nature of peer and professional relationships with youths who present with post traumatic stress. The positive relationship between helpful friend support and post traumatic symptoms may indicate that even though youths may receive helpful support from peers, the presence of peers may increase the likelihood of exposure to trauma because youths are also sharing the experiences that are affecting their peers. Since youths perceive the help they receive from professionals as helpful, the lack of association with trauma reduction is a concern. Thus it is important as practitioners that we monitor our relationships with youths to determine what factors are barriers to youths seeking help for traumatic experiences. It is possible that youths who perceive having positive peer and family support may be less able to recognize the need for additional support such as available from professionals.

Practitioners can intervene with youths who experience a traumatic event in a way that increases the youths' involvement with family, as this appears at present to be the most significant support factor in reducing the impact of trauma. Practitioners also should encourage youths to utilize other available professionals to discuss their experiences.

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PTSD and Complex PTSD/ DESNOS - Reactions to Community Violence in Adolescents

Introduction

Urban violence currently presents one of the greatest threats for adolescents raised in inner-city environments. Researchers have recently begun to examine the impact that exposure to violence has on children and adolescents. Past studies have found children's degree of exposure to community violence to be positively correlated with their levels of depression, anxiety and behavior problems (Beale, Spencer, Dobbs, & Swanson, 1988; Cooley-Quille, Turner, & Beidel, 1995; Fitzpatrick & Boldizar, 1993; Freeman, Mokros, & Poznanski, 1993; Jenkins, 1993; Martinez & Richters, 1993). The concept of post-traumatic reactions may be used to understand the psychological effects of exposure to community violence. Along this line, previous investigations have examined the relationship between Post-Traumatic Stress Disorder (PTSD) and exposure to criminal victimization (Fitzpatrick & Boldizar, 1993; Jenkins, 1993; Raia, Pederson, & Dana, 1995; Warner & Weist, 1996). The current study examined the relationship between varying degrees of exposure (amount and type) to community violence and the related impact through traumatic stress symptoms, in adolescents from low socio-economic neighborhoods.

Due to the chronic nature of community violence, the current study further proposes that the syndrome of PTSD may not fully account for the various psychological sequelae of such exposure. PTSD is a disorder commonly resulting from a single, acute

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traumatic experience from which one returns to a “normal” non-traumatic environment. Alternatively, it is proposed that living in a chronically traumatic environment, from which there is no escape, may produce further, and qualitatively, different psychological sequelae. The new concept of Complex PTSD, or Disorder of Extreme Stress Not-Otherwise-Specified (DES-NOS; Herman, 1992) has been proposed as an additional traumatic reaction. This disorder is commonly found in survivors of other chronic traumatic experiences such as childhood sexual abuse and prisoners of war. The current study proposes that the concept of Complex PTSD, or DES-NOS, may be expanded to the areas of childhood development and pervasive community violence. This disorder may more fully explain the various ramifications evidenced in many children and adolescents who are growing up in inner-city environments with continuous susceptibility to trauma. These may include significant, but heretofore unidentified, symptoms such as somatization, dissociation, depersonalization and formation of self identity, which are not encompassed by the limited nature of PTSD.

Method

Participants

Participants were 87 adolescents, selected from the 6th, 7th and 8th grades of three Catholic schools, ranging from 10 to 15 years of age. These schools were located in the Northeast region of the country, in neighborhoods characterized by low socio-economic status, numerous public housing projects and high crime rates. All students who returned the consent forms with parental consent were included in the study. Final count resulted in 34 males and 53 females; 37% 6th graders, 16% 7th graders and 47% eighth graders. School representation was unequal, with 61%, 29% and 10% respectively. Distribution by ethnicity was 56% Hispanic, 39% African American and 2% Caucasian.

Instruments

Demographic information was obtained through a short questionnaire. For assessment of experience and symptomatic indications, the following measures were used:

The Survey of Children’s Exposure to Community Violence-Child Report Version (Richters & Saltzman, 1990). A 51-item self-report instrument which assesses the frequency that children have experienced, witnessed, or heard about 20 different forms of violence and violence-related activities in their community, excluding knowledge obtained through the media. Each category questions whether the subject experienced the violent event as a victim, a witness and/or through personal knowledge (hearing about the event). The measure includes additional context questions regarding frequency of occurrence, location, relationship to the perpetrator, relationship to victim and time since last occurrence. Potential answers are structured in a Likert-type scale.

Child’s Post-traumatic Stress Disorder Reaction Index (Frederick & Pynoos, 1988). The PTSD Reaction Index is a 20-item structured interview based on DSM-III-R (APA, 1987) criteria. Symptom severity is rated on a 5-point Likert-type scale. Guidelines for assessment of severity levels of PTSD from *doubtful* to *very severe* were validated following DSM-III-R criteria (Pynoos et al., 1993). Validity studies on the original measure found correlations of .91 with clinician assessment of child PTSD (Frederick, 1985). For the current version, an inter-rater reliability rating of .94 and a Cohen’s K rating of .878 were reported (Pynoos et al, 1987; Pynoos et al., 1993).

Structured Interview for Complex PTSD/ Disorders of Extreme Stress (van der Kolk, Pelcovitz, Herman, Roth, Kaplan, & Spitzer, 1992). This 48-question structured interview is modeled after the proposed concept of Complex PTSD/DES, involving 27 criteria often seen in response to extreme stress and not addressed by DSM-IV criteria

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for PTSD. Questions may be subgrouped into seven general categories (see Table 1). Participants are asked as to whether they have ever experienced a symptom, and if so, whether it has been experienced in the past month (currently). Guidelines are provided for diagnosis of Complex PTSD based on symptom endorsement in six of the categories. Original validation studies of the interview involved administration of the interview to 520 participants, including 50 adolescent survivors of cancer and/or physical abuse. Inter-rater reliability as measured by Kappa coefficients for lifetime and current Complex PTSD were 0.81 and 0.67, respectively. Internal consistency using coefficient alpha ranged from 0.53 to 0.96. Construct validity was indicated through the highest prevalence rates of Complex PTSD in the two groups which experienced interpersonal abuse (Pelcovitz, van der Kolk, Roth, Mandel, Kaplan, & Resick, 1997).

Procedure

Measures were administered by four independent assessors who were graduate students in School Psychology and blind to the specific hypotheses of the study. The assessors received training in the administration of the structured interviews through training material produced by the instruments' creators, as well as through individual consultation with the primary investigator. All summation scoring was completed by the primary researcher.

Table 1
Division of Students Experiencing Violence by Both Degree and Severity of Exposure

	Victim	Witness	Heard
Severe	33.0%	55.2%	88.5%
Moderate	83.9%	96.6%	97.7%
Minor	57.5%	97.7%	89.7%

Children were administered the demographic questionnaire and the *Survey of Children's Exposure to Community Violence* in a group/classroom format, while supervised by two research assistants. Based on results of *The Survey of Children's Exposure to Community Violence*, 86 out of the 87 students were administered the structured interview. The structured interviews were administered privately to each student by an individual examiner. Prior to administering the *Reaction Index*, participants were also asked to freely recall and describe some of the experiences which they recalled reporting on the *Survey of Children's Exposure to Community Violence*. They were then questioned as to which experience was of significance to them. The self-identified incident was used as the focal event for the *Reaction Index*.

Results

Nearly all respondents (98.9%) reported some form of exposure to community violence. As shown in Table 2, there was no significant difference between frequency of student's direct exposure to violence, as a victim, and indirect exposure, through witnessing and personal knowledge of violent acts. Similarly, there was no difference in frequency of general exposure to severe, moderate, and minor forms of violence. Further examination revealed that the fewest number of participants were victims of severe acts of violence (Cochran's $Q = 287.71, p < .01$). There were no significant differences based on gender or ethnicity.

Assignment of PTSD symptomatology according to DSM-IV (APA, 1994) criteria found that 89.5% of participants met criteria for diagnosis of PTSD. 34.7% demonstrated mild, 26.7% moderate, 24.4% severe and 1.2% very severe PTSD symptoms. Contrary to our expectations, no prediction of PTSD symptoms was obtained from either (a) one's general exposure to community violence or (b) the degree or severity of one's exposure to such violence ($r = .299, p = .374$; Eisenstadt & DiGiuseppe, 1997).

Analysis of responses to the Structured Interview for Complex PTSD/DES revealed that 11.5% of the adolescents currently met full criteria for Complex PTSD. Specific symptom analysis revealed that many of the adolescents endorsed Complex PTSD symptoms and met category criteria even without having met full criteria for the disorder (see Figure 1).

Table 2
Criteria for Endorsement of Seven Scales
and Diagnosis of Complex PTSD

I. Alteration in Regulation of Affect and Impulses (A and one of B-F required)

- A. Affect Regulation (2 symptoms)
- B. Modulation of Anger (2)
- C. Self-Destructive
- D. Suicidal Preoccupation
- E. Difficulty Modulating Sexual Involvement
- F. Excessive Risk Taking

II. Alterations in Attention or Consciousness (A or B required)

- A. Amnesia
- B. Transient Dissociative Episodes and Depersonalization

III. Alterations in Self-Perception (Two of A-F required)

- A. Ineffectiveness
- B. Permanent Damage
- C. Guilt and Responsibility
- D. Shame
- E. Nobody Can Understand
- F. Minimizing

IV. Alterations in Perception of the Perpetrator (Not Required)

- A. Adopting Distorted Beliefs
- B. Idealization of the Perpetrator
- C. Preoccupation with Hurting Perpetrator

V. Alterations in Relations with Other (One of A-C required)

- A. Inability to Trust
- B. Revictimization
- C. Victimizing Others

VI. Somatization (One of A-E required)

- A. Digestive System
- B. Chronic Pain
- C. Cardiopulmonary Symptoms
- D. Conversion Symptoms
- E. Sexual Symptoms

VII. Alterations in Systems of Meaning (A or B required)

- A. Despair and Hopelessness
- B. Loss of Previously Sustaining Beliefs

Over 50% of participants reported currently having difficulty in the areas of inability to trust, dissociation and depersonalization and difficulty modulating sexual involvement. Furthermore, over 50% of the participants reported experiencing six characteristic Complex PTSD symptoms prior to one month (see Figure 2). Unlike PTSD symptoms, Complex PTSD symptoms were significantly related to overall exposure to community violence ($r=.36, p < .001$). Further subdivision found that Complex PTSD symptoms were not specifically related to severity or degree of exposure to community violence. High Complex PTSD symptomatology was, however, related to high levels of exposure to traumatic experiences through direct witnessing ($F=5.408, p=.0019$).

Discussion

The current study supported previous findings that a large percentage of adolescents living in urban neighborhoods in the northeast are exposed to high levels of community violence. Contrary to previous results, however, the participants in our study reported being the actual victims themselves of such crimes, as well as bystanders. This higher degree of victimization may be related to the detailed assessment instrument used in the present study, as well as the older age of the children involved (see Eisenstadt & DiGiuseppe, 1997). Previous studies have focused on elementary school-aged children while the present study focused on adolescents.

Contrary to previous findings, PTSD was not found to be related to degree or severity of exposure, indicat-

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ing that when one is living in an area characterized by chronic trauma, prediction of symptom severity may be related to other, intra-psychic, interpersonal and circumstantial factors. In contrast, Complex PTSD symptoms were associated with increasing exposure to violence, supporting our hypothesis that continuous exposure to violent experiences produces a chronic trauma environment and leaves one vulnerable to further, heretofore unstudied, post-traumatic reactions. This was supported by examination of specific symptom endorsement. Over 50% of the children exposed to pervasive community violence reported characteristic symptoms of somatization, inability to trust others, depersonalization, dissociation, self destructive tendencies and poor anger modulation. These symptoms are not incorporated within the traditional diagnosis of PTSD. As such, attempts to understand the impact of exposure to pervasive community violence through PTSD may be insufficient to fully explain the psychological and developmental ramifications of childhood exposure to pervasive community violence.

These findings hold significant implications for future areas of clinical and research involvement. It is necessary to expand one's view of trauma in order to understand the effects of chronic exposure to violence and to adequately diagnose and treat the various symptoms. Furthermore, many of the adolescents in the current study reported having difficulty in their establishment

and maintenance of relationships with others, as well as difficulties with affect regulation and anger control. These findings hold many implications regarding youths' ability to form healthy, stable relationships in the future, as well as possible associations with the rise in juvenile crime and violence.

Figure 1
Subjects Meeting Criteria for Complex PTSD Categories (N = 87)

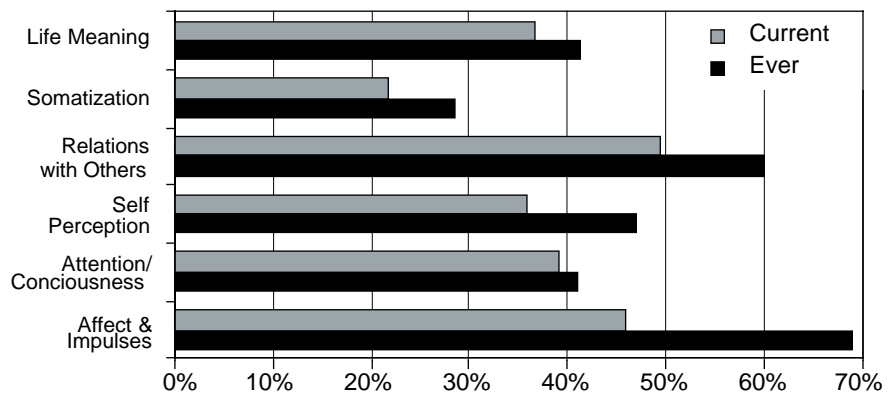
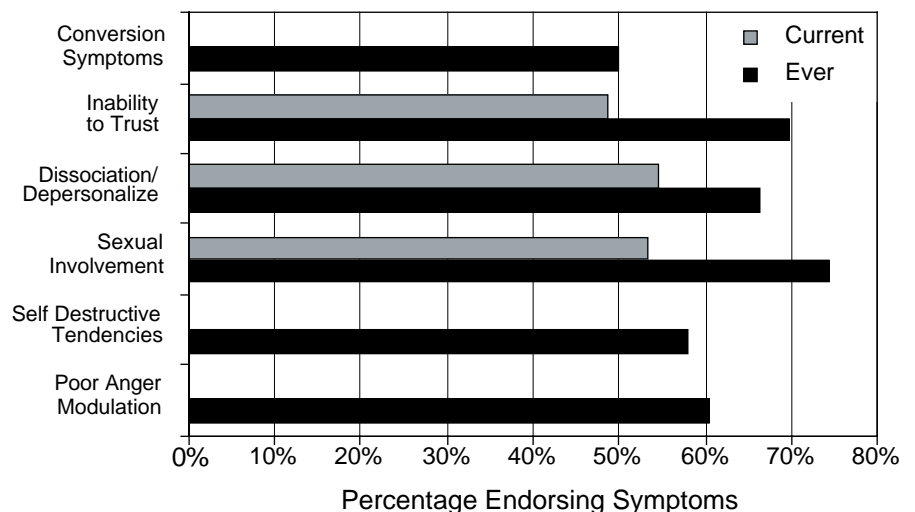


Figure 2
Subcategories Endorsed by Over 50% of Subjects (N = 87)



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Testing the Adolescent Treatment Outcomes Module (ATOM)

Introduction

To assist in making rational treatment choices for children and adolescents with emotional and behavioral problems, outcomes monitoring systems are badly needed. To that end, the Adolescent Treatment Outcomes Module (ATOM) has been constructed and field tested (Robbins & Taylor, 1997).

The goal of the module is to provide reliable and valid data in an observational study to assess the impact of treatment on critical outcome variables while adjusting for known prognostic characteristics (Smith, Rost, Fischer, Burnam & Burns, 1997). The ATOM is designed to be applicable to adolescents in treatment for emotional and behavioral disorders including depression, anxiety, attention deficit, oppositional defiant, and conduct disorders.

The purposes of this study were to (1) determine the reliability and validity of key constructs of diagnosis and patient functioning, (2) examine the module's sensitivity to important clinical changes, and (3) determine the feasibility of outcomes monitoring with the ATOM in routine clinical settings.

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Method

Sample

A sample of 72 adolescents ages 11 through 18 was selected from admissions at two inpatient units, one outpatient psychiatric unit associated with a children's hospital, and an outpatient clinic serving primarily court referred youth with emotional and behavioral problems. Of the 72 adolescents and parents with complete data at baseline, follow-up data were obtained for 61 (85%).

ATOM Administration. The ATOM is designed to be self-administered by the adolescent and a parent at treatment intake and again at six months following intake. The module assesses presenting problems, symptom severity, functional impairment, family burden, prognostic factors to identify patients for whom treatment might be expected to have greater (or lesser) benefits, satisfaction with care, and the type and extent of treatment.

ATOM Measures. Following Hoagwood and colleagues (Hoagwood, Jensen, Petti & Burns, 1996), and direction provided by a multidisciplinary expert panel, outcomes were assessed in three areas: clinical status (diagnoses and symptom severity), functioning (in the home, school, community, and with peers), and consumer perspectives (family burden and satisfaction with care).

Alternative subsets of self-report questions and response category cut points were analyzed to optimize the sensitivity and specificity of caseness indicators against the Diagnostic Interview Schedule for Children (DISC, Shaffer et al., 1996). Using the approach that most closely mirrors clinical practice, a symptom was considered to be present on the DISC or on the ATOM if either the adolescent or the parent reported it.

Severity of the adolescent's emotional and behavioral problems was assessed by summing 25

symptom items. Focal problem severity was assessed by asking the adolescent and parent to identify up to three primary reasons for initiating treatment for the child and the seriousness of these problems.

Six scales representing four functioning domains were constructed from items of the Brief Impairment Scale (Bird, 1995) and the Family, Friendships and Self Assessment Scales (Simpson & McBride, 1992). Higher scores indicate greater impairment in functioning.

The *Functioning in the Home* scale is a measure of good relations with parents and siblings, ability to follow rules at home, and enjoyment of family life. The *School Functioning* scale is a measure of appropriate school progress, good relations with teachers, and ability to complete school work.

Functioning in the community is measured by two scales: *Troubles with Rules and Laws* and *Leisure Functioning*. The *Troubles with Rules and Laws* scale measures difficulties obeying rules and staying out of trouble with legal or juvenile justice authorities. The *Leisure Functioning* scale measures participation in leisure activities or hobbies and enjoyment of life.

Functioning with friends is also measured by two scales: *Friendships* and *Dysfunctional Friends*. *Friendships* measures the ability to make friends and to get along with friends. *Dysfunctional Friends* measures the extent to which the patient's friends regularly get into trouble.

The ATOM also monitors *sentinel indicators*, relatively rare negative events associated with emotional or behavioral problems, such as inability to remain in the home, expulsion or suspension from school, and frequent arrests (Burnam, 1996).

Factors related to the prognosis of emotional or behavioral problems in adolescents were adapted from surveys of the outcomes working group of the American Academy of Child and Adolescent Psychiatry.

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Validation Instruments. Trained research assistants administered the personal computer version of the Diagnostic Interview Schedule for Children (PC-DISC, version 2.3: Shaffer et al., 1993) to the parent and adolescent. The parent and adolescent also completed the Columbia Impairment Scale (CIS: Bird, Shaffer, Fisher, Gould & Staghezza, 1993), the Child Behavior Checklist (CBCL: Achenbach, 1991a), the Youth Self Report (YSR: Achenbach, 1991b), and the Child Health Questionnaire (CHQ: Landgraf, Abetz & Ware, 1996).

The Child Health Questionnaire is a new measure of child health status extensively validated on samples of adolescents in treatment for mental health problems and adolescents in the general population (Landgraf, Abetz & Ware, 1996).

Results

Concordance of Brief Caseness Measures and Diagnoses

Using “6 or more times” in the past 6 months as the cut point for stealing and vandalism and accepting responses above the cut point on either symptom as meeting caseness criteria resulted in a sensitivity of .77 and a specificity of .92 when compared to the presence of DISC-PC diagnosis of conduct disorder ($\kappa = .65$). Oppositional defiant disorder was estimated with the symptoms of “blaming others or bothering others nearly every day” in the past month. Sensitivity for this pair of symptoms compared to DISC-PC diagnosis was .60 and specificity was .88 ($\kappa = .47$). Anxiety disorder was best estimated with either of the two symptoms “worry more than necessary” and “fears of separation”, nearly every day in the past month. Sensitivity for this set of symptoms compared to the DISC was .82 and specificity was .74 ($\kappa = .52$). Depressive disorder required the presence of both “sadness nearly every day” and “irritability a few times each week.” This combination of symptoms compared to the

DISC achieved a sensitivity of .88 and a specificity of .61 ($\kappa = .50$). Attention deficit disorder was not well predicted by any combination of symptoms or cut points. The need to “remind the adolescent a few times a week or more often” and “fidgety nearly every day” predicted DISC diagnosis with a sensitivity of .53 and specificity of .83 ($\kappa = .37$).

Reliability of Key Constructs in the ATOM

Test-retest reliability coefficients and internal consistency alpha coefficients for key outcome measures are presented in Table 1. Scales demonstrated good test-retest stability ($> .70$) and internal consistency with alpha coefficients well above .6, except for the very short (3 items) Trouble with Rules and Laws scale. Two outcome variables, family burden (Reinhard, Gubman, Horwitz, & Minsky, 1994) and satisfaction with care (Larsen, Attkisson, Hargreaves & Tuan, 1979) were measured by existing instruments with established reliability and validity in child mental health care assessment.

Concurrent Validity of ATOM Domains

As shown in Table 2, severity of focal problems was moderately correlated with the CBCL for parents but uncorrelated with the companion YSR for adolescents. Symptom severity as rated by the parent was strongly associated with the CBCL Internalizing scale and with CHQ measure of behavior problems. Severity rated by the adolescent was consistently, though more modestly, related to YSR and CHQ measures.

ATOM functioning scales, each limited to a narrow domain of functioning, were modestly correlated with the more global CIS functioning measure and the CHQ measure of role limitations attributed to problems with emotions or behavior. Correlations of ATOM scales with individual items of the CIS that measure identical content were generally higher than correlations with the overall

Table 1
Test-Retest and Internal Consistency of Parent and Adolescent Responses
on ATOM Outcome Measures

ATOM Measure	No. of Items	Test-Retest Correlation¹ (parents)	Alpha Coefficient (parent/adolescent)
Symptom severity	25	.86	.85/.83
Functioning at home	7	.64	.73/.68
School functioning	7	.71	.80/.78
Trouble with rules and laws	3	.71	.60/.68
Leisure functioning	4	.74	.83/.74
Friendships	2	.83	*
Dysfunctional peers	3	.77	.79/.81
Family burden (BAS)	19		.89/.86
Satisfaction (CSQ)	8		.94/.90

¹ Intra-class correlation.

*Alpha not computed for 2 item scales.

Table 2
Concurrent Validation of ATOM Outcome Measures
(Parents & Adolescents)

Change in ATOM Measure	Change in Comparison Measure	Correlation¹	
		Parent	Adolescent
Focal problem severity	CBCL/YSR Internalizing	.51	.13
Symptom severity	CBCL/YSR Internalizing	.69	.43
	CHQ Behavior Problems	-.74	-.23
Functioning at home	CIS	.47	.42
	CHQ Role Limit./Emotions	-.45	-.37
School functioning	CIS	.47	.40
Troubles with rules and laws	CIS	.33	.44
Leisure functioning	CIS	.37	.44
Friendships	CIS	.43	.44
Dysfunctional friends	(No adequate comparison)		
Burden Assessment Scale	CHQ Emotional Impact	-.53	
	CHQ Time Impact	-.55	

¹ Spearman correlation.

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scale. No comparison instrument was used that covered content similar to the Dysfunctional Friends scale.

Scores on the Burden Assessment Scale, measuring the impact of the adolescent's problems on the family, were strongly associated with comparable measures from the Child Health Questionnaire of the impact of health and mental health problems on the family.

Sensitivity of Module to Change

Sensitivity of module components to clinically relevant change were assessed by examining the correlation of change in outcome scores with change in validation measures. As presented in Table 3, all correlations except one were in the expected direction. Decreases in symptom severity were associated with decreases in the CBCL and YSR for parent and adolescent respondents respectively. Similarly, decreases in symptom severity were associated with

increases in the positively coded CHQ Behavior Problems scale.

Domain specific decreases in functional impairment as measured by the ATOM scales were generally associated with decreases in global impairment measured by the CIS. Changes in ATOM measures also generally occurred in the same direction as changes in CHQ Role Limitations scale.

Feasibility of Outcomes Monitoring

On average, the baseline portion of the module, excluding validating instruments, took 25 minutes ($sd=8.6$) for adolescents to complete, 28 minutes ($sd=7.8$) for parents to complete, and 7 minutes ($sd=9.4$) for clinicians to complete. Research assistants completed the medical record review in an average of 11 minutes ($sd=9.9$). All participants filled out the module with a minimum of missing data: < 2% from adolescents, <1% from parents, and <5% from clinicians.

Table 3
Sensitivity of ATOM Outcome Measures to Clinically Relevant Change
(Parents & Adolescents)

Change in ATOM Measure	Change in Comparison Measure	Correlation ¹	
		Parent	Adolescent
Focal problem severity	CBCL/YSR Internalizing	.43	-.07
Symptom severity	CBCL/YSR Internalizing	.72	.43
	CHQ Behavior Problems	-.33	-.20
Functioning at home	CIS	.20	.16
	CHQ Role Limit./Emotions	-.37	-.34
School functioning	CIS	.36	.15
Troubles with rules and laws	CIS	.46	.19
Leisure functioning	CIS	.35	.40
Friendships	CIS	.10	.37
Dysfunctional friends	(No adequate comparison)		
Burden Assessment Scale	CHQ Emotional Impact	-.44	
	CHQ Time Impact	-.39	

¹ Spearman correlation.

Discussion

The ATOM has been tested and found to be reliable, valid, sensitive to clinically important changes, and to create low respondent burden. Clinically important domains of symptom severity and functioning, as identified by the literature and by an expert panel, can be assessed reliably. Brief scales were internally consistent and stable over a four day interval. In general, scales agreed with longer research-based instruments, particularly when those instruments measured constructs very similar to those assessed by the ATOM. With few exceptions, outcomes measures changed over six months in the direction they were expected to change, similar to more extensive measurement tools. Adolescents and parents spent less than 30 minutes to complete the ATOM. Missing data occurred in an acceptable 1-5% of all questions.

The ATOM has pioneered the assessment of caseness with a few items per disorder. Although more work and larger samples are needed to improve the sensitivity and specificity of some caseness indicators, we have demonstrated that it is feasible to measure broad band disorders with a few simple, self-report questions.

The ATOM has also pioneered the measurement of focal problem severity and change in severity. The methodology is simple and the theory straightforward. While it is possible that new problems will be uncovered in the process of treatment, tracing change in focal problem severity most accurately reflects the success or failure of treatment as defined by the consumer. Measurement of this concept appears to have been quite successful among parents but not among adolescents. The addition of this element to the ATOM should strengthen its value to consumers and practitioners.

While the ATOM is immediately useable to provide preliminary evidence of the effectiveness of treatment, it will go through an additional series of tests and some modifications before a final version is disseminated. Among the additional tests required to make the ATOM a state-of-the-art instrument is the demonstration that items are not biased with respect to culture, gender, or social class.

Conclusions

If integrated into an outcomes management system, information on changes with treatment can provide real-time, real-place feedback to managers, clinicians, and consumers interested in high quality care for adolescents. Initial results support the promise of the ATOM as a reliable, scientifically-based outcomes monitoring system that is applicable across treatment sites, patient severity levels, and patient diagnoses. Studies will further develop the ATOM for use by state and private purchasers of mental health care who wish to hold providers accountable for the care of adolescents.

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The Development of a Scale to Assess the Emotional and Behavioral Strengths of Children

Introduction

Many of the behavior assessment scales currently used in mental health, child welfare, and special education are deficit oriented. While these scales are helpful for identifying children in need, they may not be helpful in developing a child's treatment plan or goals. However, strength-based assessment can be used to identify a child's skills and resources, and therefore be useful in developing his/her treatment plans and goals. Strength-based assessment is defined as the measurement of those emotional and behavioral skills, competencies, and characteristics that create a sense of personal accomplishment, contribute to satisfying relationships with family members, peers, and adults, enhance one's ability to deal with adversity and stress, and promote one's personal, social, and academic development.

The Behavior and Emotion Rating Scale: A Strength-Based Approach to Assessment (BERS; Epstein & Sharma, 1997) was developed to provide professionals with a valid and reliable strength-based assessment instrument. The BERS is a 52-item scale that identifies children's emotional and behavioral strengths in five areas: interpersonal strengths, family involvement, intrapersonal strengths, school functioning, and affective strengths. The scale is designed for parents, teachers, counselors, caregivers, and direct service providers to complete on children with whom they work. Each item is comprised of a statement

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describing a strength a child may demonstrate. The respondent then rates the child on a Likert-type scale in terms of how well the item describes the child (0 = *Not at All Like the Child* to 3 = *Very Much Like the Child*). Completion time is approximately 10-15 minutes. The item scores are then summed to determine the child's 5 subtest scores and total strength score. The norms, reliability, and validity of the BERS have been established.

Norms

In the winter and spring, 1996, efforts were made to establish norms for the BERS. Several hundred teachers, counselors, and clinicians nationwide were asked to complete the BERS for children with whom they work. Ratings were received on a national sample of 2,100 children without disabilities and 800 children with emotional and behavioral disorders. The sample selection procedures resulted in a normative sample that was representative of the nation as a whole. Based on these data, age and gender norms for children without disabilities (5-18 years of age) were established, as well as norms for children with emotional and behavioral disorders.

Factor structure

Factor analytic procedures were conducted to determine the dimensions of emotional and behavioral strength measured by the BERS. First, using the data set from the 2,100 children without disabilities who had completed BERS, oblique factor analyses with factors set at 3, 4, 5, 6, and 7 were conducted. A review of these analyses indicated several low loading items, factors with four or fewer items, and a few non-meaningful, difficult to interpret factors. Then, a second set of factor analyses was run with eigenvalues set at 1.2, item loadings set at .40, and five items set as the minimum number of items in any factor. Based on these criteria five meaningful factors were identified. Then, several items were removed because they were redundant, overlapped

with other items, or did not contribute to the factor. Fifty-two items remained following this review. A final factor analysis was conducted with these items and led to the identification of 5 factors: interpersonal strengths, family involvement, intrapersonal strengths, school functioning, and affective strengths. The factors and item loadings are presented in Table 1.

Validity

In spring and summer, 1996, three studies were conducted to assess the concurrent validity of the BERS. For each study, teachers completed the BERS and either *The Teacher Report Form* (Achenbach, 1991), a measure of emotional and behavioral problems ($N=84$), the *Self-Perception Profile for Children* (Harter, 1985), a measure examining children's global self-esteem ($N=78$), or the *Walker-McConnell Scale of Social Competence and School Adjustment* (Walker & McConnell, 1988), a measure of social skills and social competence ($N=71$). Correlational analyses indicated a moderate to high relationship between the BERS and three other measures. Construct validity was determined by comparing the mean standard scores of the two groups used to norm the BERS. Overall, children with emotional and behavioral disorders scored one standard deviation lower than the children without disabilities. Results of the *T*-test indicated that these differences were statistically significant.

Reliability

In spring and summer, 1996, two reliability studies were conducted to assess the inter-rater reliability and the test-retest reliability of the BERS. In the inter-rater reliability study, teachers and aides/student teachers were asked to complete the BERS on their students. Data from 9 pairs of raters on 96 students with emotional and behavioral disorders were collected. Pearson correlation coefficients were calculated on the two groups of raters on the five subscores and total strength scores on the BERS. Correlations were between .83 and .98.

Strength Scale

Table 1
Factors and Loadings of the Items of the BERS (Decimals Omitted)

Dimension									
Interpersonal Strength		Family Involvement		Intrapersonal Strength		School Functioning		Affective Strength	
Item	Load	Item	Load	Item	Load	Item	Load	Item	Load
1. Accepts criticism.	76	11. Communicates with parents about behavior at home	69	19. Demonstrates a sense of humor	58	10. Attends school regularly.	50	3. Accepts a hug.	74
2. Accepts "no" for an answer.	78	15. Complies with rules at home	70	20. Demonstrates age-appropriate hygiene skills	53	12. Completes school tasks on time.	86	5. Accepts the closeness and intimacy of others.	78
4. Accepts responsibility for own actions.	83	18. Demonstrates a sense of belonging to family	79	22. Enjoys a hobby	58	13. Completes homework regularly.	82	6. Acknowledges painful feelings.	64
7. Admits mistakes.	80	28. Interacts positively with parents	86	23. Enthusiastic about life	74	14. Completes a task on first request.	81	9. Asks for help.	57
8. Apologizes to others when wrong.	78	29. Interacts positively with siblings.	69	26. Identifies own feelings.	70	16. Computes math problems at or above grade level.	62	21. Discusses problems with others.	60
17. Considers consequences of own behavior.	84	35. Maintains positive family relationships.	86	27. Identifies personal strengths.	80	39. Pays attention in class.	76	25. Expresses affection for others.	79
24. Expresses remorse for behavior that hurts or upsets others.	79	36. Participates in family activities.	82	30. Is self-confident.	78	41. Reads at or above grade level.	57	45. Shows concern for the feelings of others.	66
31. Is kind toward others.	81	37. Participates in community activities.	66	32. Is popular with peers.	68	47. Studies for tests.	79		
33. Listens to others.	80	38. Participates in church activities.	58	42. Requests support from peers and friends.	62	52. Uses note taking and listening skills in school.	76		
34. Loses a game gracefully.	75	49. Trusts a significant person with his/her life.	71	46. Smiles often.	57				
40. Reacts to disappointment in a calm manner.	78			48. Talks about the positive aspects of life.	72				
43. Respects the rights of others.	86								
44. Shares with others.	74								
50. Uses anger management skills.	71								
51. Uses appropriate language	83								

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Table 2
Correlation Coefficients Between the BERS and the Walker-McConnell

	Self Control	Peer Relations	School Adjustment	Empathy	Other	Total Score
Interpersonal Strength	.80	.51	.72	.72	.55	.78
Family Involvement	.38	.37	.39	.35	.29	.36
Intrapersonal Strength	.52	.72	.50	.55	.67	.65
School Functioning	.57	.42	.85	.45	.49	.61
Affective Strength	.50	.58	.49	.74	.53	.68
Total	.70	.68	.74	.73	.66	.77

Table 3
Correlation Coefficients Between the BERS and the Self-Perception Profile for Children

	Scholastic Competence	Behavioral Conduct
Interpersonal Strength	.32	.65
Family Involvement	.55	.58
Intrapersonal Strength	.48	.55
School Functioning	.72	.56
Affective Strength	.28	.50
Total	.57	.61

Table 4
Correlation Coefficients Between the BERS and the Achenbach

	Internalizing	Externalizing	Total Score
Interpersonal Strength	NS	-.72	-.60
Family Involvement	NS	-.39	-.42
Intrapersonal Strength	-.39	NS	-.27
School Functioning	NS	-.47	-.51
Affective Strength	NS	-.39	-.33
Composite	NS	-.72	-.61

Strength Scale

In the test-retest reliability, 59 students with serious emotional disturbance were rated twice by their teachers over a two-week interval. Pearson correlation coefficients were calculated on the two groups of ratings on the five subscores and total strength score on the BERS. Correlations ranged between .85 to .99.

Uses

The BERS has five principal uses: to identify children with limited emotional and behavioral strengths; to target goals for an individual treatment plan or individual educational plan; to identify strengths and weaknesses for treatment; to document progress in a strength area as a consequence of specialized treatment or services; and to measure strengths in research and evaluation projects.

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¿Qué Dice? Initial Analyses Examining Three Spanish Translations of the CBCL

Introduction

At this time, the Child Behavior Checklist (CBCL; Achenbach, 1991) is the most extensively used and researched rating scale of children's internalizing and externalizing emotions in the United States and abroad (Furlong & Wood, in press). Although widely adopted, the "official" Spanish version of the CBCL translated in Toronto, Canada, has been subject to impromptu revisions as it is used by practitioners because they believe that some items are misunderstood by- or unclear to - Spanish-speaking parents. As a result, in California, at least, two "unofficial" and "unvalidated" Spanish versions have been developed, specifically in Los Angeles and San Francisco, presumably with the intention of more appropriately measuring Spanish-speaking caregivers' perceptions of their children's behaviors. This study describes preliminary research efforts to examine the validity and utility of these three Spanish versions of the CBCL (The "official" version translated in Toronto, and its Los Angeles and San Francisco modifications) with Latinos from diverse national and linguistic subgroups.

A search for research that used the Spanish version of the CBCL culminated in the identification of 40 studies. Only four of these 40 studies may be considered validation studies; only two were conducted in the United States with caregivers residing in Puerto Rico. Notably, eleven of the investigations with Hispanics living in the continental United States were applied research

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studies utilizing the Toronto Spanish CBCL without the benefit of supporting validity and/or epidemiological data.

Relative to the Toronto version of the Spanish CBCL, there is no published documentation of the translation procedures followed to produce it. The CBCL manual simply states that a Spanish version is available (Achenbach, 1991). The most accurate information concerning translation procedures was obtained directly from the instrument's author (T. Achenbach, personal communication, September, 1996). The procedures used to translate the Toronto version are detailed in Casas, Furlong, Alvarez, and Wood (1996).

As a result of the need for more validity and reliability information concerning the Spanish translation of the CBCL, this paper reports on the following three analyses: (a) the identification of Spanish items that were significantly different in meaning from the English version; (b) the rating by bilingual individuals of the items that they find to be most preferable from among the Toronto, Los Angeles, and San Francisco versions; and (c) a preliminary investigation of CBCL profiles of children whose parents opted to use the Toronto Spanish version as compared to those whose parents used the English version.

Methodology and Results

Setting

This project was conducted in Santa Barbara County, a coastal area of 390,000 that includes both small urban and rural communities. Approximately 86,000 children live in the county and are identified as 52% Caucasian, 40% Latino (specifically Mexican and Central American immigrants), 5% Asian/Pacific Islander, and 3% African-American (Damery, Furlong, Casas, & Corral, 1996).

Procedures and Results

Analysis 1: Identification of items that differ significantly from one another. Using the *Translation Equivalence Classification* model (Treviño, 1985), each item from the original Toronto Spanish translation of the CBCL was evaluated by two bilingual/bicultural psychologists whose first language was Spanish. Each of the Spanish items were compared to the English CBCL based on structural equivalence (i.e., grammatical consistency) and conceptual equivalence (i.e., semantic equivalence of terms). An item was classified as exact, similar, or significantly different from its parallel English item, as suggested by Treviño (1985). As shown in Figure 1, this analysis found that 48 Spanish CBCL items had structural and/or conceptual differences from their corresponding English versions. These items came from all syndrome subscales. This first analysis showed that the translations of a number of CBCL items required additional clarification and analysis, an outcome helping to understand why practitioners in Los Angeles and San Francisco modified the original Toronto translation.

Analysis 2: The identification of preferred Spanish items. The main purpose of this analysis was to have raters identify, from the pool of 48 items targeted for additional review, those which they found to be most preferable, if any. In this analysis,

Spanish CBCL

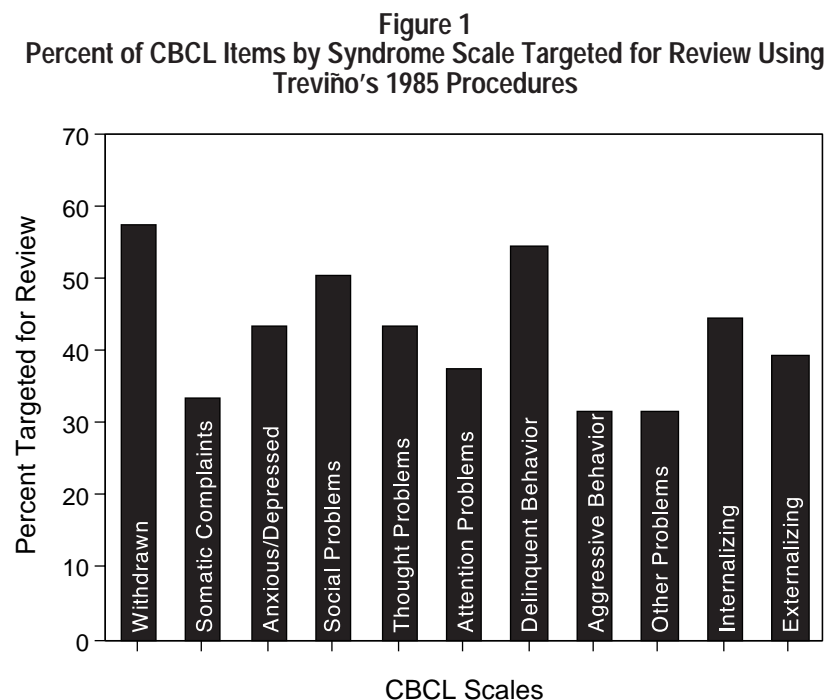
raters were recruited to evaluate the translated items based on (a) expert level of bilingualism, Spanish-English; (b) being bicultural or having extensive experience working with Latino populations in California; and, (c) educational or occupational background in psychology or education. Relative to their work, the 15 raters were independently presented with the original English item followed by the Toronto translations and its Los Angeles and San Francisco modifications. The raters were asked to rate each translation in terms of global acceptability, as shown in the example in Figure 2, taking into account how equivalent in meaning the Spanish version was to the English. After compiling the ratings, a specific Spanish translation was deemed to be “acceptable” if a minimum of 10 of the 15 raters gave a preferability rating of 4 or 5 to the item and no more than 1 rater gave a rating of 1 or 2. Whenever the original Toronto item had these rating characteristics, it was considered to have an acceptable translation. Items from the Los Angeles and San Francisco versions were selected as the most acceptable if they met the above criteria and

the Toronto version did not meet these criteria. As a result of this preference analysis the following outcome was found for the 48 items being reviewed:

1. Ten of the items considered to have potential structural and/or conceptual differences in analysis 1 were identical across all three Spanish versions. These items met the preferability criteria and therefore are considered to have no specific translation problems.
2. Of the remaining 38 items, the expert judges were about equally divided in their preference for the original Toronto translation (11), Los Angeles translation (13), and the San Francisco translation (11).
3. Three items failed to receive acceptable preference ratings regardless of the translation considered. (These specific items are shown in Figure 3.)

Analysis 3: Emerging profiles of children. To conduct this analysis, a sample of youths and parents was drawn from a federally sponsored multiagency system of care in Santa Barbara County. More specifically, 10 youths whose parent/caregiver(s) completed the Toronto version of the

CBCL (Latino-Spanish) were examined for the following characteristics: gender, age, and referral gateway (i.e., probation, social service, mental health). Two additional groups composed of (a) Caucasian youths whose parent/caregiver completed the English version CBCL (White-English), and (b) Latino/a youths whose parent/caregiver completed the English version CBCL (Latino-English) were matched to the Latino-Spanish groups by gender, age, and referral gateway. All of the matched sample youths were of the same sex and referral gateway as the Spanish-completed group. Some slight adjustments were necessary



Spanish CBCL

with the age variable. When a youth of the same age could not be found in the database, a broader search encompassing an age one year below and above the target age was completed. The age search was broadened in this manner until one or more matches could be identified. When more than one match was identified, a match was selected randomly from the possible cases.

Each of the three groups were finally composed of the following: (a) gender: 2 females, 8 males; (b) referral gateway: 3 public health, 4 probation, 2 mental health, 1 child protective services; and (c) mean age: Latino-Spanish and White-English groups (13.7 years), Latino-English group (14.5 years).

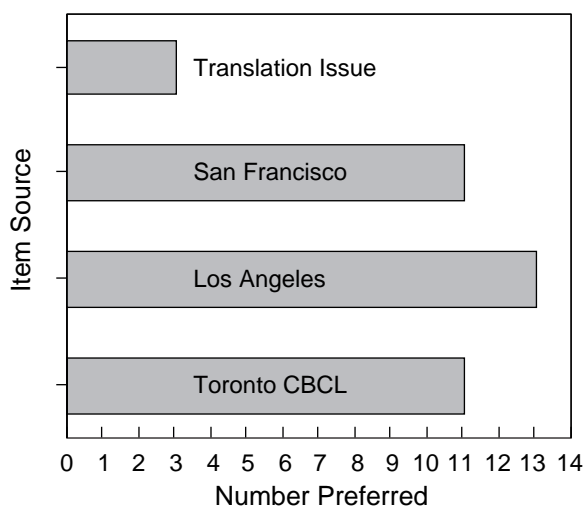
Comparison of the Latino-Spanish, Latino-English, and White-English groups identified a few differences across groups on the syndrome subscales. In particular, the CBCL Thought Problems Syndrome Scale mean score was highest for Latino Spanish-CBCL ($M= 4.6, SD=3.0$), lowest for Latino-English ($M=1.2, SD=1.8$), and intermediate for White-

English ($M=2.4, SD=2.6; F_{2, 27}=4.66, p< .02$). This analysis suggests that some differences in Latino parents' rating of their children's behavior and emotional status may be associated with the language used to solicit those ratings.

Discussion

Working with the growing number of children who are from diverse racial/ethnic minority cultures, and who may also have limited proficiency in English (U.S. Bureau of the Census, 1992), is a great challenge for professionals who assess, diagnose and develop individual and family interventions for such children. Addressing this challenge, this study has directed attention to the need to establish the cultural and linguistic validity and utility of all assessment instruments even those, like the Child Behavior Checklist (Achenbach, 1993), that have been universally accepted and used over time. An important lesson learned from these initial analyses is that existing translations of standardized scales, such as the CBCL, may not be universally appropriate, and that ad hoc translations do not necessarily result in more acceptable items. As part of the next steps in the examination of these three versions of the CBCL being used in California, the authors plan to combine preferred Spanish items across the three versions into an omnibus California Spanish version. Additional back-to-back translation analysis will precede studies to gather normative data for the Spanish version and to validate its application with clinical samples of Latino youths. These activities are more than academic exercises because recently the California Department of Mental Health adopted the CBCL for use by county mental health program throughout the state.

Figure 3
Number of Spanish CBCL Items
Rated Most Preferable by Experts for
Toronto, Los Angeles, and San Francisco Versions



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Measuring Ethnic Identity Among American Indian Adolescents: A Factor Analytic Study

Introduction

When addressing issues of race or ethnicity, researchers often ask respondents to choose one alternative from a list that includes categories such as White, African American, Hispanic, Asian American, or American Indian. Trimble (1991) referred to this as an *ethnic gloss* approach and argued that it fails to capture significant differences that exist within most ethnic groups. The work described here is based on the premise that due to great intragroup diversity, e.g., more than 500 separate tribes (Hirschfelder & Montano, 1993), many distinct cultural areas (Manson, Shore, Barron, Ackerson & Neligh, 1992) and more than 200 currently spoken Indian languages (Fleming, 1992), employing ethnic glosses with the American Indian population is especially problematic. An alternative to the *checklist* approach is to focus on ethnic identity rather than, or in addition to, race and or ethnicity. However, little empirical work has been carried out regarding the measurement of ethnic identity in general, or specifically among American Indians. Reported here is the development of a valid and reliable measure of ethnic identity among American Indian adolescents.

Since most Indian people live in two worlds, their own ethnic community and the mainstream or White community, it is likely that they identify to some extent with both groups. The process of developing more than one identification was referred to as dual socialization by de Anda (1984) and was conceptualized as primary enculturation experiences within their own cultural group, along with less comprehensive, but significant

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exposure to agents and forces within the majority culture. Berry and his colleagues (Berry, Kim, Minde, & Mok, 1987; Berry, Kim, Power, Young, & Bujaki, 1989) indicated that among ethnic group members possible patterns of identification are *separation, assimilation, marginalization, and biculturalism*. These distinctions are important since several researchers have found that ethnic group members who are bicultural versus marginal in their ethnic identity tend to score higher on positive psychological indicators such as self esteem (Oetting & Beauvais, 1991; Phinney, Lochner, & Murphy, 1990; Szapocznik & Kurtines, 1980), personal mastery (Phinney, 1989), and positive peer and family relations (Phinney, 1989; Phinney & Alipuria, 1990).

Methods

Sample

Data were collected in nine high schools located in four broadly dispersed American Indian communities west of the Mississippi (Voices of Indian Teens, 1992). In November, 1992, a total of 1592 high school students completed the self-report survey; 53% were female; 25% were 9th graders, 29% 10th graders, 24% 11th graders, and 22% 12th graders. The median age was 16.0 years with the minimum age of 14 and the maximum age of 19. A total of 31 different tribes were represented. Although 1990 Census data by tribal group are not yet available, a sense of the representativeness of the sample can be gained by noting that these tribes accounted for 55.4 per cent of the total Indian population enumerated in the 1980 Census and that seven of the tribes are among the top 15 most populous tribes in the United States (Snipp, 1989).

Measures

Ethnic Identity Scale. To accommodate the diversity of the American Indian population and to account for the reality that Indian people often live

in two worlds, the approach used here builds directly on Oetting and Beauvais' (1991) four-item scale that has been used in studies of minority youth, including American Indians. To avoid a separate set of questions for each of the more than 500 tribal groups, they developed measures of how strongly individuals are linked to their own perception of what it means to be an Indian. Rather than asking questions about specific tribes, they asked questions that incorporate the term "the Indian way of life." In answering such questions, each respondent was free to interpret the specific meaning of this term for themselves and thus, Indian people from different cultural backgrounds could be asked the same set of questions. To account for the possibility of identification with both Indian and dominant culture groups, parallel questions were included about "the White way of life." Respondents were asked to indicate their degree of affinity with both Indian and White questions.

In the interest of expanding the Oetting and Beauvais four question scale, separate focus groups consisting of professionals (e.g., dorm aids, teachers, school administrators) and adolescents addressed the question of the meaning of being Indian (King, 1992; Mitchell, Dick, & Beals, 1993). Consistent results from this qualitative work centered on the importance of family, cultural traditions, language use by family, and spiritual beliefs. As a result, questions were added to address current family cultural activities, future personal involvement in cultural traditions, language use in childhood home, and importance of religious or spiritual beliefs.

Table 1 presents the eight ethnic identity questions that comprised the items administered to this sample. Questions 1 through 4 are the Oetting and Beauvais scale; questions 5 through 8 were added. As with the original scale, questions 5 and 6 used the insert of American Indian or White. Question 7, the language question, used Tribal

Measuring Ethnic Identity Among American Indian Adolescents

Language and English; question 8, which focused on religion, used the options of Traditional Indian Beliefs and Christian Beliefs. The response categories for all eight questions were (1) *Not at All*, (2) *Not Much*, (3) *Some*, and (4) *A Lot*. Each of the questions was coded so that higher values indicated more of the property of interest.

The central purpose of this work was the development of a valid ethnic identity measure for use with American Indian adolescents. To test the validity of this new measure, scales measuring social competencies, personal mastery, self-esteem, and perceived social support as indicators of positive psychological well-being were used. These measures underwent extensive pilot-testing and the reliability coefficients reported come from this pilot testing of the measures.

Competencies Scale. The competencies scale was adapted from the Adolescent Pathways Project (Seidman, 1991). It consists of seven items which tap positive social competencies such as making friends,

being good at creative things and doing school work carefully ($\alpha = .81$).

Personal Mastery. This measure was a composite of eight items drawn from Pearlin & Schooler's (1978) mastery scale and Levenson's (1981) internal locus of control scale ($\alpha = .69$).

Self-Esteem Scale. Our measure of self-esteem was adapted from the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Six items of the original ten-item scale were used ($\alpha = .79$).

Social Support Scale. For this construct, we used the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, & Farley, 1988). This six-item scale addresses the presence of perceived social support from a special person, family, and friends ($\alpha = .85$).

Results Analysis

To examine the underlying structure of the items, a cross-validation factor analysis was carried out using two independent sub-samples of the 1592 respondents. Exploratory factor analysis was conducted with a 25% ($n=382$) random sample of the respondents. The resulting factor structure was then tested, using confirmatory factor analysis, with the remaining 75% ($n=1210$) of the cases.

Exploratory Factor Analysis. All but one of the 16 proposed items loaded at or above a level of .3. Only two factors had eigenvalues greater than 1.0 and an examination of the specific loadings indicated that the Indian items tended to load on Factor One, and the White items loaded on Factor Two. The only exception to this pattern was that "English spoken in childhood home" loaded with a negative sign on the Indian factor. The one item that did not meet the .3 loading criterion was the question concerning the importance of Christian spiritual beliefs.

Table 1
Ethnic Identity Questions

(1) Do you live by or follow the [...] way of life?
(2) When you are an adult, will you be a success in the [...] way of life?
(3) Does your family live by or follow the [...] way of life?
(4) Is your family a success in the [...] way of life?
(5) How many of your family's activities or traditions are based on [...] culture?
(6) When you are an adult, how involved do you think you will be in [...] traditions and beliefs?
(7) What languages were spoken in your home when you were growing up?
(8) How important is it for you to follow religious or spiritual beliefs which are based on [...] ?

Moran

Confirmatory Factor Analysis. Using a cross-validation approach, the structure obtained employing exploratory factor analysis with 25% of the cases was tested using confirmatory factor analysis with the remaining 75% of the respondents. The result was a CFI of .890. In other words, while coming close to a significant fit, the structure was not confirmed. An examination of the factor loadings for this model showed that the absolute value for the English language item was substantially lower than the other loadings on the Indian factor and the Language test indicated that the statistical fit of the model would be improved if the English language item also was considered as part of the White factor. The combination of these two findings led to the elimination the English language item and testing the model again. This trimmed model had a CFI of .913 and the improvement in the Chi Square over the initial model was 244 (13 *df*; $p < .001$). These confirmatory factor analysis results are presented in Table 2.

Constructing the Scales.

Based on the results of the confirmatory factor analysis, the ethnic identity measure embodied two scales: an eight-item Indian scale consisting of the questions loading on Factor One, and a six-item White scale consisting of the questions loading on Factor Two. Average-item scale scores were obtained by summing over the variables and dividing by the number of variables with valid responses. The mean Indian scale score was 3.04 ($sd = .72$) and the

mean White scale score was 2.55 ($sd = .90$), with Cronbach's alpha coefficients for the Indian scale of .91 and for the White scale of .92.

Validity Assessment was based on the assumption that a strong ethnic identity is related to positive measures of psychological well-being (Phinney, 1990). Oetting and Beauvais (1991) found that respondents who do not identify strongly with any ethnic identity (marginalization) tend to score low on psychological measures of well-being; those who identify with either their minority group (separation) or the mainstream (assimilation) score higher; and those who strongly identify with more than one

Table 2
Confirmatory Factor Analysis - Trimmed Model
($n = 879$ / CFI = .913)

Item Description	Factor 1	Factor 2	Error
Will be Involved in Indian Traditions as an Adult	.827		.562
Lives by Indian Way of Life	.843		.538
Family is a Success in Indian Way of Life	.806		.592
Family Lives by Indian Way of Life	.825		.565
Will be Successful in Indian Way of Life as an Adult	.806		.592
Important to Follow Traditional Indian Spiritual Beliefs	.801		.599
Family Activities Based on Indian Culture	.738		.675
Tribal Language Spoken in Childhood Home	.437		.899
Lives by White Way of Life		.883	.469
Family is a Success in White Way of Life		.814	.581
Will be Successful in White Way of Life as an Adult		.819	.574
Family Lives by White Way of Life		.859	.512
Will be Involved in White Traditions as an Adult		.783	.622
Family Activities Based on White Culture		.627	.779

Measuring Ethnic Identity Among American Indian Adolescents

ethnic identity (bicultural) tend to have the highest scores. Following this line of reasoning, this analysis was limited to the 808 respondents who scored in the bottom and top thirds on each ethnic identity scale.

To examine the relationship of ethnic identity to psychological well-being, the respondents who identified strongly with either Indian or White, were combined into (a) *High on None*, (b) *High on One*, and (c) *High on Both*. Based on Oetting and Beauvais (1991), it was expected that the first group would have the lowest psychological well-being scores, there would be higher scores for the middle group, and the highest scores would be for the group identifying strongly with both Indian and White. ANOVA results for the 808 respondents are presented in Table 3. These results show that for all four measures of positive psychological well-being, this expected pattern was obtained at statistically significant levels. MANOVA was used to test for the impact of level of ethnic identity on these four dependent variables as a set. The multivariate Wilks Lambda was statistically significant ($p < .0001$) and the univariate results were the same as the individual ANOVA results.

Discussion

Lewin (1948) indicated that individuals require a strong sense of group identification in order to maintain a state of well-being. For American Indians, ethnic identity is a critical component of

group identification and is considered by many as crucial to self-concept and psychological functioning (Gurin & Epps, 1975; Maldonado, 1975). In past generations, it was believed that one could not be true to Indian traditions and embrace certain aspects of the mainstream culture such as education. Others believed that Indian people needed to leave behind all aspects of Indian culture if they were to be successful in the mainstream society. However, in today's society, most American Indians "live in two worlds" and the issue of ethnic identity is complicated. The analyses reported here provide empirical support for a bicultural model of ethnic identity that measures investment in both Indian and White identities. The resulting identity scales, used together, provide an opportunity for a rich exploration of the role of ethnic identity in understanding the experience of Indian adolescents. In most Indian communities there is an unwavering belief that for Indian persons of all ages, a strong identification with one or more Indian cultural groups serves as a protective factor for a host of undesirable outcomes such as substance abuse and serious mental health problems. Efforts to enhance the Indian youths' identity with Indian culture are often a major part of prevention programs aimed at youth. Mental health providers working in prevention programs may be able to use the bicultural ethnic identity scale to assess the impact of such efforts. In a more general sense, use of the bicultural scale by mental health providers might allow the examination of the

connections between patterns of ethnic identity (separation/assimilation/marginalization/biculturalism) and problems such as alcohol, tobacco, and drug use, depressive symptoms, anxiety, and antisocial behavior.

Table 3
Mean Psychological Well-Being Scores by Level of Ethnic Identity

Identity	Competencies* ($p < .0001$)	Personal Mastery** ($p < .0001$)	Self-Esteem*** ($p < .002$)	Social Support**** ($p < .0001$)
High on None	2.51	3.40	3.38	3.73
High on One	2.81	3.71	3.45	3.99
High on Both	3.06	3.84	3.54	4.17

* $F = 28.63$; $df = 2,733$

** $F = 15.58$; $df = 2,733$

*** $F = 6.18$; $df = 2,733$

**** $F = 8.56$; $df = 2,733$

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A Structured Interview for Collecting Objective Clinical Data

Introduction

The purpose of this study was to examine the test-retest reliability of a structured interview developed for the Child & Adolescent Functional Assessment (CAFAS; Hodges, 1990), referred to as the CAFAS: Parent Report. The interview was used to gather objective clinical information about a youth's behavioral and emotional functioning as reported by the primary caregiver (i.e., the parent). Clinical information obtained from the Parent Report was used to score the CAFAS. The CAFAS is designed to measure the degree of impairment in children and adolescents, secondary to emotional and behavioral problems (Hodges, 1990). Impairment is defined as the effect of the youth's behavioral and emotional problems, diagnosis, and symptoms as it impacts the youth, the family or others (Hodges, 1990). Recent studies have shown CAFAS to be a reliable and valid measure (Hodges & Wong, 1995a) and an effective way to assess clinical outcomes and predict service utilization and cost (Hodges & Wong, 1995b).

The typical mechanism for gathering clinical information is the intake interview. Utilizing a structured interview should improve reliability of ratings because information variance would be minimized. With increasing demands to evaluate outcomes in children's mental health care, a structured interview can become an essential component of the evaluation process. The Parent Report can be used by both professional and lay interviewers (e.g., students, intake workers). The parent may complete the

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interview in person, over the phone or independently by following the instructions.

The Parent Report serves as a means of effectively gathering clinical information to score the CAFAS. This summary reports on the test-retest reliability of the CAFAS ratings based on the structured interview with the parents about their youth's functioning. For the present study, the interviewer who conducted the CAFAS Parent Report structured interview also scored the CAFAS. Interrater reliability is embedded in the design given that different raters conducted the first and second interviews.

Method

Overview

Test-retest reliability was assessed by interviewing the primary caregiver by telephone on two separate occasions by two separate interviewers. A pair of interviewers/raters conducted the first or second interview and also rated the youth on the CAFAS based on the information obtained from the parent. The total and scale scores on the CAFAS were correlated between the ratings for the first and second administration. Correlations were then generated between the ratings ignoring time of administration.

Participants

Twenty-five youth were rated on the CAFAS based on a structured interview with the primary caregiver about their child's functioning. The age range of the youth was 6-17, with a mean age of 11 years old. There were 15 boys and 10 girls in the study. Participants were recruited from clients requesting services from the children's outpatient unit at two local community mental health centers. Families and youths were either receiving services or placed on a waiting list at the time of the study.

Interviewers/Raters

Research assistants served as both interviewers and raters in assessing the youth. There were three teams of raters, each consisting of one first year graduate student and one undergraduate. Two raters served on two teams. There were three female interviewers/raters and one male.

Interviewers/raters were trained on the use of the CAFAS from the CAFAS Self Training Manual developed by Kay Hodges (1990). Self training consisted of completing 10 vignettes based on actual clinical child cases. After completing the vignettes, raters were asked to score the CAFAS based on the information from each clinical scenario. CAFAS scores were compared to a standard 'gold' score and correlated to determine reliability. After establishing satisfactory reliability, the raters were prepared to rate the CAFAS.

Interviewers/raters were also trained in administering the structured interview for the purposes of this study, although it was not necessary to acquire formal training. Directions were provided for the interviewer throughout the interview to ensure each relevant question was addressed.

Measures

The Parent Report: A structured interview for the Child & Adolescent Functional Assessment Scale, 1994 Version & the 1994 Revised edition. The Parent Report was developed for the CAFAS to elicit all the required information to rate the CAFAS. The interview takes approximately 30 minutes and inquires about the youth's functions across the eight psychosocial areas of the child's life. Each section gathers detailed information used in scoring the CAFAS scales. For example, to score a scale that measures impairment at school, the structured interview asks specific, successive questions related to school behavior such as attendance, following rules, and academic issues.

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The Child and Adolescent Functional Assessment Scale (CAFAS). The CAFAS is based on eight areas of psychosocial functioning of a youth's life which include the following scales (Hodges, 1990): School/Work, Home, Community, Behavior Toward Others (i.e., peers, adults), Mood (i.e., depression, anxiety), Self-Harmful Behavior, Thinking, and Substance Use.

Each scale is divided into four levels of severity of functional impairment which are as follows: 30= *Severe Impairment* (i.e., severe disruption or incapacitation); 20= *Moderate Impairment* (i.e., persistent disruption or major occasional disruption of functioning); 10= *Mild Impairment* (i.e., significant problems or distress); 0= *Minimal or No Impairment*. Each level contains a list of behavioral descriptors from which the rater chooses after reviewing the available items to best describe the child's behavior during a specified period. For each scale, the rater reviews the items within the Severe Level column. If, after reviewing all the items, the reviewer does not find any items that describe the youth, the rater moves to the next level, Moderate Impairment, and so on, until an item is found to describe the child's problem(s).

Procedures

Prior written consent was obtained from parent participants with their telephone number and available time to call for an interview. The first interviewer/rater contacted the parent to schedule the first interview. Interviews with parents were approximately 30-40 minutes in length, and parents were asked to report on the child's behavior during the specified rating period of the three previous months. At the end of the first interview, an appointment time for the second interview was arranged. Interviewers were counterbalanced between conducting the first and second interview so that each interviewer conducted half of the initial interviews and half of the second. The second interview took

place 3 to 14 days after the first interview, with an average interval of 7.1 days between the first and second interview. Interviewers/raters were blind to the youth's level of services and/or reason for receiving services at the time of the interviews. They were also unaware of information obtained from each other's interviews.

Results

The relationship between the youth's total and scale scores was examined between the first administration and the second administration of the interview, referred to as Time 1 and Time 2 respectively. Separate analyses were performed for information based on 1994 version ($n=14$) and revised version of the Parent Interview ($n=11$).

Test-retest reliability for the 1994 version Parent Report ($n=14$). Test-retest coefficients between Time 1 and Time 2 CAFAS ratings are presented in Table 1. With the exception of the Home ($r=.65$) and Moods scale ($r=.66$), correlation coefficients reflect good to very good test-retest reliability. Overall, the coefficients for the youth's total score $r=.92$ indicates excellent reliability.

Paired t -tests between Time 1 and Time 2 revealed no significant differences in ratings, with the exception of Moods ($t=2.12$, $p=.05$), with a higher score found for the first administration ($M_1=16$) compared to the second administration ($M_2=12$). Due to the effect observed for the Mood scale, a difference was also found for the youth's total score ($t=2.19$, $p<.05$). The results of the t -tests are presented in Table 2.

Test-retest reliability for the 1994 revised edition of the CAFAS Parent Report ($n=11$). Results presented in Table 3 are indicative of good to very good reliability with the total score yielding a correlation coefficient of $r=.83$. Results of the paired t -tests are presented in Table 4 with no significant differences revealed between the first and second interview.

Discussion

The study examined the test-retest reliability of scoring the CAFAS based on information obtained via a structured interview with the primary caregiver. The findings for the CAFAS total score (i.e., the sum of the eight youth scales) compare favorably to reported data on global measures of impairment (Bird et al., 1987; Green, Shirk, Hanze, & Wanstrath, 1994). It was anticipated that the revised edition of the interview would demonstrate stronger correlations for the total score. Although reliability was moderately correlated ($r = .83$), there were no significant differences between the total scores of the first and second interview. Given that most decision making is based on the CAFAS total score for the youth, both interviews yielded good reliability.

In order to examine improved reliability after restructuring questions in the Home and Moods sections of the interview, separate analyses were conducted for the original and revised version of the

CAFAS Parent Report. Low correlations were obtained for the Home ($r = .65$) and Moods scale ($r = .66$) of the original 1994 version of the interview. The revised edition demonstrated an improvement for these scales; however, they were less than expected (Home, $r = .79$; Moods, $r = .79$). A visual scan of the data reveals a discrepancy in the amount of information reported from the first to the second interview for the Home and Mood scale. In one case, a 20 point difference in scoring dramatically reduced the correlation coefficient for the Home scale. Employing such a small sample size ($n = 11$) also contributed to achieving a low correlation; however, the mean ratings of the CAFAS Home scale were not significantly different ($M_1 = 20$, $M_2 = 17$). Differences in the Mood scale were also attributable to a lack of information concerning symptoms of anxiety on the second interview ($M_1 = 19$; $M_2 = 17$). Although CAFAS ratings were lower for the second interview, they did not differ in their overall mean scores. For a scale that incorporates subjective symptoms of anxiety, the Mood scale indicates very

Table 1
Test-Retest Coefficients Between Time 1 and Time 2 for the 1994 Version of the CAFAS Parent Interview

CAFAS Scale	<i>r</i> (<i>n</i> = 14)
School	.72
Home	.65
Community	.92
Behavior Toward Others	.87
Moods	.66
Self-Harm	.88
* Substance Use	–
Thinking	.94
Youth Total	.92

* Correlation coefficient was unable to be computed for Substance Use due to the low frequency of occurrence.

Table 2
Paired *t*-tests between Time 1 and Time 2 for the 1994 Version of the CAFAS Parent Report

CAFAS Scale	<i>t</i> -value (<i>n</i> =14)	Sig. Level
School	.00	NS
Home	2.10	NS
Community	.56	NS
Behavior Toward Others	.81	NS
Moods	2.12	.05
Self-Harm	-1.47	NS
Substance Use	-1.00	NS
Thinking	1.00	NS
Youth Total	2.19	.05

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good reliability. The range of test-retest correlation demonstrated by the CAFAS Mood scale is similar to those reported for a widely used clinical measure that also assesses degree of anxiety (Butcher & Dahlstrom, 1989; Schwartz, 1977).

This study also demonstrated that lay-interviewers (e.g., non-clinicians such as graduate and undergraduate students) were able to provide reliable ratings of the youth's degree of impairment based on an interview with the parent. Discordant ratings on the original version of the CAFAS interview were attributed to changes in the child's behavior, a lack of information, and ambiguous structure of the questions.

Future studies examining the test-retest reliability of the CAFAS Parent Report should increase the number of subjects. Further, there is currently an effort to abridge the interview by eliminating redundant questions. Overall, the study indicated that employing such a structured interview is a cost-effective means of collecting objective outcome data.

Table 3
Test-Retest Coefficients Between Time 1 and Time 2 for the 1994 Revised Edition of the CAFAS Parent Report

CAFAS Scale	<i>r</i> (<i>n</i> =11)
School	1.00
Home	.79
Community	1.00
Behavior Toward Others	.92
Moods	.79
Self-Harm	.77
Substance Use	–
Thinking	–
Youth Total	.83

* Correlation coefficients were unable to be computed due to the low frequency of occurrence.

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Table 4
Paired *t*-tests Between Time 1 and Time 2 for the 1994 Revised Edition of the CAFAS Parent Report

CAFAS Scale	<i>t</i> -value (<i>n</i> =11)	Sig. Level
*School	–	NS
Home	1.40	NS
*Community	–	NS
*Behavior Toward Others	1.00	NS
Moods	1.00	NS
Self-Harm	1.00	NS
Substance Use	–	NS
*Thinking	–	NS
Youth Total	1.32	NS

* Standard error of the difference is 0; *t*-values were unable to be computed due to identical ratings.

