



Data Trends

Summaries of Current Research Findings
in the Children's Mental Health Field

issue numbers 71-93
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DATA TRENDS

Summaries of research on mental health services for children and adolescents and their families

Data Trends are produced by the Research and Training Center for Children's Mental Health in Tampa, Florida to increase the dissemination of current research findings in the area of children's mental health services. Each issue of *Data Trends* summarizes a current publication in the children's mental health area to alert the field to current findings and activities. A citation is given for each summary so the readers will be able to retrieve the original document for further examination.

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Source: Heflinger, C. A., Simpkins, C. G., & Foster, E. M. (2002). Modeling child and adolescent psychiatric hospital utilization: A framework for examining predictors of service use. *Children's Services: Social, Policy, Research, and Practice*, 5(3), 151-171.

An important finding from this study documents the impact that community and mental health service systems have on reducing child and adolescent psychiatric hospitalization. Using a database of over 11,000 youth, the authors compared data on consumer, community, and services characteristics to determine whether any of those characteristics could predict hospitalization usage. The authors found that “when community-based services, whether group home or alternative settings, were available in a county, fewer children were hospitalized, indicating that these resources can be used to reduce hospitalization” (p. 167).

Data were examined for all children and adolescents in custody of the State of Tennessee as of November, 1, 1996 ($N = 11,585$). The mean age of this group was 11.5 years. Over half (58%) of the youth were male, 60% were Caucasian, and 38% were African American. Most youth entered state custody through the child welfare system (80%). Results indicate that, 10.3% of youth ($n = 1,193$) had received (any) psychiatric hospitalization. Males were more likely than females to experience hospitalization, and older youth were more likely than younger children to be hospitalized. Caucasian youth were more likely to be hospitalized than were African American youth. Compared with children who entered into state custody through child welfare, youth who entered through the Department of Mental Health were 7.6 percentage points more likely to experience psychiatric hospitalization.

The authors also found that “five service system and community characteristics at the county level were significant predictors” ($p < .05$; p. 164) of hospitalization. Four of those predictors were found to *reduce* the probability that a child in his or her home county would be placed in a psychiatric hospital anywhere in the state. Those predictors are: (a) the county’s capacity for alternative placements while the child was in state care; (b) the presence of a general or psychiatric hospital in the child’s home county; (c) the total population of the child’s county, and (d) the number of children living below the poverty line in the child’s county. The fifth predictor—the percentage of children in the child’s county who were living in a single parent family—was associated with an increased probability of placement in a psychiatric hospital.

In conclusion, the presence of hospitals in a child’s community may have a mitigating effect on reducing the rates of psychiatric hospitalization among children in state custody. The authors speculate that the availability of outpatient clinics associated with hospitals provides an alternative to hospitalization, and that the presence of group homes and other community settings may also be associated with reduced hospitalization rates. That is, if there were alternative lower-level placements in the county where the child lived, he/she was much less likely to be hospitalized. Other findings of this study also suggest the need for “the development and use of a community-based range of services” (p. 167). For example, the high rate at which boys were served in psychiatric hospitals or residential treatment settings, even though their mental health needs were similar to other adolescents, suggests that “supports geared to meet the needs of boys and other adolescents must be developed so that they can have successful community lives and avoid placement out of the community in residential treatment” (p. 167). These findings have direct implications for further mental health services research.

Source: Olfson, M., Marcus, S. C., Weissman, M. M., & Jensen, P. S. (2002). National trends in the use of psychotropic medications by children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41(5), 514-521.

Keywords: psychotropic medication use, national trends, national datasets

The use of psychotropic medication by children has been a source of recent public controversy with many concerned that prescription psychotropic medications are overused and misapplied to children with mental health problems. Little information exists to help clarify the debate concerning national patterns of psychotropic medication use by children and adolescents. Olfson and colleagues provide some insight into this issue by examining two nationally representative datasets to track changes in the use of prescription psychotropic medication by children and adolescents over a span of 10 years. The researchers found that children and adolescents were three times more likely to use a prescription psychotropic medication in 1996 than in 1987.

Data on 1987 prescription drug use was obtained from the National Medical Expenditure Survey (NMES). The NMES collected information during four interviews on a random sample of 10,389 children over a 16-month time period. The Medical Expenditure Panel Survey (MEPS) supplied data on 1996 prescription drug use. The MEPS collected information on a random sample of 6,490 children during six rounds of interviews over a 30-month time period. The respondents for both the NMES and MEPS were the parent or legal guardian of the child, and information was collected on primary insurance type and sociodemographic characteristics of the child. In addition, both surveys contacted medical providers for each child to verify the medication use reported by the parent.

Results indicate that from 1987 to 1996 the overall rate of any psychotropic medication use increased from 1.4 to 3.9 per 100 children and adolescents, with increases evident across all geographic regions and all age, race/ethnicity, sex, and insurance groups examined (see Table 1 for a breakdown of prescription psychotropic medication use by demographic characteristic). After controlling for these demographic characteristics, the researchers found that the likelihood of using a psychotropic medication was nearly three times higher in 1996 than in 1987.

	1987	1996
<i>Age, years</i>		
<6	0.46 (0.19-0.73)	0.82 (0.35-1.29)
6-14	1.89 (1.38-2.40)	5.41 (4.43-6.39)
15-18	1.76 (1.17-2.35)	5.15 (3.72-6.58)
<i>Gender</i>		
Female	1.04 (0.71-1.37)	2.51 (1.86-3.16)
Male	1.67 (1.30-2.04)	5.18 (4.20-6.16)
<i>Race</i>		
African American	0.56 (0.25-0.87)	2.79 (1.63-3.95)
Hispanic	0.55 (0.14-0.96)	2.16 (1.38-2.94)
White	1.69 (1.34-2.04)	4.68 (2.84-5.52)
<i>Insurance</i>		
Private	1.71 (1.32-2.10)	4.07 (3.38-4.76)
Public	1.09 (0.44-1.74)	5.27 (3.64-6.90)
None	0.53 (0.18-0.88)	1.52 (0.78-2.26)
<i>Region of Residence</i>		
Northeast	0.98 (0.47-1.49)	3.12 (2.14-4.10)
Midwest	1.73 (1.10-2.36)	4.42 (2.75-6.09)
South	1.54 (1.07-2.01)	5.20 (4.08-6.32)
West	0.86 (0.51-1.21)	2.04 (1.20-2.88)

Stimulant medication use by children and adolescents rose significantly from 0.6 in 1987 to 2.4 per 100 children in 1996. A significant increase was observed across all demographic groups, except among children without insurance. After controlling for demographic characteristics the likelihood of using a stimulant medication was almost four times higher in 1996 than in 1987.

Antidepressant medication use increased from 0.3 in 1987 to 1.0 per 100 children in 1996. After controlling for demographic characteristics, children in 1996 were 3.56 times more likely to use an antidepressant medication than were children in 1987. These increases were strongest in the 15- to 18-year age group.

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Use of psychotropic medications other than stimulants and antidepressants also significantly increased between 1987 and 1996 (0.55 to 1.23 per 100 children, respectively). Use of mood stabilizers significantly increased from 0.2 to 0.7 per 100 children. The rate of antipsychotic medications remained stable at 0.2 per 100 children, and the use of benzodiazepines increased only slightly, from 0.2 to 0.3 per 100 children.

Furthermore, the authors examined the frequency with which children used a medication from more than one psychotropic group. Among children who used at least one psychotropic medication, the rate of coprescription significantly rose from 4.7 to 11.6 per 100 during the 1987-1996 time period. In 1996, approximately one in three (33.7%) children who used antidepressant medications also used another class of psychotropic medication.

The authors provide several suggestions to explain the dramatic increases observed in the use of all psychotropic medications by children. Increases in prescribed stimulant use, which is used almost exclusively in the treatment of ADHD, may reflect an increasing public acceptance of the medications. Additionally, revisions of the Diagnostic and Statistical Manual of Mental Disorders reduced the number of criteria needed for a diagnosis of ADHD from eight to six, which may have led to larger numbers of ADHD diagnoses. The authors suggest that the increase in prescription antidepressant use may be due to greater numbers of children and adolescents diagnosed with depression or that antidepressant medications are being used to treat conditions other than mood or anxiety disorders.

Although the findings of this study indicate that more children are receiving medication for mental health problems, the authors discuss the need to determine the appropriateness of these medications. Of particular importance is the finding that for the approximately one in six children in the United States without health insurance, use of prescribed psychotropic medications remained far below that of children with coverage. This finding highlights the fact that large numbers of uninsured children may have little access to psychopharmacological treatments.

finding that for the approximately one in six children in the United States without health insurance, use of prescribed psychotropic medications remained far below that of children with coverage. This finding highlights the fact that large numbers of uninsured children may have little access to psychopharmacological treatments.

Source: Vander Stoep, A., Weiss, N. S., McKnight, B., Beresford, S. A. A., & Cohen, P. (2002). Which measure of adolescent psychiatric disorder—diagnosis, number of symptoms, or adaptive functioning—best predicts adverse young adult outcomes? *Journal of Epidemiology and Community Health* 56: 56-65.

Key words: diagnosis, symptom, functioning, prediction, outcomes

This study, conducted on a random, representative sample of high school teens and their families, suggests that knowing youth functioning at school and home, or knowing the types of mental health symptoms that they are experiencing, may be more predictive of eventual school success and non-criminal activities than a mental health diagnosis. According to the authors, this is the only study to date that investigates the relative validity of *diagnosis*, *symptom count*, and *level of functioning* to predict adverse outcomes among teens. Although preliminary, the results of this study may lead to the development of a screening measure for emotional and behavioral problems among adolescents that is both cost-effective and simple to use. Such a measure could be used by schools and other community-based services.

Participating youth and their families were initially selected as part of a larger study initiated in 1975 when the children were between the ages of 1-10. The larger study (the CICS/YAICS) documented the developmental course of youth who were representative of the national population in socioeconomic status (SES), family structure, and urban/rural status. For the present study, these youth ($N = 181$) and their families were interviewed eight years later, when the youth had reached a median age of 16.7 years. During these interviews, mental health symptoms and levels of functioning were recorded, and a diagnosis was determined for *disruptive*, *anxiety*, *affective*, and *drug abuse* disorders and *any psychiatric diagnosis*. Teen levels of functioning were also ascertained at this time, and included questions about academic achievement, general sociability, self-esteem, interpersonal difficulties, resistance to maternal control, social competence, and participation in extracurricular activities.

In order to determine whether diagnosis, or symptom count, or level of functioning, could predict school failure and criminal involvement, the authors conducted numerous analyses on each indicator of mental health alone, and in relation to each other. Thus, 56% of teens were found to have a psychiatric disorder “based on either diagnosis, being in the upper 40th centile for symptom count, or being in the lower 40th centile for adaptive functioning” (p. 60). However, that figure fell to 15% when data were based on all three indicators.

When teens were about 18 years old, they and their families were reinterviewed to find out whether they had completed (or expected to complete) high school, and whether they had engaged in any criminal activities within the previous two years. With regard to school completion, teens were simply asked if they had completed, or were on target for completing school. Criminal involvement was measured in two ways: (a) teens and their families were asked whether they had ever been in trouble with the police, and these reports were compared with police records; (b) teens and their families were also asked about youth criminal involvement in general, and in cases where these reports conflicted, interviewers accepted any account of criminal activity reported by either teen or parent.

Twenty-two teens failed to complete secondary school. Regardless of the approach used to determine psychiatric disorder, adolescents with a disorder were more likely to fail secondary school than teens with no disorder. Importantly, the total number of symptoms provided the most sensitive measure for predicting school failure. Although psychiatric disorder was strongly related to school failure among youth who were in both upper

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and lower SES categories, youth in the lower SES stratum were less likely, overall, to complete school. An analysis of youth demographics (age, gender, SES) combined with the number of symptoms, was a stronger predictor of school failure than symptoms only or demographics only. Additionally, age, gender, and social class alone were better predictors of school completion than were diagnosis or functioning. In summary, the number of psychiatric symptoms and level of adaptive functioning were found to be “at least as informative as a psychiatric diagnosis” (p. 63) in predicting school completion, especially among youth in the lowest SES group.

Findings also revealed that 24 youth were involved in criminal activities (70% were assaults or property crimes). Disruptive symptoms combined with a disruptive disorder diagnosis provided the best ability to predict criminal involvement, and all three indicators combined showed that boys were more likely to engage in criminal behavior than girls. Disruptive symptoms and demographic characteristics also provided greater predictive validity when compared to disruptive symptoms alone or to demographics alone. In general, youth with disruptive, substance abuse, and depressive disorder diagnoses were at increased risk of criminal involvement, while having an anxiety disorder reduced that risk. The number of disruptive symptoms was found to be at least as informative in predicting criminal involvement as a disruptive disorder diagnosis, especially in boys.

Limitations of the study include its small size, and the fact that other scales which measure functionality (Child Global Assessment Scale and the Child and Adolescent Functional Assessment Scale) have been developed since the 1980s. Nonetheless this study suggests alternate ways of predicting outcome among youth that are less complicated than standard diagnostic procedures based on the DSM.

Source: Kendall, P.C., & Kessler, R. C. (2002). The Impact of Childhood Psychopathology Interventions on Subsequent Substance Abuse: Policy Implications, Comments, and Recommendations, *Journal of Consulting and Clinical Psychology*, 70(6), 1303-1306.

Key words: intervention, comorbidity, substance abuse, longitudinal research

This brief article, the concluding article in a special journal issue on the “Impact of Childhood Psychopathology Interventions on Subsequent Substance Abuse,” makes a strong case for the potential value that interventions for child and adolescent mental disorders have on subsequent substance abuse and other problems. The article follows upon four articles that deal with risks and outcomes in substance abuse research, adolescent substance use dependence and comorbidity, the evidence-based for treatment of internalizing disorders, and the evidence-base for treatment of externalizing disorders.

The authors first make the point that longitudinal research indicates that child and adolescent mental disorders are strong predictors of subsequent substance abuse disorders. In fact, they make the claim that, “policy simulations based on adult epidemiological survey data collected in a number of countries suggest that as much as 60% of adult substance abuse dependence might be prevented by early and effective treatment of child and adolescent mental disorders” (p. 1303).

The authors indicate that child and adolescent mental disorders, in addition to being predictive of subsequent substance abuse disorders, “are much more powerful predictors of a wide array of later adverse outcomes than virtually any other intervention target” (p. 1304). These adverse outcomes include diminished educational attainment, higher rates of teen childbearing, more marital instability, and more employment instability. Further, Kendall and Kessler make the point that early onset mental disorders are often more persistent and severe than later onset mental disorders.

The missing empirical connections, the authors indicate, is longitudinal research that shows clearly the consequences and costs of early onset child and adolescent mental disorders, and intervention research with long follow-up periods that show that interventions can have effects not only on the targeted problem but on other problems as well. Kendall and Kessler make a strong call for more research of these types. They note that interventions can have three types of effects: sudden, in which you immediately see an effect; spillover, in which effects are shown on problems in addition to or other than the one specifically targeted; and sleeper, in which the effects appear some period of time after the intervention has been completed.

Kendall and Kessler leave the researcher with a clear and strong challenge to conduct the type of research that can potentially support the case for the importance of a greater focus on interventions for child and adolescent mental disorder. They emphatically make the point that given such research, policy makers will be very interested in funding interventions since: (a) child and adolescent disorders appear to affect the subsequent onset of a number of serious problems that not only take an enormous human toll but also a great financial toll; (b) there are few other conditions that seem as closely related to so many negative outcomes; and (c) of those other problems (e.g., poverty and low parental education), it may be easier to effectively address child and adolescent disorders than any other.

Source: Achenbach, T. M., Dumenci, L., & Rescorla, L. A. (2002). Ten-year comparisons of problems and competencies for national samples of youth: Self, parent, and teacher reports. *Journal of Emotional and Behavioral Disorders*, 10(4), 194-203.

Achenbach, T. M., Dumenci, L., & Rescorla, L. A. (2003). Are American children's problems still getting worse? A 23-year comparison. *Journal of Abnormal Child Psychology*, 31(1), 1-11.

Key words: behavior problems, functioning, trends, service use

It is a commonly held belief that the emotional or behavioral problems of children are getting more severe. Two recent studies examined nationally representative samples of children to research this perception. Results indicate that levels of problems increased from 1976 to 1989 and then decreased from 1989 to 1999. Levels of competence decreased from 1976 to 1989 and increased from 1989 to 1999. Levels of problems and competence were at their worst in 1989 and although both levels improved in 1999, problem scores were still at a much higher level than they were in 1976.

In one study, (Achenbach, Dumenci, & Rescorla, 2003) three nationally representative samples were collected in 1976, 1989, and 1999. To maximize comparability across the 23 years from 1976 to 1999, the authors selected 670 (aged 7 –16) participants from each sample. Participants from the three samples were restricted to White and African American youth and were matched for gender, age, ethnicity, and socioeconomic status (SES).

Analyses of modified Child Behavior Checklist (CBCL) scores indicate increasing problems and decreasing competencies among youth from 1976 to 1989. However, these trends reversed from 1989 to 1999, with improvements shown in competencies and problems for the 1999 sample when compared with results from a decade earlier (see Figure 1). The 1989 sample obtained the lowest competence scores and the highest problem scores on the majority of scales of the three instruments when compared to scores from 1976 and 1999.

Approximately 20% of the 1999 national sample had CBCL Total Problem scores in the borderline or clinical range, which is similar to prevalence rates found in other studies. Significant demographic differences found across years included the following: a) males scored higher than females on several problem subscales, b) youth with upper SES had higher competence scores and lower problem scores than youth with lower SES, and c) White youth had higher competence scores than African American youth.

Mental health service use data were compared for the 1989 and 1999 samples. No significant differences in one-year prevalence rates for mental health services use were found between the two samples for either the entire national samples (13.2% in 1989 and 12.8% in 1999) or for children with deviant CBCL Total Problem scores (30.5% in 1989 and 26.6% in 1999). Importantly, only one-quarter of youth scoring in the borderline or clinical range of the CBCL received any mental health services in 1999.

In another study (Achenbach, Dumenci, & Rescorla, 2002), two nationally representative samples collected in 1989 and 1999 were compared. The youth in these two samples were from the same samples in the article previously discussed, but they represented a different subsection of youth. In this case, youth aged 11 to 18 were assessed via the Youth Self-Report (YSR), the Teacher's Report Form (TRF), and parent reports on the CBCL. For most of the analyses, the 1989 sample included 902 youth and the 1999 sample included 687 youth. All participants had complete CBCL, YRF, and TRF scores.

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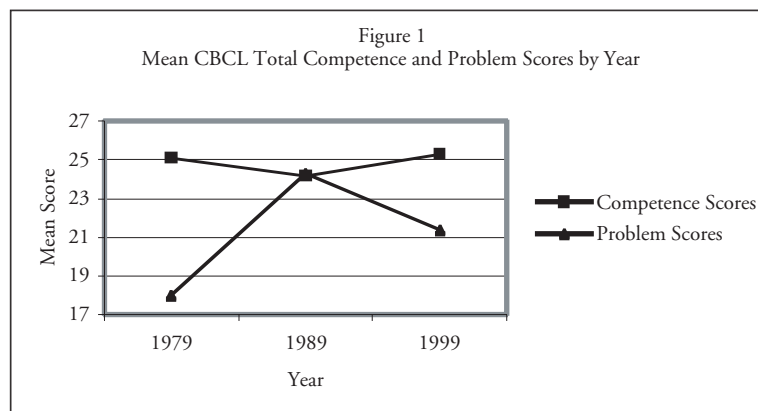
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The comparisons of 1989 to 1999 scores on all three instruments indicate small increases in competencies and adaptive functioning, accompanied by small decreases in problem scores. The declines in problem scores were parallel on all three forms. Youth reported the most problems, while teachers reported the fewest problems. In addition, the authors conducted a separate analysis on the scores of youth completed in the three months before and after the Columbine High School shootings in 1999 and found no differences in scores on any of the three instruments.

The authors suggest that the findings of these studies contradict public perception that behavior problems and functioning among young people are on the rise. Although parents, youth, and teachers identified fewer problems in 1999 than ten years previously, the authors point out that many youth in 1999 had high scores on the YSR, indicating numerous problems perceived by the youth themselves. The authors suggest that these improvements over time may be the result of enhanced childrearing conditions due to “better economic conditions, lower unemployment, and less crime during the 1990s than the 1980s” (p. 10). Future studies should continue to track these changes over time to determine the stability of the encouraging improvements seen over the last decade.



Source: Rosenblatt, A., & Rosenblatt, J. A. (2002). Assessing the effectiveness of care for youth with severe emotional disturbances: Is there agreement between popular outcome measures? *The Journal of Behavioral Health Services & Research*, 29(3), 259-273.

Key words: outcomes, functioning, impairment, symptoms, measures

Monitoring outcomes for youth with emotional or behavioral problems has become increasingly important for service providers who strive to improve youth services and comply with program accountability. However, outcomes measurement is a complex process that often includes determinations about a youth's symptoms and his or her ability to function in daily life. As Data Trends #25 shows, there are theoretical problems with the measurement of functioning; Canino et al. remark that "the area under the label 'functional impairment' is wide and poorly bounded" (p. 94), and they suggest that some measures may capture the construct of functioning in "real world" settings, while others may be more appropriate for research settings¹. The authors of the current article found that outcomes can vary to a considerable degree, depending upon the instrument used to measure symptomatology and functioning. Rosenblatt and Rosenblatt's findings "raise questions regarding translating measures from research settings to clinical environments and reconciling differences between outcomes measures" (p. 259).

According to Rosenblatt and Rosenblatt, some child-serving agencies are using measures of functioning to determine whether youth are improving, and others are measuring symptomatology. The Child and Adolescent Functional Assessment Scale (CAFAS), and the Child Behavior Checklist (CBCL) along with its related measure, the Youth Self-Report (YSR), are two measures currently used to assess youth outcomes. The authors correlated the different perspectives captured by the CAFAS, CBCL, and YSR (i.e., of the clinician, caregiver, or youth, respectively) to see how they are related. They found that relationships between these measures for clinical diagnosis and functioning were weaker in the current, real world study than they were under controlled studies reported in the literature. Furthermore, there was little agreement between scales on youth improvement.

Demographic data and clinical diagnoses were gleaned from county management information systems. The initial sample included 3,008 youth from six county-based system of care sites in California. Of this group, most youth (64%) were male, and the mean age at intake was 12.5 years. Over half of the youth were Anglo American (61%), and the second largest group was Latino (21%). The most common diagnosis was for mood and affective disorders (27%), followed by Attention Deficit Hyperactive Disorder (ADHD; 15%). Between 1994-1998 the CAFAS, CBCL, and YSR were administered at intake and at six-month intervals until discharge. For various reasons, follow-up sample sizes were reduced considerably, but demographic characteristics generally remained the same.

Correlations between the CAFAS Total score and the CBCL Total Problems score at intake were low to moderate (.220). The CAFAS Total score correlated more highly with the CBCL Externalizing scale (.226) than with the CBCL Internalizing scale (.163). The highest correlations were between the CBCL Externalizing scale and the CAFAS Role Performance and Behavior Toward Others scales (.327, .296 respectively); these CAFAS scales, including Moods/Emotions, also correlated highly with the CBCL Internalizing scale (.297). Although the correlation between the YSR and CAFAS Total Problems score was low (.238), the YSR Internalizing scale correlated more highly with the Moods/Emotions (.270) and Thinking (.127) subscales on the CAFAS than with any other CAFAS subscale.

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Outcome data for the CAFAS and CBCL were available for 844 youth, and YSR data were available for 406 youth (age 11 or over). Using the Reliable Change Index, the authors categorized outcomes according to: (a) positive change, (b) no change, or (c) negative change. In general, youth showed improvement on all three measures², and the CAFAS and CBCL agreed on the outcomes of 43% of the youth. The CAFAS was more likely to show improvement than the CBCL. When measured by the CAFAS, 49% of youth improved, compared to 35.1% on the CBCL, and 23% on the YSR. The CAFAS found that 12% of youth got worse, and the CBCL showed 13.7%. Thirty-nine percent of youth were identified by the CAFAS and 51.2% by the CBCL as making no change. Finally, the CBCL and YSR agreed on the outcomes of youth almost half (47%) of the time. The CAFAS and CBCL tended to indicate more positive change than did the YSR.

The authors note that numerous studies have been conducted on the interrelationships between the CAFAS and the CBCL, but that they were conducted under controlled settings. In the current study, youth, clinicians, and caregivers were interviewed in real world settings, and as a result, their findings may be related to administrative and other differences between raters at the everyday level. Yet the goal of this research was to “bridge the gap between efficacy and effectiveness research,” (p. 261), and the finding that these scales show less correlation in the real world than at the level of the laboratory has numerous research implications. These results raise important questions about the use and interpretation of data, and may create problems for service delivery providers, administrators, and policy makers due to the lack of agreement on outcomes. For example, “the proportion of youth who show improvement could range from 20% (agreement of positive change on both CBCL and CAFAS) to 66% (positive change on either the CAFAS or CBCL)” (p. 270). This degree of discrepancy can have “serious operational and policy consequences for a care system” (p. 270).

Notes

¹ Canino et al. discuss the CAFAS and CBCL in this literature review and, with regard to measuring functional impairment, each are shown to have both strengths and weaknesses.

² The authors note that a future article will provide more detailed information on the outcomes of these youth.

References

[Data Trends #25] Canino, G., Costello, J. E., & Angold, A. (1999). Assessing functional impairment and social adaptation for child mental health services research: A review of measures. *Mental Health Services Research* 1(2), 93-108.

Source: Taussig, H. N. (2002). Risk behaviors in maltreated youth placed in foster care: A longitudinal study of protective and vulnerability factors. *Child Abuse & Neglect*, 26, 1179-1199.

Key words: risk factors, foster care, social support, self-perception, CBCL

This longitudinal study of youth in foster care demonstrates that youth who are likely to engage in high risk behaviors can be identified shortly after coming into care, and that the likelihood of engaging in such behavior is related not only to problems but to the presence or absence of important social supports.

All youth recruited for the study ($N = 214$) were from a shelter in Southern California. At the time of the initial interviews (Time 1), youth had been in foster care for at least five months, were new referrals to the child welfare system (between 5/90-10/91), were legal dependents of the court as a result of maltreatment, and were between the ages of 7-12. Approximately six months after placement in foster care, Time 1 interviews began. Foster caretakers completed the Child Behavior Checklist (CBCL) concerning any behavioral problems the youth exhibited. Using a range of instruments, youth were also interviewed at this time about psychosocial predictor variables that reflected youths' *cognitive functioning, adaptive behavioral functioning, social support, and self-perception*.

Approximately five years later (Time 2), 51% of the initial group ($N = 110$) were interviewed about risk behaviors they had engaged in during the previous year. Of this group, 60% were female, 44% were Caucasian, 36% were African American, and 20% were Hispanic. The average age of these youth was 15 years. Over half (58%) had been placed in foster care as a result of substantial neglect, 22% were victims of physical abuse, and 16% had been sexually abused (some maltreatment categories were omitted from the study due to their overlap or small size). Interviews were conducted with youth only, and analyses identified risk behaviors in four domains: *delinquency, self-destructive, substance use, and sexual risk* behaviors. A total score for all four domains, and frequency of behaviors within each domain, were used to determine level risk behaviors.

Analysis of demographic behaviors and psychosocial aspects of the youth's functioning over time revealed significant correlations between variables measured at Time 1 and Time 2. At the initial interviews, the CBCL Total score found that almost half (42%) of youth were above the clinical range. Time 2 interviews revealed that mental health problems previously measured by the CBCL were highly associated with delinquency, self-destructive, and sexual risk behaviors. Not surprisingly, analysis found that substance use and risky sexual behaviors were engaged in most often by older youth. Further, of the three racial/ethnic groups, Hispanics were the most likely to engage in self-destructive behaviors, and African Americans were the least likely to do so. Having been physically abused predicted more delinquent behaviors, and neglect predicted a higher rate of substance use. The measure for adaptive functioning indicated that the poorer adaptive skills a youth has, the more likely he or she is to engage in self-destructive behaviors.

Results from the two psychosocial predictor variables for social support and self-perception were especially salient. The Hartner Social Support Scale measures the child's perceived support from parents, classmates, teachers, and close friends. Youth who felt supported by their parents and teachers were less likely to engage in risky sexual behavior, and youth who perceived support among their classmates were less likely to hurt themselves intentionally or to think about suicide. Results from the Hartner Self-Perception Scale indicated that maltreated youth who perceived themselves to be socially popular were more likely to engage in substance use and risky sexual behaviors than youth who did not feel popular; the implications of this finding are discussed below.

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According to the author, the finding that African Americans are the least likely to engage in self-destructive behaviors was expected, but the finding that Hispanics are more likely to do so than Caucasians is not supported in the literature. The author also found that sexual abuse did not correlate with any of the four risk domains, and suggests that the low incidence of sexually abused youth in the current sample may explain this finding. Although this study has a number of limitations, it makes an important contribution to our knowledge through its longitudinal focus over a five year period, the diversity of the sample, and the inclusion of measures of social support as well as measures of problem behavior.

This study points to the complex nature of the development of risk behaviors among maltreated youth. For example, on the one hand youth who have been maltreated and have poor social skills may be rejected by their classmates, increasing their risk for further problem behaviors; on the other hand, youth who have been maltreated and who are socially popular may also be at heightened risk for additional problem behaviors if they associate with deviant peers. An important focus of interventions may need to be on strengthening positive social supports overall, and particularly trying to establish positive peer influences.

According to Taussig, this is the first study to measure psychosocial risk and protective factors in a foster care sample, and the study is exploratory insofar as there is “little precedence for building predictor models” (p.1184). Her findings indicate that “there are certain *markers*, including early behavior problems, low classmate support, and high school acceptance that likely play a part” in the development of a more comprehensive model for intervention and prevention programs (p. 1194). Finally, given that the caregivers in this study only knew the child they fostered for six months, the CBCL emerged in this study has having considerable “predictive power years later despite so many intervening factors” (p. 1192). Therefore, identifying and treating mental health problems of youth early, when these symptoms first occur, could possibly help to stem some of these long-term negative outcomes for youth in the foster care system.

Source: Teagle, S. (2002). Parental problem recognition and child mental health service use. *Mental Health Services Research*, 4(4), 257-266.

Farmer, E. M. Z., Burns, B. J., Phillips, S. W., Angold, A., & Costello, E. J. (2003). Pathways into and through mental health services for children and adolescents. *Psychiatric Services*, 54(1), 60-67.

Key words: problem perception, family impact, mental health services, service pathways, GSMS

This *Data Trends* summarizes two recent articles that make use of the same dataset from the ongoing Great Smoky Mountains Study (GSMS). The first article explores the ability of parents to recognize mental health problems in their children and asks about services sought for those children, while the second focuses on the kinds of services children use, along with their points of entry and pathways of use. Results of the first article suggest that parents with their own history of mental health needs are more likely than other parents to identify mental health problems in their children and to obtain specialty mental health services for them. The second study found a consistent pattern of service receipt among children, such that mental health services are most often received through the schools, followed by specialty mental health services. While both studies found that some children who are severely ill tend to receive services through specialty mental health providers, results of each study also suggest that greater attention needs to be paid toward identifying those children who need specialty mental health services but have not yet received them.

Demographics reported for both studies list a sample of 1,420 youth and their families, and show that over half (51%) were boys, 89% were Caucasian, 7% were African American, and 4% were American Indian. Data and analyses differed among studies. For example, Teagle used data from four annual interviews, while Farmer et al. used data collected over the same time period, but on a quarterly basis. Furthermore, Teagle collected data with the following three, primary interview instruments, whereas Farmer et al. made use of the first two instruments only: 1) the Child and Adolescent Psychiatric Assessment (CAPA); 2) the Child and Adolescent Services Assessment (CASA); and 3) the Child and Adolescent Impact Assessment (CAIA).

For the first study, parents were interviewed about any mental health *problems* the child might be experiencing or need help with, along with any (non-financial) *impacts* those problems might be having on the family. Teagle reports that 39% of parents of a child having one or more diagnoses perceived their child to have mental health problems, and 32% felt that those problems impacted the family. According to Teagle, parents of younger children were likely to perceive *problems* in their children, whereas parents of older children were likely to report *impacts*, suggesting a close association between problem perception and impact recognition. Results also showed a high correlation between parents' ability to recognize problems and impacts and the severity of those problems (when measured structurally). Thus, parents were more sensitive to externalizing mental health problems than internalizing ones.

Parents in the Teagle study were also asked about any types of mental health services received in the schools, through specialty mental health services, or in general medical settings. Parents who identified problems in their children and who had their own history of mental illness were the most likely of all parents to seek specialty mental health services for their children. Among all parents who perceived problems, 17.8% found services for their children through the schools, followed by specialty mental health services (16.5%), and the general medical sector (6.8%).

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Results of the second study shed additional light on the patterns of service receipt among this group of 1,420 children. Whether data were arranged by use in any given year, over the course of the study, or over a lifetime (defined as birth to age 16), the finding that schools provided services more often than any other setting, followed by specialty mental health service use, was consistent. Over a three-year period, 33.6% of all youth received services, and of this group 24.1% received them through the schools, followed by specialty mental health services (14.2%). In general, schools were the most common point of entry among all youth receiving services, and once a child found services through the schools, he or she was the least likely to receive subsequent services elsewhere. However, a small group (about 25%) of all youth who entered services through the schools also received services from the specialty mental health and general medical sectors; of this group, 58% sought care through the specialty mental health sector.

In contrast to the fairly simple and consistent service patterns reflected among youth who first entered services through the schools, youth who first entered through specialty services showed more complex pathways to care. The specialty mental health sector was the most likely service sector to offer access to other sectors, and “was a common subsequent provider for youths who initially entered services through other sectors” (p. 65). Sixty-two percent of youth entering through specialty mental health services received services from other agencies; of this group, almost 56% received services from the schools, and 30% received services from the general medical sector. Youth who first received services through the general medical sector were often recipients of additional services in either the schools or specialty mental health. With regard to severity of illness, youth who found services in the schools were not likely to have both a diagnosis and functional impairment, whereas youth who received services in the specialty mental health sector were the most likely to have both, and therefore to have a serious mental illness.

In conclusion, these studies help children’s mental health services researchers and policymakers identify areas where education and collaboration are needed. Teagle’s finding that over half of parents (60.9%) of children with one or more diagnoses did not perceive problems, suggests that parent and caregiver education programs may help identify children who need specialty mental health services. Because parental factors (e.g., problem perception and parent history of psychopathology) are strongly related to determining whether children receive specialty mental health services, Teagle suggests that universal screening programs in general medical settings and schools should complement parent education programs. The study by Farmer et al. provides a “generally encouraging picture of triage” (p. 65) among the education, specialty mental health, and general medical service sectors. However, because schools are often the only place where children receive treatment, the authors voice a concern that youth with severe mental illness who are being served through the schools may not be receiving the specialty mental health care that they require. Thus, increased interagency collaboration among each service sector may further identify youth who need specialty mental health services.

Source: Dorsey, S. & Forehand, R. (2003). The relation of social capital to child psychosocial adjustment difficulties: The role of positive parenting and neighborhood dangerousness. *Journal of Psychopathology and Behavioral Assessment*, 25(1), 11-23.

Key words: social capital, positive parenting, neighborhoods, internalizing, externalizing

The authors of this study hypothesized that social capital would have a direct influence on lowering the levels of adjustment problems among children living in dangerous neighborhoods. Exploring the relationships between social capital, positive parenting, and children's externalizing and internalizing behaviors, the authors found that social capital is related, although not directly, to children's adjustment problems through positive parenting and the creation of safe neighborhoods.

Social capital is defined as the ability of individuals to group together to implement goals and achieve tasks that would not be possible by one person only. A primary characteristic of social capital is its dynamic structure, "created by the formation of trust, sharing, and opportunities" (p. 12) among groups of individuals. In this study, social capital includes relationships among neighbors that provide both formal and informal supports. For example, formal supports may include the willingness of a neighbor to provide transportation in an emergency, whereas informal supports are less visible. Informal supports may include the degree to which neighbors collectively monitor and supervise each other's children, or a willingness among neighbors to work toward a common goal (e.g., neighborhood clean-up committees).

Subjects of the study were 130 African American mothers and one child per household, living in low-income neighborhoods in New Orleans. Eighty percent of mothers were single, and 42% had not completed high school. Mothers were an average age of 37, and children were an average age of 13. About half (51%) of youth were boys. A range of instruments to capture *social capital* asked about the mother's perceived support for work and parenting, the availability of that support, informal childcare supports, levels of social cohesion and trust among members of the neighborhood, as well as risks and dangers in the neighborhood. *Positive parenting* skills were measured with the Interaction Behavior Questionnaire (IBQ), the Monitoring and Control Questionnaire (developed for this study), and the Laxness and Overreactivity subscales of the Parenting Scale; these instruments captured the quality of the mother-child relationship, the mother's ability to monitor her children's activities, and to enforce appropriate and consistent discipline. Finally, the Child Behavior Checklist (CBCL) measured child externalizing and internalizing *adjustment problems*.

Social capital was directly associated with positive parenting and with lower levels of neighborhood dangerousness, but was not directly related to fewer child adjustment problems. According to the authors, social capital appears to work *indirectly* toward reducing child adjustment problems, insofar as "mothers who have access to higher levels of social capital are more successful in their efforts to engage in positive parenting behaviors that, in turn, relate to lower levels of child psychosocial adjustment problems" (p. 20). Additionally, "social capital provides further benefits for children in that neighborhoods with high levels of this resource are typically less dangerous, thereby lessening the link between danger and child psychosocial adjustment problems" (p. 20). The authors also found that mothers of younger children exhibited more positive parenting skills than mothers of older children, and mothers having low incomes or less education had children with more adjustment problems than did other mothers.

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DATA TRENDS

Summaries of research on mental health services for children and adolescents and their families

No. 79 (continued)

Limitations to this study include the fact that all respondents were mothers, and that the children in this sample did not have severe emotional and behavioral problems (as measured by the CBCL). Regardless of these limitations, the study contributes to an understanding of the indirect role that social capital may play in mitigating child adjustment problems. The authors call for the development of programs that build social capital in dangerous neighborhoods, because “projects that contribute to our knowledge of how social capital can be developed in neighborhoods may lead to viable prevention and intervention programs for children at risk for psychosocial adjustment problems” (p. 21). For more information on the role that family and peers may play in reducing the effects of dangerous neighborhoods on children’s mental health, see *Data Trends* #28.

Source: Henggeler, S. W., Rowland, M. D., Halliday-Boykins, C., Sheidow, A. J., Ward, D. M., Randall, J., Pickrel, S. G., Cunningham, P. B., & Edwards, J. (2003). One-year follow-up of Multisystemic Therapy as an alternative to the hospitalization of youths in psychiatric crisis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(5), 543-551.

Key words: Multisystemic Therapy (MST), evidence-based, interventions, psychiatric symptoms

The same general intervention may be effective and evidence-based for one population of youth, but not effective with a different population. This is an overall conclusion of this article, which presents a one-year follow-up of multisystemic therapy (MST) as an alternative to psychiatric hospitalization for low-income youth in crisis. The results from the study, which involved random assignment of 160 youngsters either to psychiatric hospitalization and then treatment as usual, or MST, are that there were no major differences between the two groups 12 months after entry into treatment, although there were some differences in the trajectory of change.

The authors report that while four published randomized trials with youth with serious antisocial behavior have shown greater gains with MST than with comparison treatments, "this first MST study with a predominantly mental health population did not achieve such lasting treatment differences" (p. 549).

MST, as employed in this study, had already been adapted compared to its use with youth with anti-social behavior. The adaptations were the integration of additional clinical staff, the integration of evidence-based pharmacological interventions, and the planned and judicious use of out-of-home placements to promote safety or facilitate the attainment of treatment goals. In addition to these changes, the authors indicate that the findings suggest that for this population, "time-limited interventions will not often be adequate" (p. 550), given the chronicity and complexity of the problems. The average length of MST treatment in this study had been 127 days (92 hours of clinical service). The authors further indicate that other services (both more intensive and less intensive) may be needed to meet the ongoing mental health needs of this group of youngsters and their families.

On a positive note, measures of psychiatric symptoms showed a general decrease through the duration of the study. However, key measures of school and community functioning showed deterioration over time.

This is a very significant report, given the importance of MST to the field. The authors are to be commended for offering a direct, straight-forward conclusion indicating a difference in findings for this population of low-income and predominantly African-American (65%) youth who were in psychiatric crisis, compared to the findings for youth whose presenting problem is anti-social behavior. The findings are a reflection of the complexity of developing and implementing effective interventions for diverse populations, and also the complexity of the concept of "evidence-based."

The authors report that they have made, and will be making changes to the MST model in order to more effectively serve this population. This is a very positive example of the use of research findings to try to strengthen interventions.

Source: Lewczyk, C. M., Garland, A. F., Hurlburt, M. S., Gearity, J., & Hough, R. L. (2003). Comparing DISC-IV and clinician diagnosis among youths receiving public mental health services. *Journal of the American Academy of Adolescent Psychiatry*, 42(3), 349-356.

Key words: DSM-IV, DISC-IV, diagnosis, prevalence, agreement, mental health services

This study indicates that there is only modest agreement between diagnoses youth receive from community clinicians and those they receive from standardized diagnostic interviews. The current study found that the prevalence of diagnoses on the Diagnostic Interview Schedule for Children (Version IV) was significantly higher than clinician-based diagnoses for Attention Deficit Hyperactivity Disorder (ADHD), Disruptive Behavioral Disorders, and Anxiety Disorders. Conversely, clinician-assigned diagnoses for Mood Disorder were significantly higher than those endorsed by the DISC-IV.

Participants were a subset of youth ($N = 240$) ages 6-18 from the Patterns of Care (POC) study in San Diego County who were receiving services through the mental health service sector between 1996-1997, and whose mental health diagnoses were assessed with the DISC-IV. Over half of youth were male (61%) and Caucasian (52%), followed by Latino (23%), African American (16%), biracial (5%), and Asian/Pacific Island or Other (4%). Sixty percent of youth were active in at least one additional service sector (i.e., child welfare, juvenile justice, special education [SED], or alcohol/drug). Activity in service sectors was defined as having at least one treatment episode within the year, and youth averaged 1.3 ($SD = 1.2$) episodes per year.

Most participating clinicians were master's level counselors or social workers. Clinician diagnoses were gleaned from the county database, and were usually arrived at through a multidisciplinary team that included the child and a psychiatrist. Diagnoses for each treatment episode were made after consultation with the DSM-IV (substance abuse and developmental disorder diagnoses were not included in the analysis). In an effort to capture diagnoses based on having known the child for the longest period of time, the authors based their analysis on diagnoses made at discharge.

Table 1. Prevalence of DISC-IV and Clinician Diagnoses				
Diagnostic Category	DISC-IV		Clinician	
	<i>n</i>	%	<i>n</i>	%
ADHD 112		46.7	56	23.3
Any DBD	158	65.8	63	26.3
Any Mood Disorder	26	12.6	81	39.1
Any Anxiety Disorder	45	18.8	11	4.6

Selected modules of the DISC-IV (i.e., anxiety, mood, and disruptive) were administered to youth between the ages of 11-18, and to parents of youth ages 6-10. In addition, the disruptive module was administered to parents of youth ages 11-18. A diagnosis was deemed present if the parent or youth report reflected diagnostic criteria as measured by the DISC-IV,

and if functional impairment was endorsed. Mental health diagnoses generated by either the DISC-IV or clinician assessment were broadly classified as ADHD, Disruptive Behavioral Disorders, Mood Disorder, or Anxiety Disorder. The Child Behavior Checklist (CBCL) was also used to assess youth externalizing and internalizing problems (clinicians did not have access to these data). The average length of time between a youth's last clinic appointment and a DISC-IV assessment was 168.2 days ($SD = 105.1$).

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As shown in Table 1, there was poor overall agreement between diagnoses endorsed by the DISC-IV and clinician assignment. When youth were assessed with the DISC-IV, 77% met criteria for a mental health diagnosis, and 50% of those youth had more than one diagnosis. Twenty-eight percent of all diagnoses assigned by clinicians were not endorsed by the DISC-IV (e.g., adjustment, impulse control, psychotic, learning, somatoform and elimination disorders, etc.), and clinicians assigned multiple diagnoses for 28% of all youth.

Although the length of time between clinician-assigned diagnoses and a DISC-IV endorsement was lengthy, the authors found no significant relationship between time interval and diagnostic agreement. However, one possible explanation for the poor agreement between clinician assessment and DISC-IV endorsement may be related to the fact that clinicians had to assign a diagnosis in order to be reimbursed for services. It is possible that the frequency of Mood Disorder and Not Otherwise Specified (NOS) diagnoses may be related to this requirement, particularly if clinicians perceived them to be less “pejorative” than other diagnoses (p. 355). According to the authors, a major limitation of the study concerns the lack of a “gold standard” (p. 355) against which DISC-IV endorsed or clinician-assigned diagnoses can be compared. That is, the study does not provide insight into which of the two diagnostic methods are most valid.

Of studies that have examined agreement between structured interviews and clinician assessment, this is the first to use the most current version of the DSM to assign diagnoses, and is also the first study with “sufficient statistical power to examine predictors of agreement between structured interviews and clinician diagnoses” (p. 355). Because clinician-assigned diagnoses influence subsequent treatment and interventions, it is important to understand how clinicians assign diagnoses. Yet some clinicians may be ambivalent about the utility of data gleaned from standardized instruments. Thus, the authors suggest that researchers need to find ways to increase clinician support of such instruments. Furthermore, because clinicians may have much to contribute toward improving instruments used in the clinical setting, more instrumentation research that incorporates their insights and judgments into standardized measurements should be conducted.

Source: Armstrong, K. H., Dedrick, R. F., & Greenbaum, P. E. (2003). Factors associated with community adjustment of young adults with serious emotional disturbance: A longitudinal analysis. *Journal of Emotional and Behavioral Disorders*, 11(2), 66-76.

Keywords: functional impairment, transition, community adjustment, VBS, CBCL, WRAT-2, NACTS

Results of this study suggest that measures of functional impairment for older youth with serious emotional disturbances (SED) are the most powerful predictors of a successful transition into young adulthood. Thus, programs that develop functional skills in adolescents should be included in treatment interventions for troubled youth.

The authors analyzed data from a subset of youth ($N = 292$) studied by the National Adolescent and Child Treatment Study (NACTS), a seven-year longitudinal study of youth with SED and their families that collected data annually. Participating youth were at least 12 years old at the beginning of the study, and youth were an average age of 20.86 years ($SD = 1.61$) at the end of the study. Most youth were male (77%), and Caucasian (75%), followed by African American (15%), Hispanic (7%), and other (4%). At entry, 54% of youth were receiving services through the schools, while others received treatment through residential or inpatient mental health programs.

The authors sought to identify: (1) levels of community adjustment (i.e., how well youth adjusted to the changes required of them as they passed into young adulthood, including work, school, family and friends); (2) the level of both strength- and deficit-based behaviors at the beginning of the study compared to levels of these behaviors at the end of the study; and (3) the relationship between community adjustment and initial levels of strength- and deficit-based behaviors as well as their levels at the end of the study. The authors created the Index of Community Adjustment (ICA), which incorporated information measuring the youths' educational, employment, and residential status, along with parent reports and youth self-reports of satisfaction with regard to school, employment, living situation, and emotions. Other measures included the Vineland Adaptive Behavior Scales (VBS), the Child Behavior Checklist (CBCL/4-18), and the WRAT-R (which was used to measure arithmetic skills).

Overall, youth had poor outcomes as they transitioned into young adulthood. For example, slightly more than 50% had no high school diploma or GED equivalent by the end of the study, and less than half were unemployed (42%) or living on their own or with a significant other (40%). On average, youth reported moderate levels of satisfaction with school, work, and living situation and, in contrast, parents reported significantly lower levels of satisfaction. Compared to Caucasian youth, African Americans had poorer outcomes with regard to employment and living situation. However, "the change in adaptive behavior was the strongest predictor" (p. 74) of positive outcomes for the young adults in this study. Furthermore, youth who entered the study with higher adaptive scores showed more positive outcomes, and improvements overtime in adaptive behavior were significantly correlated with reductions in problem behaviors at the end of the study. Youth receiving services in community-based school programs at entry also evidenced more positive outcomes when compared to youth in residential or inpatient settings.

These findings suggest that interventions should develop youths' functioning skills for building positive relationships in home, work, and community settings—and thus prepare adolescents with SED for the challenges that await them as they transition into young adult hood.

Source: Kataoka, S. A., Stein, B. D., Jaycox, L. H., Wong, M., Escudero, P., Tu, W., Zaragoza, C., & Fink, A. (2003). A school-based mental health program for traumatized Latino immigrant children. *Journal of the Academy of Child and Adolescent Psychiatry*, 42(3), 311-318.

Key words: PTSD, depression, cognitive-behavioral intervention, school-based, immigrant children

Results of this school-based intervention program demonstrated modest improvements in symptoms of Post Traumatic Stress Disorder (PTSD) and depression among immigrant Latino children exposed to violence. The authors administered the Cognitive-Behavioral Intervention for Trauma in Schools (CBITS) to students attending nine schools in the Los Angeles Unified School District. The CBITS was designed for inner-city schools serving multicultural populations and was modified for this study to address the needs of traumatized, immigrant children. The intervention consisted of four small group sessions and four individual sessions administered over an eight-week period by school clinicians. The sessions included age appropriate relaxation training, social problem solving, and writing and drawing exercises. Parents and teachers were also provided psychosocial education to complement the intervention.

Students eligible for the study were: Spanish-speaking; in grades three through eight; had immigrated to the United States within the last three years; and were screened for exposure to violence and symptoms of PTSD and/or depression. Of students who were available for both baseline and three-month follow up interviews ($N = 198$), most were assigned to receive the intervention immediately ($n = 152$), and some were placed on a comparison waitlist ($n = 46$). Parents of children on the waitlist were given referrals to local mental health agencies. Most children were from Mexico, followed by El Salvador, "other" Latin American countries, and Guatemala. Exposure to weapons-related violence was common, with 66% of children reporting exposure to violent events involving a knife or a gun. On average, children reported exposure to a high frequency of multiple violent events, many of which occurred before they came to the U.S. (p. 314).

	Baseline (SD)	Follow up (SD)
CPSS - Intervention	18.8 (7.7)	13.0 (7.6)*
CPSS - Waitlist	18.1 (8.0)	15.7 (13.2)
CDI - Intervention	16.3 (6.9)	13.5 (7.5)*
CDI - Waitlist	16.3 (7.7)	16.2 (9/9)

* significant change from baseline to follow up, $p < .001$

Measures used to screen students and to follow up on the effects of the intervention included: (a) the Life Events Scale, which measures the frequency of violent acts (e.g., threats, slapping, hitting, punching, beatings, knife attacks and shootings) that were either directed toward the youth or directly witnessed (i.e., not through the media) by the child over the past year and lifetime;

(b) the Child PTSD Symptom Scale (CPSS), for which a cutoff score of 11 indicates moderate levels of symptomatology, and (c) the Children's Depression Inventory (CDI), for which a cutoff score of 18 indicates significant levels of depression.

As shown in Table 1, there was a modest reduction in symptoms of PTSD and depression, although, on average, these follow up scores remained within the clinical range. While more research is needed to determine whether a longer treatment period would result in fewer symptoms, this study provides an example of how school-based interventions for traumatized children can be developed and implemented in schools. Furthermore, the literature suggest that Latino children have greater unmet mental health needs than Caucasian and African-American children (see *Data Trends* #66), and some perceived barriers to care may be culturally based. It is noteworthy, for example, that in the current study few parents of children on the waitlist made use of the mental health agencies they had been referred to. Because Latino parents anecdotally reported less stigma associated with the school-based intervention, results of this study may have important implications for meeting the mental health needs of some Latino children.

Source: Glisson, C. (2002). The organizational context of children's mental health services. *Clinical Child and Family Psychology Review*, 5(4), 233-253.

Key words: implementation, dissemination, management, children's mental health services, ARC Initiative

This article discusses an organizational approach from the world of business and industry that may help mental health services workers implement new treatment interventions by building bridges among service providers, administrators, and community leaders. The Availability Responsiveness and Continuity (ARC) intervention was developed from the organizational research literature and adapted to meet the goals of mental health services agencies to implement evidence-based practices among different service sectors. The ARC includes a 200-page manual, *The ARC Initiative*, and there is empirical evidence of its success in reducing high casemanagement turnover rates by 41% in the juvenile justice and child welfare sectors, and for improving the quality of services in these sectors.

The ARC intervention utilizes the skills of *change agents*, who work with treatment teams and administrators within the service sector to facilitate the development of a positive work environment for all employees. Change agents also develop meaningful relationships between multiple service sectors and with community leaders (i.e., judges, school administrators, ministers, child advocates, and other stakeholders) to assist in the successful dissemination and implementation of evidence-based practices. The ARC initiative is designed to address problems in the work environment, such as interpersonal conflict, inter-group competition, turf wars, and resistance to change, and to reduce conflicts between the service organization and community leaders. Because these and similar problems "prevent innovation or subvert the implementation of new treatment technologies" (p. 248), the program includes 10 components that address these problems. The components are briefly described below.

- ✓ *Participatory decision-making* includes mental health service providers and community leaders in the administrative decision-making process, especially when these decisions affect the way services are structured and provided.
- ✓ *Team building* involves community leader advisory groups and direct service providers who work with change agents to solve problems that impede service delivery.
- ✓ *Continuous quality improvement* is made possible through the input of community and service provider teams, and through the collection and interpretation of data that help identify problems, recommend policy changes, and monitor progress.
- ✓ *Job redesign* efforts further eliminate barriers to service delivery that result from specific job characteristics (e.g., restrictions on scope of work, needed skills to perform job, etc.). These efforts include input from service providers about what they believe will enhance their ability to provide services.
- ✓ *Network development* is initiated by the change agent, and includes administrators, direct service providers, and community leaders who work with the change agent to identify problems in the community that interfere with the implementation of services and new treatment programs.
- ✓ *Feedback* about the effectiveness of services and barriers to care is a key factor in the ability of the change agent to troubleshoot problem areas and advocate for change; this feedback is collected from administrators, service providers, and community leaders.

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- ✓ *Information and assessment strategies* are made available to the community and to the service agency so that data may be used by each organization to monitor their progress toward making services available to children and their families.
- ✓ *Personal relationships* are the foundation of a successful intervention, and the change agent establishes these relationships with community leaders through sharing information and solving problems that arise during the implementation of services or new treatments.
- ✓ *Conflict resolution* may be necessary at the interpersonal, inter-group, and inter-organizational levels, and is made possible through the close relationships established by the change agent with administrators, service providers, and community leaders.
- ✓ *Self-regulation and stabilization* of an innovation or treatment plan is achieved through the application of the components discussed above, the provision of tools and training, and the incremental monitoring of the organizational intervention until administrators, service providers and community leaders adopt the roles initiated by the change agent (p. 249).

In conclusion, Glisson provides an exhaustive review of concepts and models from the organizational literature that sets the stage for a discussion of the ARC intervention. The concepts and principles discussed in this article may contribute to: (a) the openness of a service agency to adopt innovative and evidence-based treatments, (b) a close adherence to treatment protocols and strategies for service delivery, (c) therapeutic alliance between the service provider and client, and (d) continuity of services that are accessible and responsive to the mental health needs of children and their families (p. 250).

Source: Hodges, S., Hernandez, M., & Nesman, T. (2003). A developmental framework for collaboration in child-serving agencies. *Journal of Child and Family Studies*, 12(3), 291-305.

Key words: interagency collaboration, family participation, system of care, children's mental health services

Developing a strong interagency partnership must go hand-in-hand with the development of family participation; "these two processes must be fully developed and woven together to achieve the goal of true collaboration." (p. 302). The framework reported on in this study was developed from a series of interviews with administrators, directors, direct service staff, and family members from nine system-of-care sites known for effectively building interagency collaboration. Interviews ($N = 98$) were structured to assist the authors in answering the following five research questions: (a) What are the components of strong and effective collaboration? (b) What structural and relational factors contribute to increased collaboration? (c) How has increased collaboration changed service to children and families? (d) What supports and impediments have been experienced in building collaboration, and (e) Has collaboration changed the way stakeholders perceive children's mental health?

From these interviews, the authors devised a framework for interagency collaboration reflective of the respondents' experience and insights; the model includes five developmental stages briefly summarized here.

- (1) *Individual Action*. At this stage the need for collaboration is identified, but there are no structures in place to move forward into collaborative action. Thus, a crucial catalyst for moving to the next stage involves the recognition that some aspect or element of the system must be changed in order to do so. This stage "suggests the awareness of the potential for work relationships and activities to be different" (p. 298).
- (2) *One-on-One*. Often, early efforts toward collaboration begin with a single individual who makes contact with another individual in another agency. This stage may result in the formation of a core group of potential collaborators and leaders who take responsibility for moving the collaboration forward. The recognition that partnership is a possibility becomes the impetus that moves the core group toward the third developmental stage.
- (3) *New Service Development*. Key issues identified by participants at this stage include the willingness to take risks, to share risks with other collaborators, and to "shift away from agency-centered thinking...to a more child-centered approach to providing services" (p. 300). As the group begins to solidify its collective vision and to see their initial ideas become realities, the notion of a formal collaborative structure begins to develop, which leads to the next stage.
- (4) *Professional Collaboration*. At this stage, there may be group decision-making, guidelines, procedures, and available funding for collaborative service delivery. With each participant holding a common vision for the collaborative process, this stage would appear to signal the development of a fully collaborative entity. However, participants reported that the interagency relationships they experienced at this stage gave them the opportunity to view children and their families at a much more holistic level (i.e., through other service agencies, at different service levels, etc.) than they had previously done. This new understanding of children and their families introduces the possibility of a fifth stage, whereby the family is fully incorporated into the collaborative process.

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- (5) *True Collaboration*. Participants' discussions of family participation revealed a four-stage developmental process toward full collaboration (i.e., as client, guest, participant, and full partner). Additionally, the process by which one moves from an outsider to the service delivery process toward full collaboration may take place at the individual (child) and system (community) levels. Yet successful family involvement at one level may not guarantee success at another level. Overall, participants (some of whom were family members) also indicated that there are challenges involved in determining clear roles for the family member, and that the involvement process is one that is negotiated, or "occurs over time." (p. 301).

In summary, this framework for interagency collaboration improves upon previous models by emphasizing the developmental nature of collaborative efforts. Collaboration is a developmental process, although the evolution from one stage to the next may be "uneven in its progression" (p. 297). Thus, evaluations must take into account the stage to which the collaboration has evolved. Additionally, although often voluntarily initiated, collaborations must nonetheless include a system of formalized roles and responsibilities for administrators, directors, and direct service staff. Finally, unlike collaborations that provide family members with peripheral or short-term roles, respondents referred to "true" collaboration as one that includes parents as "full partners in service planning and delivery," and "incorporates qualities of role clarity for families and service providers, interdependence and shared responsibility among collaborating partners, vision-driven solutions, and a focus on the whole child" (p. 297).

Source: Yeh, M., McCabe, K., Hough, R., Dupuis, D., & Hazen, A. (2003). Racial/ethnic differences in parental endorsement of barriers to mental health services for youth. *Mental Health Services Research*, 5(2), 65-77.

Key Words: cultural competence, services, acculturation, self-report measures

This study found that parents with ethnic/minority backgrounds who are least acculturated into mainstream American culture tend to report *fewer* barriers to mental health care for their children than do acculturated parents—even though parents with ethnic/minority backgrounds also reported *more unmet need* for their children. This study examined unmet need and barriers to services reported by parents of African-American, Asian Pacific Islander (API) and Latino children, in comparison to responses provided by parents of Non-Hispanic White (NHW) children. Because results concerning barriers to services were unexpected, the authors speculate that differing cultural perspectives may have contributed to reluctance among some parents to report barriers.

Youth were selected from the larger Patterns of Care (POC) Survey, which involved a stratified sample of youth ages 6-17 who were receiving services in the San Diego area. (*Data Trends* #35 and #55 report, respectively, on the prevalence of disorders among youth in the POC sample, and on their referral patterns into various sectors of care). Youth in the current study ($N = 1,330$) were API ($n = 109$), African American ($n = 270$), Latino ($n = 372$), and NHW ($n = 587$). Youths' mean age was 14.25 years (SD 3.07), and 68% were male.

Table 1. Average number of barriers endorsed by race/ethnic group.		
Race/ethnic group	Average number of barriers endorsed (range 0 to 54).	
	Mean	(SD)
Non-Hispanic White	12.75	(11.00)
African American	10.92	(10.54)
Asian/ Pacific Islanders	8.64	(10.64)
Latino	10.00	(10.72)

Parents were asked about perceived barriers to service that fell into the following eight domains: (a) *Content of services* (e.g., whether services would be kept confidential); (b) *Helpfulness of services* (e.g., perceived effectiveness of services); (c) *Provider characteristics* (e.g., belief that the provider may not understand the family's cultural background); (d) *Effects of services* (e.g., fear of what friends or family might say); (e) *Economic/financial constraints* (e.g., perceived inability to afford services); (f) *Accessibility* (e.g., lack of knowledge about where to go for services); (g) *Language problems* (e.g., trouble filling out forms or talking with staff), and; (h) *Lack of Need* (e.g., belief that child's problems did not require mental health services).

African American, API, and Latino youth had significant unmet need when compared to NHW youth (48%, 72%, 47%, and 31%, respectively). However, parents of African American, API, and Latino youth reported significantly fewer barriers to care than did parents of NHW youth (Table 1). On average, African-American parents reported 11 barriers, APIs endorsed 9, Latinos endorsed 10, and NWH parents reported 13. Compared to NHW parents, African-American parents reported fewer economic and accessibility barriers, and API parents reported fewer barriers in five domains (i.e., Context, Helpfulness, Provider characteristics, Economic/financial, and Accessibility), while Latino parents reported fewer accessibility barriers. API and Latino parents reported greater Language barriers when compared to NHW parents. Additionally, no significant relationship was found between unmet mental health need and perceived barriers to care among all four groups.

According to the authors, a number of reasons may explain these findings. It is possible that parents who are least acculturated into American mainstream life may be immigrants who come from nations where

Continued...

DATA TRENDS

Summaries of research on mental health services for children and adolescents and their families

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mental health services are not readily accessible. In this study, 70% of API respondents and 59% of Latino respondents were not born in the United States. Thus, some immigrants may be *appreciative of any services* they receive here, in comparison to the services available in their home country. Also, *cultural stigma* regarding mental health services may account for parents' ambivalence to receive services to begin with, or to complain when services are not readily accessible. Additionally, *cultural values* may contribute to a general reluctance among some parents to criticize services received. For example, Mexican Americans place a high value on respect (*respeto*), and Asian Americans value resilience and "suffering in silence" (p. 74). (*Data Trends* #30 and #68 also discuss cultural competency issues, and #69 reports on perceived barriers to care).

The authors suggest that future studies about barriers to services may benefit from the inclusion of a self-report measure that can detect cultural differences among ethnic/minority respondents. For example, API respondents may accurately report barriers that discourage use by their group, "even though they may appear to be underreporting barriers when compared to NHWs" (p. 75). Further, other measures should also be designed to study the correlation between perception and actual barriers reported by ethnic/minority groups. These measures should be devised from a perspective that stands "within" (p. 75) such cultures, rather than outside of them.

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Source: The Treatment for Adolescents with Depression Study Team. (2003). Treatment for Adolescents with Depression Study (TADS): Rationale, design, and methods. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(5), 531-542.

Keywords: adolescence, depression, treatment, cognitive-behavioral therapy, fluoxetine (Prozac), trial

Funded by the National Institute of Mental Health, the Treatment for Adolescents with Depression Study (TADS) is a multicenter, randomized, masked effectiveness trial designed to test the hypothesis that a combined treatment of cognitive-behavioral therapy (CBT) with the selective serotonin reuptake inhibitor (SSRI) fluoxetine (FLX), is superior to either psychotherapy or pharmacological therapy alone, in the treatment of Major Depressive Disorder (MDD) in adolescents (see text box). In this article, the TADS team outlines the design, rationale, and methodology of the trial.

A volunteer clinical sample of 432 youth ages 12-17 will be recruited from site clinics, primary care physicians, mental health providers, schools, juvenile justice facilities, and local media (this stage is expected to conclude by spring, 2003). In order to be eligible for the study, teens must have a DSM-IV diagnosis of MDD, and be antidepressant-free before the start of the study. Teens having other disorders (i.e., bipolar disorder, severe conduct disorder, pervasive developmental disorder, thought disorder, and substance abuse) are ineligible for the study because treatment may require additional or different interventions. Potential candidates for the study who decline to participate or who do not meet eligibility requirements will be offered clinically appropriate treatments outside the study.

Primary outcome measures include the Children's Depression Rating Scale-Revised, and the Clinical Global Impressions-Improvement scale. An independent evaluator will collect primary outcome data at baseline, 6, 12, 18, 24, 30, and 36 weeks. Quality assurance will include: (a) centralized training by the NIMH; (b) a "train the trainers" model whereby site managers monitor local fidelity; (c) mechanisms to provide prompt feedback; (d) teleconferencing; and (e) the extensive use of manuals (11 total). Procedures are also in place to meet clinical emergencies or contingencies that may arise during the course of the trial.

Selected teens will be randomized to receive, on an outpatient basis, one of the following four treatment options: (a) FLX, (b) CBT, (c) FLX and CBT combined (COMB), or (d) placebo (PBO). Stage I (acute) lasts for 12 weeks. During this stage, teens in the FLX group will receive a flexible-dosing schedule devised to achieve normalization (10-40 mg. maximum). Teens in the PBO group will be advised of their medication status at the end of Stage I, and appropriate follow-up efforts will be made, depending upon the teen's response to PBO. Teens receiving CBT will attend required skillbuilding sessions and optional sessions will also be available; this CBT intervention is modified to treat MDD, and includes parent and family sessions. During the first half of Stage I, the CBT intervention includes services such as education about depression and the TADS CBT approach (i.e., psychoeducation), goal setting, mood-monitoring and cognitive restruc-

Specific Aims of TADS

1. To compare the effectiveness of: (a) fluoxetine (FLX); (b) cognitive-behavioral therapy (CBT); (c) a combination of FLX and CBT (COMB), and; (d) placebo (PBO) for reducing Major Depressive Disorder (MDD) symptoms and patient disability over a period of 12 weeks.
2. To compare the effectiveness of the three active treatments (FLX, CBT, and COMB) over nine months of treatment.
3. To compare the acute time-action profiles (speed of response) of FLX, CBT, and COMB.
4. To compare recurrence rates, MDD-associated impairment, and use of mental health/medical services for FLX, CBT, and COMB during long-term maintenance treatment and during open follow-up.
5. To explore predictors of response to treatment, including, among others, characteristics of MDD at baseline, comorbid internalizing and externalizing symptoms, treatment expectations, and family psychopathology and functioning.
6. To examine the acceptability and cost-effectiveness of FLX, CBT, and COMB for the treatment of MDD in adolescents.

(pp. 533-534)

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turing; the latter six weeks focus on issues chosen by the therapist, teen, and parents to meet needs specific to the child and his or her family. Teens in the COMB group will receive both FLX and CBT and, “to allow for limited integration between medication management and CBT in Stages I and II” (p. 538), CBT and medication management will be functionally independent of each other. However, in cases where the teen does not respond as well as expected to the COMB treatment, the FLX clinician and CBT therapist will then consult with each other to evaluate the teen’s overall progress and jointly decide whether changes to the FLX dosing strategy are required.

Stage II (graduated maintenance) lasts for six weeks, and teens continue to receive treatment by the same clinician and/or therapist they saw during Stage I. Depending upon how well teens respond to the intervention, treatments may be leveled or increased. For example, teens who respond well to CBT will be given bi-weekly follow-up visits that are 30-50 minutes long, whereas those who respond only partially will have weekly, 50-60 minute visits. At this stage, teens receiving fluoxetine may have their medication increased to a maximum of 60 mg. Next, Stage III (consolidation) continues for 18 weeks. During this period, no downward adjustments of medication are made (unless there are medically adverse effects), and no new concepts are introduced into the CBT program. Stage IV includes open follow-up for 52 weeks. All teens receive follow-up assessments, including those in the PBO group.

According to the TADS research group, this study represents “the best compromise between the dictates of the RFP, ethical considerations, scientific rigor and credibility, stakeholder concerns, feasibility of implementation, and cost” (p. 535); they expect to publish their results at the conclusion of each stage. While this may be the case, there are several things that are important to note. First, in this traditional randomized design, families are provided no choice of treatment. This is inconsistent with the values expressed in the recently released President’s New Freedom Commission report, which calls for mental health care that “is consumer and family driven.” Given that “choice” alone has been found to be an evidence-based process, it also removes this possible contributor to success.

Second, although there is some flexibility in the CBT intervention, this is basically a study using highly standardized interventions. This is the case despite the fact that the authors report that both interventions – medication and CBT – alone are effective for 60% of the youth served with about half of those relapsing within a year. Given this limited success rate, one would anticipate potentially incorporating a more comprehensive, individualized intervention as part of the study rather than simply combining two highly standardized interventions, each of which has been found to have limited success over a one year period. Within an individualized intervention, medication or CBT could certainly be used if indicated and selected by the adolescent, parents, and treatment team. The traditional approach taken in this study is again inconsistent with the recommendations of the President’s Commission, which calls for “a personalized, highly individualized health management program.” This is particularly important given the high rate of co-occurring problems associated with depression. Nor is there any mention of building on strengths or tailoring interventions to meet the needs of diverse racial or ethnic groups.

In summary, this is a large and important study of a significant mental disorder affecting many adolescents. It has a strong research design from the perspective of internal validity but unfortunately fails to be consistent with recommendations from the President’s Commission, or with principles of strength-based, comprehensive, culturally competent individualized care. In many ways it is a reflection of the gap between the evidence-based care movement and the system of care/individualized care movement, a gap that is unnecessary from a conceptual and a practical standpoint, and a gap that is potentially harmful to efforts to improve care for children and their families.

Source: Compton, S. N., Burns, B. J., Egger, H. L., & Robertson, E. (2002). Review of the evidence base for treatment of childhood psychopathology: Internalizing disorders. *Journal of Counseling and Community Psychology*, 70(6), 1240-1266.

Farmer, E. Z. M., Compton, S. N., Burns, B. J., & Robertson, E. (2002). Review of the evidence base for treatment of childhood psychopathology: Externalizing disorders. *Journal of Counseling and Community Psychology*, 70(6), 1267-1302.

Key words: internalizing, externalizing, effective, efficacious, psychosocial, pharmacological, interventions

Initiated by the National Institute on Drug Abuse, these two literature reviews—one on internalizing disorders and the other on externalizing disorders—were conducted to identify interventions for the treatment of childhood psychiatric disorders that have the potential to reduce the risk of subsequent substance abuse among children and adolescents. Promising outcome studies that also make follow-up research possible (i.e., due to design, sample size, etc.) on whether child subjects developed substance abuse problems at a later age were also identified. Both Compton et al. and Farmer et al. include a detailed table of the studies reviewed, and each article provides a rich source of information for researchers and clinicians concerned with reducing mental health problems in children.

In general, selection criteria included: (a) a sample in which all or most children were 6-12 years old, (b) a controlled design (e.g., randomized assignment, quasi-experimental, or experimental and control group) and (c) publication between 1985-2001 (most articles were published in peer reviewed journals). Sample sizes of articles on internalizing disorders ranged from 6-69 subjects, and most studies of externalizing disorders were selected if they had a sample size of 30 or more. Application of these criteria resulted in reviews of 33 studies on Anxiety Disorders; 18 on Depression Disorders; 21 on Disruptive Disorders; and 28 articles on Attention Deficit Hyperactive Disorder.

Internalizing Disorders

Anxiety Disorders

A wealth of scientifically rigorous and methodologically strong studies on this disorder suggest that cognitive-behavioral interventions are the most promising psychosocial intervention type for anxiety disorders. In particular, “systematic and desensitization and contingency management techniques are well-established treatments for childhood phobias,” and the cognitive-behavioral therapies pioneered by Kendall, Barrett, and colleagues (which combined cognitive-behavioral techniques with a family management program) “are probably efficacious” for the treatment of a range of childhood anxiety disorders (p. 1258). Of those studies that evaluated the potential of cognitive-behavioral interventions to treat Post Traumatic Stress Disorder (PTSD) for childhood sexual abuse, findings were positive, but research on childhood PTSD is at an early stage and lacks the methodological rigor characterized by research on childhood anxiety disorders in general.

While the evidence base on psychosocial interventions for Obsessive Compulsive Disorder (OCD) is also lacking, there is strong empirical evidence-base for the effectiveness of psychopharmacological treatments for this disorder. Specifically, the Selective Serotonin Reuptake Inhibitors (SSRI), fluoxetine (Prozac), sertraline (Zoloft), and fluvoxamine (Luvox) have been established as effective treatments for OCD (p. 1258.) A study by the RUPP Anxiety Group found that fluvoxamine (Luvox) is efficacious for the short-term psychopharmacological treatment of childhood anxiety disorder, generalized anxiety disorder, and social phobia, but its long-term efficacy is yet to be determined.

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Depression

Some cognitive-behavioral interventions for the reduction of depressive symptoms were promising, but the majority of the studies reviewed involved non-referred samples; therefore, results cannot be generalized to (referred) children who are severely depressed. In general, however, depressed children appear to “respond similarly to most active interventions, including cognitive-behavioral, attention-placebo, and nonspecific supportive interventions” (p. 1242-43).

The benefits of psychopharmacological interventions for childhood depression were supported in one study of fluoxetine (Prozac), and this study included a one-year follow up. In keeping with previous studies, tricyclic antidepressants were further confirmed to be of “unlikely benefit, and should not be considered first-line medications for treatment of this disorder” (p. 1243).

Overall, the primary shortcomings of psychosocial and psychopharmacological studies for the treatment of childhood depression include: (a) the relatively small number of well-designed clinical trials, (b) the lack of sufficient follow up data, and (c) the fact that no study reviewed had undergone independent replication. Thus, in contrast to the rich and systematic body of research on childhood anxiety disorders, there is a dearth of research on childhood depression. Of the interventions reviewed, none met criteria for “efficacious” or “possibly efficacious” (p. 1243). Suggesting that research on childhood depression “is at an early stage” (p. 1242), the authors call for interventions that are geared toward improved functioning and involve clinic-referred children and their families.

Externalizing Disorders

Conduct Disorder (CD) and Oppositional Defiant Disorder (ODD)

The evidence base suggests that there are a variety of interventions that may have positive outcomes for children with CD or ODD. Encouraging findings included a variety of approaches, including parent training, clinic-based treatments, and community-based treatments. Among treatments provided in specialty mental health clinics (e.g., psychoanalysis, day treatment, problem-solving skills training, and cognitive-behavioral treatment), interventions that include the family and involve real-life practice situations were the most effective (psychoanalytic treatments were the least effective). What is “most encouraging” (p. 1270) about these relatively short-term clinic-based interventions is that they appear to produce long-term treatment gains.

According to the authors, “well-conducted research on true community-based interventions...has begun to appear only recently” (p. 1270). Some case management and wraparound interventions showed promise, but results were of marginal statistical significance. Further, the long-term benefit of prevention programs is not yet clear, but these interventions “appear to be an important component in the continuum of services” (p. 1271).

Very few studies of psychopharmacological interventions for disruptive disorders were found, and each had brief follow-up periods and small samples; treatment with carbamazepine (Epitol, Tegretol) was not successful. Although the literature on disruptive disorders is promising, the authors call for more research on interventions that are developmentally appropriate for this age group.

Attention Deficit Hyperactive Disorder (ADHD)

Because ADHD is a widely researched mental health problem among youth in the 6-12 year age range, the authors adjusted their selection criteria accordingly; a large net was cast to find studies on psychosocial interventions (e.g., allowing sample sizes of less than 30), and more stringent criteria were applied to pharmacological studies.

Source: Evans, M. E., Boothroyd, R. A., Armstrong, M. I., Greenbaum, P. E., Brown, E. C., & Kuppinger, A. D. (2003). An experimental study of the effectiveness of in-home crisis services for children and their families: Program outcomes. *Journal of Emotional and Behavioral Disorders*, 11(2), 92-102.

Key words: community-based, home-based crisis intervention, psychiatric emergency care

This article describes one of the few studies to examine, using a rigorous research design, the comparative effectiveness of three alternative approaches to in-home crisis services for children and their families. Results suggest that such children and adolescents can be treated successfully in their natural environment, and that some gains for both child and family can be maintained six months postdischarge.

Youth ($N = 238$) were between the ages of 5-17 years ($M = 12.3$; $SD = 3.6$), and had presented at one of two emergency rooms in the Bronx, New York, for a psychiatric crisis that would otherwise result in hospitalization. Half of the sample consisted of boys (53%), and most youth were either Hispanic (59%) or African American (34%), while some were Caucasian (6%), or of other ethnicity (2%). Overall, these youth exhibited considerable emotional and behavioral problems. For example, 53% met criteria for a serious emotional disturbance, 71% had at least one functional impairment, and 40% had two or more functional impairments. The most common presenting problems included suicidal ideation (57%), depression (55%), temper tantrums (45%), verbal aggression (41%), anxiety (34%), and destruction of property (32%). At the beginning of the study, all youth were living at home (with a natural, adoptive, or foster caregiver). Most homes (72%) were headed by a single parent with an average age of 38.5 years ($SD = 10$). Caregivers were often not employed (76.5%), and over half had less than a high school education and received some form of public assistance. After both youth and caregiver consented to receive services, youth were randomly assigned to one of three interventions, outlined below. Each intervention lasted between four to six weeks.

(1) The Home-based Crisis Intervention (HBCI) was the standard treatment model for this area of the Bronx, and included a counselor whose treatment goals were to resolve the immediate psychiatric crisis, teach caregivers communication and other relevant skills, improve family relationships, and to link the youth and family to needed services; (2) The Enhanced Home-based Crisis Intervention (HBCI+) provided all of the above HBCI services, and also included a bilingual family advocate who established parent support groups, provided individual parent support and advocacy, in-home and out-of-home respite care, and \$100 in flexible funding; (3) The Crisis Case Management (CCM) model included a counselor trained in crisis intervention who provided concrete services and links to needed services, along with in-home and out-of-home respite care and \$150 in flexible funding. Relative to the first two interventions, this treatment model was less expensive and therefore of interest to area policymakers.

Child and family outcome measurements were collected at enrollment, upon discharge, and again six months later. Primary measurements included the Piers-Harris Self-Concept Scale, the Family Adaptability and Cohesion Scales II, the Parent Self-Efficacy Scale, the authors' Inventory Of Social Supports and Behaviors, and the Child Behavior Checklist.

Upon discharge from the interventions, 83% of all youth were living in the community; of this percentage, 6% had moved into the home of a relative. With regard to specific interventions, 83% of HBCI youth, 86% of HBCI+ youth, and 78% of CCM youth were successfully maintained in their communities at discharge. At some point during the intervention, 5% of CCM youth, 10% of HBCI youth, and 10% of HBCI+ youth were hospitalized, a low rate for all groups. There were no significant differences across each intervention between youth who were living in the community at discharge.

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Youth in all programs made significant gains on some outcome measures. Between admission and discharge, significant gains were made by all groups in *self-concept* and CBCL *internalizing* scores, with CCM youth making significant gains relative to HBCI and HBCI+ youth. Youth in all groups continued to show positive gains in *self-concept* and CBCL *internalizing* scores at six months postdischarge. No significant gains were made by any group between admission and discharge on CBCL *externalizing* and *social competency* scores; however, significant gains for *externalizing behaviors* were revealed at six months postdischarge.

Family outcomes suggest similar results. From admission to discharge, all programs showed significant gains in *family adaptability* and *caregiver self-efficacy*; these gains were still evident six months later. During the intervention, HBCI and HBCI+ caregivers also made significant gains in *family cohesion*. Between admission and discharge, HCBI+ caretakers also reported improvements in *informal supports*. Because HBCI+ was an enhanced intervention that included a parent advocate and support groups, this finding was expected. However, at six months postdischarge, gains in *family cohesion* were not maintained by either HCBI or HCBI+ caretakers, and *informal supports* were not maintained by HCBI+ caretakers. Thus, the authors note that the enhanced model showed “limited success” (p. 100).

The authors report two major limitations to the study. First, a lack of funding inhibited the availability of staff and other resources, and precluded further follow-up studies. Second, this demonstration included youth and their caretakers who live in some of the “poorest, most violent” (p. 101) neighborhoods in the country, and results may not generalize to other communities. Yet, despite the living situation of the subjects in this study, “the majority of the families did experience gains in parental self-efficacy and adaptability” (p. 101). While results show that intensive, in-home interventions can keep these children in their natural environments, longer-term interventions, “booster doses” of key concepts and services, or transitional services after discharge, may further contribute to the long-term success of intensive, community-based crisis interventions.

Source: Clingempeel, W. G., & Henggeler, S. W. (2003). Aggressive juvenile offenders transitioning into emerging adulthood: Discriminating persistors and desistors. *American Journal of Orthopsychiatry*, 73(3), 310-323.

Key words: MST, juvenile justice, adolescence, young adulthood, resilience, serious crime

Why do some delinquent adolescents grow up to commit aggressive crimes in young adulthood while others do not? Are there risk and protective factors experienced during adolescence that differ between youth who grow up to *persist* in criminal behavior and those who *desist* from such behavior? Similarly, once adolescents reach young adulthood, what characteristics influence their decisions to either persist or desist in criminal activity? To answer these questions, the authors conducted a longitudinal study of 80 juvenile delinquents as they moved from late adolescence to early adulthood. Results of the current study suggest a relationship between highly aggressive crimes committed during adolescence and the persistence of aggressive behavior in young adulthood. Further, compared to young adults who had desisted from criminal activity, persistors reported lower quality relationships with peers and a higher number of lifetime psychiatric diagnoses and symptoms.

The sample in this study ($N = 80$) consisted of youth who were on probation with the Department of Juvenile Justice (DJJ) in Charleston, South Carolina. Youth ranged in age from 12-17, with a mean age of 15.2 years; 60 respondents were male, 41 were African American, and 39 were Caucasian. Youth were randomly assigned to six months of Multisystemic Therapy (MST; $n = 43$) or usual community services ($n = 37$) for the treatment of substance abuse or dependency problems; *Data Trends* #67 reports on the four-year outcomes of that intervention. The current study takes a look at the aggressive offenses committed by these individuals while adolescents and as young adults.

Self-report and/or DJJ records identified those youth who had committed one or more aggressive crimes (e.g., minor assault, felony assault, strong-armed robbery, domestic violence, assault and battery with intent to kill, sexual assault, etc.) during adolescence. Pre- and post- interviews with adolescents and their caretakers were conducted with a variety of instruments and verified with DJJ records. Interviews included questions about the youths' aggressive and property crimes, substance abuse, family and peer relationships, and social and academic competence. Pre-treatment interviews occurred at Time 1, and post-treatment interviews were conducted at the conclusion of the MST intervention, about six months later (Time 2). Follow up interviews occurred again six months after (Time 3), and annually for the next four years (Times 4, 5, 6, and 7). Interviews conducted at Times 5-7, when youth were emerging into young adulthood, also included questions about mental health diagnosis and symptoms, perceived interpersonal supports, occupational and social functioning and physical health. At the time of the last interview (Time 7), participants were an average age of 21.3 years.

Based on interviews conducted at Time 5, participants were classified as being either *persistors* ($n = 55$) or *desistors* ($n = 25$) in aggressive criminal activity. Desistors were defined according to the following criteria: (a) they did not report, nor were they charged with, any felony assaults, minor assaults, or strong-armed robberies between Time 5 and Time 7; and (b) when interviewed, they answered that they did not "get in many fights," or "physically attack people." Thus, desistors may have committed minor crimes, but had refrained from aggressive criminal behavior; 16 desistors committed no crimes, and nine reported minor property offenses. There were no significant differences between each group on outcome measures.

Compared to persistors, respondents who desisted from serious criminal activity reported fewer and less serious aggressive acts and fewer property crimes during young adulthood. In addition to desisting from serious criminal behavior, these subjects also reported more emotional bonding with peers, less aggressiveness

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with peers, more emotional support from significant others, higher quality relationships with friends, greater job satisfaction, and lower numbers of lifetime psychiatric diagnoses. "With few exceptions, these differences remained statistically significant after [controlling] for treatment condition" (p. 319) and demographic variables such as gender, race, parent's educational level, and number of children in the household.

Among those who continued to commit serious crimes, a correlation existed between the commission of more serious crimes during adolescence and the commission of serious offenses as young adults. Compared to desistors, this group also reported less perceived emotional support, lower job satisfaction, and higher numbers of lifetime psychiatric diagnoses and symptoms. Most persistors were African American (89%); in comparison to Caucasians, they reported significantly less emotional bonding with peers at adolescence and in young adulthood.

These results have substantial implications for treatment interventions for adolescents at-risk of serious criminal activity. Because the ability to create and sustain close emotional relationships may be an important protective factor in adolescence and a resiliency factor in young adulthood (see text box), the authors suggest that "interventions designed to promote relationship building skills with pro-social peers may be important components of treatment programs focusing on aggressive juveniles" (p. 320).

Two nonsignificant findings may support the authors' call for pro-social interventions. First, positive measures of mother-adolescent functioning and global family functioning did not mitigate young adult criminal behavior, suggesting that peer groups may be more influential than families in promoting or reducing young adult deviant behaviors. Second, academic and social competencies during adolescence were not related to a reduction of criminal behavior in young adulthood. According to the authors, this latter finding supports the work of Luthar and colleagues (2000). In contrast to middle class youth, for whom academic competence may be a protective factor, "greater academic competence among high-risk youth may result in peer rejection" (p. 320). Thus, pro-social skills may be especially important for high-risk youth who perform well academically. These points support the Surgeon General's (2001) promotion of "ecologically oriented treatments that target multiple dimensions of the youths' social ecology, including the promotion of positive peer relationships, as promising and effective treatments of youth aggression" (p. 320).

In conclusion, a strength of this longitudinal study includes its person-centered methodology, which offers information about the specific persons who persist or desist from aggressive behaviors over time. However, the design can also lead to "backward causation," whereby current behaviors (at young adulthood) are explained with reference to prior behaviors (at adolescence). Sensitive to this problem, the authors conducted a number of analyses to address this concern. Further, it should be kept in mind that this study focused on risk and protective factors affecting aggressive criminal behavior during youth and young adulthood, and not on the range and degree of emotional and behavioral problems among the sample or the effectiveness of the MST intervention. Therefore, scant discussion about the emotional or behavioral problems experienced by the sample appears in this article.

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Frequent aggressive interactions with peers may be incompatible with developing close emotional relationships and may predispose youngsters to future aggressive behavior.

In contrast, higher emotional bonding scores may reflect a capacity to mobilize emotional support from significant others, which, in turn, may inhibit future aggressive responses to provocations or stressful events. (p. 319)

Source: Whitemore, E., Ford, M., & Sack, W. H. (2003). Effectiveness of day treatment with proctor care for young children: A four-year follow-up. *Journal of Community Psychology*, 31(5), 459-468.

Key words: therapeutic foster care, proctor care, residential treatment centers, day treatment

Finding a stable, community-based placement for very young children who have experienced multiple forms of abuse can be difficult. Therapists often hesitate to place such children in residential treatment settings because of their young age. Yet these children often have severe emotional, behavioral, and developmental problems that make foster parenting difficult, and which may lead to multiple foster care placements. In this article, the authors evaluate the long-term outcomes of an alternative intervention to institutional and foster care placement, the Hand in Hand program in Portland, Oregon. Results suggest that gains made during treatment were maintained four years after completing the program and that these behavioral changes contributed to adoptions for a majority of children.

Children ($N = 129$) were between the ages of two and six years, with an average age of 50 months ($SD = 9.5$); 77 were boys, and 52 were girls. Table 1 reflects the race/ethnicity and abuse histories of these children. Nearly all children (96%) were from impoverished backgrounds, and 95% had parents who were chronic substance abusers. Most children (72%) were wards of the court. On average, all children had spent more than one-third of their lives in foster care and had experienced 2.8 foster care placements before admission into the program. Measures used at intake and discharge from the program included the Child Behavior Checklist (CBCL), the Teacher Report Form (TRF), the Battelle Developmental Inventory (BDI), the Peabody Picture Vocabulary and the Expressive One-Word Picture Vocabulary.

Table 1. Child Demographics at Admission ($N = 129$)	
Race/Ethnicity	
Caucasian	64%
African American	16%
Multi-racial	16%
Native American	2%
Asian American	1%
History of Abuse	
Physically Neglected	91%
Severe Molestation	80%
Multiple Forms of Abuse	72%
Physical Abuse	70%
Sexual Abuse	54%

The Hand in Hand program combines day treatment with proctor care (as needed). Day treatment includes special education, intensive case management, academic and developmental skill building, and individual family therapy. Proctor care is similar to therapeutic foster care. Proctor parents receive special training and work closely with the treatment teams to develop and implement treatment plans and to monitor the child's progress. However, there is an important difference between therapeutic foster and proctor care. In therapeutic foster care, the *home is the primary treatment setting* and day treatment programs reinforce the efforts of the therapeutic foster parent. In proctor care, the *day treatment program is the primary treatment setting*, and proctor parents reinforce the skills and behaviors taught in day treatment. Thus, children admitted into proctor care experience a "consistent nurturing environment" (p. 462) around the clock. Children who are in need of proctor care may be admitted into or released from such care at any time during the program. Sixty percent of all children ($n = 77$) received proctor care.

Ninety-nine children completed the day treatment program, with an average treatment length of 627 days; proctor care averaged 567 days. At discharge from the program, data showed significant improvements on the aggression subscale and externalizing scale of the CBCL, and on the attention subscale of the TRF. Developmental improvements were also significant, showing gains in the personal-social and adaptive subscales of the BDI. Language scores increased from the 25th percentile, at intake, to above average scores at discharge.

Four years after discharge from the program, 53 children and their current caretakers (41% of the original sample) were located for follow up interviews. There were no significant emotional and behavioral

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differences between children who completed the program and those who were unavailable for follow up. At follow up, positive gains made in school placements were maintained, with most children enrolled in regular school placements (75%); of this group, about half (53%) were in regular classrooms with special education. Some children (16%) were in regular classrooms with special education, and few (6%) were in self-contained special education classrooms. Adoptions increased from 2% at intake to 65% at four-year follow up. Very few children (8%) had been placed in residential settings.

In conclusion, the authors write: “day treatment and proctor care are powerful interventions alone, but the greatest positive effect occurs when these services are combined” (p. 460). However, because placements into day treatment and/or proctor care are not randomized, and because children may enter and exit proctor care as needed, quantitative research to support the above statement would be difficult to conduct. Additionally, the study design did not include a control group. Nonetheless, the authors also show that day treatment and proctor care are significantly less costly than residential treatment, and they call for more research on interventions that can help stabilize such young children and their families in the community.

Source: Sturm, R., Ringel, J. S., & Andreyeva, T. (2003). Geographic disparities in children's mental health care. *Pediatrics*, 112(4), 308-315.

Key words: NSAF, mental health use, mental health need, sociodemographics, policy

Results of this study suggest that disparities in children's mental health service use are more likely to be influenced by state policies and health care markets than by the socioeconomic or racial/ethnic characteristics of the population served.

The authors of this epidemiological study explored the rates of children's mental health service utilization by *use*, *need*, *unmet need*, and *need among users* in 13 states, along with a sample of youth from the remaining states ($N = 45, 247$). Data were from the 1997 and 1999 waves of the National Survey of America's Families (NSAF), and reflected service use and need among children ages 6-17. The NSAF database is large enough to investigate the role played by state of residence in addressing health care inequities among a nationally representative sample. Collectively, the 13 states (listed in Table 1) account for more than half of the U.S. population, and represent a variety of geographic locations, demographics, size, and political traditions.

Use of mental health services was affirmed for children who had received services for a mental health problem (but not for substance abuse or tobacco) from a mental health representative or medical doctor at least once, within the last 12 months. *Need for mental health services* within the last month were determined with six parent-reported, age-appropriate questions from the Child Behavior Checklist. *Unmet need*, defined as the percentage of children whose symptoms "warrant at least a psychological evaluation" (p. 310) but have not received any mental health services within the last 12 months, was calculated by combining the indicators of *use* and *need*. *Need among users* was identified when a child had received services at least three times within the last 12 months.

	No. Obs ¹	Use of Services	No. Visits by Users	Need	Unmet Need	Need Among Users
By State						
Alabama	2554	6.47*	9.02	8.26*	69.34	47.07*
California	2432	5.13**	11.68	6.34	80.57**	31.28
Colorado	3012	10.06**	14.92*	6.65	55.23**	32.13
Florida	2601	6.47*	12.27	8.09	73.73**	38.33
Massachusetts	3139	11.55**	15.71**	7.05	51.27**	31.78
Michigan	2799	7.65	11.85	7.14	66.67	40.43
Minnesota	3179	9.27**	13.51	7.50	54.83**	36.06
Mississippi	2424	6.58	14.19	9.43**	70.37	50.07*
New Jersey	3538	6.87	11.99	5.58**	62.17	30.34
New York	2852	8.07	13.56*	6.69	57.29*	40.96
Texas	2786	5.69**	10.14	7.92	76.39**	37.58
Washington	3153	7.97	10.89	5.92**	64.74	35.74
Wisconsin	5643	7.96	10.33	7.93*	64.53	40.14
Rest of U.S.	5135	8.05	10.18	7.09	59.67	37.52
By Race/Ethnicity						
Caucasian	31,240	7.77	11.34	6.09**	59.18**	35.66
African American	6371	8.44	10.22	10.59**	69.23	42.79
Hispanic	6022	5.29**	12.77	7.82	77.16*	38.83
Other	1614	6.19	7.72*	7.14	67.07	35.27
National average²		7.45	11.15	7.09	64.71	37.11
Sample size	45,247	45,247	3,777	45,247	3,470	2,642

¹ Observations; ² National averages derived by NSAF team through estimation weights. * Significantly different from National average at $p < .10$; ** Significantly different from National average at $p < .05$.

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Relative to the national average, there were large differences in service *use* across states (see Table 1). Yet analysis revealed that these discrepancies were not related to age, race/ethnicity, insurance status or family income. With regard to the *need* for services, large statistical differences emerged between rates of need for African American and Caucasian children; however, these differences became insignificant after adjusting for income, residence, and insurance status. Although the highest levels of need and severity of symptoms were found among lower income families, these characteristics were not related to race/ethnicity.

The fifth column in Table 1 presents rates of *unmet need*. Hispanic children had significantly higher rates of unmet need in comparison to the national average. This need was not related to income or racial/ethnic group. However, analysis of *need among users* showed a strong income effect with children of high-income families receiving services for less substantial symptoms than children from low-income families. The findings from this study suggest that some states may not be as adept as others in delivering services to children with severe mental health problems. (p. 313). The most surprising state-level finding concerned a comparison of the high rates of *need*, low rates of *service use*, and near-average rates of *unmet need* (relative to the national average) in Mississippi and Alabama; these states appear to be effectively targeting their limited resources toward “children who are more symptomatic than in other states” (p. 313).

Race/ethnicity and income do not appear to be related to whether families *use* services, although low-income families have more severe problems and higher *need* for services. Among racial/ethnic groups, Hispanic children are the least likely to receive services when compared to Caucasian children. Among all children, those from higher income families are more likely to receive services (on more than three occasions) for less symptomatic disturbances than children from low-income families. According to the authors, “the most disconcerting finding is that the differences in use across states are not paralleled by differences in need. Overall, there is no apparent relationship between levels of need and use of services across states” (p. 314). They conclude that the differences and disparities they have uncovered are “more likely to be a consequence of state policies and health care market characteristics” (p. 314), than sociodemographics. However, this finding may be “good news”...[because] “there is greater ability to alter state policies and market characteristics than population characteristics” (p. 314).

Source: Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry*, 60, 837-844.

Key words: GSMS, prevalence, comorbidity, early childhood, adolescence, gender differences

At any given time between the ages of 9 and 16, one child out of six will develop an emotional or behavioral disorder, with many of them developing comorbid disorders. These are some findings of the latest longitudinal research from the Great Smoky Mountains Study (GSMS). While children between the ages of 9 and 10 had the highest rates of any disorder overall, rates of prevalence dropped to their lowest levels by the age of 12, and then slowly rose again as children moved into adolescence. Significant gender differences were also found for the type and prevalence of disorders developed by these youth.

Data were collected from three cohorts of children ($N = 1420$) ages 9, 11, and 13 at intake. Data collection occurred for cohorts 1 and 2 at ages 9-10, and 11-13 respectively, and from all cohorts at ages 14-16, to total 6,675 completed observations (i.e., 84% of all possible observations). As reported in a previous GSMS study (see *Data Trends* 78), about half of these children were boys (51%), and most children were Caucasian (89%). In the current study, the authors investigated the prevalence of DSM-IV disorders at each wave, and whether that prevalence increased or decreased as children grew older. They identified developmental patterns among disorders, including comorbidity, and gender differences between disorders and their patterns of development. Two specific patterns were also studied: (a) *heterotypic* continuity, in which a child develops one or more additional disorders that differ in type from an earlier disorder; and (b) *homotypic* continuity, wherein a child develops similar disorders over time.

Evidence of disorders and accompanying impairment were measured with the Child and Adolescent Psychiatric Assessment (CAPA) and DSM-IV diagnostic guidelines. At each wave of data collection, children and parents reported psychiatric symptoms that had occurred within the previous three months.

Disorders typically associated with childhood (i.e., Attention Deficit Hyperactive Disorder [ADHD] separation anxiety disorder, enuresis, encopresis, and verbal and motor ticks) had "almost disappeared" (p. 839) by the age of 12. This drop in disorders was seen especially among boys. Prevalence of any disorder at 9-10 years also fell at age 12 for girls, but girls had fewer childhood disorders to begin with. However, after age 12, girl's rates of depression, social phobia, and Substance Use Disorders (SUDs) increased, whereas only the prevalence of SUDs increased for boys. Diagnosis of a Serious Emotional Disorder (SED) increased dramatically for both genders during the course of the study. For example, 20% of boys and 31% of girls had a diagnosis of SED at ages 9-10; among children with a mental health disorder, those rates had risen to 79% for boys, and 58% for girls by the age of 16. Of all children with a diagnosis, 25% had concurrent comorbidity. While comorbid levels of depression and Conduct Disorder (CD) were statistically significant among girls, comorbidity between SUDs and depression was significant for boys.

In general, all children having a psychiatric diagnosis were significantly three times more likely to develop a subsequent disorder when compared to children with no previous disorder. Although girls had fewer, less serious disorders than boys, they were significantly more likely than children without a diagnosis to develop subsequent disorders, whether homotypic or heterotypic. Compared to boys, developmental patterns among girls were more likely to be *heterotypic*; strong patterns of this type were found for girls between depression and the subsequent development of anxiety (and vice versa), between anxiety disorders or CD and SUDs, and between ADHD and ODD. Girls were also significantly more likely than boys to develop *homotypic* patterns for depression, generalized anxiety disorder, and social phobias.

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With regard to *heterotypic* patterns among boys, “there was no evidence that boys with an emotional disorder were at increased risk of developing behavioral disorders, or vice versa” (p. 843). Boys showed *homotypic* patterns in the development of encopresis only. No significant gender differences in homotypic patterns were found for SUDs, although boys evidenced a higher prevalence of SUDs overall.

Table 1 illustrates the predicted cumulative prevalence of disorders among previously unaffected children. As shown, boys had the highest rates of behavioral disorders and girls had the highest rates of emotional disorders. Of children who had not developed a disorder in childhood, 36.7% met criteria for one or more disorders by the age of 16.

In conclusion, these results are limited by the high percentage of Caucasian children in the sample, and by the rural area of the study. However, another study conducted by Angold and colleagues (2002) included a large percentage of mostly rural, African American children; they found rates of disorder among African American and Caucasian children that were similar to the current findings. An additional limitation concerns the fact that the CAPA is designed to assess symptoms within the previous three months only. It is therefore likely that the measure underestimated the cumulative prevalence of disorders. Given this awareness, however, “the degree of homotypic continuity is remarkable” (p. 843). Yet with regard to implications of the study, the high rates of homotypic continuity among girls, combined with the low prevalence of heterotypic patterns overall, may suggest that “the DSM-IV taxonomy [fits] boys’ developmental patterns better than girls” (p. 843). Although unmentioned by the authors, a further implication may be culled from the following two findings from this study: (a) childhood prevalence rates fell to 8.3% at age 12, after which adult impairment disorders (e.g., depression, panic disorders, SUDs, etc.) began to rise, and; (b) rates of SED increased between the ages of 12 and 16. Thus, although there is more work to be done on the antecedents of these disorders, researchers and policymakers may want to target preventative mental health interventions to children in the 12-year-old age group.

Diagnosis	Total	Girls	Boys
Any disorder	36.7 (2.7)	31.0 (2.3)	42.3 (3.1)
Any emotional disorder	15.0 (1.7)	17.1 (1.7)	13.0 (1.6)
Any anxiety disorder	9.9 (1.5)	12.1 (1.5)	7.7 (1.4)
Any depressive disorder	9.5 (1.1)	11.7 (1.2)	7.3 (1.0)
Any behavioral disorder	23.0 (1.7)	16.1 (1.2)	29.9 (2.2)
Conduct disorder	9.0 (1.2)	3.8 (.7)	14.1 (1.8)
Oppositional defiant disorder	11.3 (1.0)	9.1 (1.0)	13.4 (1.0)
ADHD	4.1 (.7)	1.1 (.2)	7.0 (1.1)
SUDs	12.2 (.6)	10.1 (.5)	14.3 (.7)

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Articles reviewed in *Data Trends* Summaries, by issue number:

Issues 1-16, summarized January – December, 1999

Issues 17-30, summarized January – December, 2000

Issues 31-48, summarized January – December, 2001

Issues 49-70, summarized January – December, 2002

Issues 71-93, summarized January – December, 2003

Each of these summaries can be accessed through Data Trends, at: <http://rtckids.fmhi.usf.edu>

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