

Chapter Eleven

**Special Topics in
Clinical Applications,
Interventions and
Professional Training**

Not All Managed Care Plans Are Created Equal: Differences in Mental Health Service Provision, Program Participation, and Outcomes among Medicaid Program Participants

**Sarah Hurley
Tim Goldsmith
George Lord**

Introduction

In the mid-1990s, common wisdom held that the need in mental health services was for service coordination—in short, a managed care system (Behar, Macbeth, & Holland, 1993; Bickman, 1996a; Bickman, 1996b; Foster, Saunders, & Summerfelt, 1996; Heflinger, 1996; Layne, 1994; and Morrissey, Johnsen, & Calloway, 1997). It was widely thought that a managed care approach would not only be cost-effective (Behar et al., 1993; Bickman, 1996b; and Foster et al., 1996) but that treatment outcome would improve as well (Axelson, 1997; Heflinger, 1996; Layne, 1994). With the publication of the findings from the Fort Bragg Child and Adolescent Mental Health Demonstration (CAMHD; Bickman, et al., 1995), the usefulness of the managed care model was questioned, specifically arguing that the model was no more effective than a fragmented model (Bickman et al., 1995).

The effects of funding source on program participation (both length of stay and program mix) and outcome also have been extensively discussed in the literature (Beck, Meadowcroft, & Mason, 1998; Behar et al., 1993; Heflinger & Northrup, 2000). Funding source often dictates programming available to recipients, the maximum allowed length of stay in the programs, and the setting in which the programs are delivered (Pandiani, Banks, & Gauvin, 1997). Program mix, length of stay and setting, in turn, have a profound impact on client outcome, as well as on client status at follow-up (Heflinger & Northrup, 2000; Pandiani et al., 1997).

In this summary, we compare and contrast three managed care models (in States A, B, and C) implemented by a single service provider with funding from different state Medicaid programs. This study makes a unique contribution by comparing these models with a variety of funding sources and, hence, a variety of programs.

The organization from which data were gathered provides a variety of behavioral health services to approximately 2,500 children per year in a five-state region. Programs include residential treatment centers, community-based group homes, therapeutic foster care, in-home intensive therapy, and adoption services. Funding for all services is provided by a wide variety of state and local public agencies, private insurance companies, and corporate and private donors.

Contractual agreements with state Medicaid programs assure that services are available to recipients, but also set the boundaries for program participation, length of stay, and rates of pay for each level of care. Children served by this organization from State A received treatment in a residential center, with limited aftercare provided in their home community by the organization. State B allowed funding for a limited number of recipients to receive in-home services, but most children from that state received treatment in a residential center only. State C, which has a Medicaid waiver program, provided funding for innovative services in non-traditional settings, such as intensive in-home counseling, which utilized evidence-based treatment models, including Multisystemic Therapy (Henggeler, Melton, & Smith, 1992) and Multi-Dimensional Treatment Foster Care (Moore & Chamberlain, 1994). While children from State C were eligible to receive services in residential facilities, most were served in their home.

Method

All children who were served by the organization and discharged between July 1999 and June 2002, and who had funding from one of three state Medicaid programs, were included in this study. Demographic, clinical assessment, program participation, cost, and outcome data were examined for 1,004 children using Pearson's chi-square and one-way ANOVA in SPSS. (Demographics presented in Table 1).

Table 1
Client Demographics by State

	<i>State A</i>	<i>State B</i>	<i>State C</i>	<i>Total</i>
<i>Gender</i>				
Male	135 (83.9%)	127 (85.8%)	489 (70.4%)	751 (74.8%)
Female	26 (16.1%)	21 (14.2%)	206 (29.6%)	253 (25.2%)
<i>Race</i>				
African American	44 (27.3%)	61 (41.2%)	175 (25.4%)	280 (28.1%)
Caucasian	112 (69.6%)	86 (58.1%)	474 (68.9%)	672 (67.4%)
Other	5 (3.1%)	1 (.7%)	39 (5.7%)	45 (4.5%)
<i>Age</i>				
≤ 8 Years Old	8 (5.0%)	7 (4.7%)	107 (15.4%)	122 (12.2%)
9 - 11 Years Old	26 (16.1%)	32 (21.6%)	142 (20.4%)	200 (19.9%)
12 - 14 Years Old	70 (43.5%)	72 (48.6%)	256 (36.8%)	398 (39.6%)
≥ 15 Years Old	57 (35.4%)	37 (25.0%)	190 (27.3%)	284 (28.3%)

Results

Children from the three states appeared to be quite similar at admission. Examining primary diagnosis, the largest percentage of children in all three states received a diagnosis of Mood Disorder; the next largest category of diagnoses was for Conduct Disorder, and the third largest category was for Attention Deficit Hyperactivity Disorder (ADHD) and related disorders. Evidence from assessment instruments used at admission also pointed to the similarities among children from all three states. Child Behavior Check List scores (CBCL; Achenbach, 1991) indicated that the mean Total Score from all three states fell within the clinical range, although State B had a higher mean score than the other states. Mean CBCL Total scores for States A, B, and C were 73.87, 76.24, and 73.08, respectively. Data from the Youth Self Report (YSR; Achenbach & Edelbrock, 1987) Total Score also pointed to similarities, with only insignificant differences between the states, and with mean scores from all three states falling within the borderline range: State A = 62.38; State B = 63.44; and State C = 64.42.

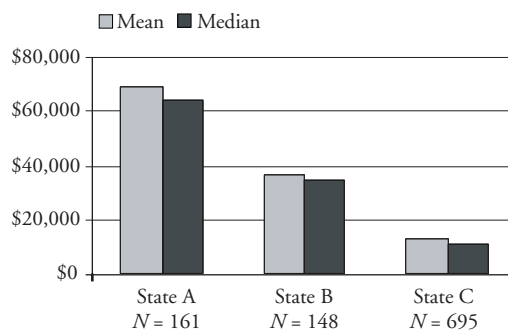
Length of Stay

Findings demonstrated significantly different lengths of stay for children from the three different states. Children from State A had a mean length of stay of 204.44 days, from State B an average of 176.12 days, and from State C a mean of 133.13 days, $F = 55.23, p < .01$. Despite the fact that State C children were more likely than children from other states to participate in more than one program during admission, both the residential length of stay and the overall length of stay were shorter for these children. Program mix also differed by state, with children from State A receiving services only in a residential treatment setting from this provider, while children from State C most often received therapy in their home. Over 90% of children from State B received services only in a residential treatment center setting; the remainder received both residential and in-home therapy.

Cost Analysis

Cost analysis showed a great disparity in the amount spent by the three different states on services from this provider, as shown in Figure 1. On average, State A spent \$69,404 per child, State B spent \$35,154 per child, and State C spent \$36,200 per child. These differences are clearly mirrored in the different costs of the types of services provided. State A's entire expenditure paid for residential treatment services, which are more costly than in-home therapy. State B purchased mostly residential treatment, although some children from that state received in-home therapy. In-home therapy for recipients comprised the lion's share of State C's expenditures. However, expenditures, by themselves, tell us little about the impact of the services on children and families.

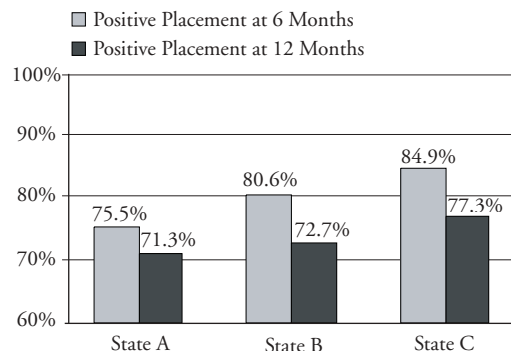
Figure 1
Average Cost by State



Outcome Analysis

Data concerning outcome at six and 12-month follow-up revealed a clear pattern for the three Medicaid programs. As demonstrated in Figure 2, children from State C were more likely to be at home or in a home-like setting at both six and twelve months post-discharge than were children from the other two states. Over 91% of children from State C who received services were successfully discharged; 77.3% were still in successful placements 12 months post-discharge. These figures contrast with State A children, for whom 88.8% were successfully discharged, and 71.3% were still in successful placements 12 months after discharge. Outcome data for children from State B fell between the other two states: 89.9% of children were successfully discharged, and 72.7% were still in successful placements at 12 months post-discharge. While the differences are not statistically significant, they point to a clear pattern that favors State C cost and outcomes.

Figure 2
Placement at Follow-up by State



Other measures of success, such as school success, trouble with the law, and out-of-home placement were also examined for the three groups. These measures do not show as clear a pattern as do the placement data, but they do lend some support to the notion that State C, with its more innovative approach, had more success with children. For example, Table 2 shows that State C had the highest percentage of children either in school or who had graduated at 12 months post-discharge, and the lowest percentage of children who reported being in trouble with the law at both six and 12 month follow up. Also, State C had the lowest percentage of children who had out-of-home placements (including placements in residential treatment center, psychiatric hospital, group home, diagnostic center, or drug and alcohol treatment center) between discharge and six months, and the lowest rate of children placed in correctional facilities both between discharge and six months, and between six and 12 months post-discharge. Taken together, these measures describe a substantially higher level of success for children from State C.

Table 2
Selected Outcomes for Children in Three States at 6 and 12 Months

<i>Outcome (time)</i>	<i>State A</i>	<i>State B</i>	<i>State C</i>
In school or graduated (12 months)	76.3%	79.4%	87.3%
Trouble with the law (6 months)	16.8%	18.9%	14.4%
	(12 months)	15.0%	20.6%
Out of home placements (6 months)	34.6%	40.0%	21.0%
In correctional facilities (6 months)	15.9%	15.8%	4.9%
	(during follow-up period – 12 months)	6.3%	9.5%

Discussion

The mechanisms responsible for the seemingly higher level of success for State C's children are not necessarily apparent from this study. It can be argued that, given the comparability of the children from the three different states upon admission into the program, the innovative approach of State C is at least partially responsible for the increased success of children from that state. However, it remains to be discovered why this approach seems to produce more favorable results. Also, it is important to examine the effects that this approach might have on different populations of children. Such variables as mental health service utilization both prior to and following treatment, familial support, and the availability and use of community supports would be important additions to this discussion. In addition, further analysis of the differences in the structure of the managed care systems in each state, and of the cost-effectiveness of services, would significantly contribute to policy discussions concerning provision of mental health services to children.

References

- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Achenbach, T. M. & Edelbrock, C. (1987) *Manual for the Youth Self-Report and Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Axelson, A. A. (1997). Alternative treatment services for children and adolescents. In R. K. Schreter (Ed.), *Managing care, not dollars: The continuum of mental health services* (pp. 151-176). Washington, DC: American Psychiatric Association.
- Beck, S. A., Meadowcroft, P., & Mason, M. (1998). Multiagency outcome evaluation of children's services: A case study. *The Journal of Behavioral Health Services and Research*, 25, 163-176.
- Behar, L., Macbeth, G., & Holland, J. M. (1993). Distribution and costs of mental health services within a system of care for children and adolescents. *Administration and Policy in Mental Health (Special Issue: Children's Mental Health Administration)*, 20(4), 283-295.
- Bickman, L. (1996a). A continuum of care. *American Psychologist*, 51(7), 689-701.
- Bickman, L. (1996b). The application of program theory to the evaluation of a managed care mental health care system. *Evaluation and Program Planning*, 19(2), 111-119.
- Bickman, L., Guthrie, P., Foster, M. E., Lambert, E. W., Summerfelt, W. T., Breda, C., & Heflinger, C.A. (1995). *Evaluating managed mental health services: The Fort Bragg experiment*. New York: Plenum Press.
- Foster, E. M., Saunders, R. C., & Summerfelt, W. T. (1996). Predicting level of care in mental health services under a continuum of care. *Evaluation and Program Planning*, 19(2), 143-153.
- Heflinger, C. A. (1996). Measuring service system coordination in managed mental health care for children and youth. *Evaluation and Program Planning*, 19(2), 155-163.
- Heflinger, C. A., & Northrup, D. (2000). What happens when capitated behavioral health comes to town? The transition from the Fort Bragg demonstration to a capitated managed behavioral using the CAFAS: Implications for service planning. *The Journal of Behavioral Health Services and Research*, 27(4), 390-405.
- Henggeler, S. W., Melton, G. B., & Smith, L. A. (1992). Family preservation using Multisystemic Therapy: An effective alternative to incarcerating serious juvenile offenders. *Journal of Consulting and Clinical Psychology*, 60, 953-961.
- Layne, G. S. (1994). Child psychiatry encounters 'The continuum'. *Behavioral Health Management*, 14(3), 19-21.
- Moore, K. J. & Chamberlain, P. (1994). Treatment foster care: Toward development of community-based models for adolescents with severe emotional and behavioral disorders. *Journal of Emotional & Behavioral Disorders*, 2, 22-30.
- Morrissey, J. P., Johnsen, M. C., & Calloway, M. O. (1997). Evaluating performance and change in mental health systems serving children and youth: An interorganizational network approach. *Journal of Mental Health Administration*, 24, 4-22.
- Pandiani, J. A., Banks, S. M., & Gauvin, L. (1997). A global measure of access to mental health services for a managed care environment. *The Journal of Mental Health Administration*, 24, 268-277.

CONTRIBUTING AUTHORS

Sarah Hurley, M.A.

Research and Evaluation Manager; Youth Villages, Inc., 5515 Shelby Oaks Drive, Memphis, TN 38134; 901-252-7678, fax: 901-252-7620; e-mail: sarah.hurley@youthvillages.org

Tim Goldsmith, Ph.D.

Director of Clinical Services; Youth Villages, Inc., 5515 Shelby Oaks Drive, Memphis, TN 38134; 901-252-7600, fax: 901-252-7620; e-mail: tim.goldsmith@youthvillages.org

George Lord, Ph.D.

Dean, College of Liberal Arts, Grambling State University, Grambling, LA 71245; 318-274-3225, fax: 318-274-3344; e-mail: lordg@gram.edu

Symposium Overview

Examining Supports During the Transition to Adulthood Using Multiple Lenses

Symposium Introduction

Maryann Davis

Attention has recently focused on the needs of youth with serious emotional disturbance (SED) as they mature into adulthood. Davis and Vander Stoep (1997) comprehensively reviewed the existing literature on young adult outcomes for youth with SED who received child mental health (MH) or special education services. This review rang a warning bell; youth with SED who received these “services as usual” fared very poorly in every domain of adult functioning. They were less likely to complete high school and find employment, and were more likely to become homeless or get arrested. Services as usual also became scarce once youth reached the age of majority (Cohen & Hesselbart, 1993; Davis, 1996; Silver, 1996).

In contrast, Clark and colleagues (1993) gathered data on practices shared by promising transition programs for this population. Initial outcome results from these programs indicated positive functioning in the young people served, however, none of these studies involved random-assignment to conditions or comparison groups (e.g. Bullis et al., 1994; Cheney, Malloy & Hagner, 1998; Cook, Solomon, Farrell, & Koziel, 1997).

This symposium overview presents findings from several new studies of national and local samples of youth with SED that use diverse methodologies to describe transition services and review outcomes.

National Picture of Transition Supports

Presented by Maryann Davis & Marian Butler

For this study, in the spring of 2001 lead child MH administrators in every state were interviewed, and parents of transition-aged youth from 28 states were surveyed about transition services in state child MH systems. Detailed methodology and other results can be found in Davis (2001) and Davis and Butler (2002).

Highlighted Results

Administrators were asked about the availability of various types of categorical transition support programs (e.g., supported employment) and specialized transition support coordination efforts within the child MH system. Overall, these supports were uncommon. Thirty states offered no transition support services or only one type of transition support program, and only six of these states offered that one support type statewide. In 12 states multiple regions offered transition support programs, with at least one of those regions offering multiple types of programs. No state offered multiple types of transition support programs statewide. Only one state provided comprehensive transition support coordination through their statewide wraparound program, though there were no categorical transition support programs in that state.

Parents rated as most important system components those that focused on concrete aspects of functioning such as preparing for work, living independently, and being fiscally responsible. On a scale of 1-5 (1 = *terrible*, 5 = *wonderful*) the modal rating of child MH performance in these areas was 1, or *terrible* (52-64% of respondents endorsed this rating. A tiny fraction (0.2-0.3%) gave child MH the highest rating for these items (*wonderful*).

Chair

Maryann Davis

Presenting Authors

Maryann Davis et al.

Jonathan Delman et al.

Michael Polgar et al.

Ann Vander Stoep

Hewitt B. “Rusty” Clark et al.

Voices of Youth in Transition in Massachusetts

Presented by Jonathan Delman & Jessel-Paul Smith

This study involved 24 young adults between the ages of 18-25. Participants had received Massachusetts's public adolescent MH services and were asked to complete consumer-conducted qualitative interviews about transitioning to adulthood¹.

Highlighted Results

Most youth described the experience of "aging out" of the child and adolescent mental health system as generating feelings of shock and helplessness, using words like "Scary," "Stressful," "Hard," "Traumatizing," and "Awful." Five respondents reported that aging out was positive in comparison to their negative experiences with adolescent services.

Half of the respondents reported that the aging out process felt unstable. Feelings of instability were associated with: (a) the short notice that respondents were given before being moved to adult treatment settings, (b) a lack of prior exposure to that setting or staff, (c) not liking new environments, or (d) becoming homeless or incarcerated shortly after aging out.

One-third of the respondents reported an immediate loss of interpersonal support, due either to their loss of access to trusted adolescent case managers or therapists, or to the loss of common supports in youth programs (e.g., being driven to movies).

One-quarter of these transitioning youth felt "shocked," upon entering adult programs or hospitals, to encounter an older group of people with whom they did not identify.

When asked what kinds of help would improve the aging out experience, the most common responses were: (a) adult independent skills training during their transition period, (b) advanced planning for the transition, and (c) youth involvement in transition planning.

Factors Promoting Transitions in St. Louis County

Presented by Michael Polgar, Leopoldo Cabassa, & David Gillespie

Researchers for this study identified one key representative in each of 100 agencies providing services to young adults (16-25) with SED or serious mental illness (SMI) in St. Louis City and County for data collection using structured Social Network Analysis interviews (Morrissey, Ridgely, Goldman, & Bartko, 1994). Sixty-five percent of the agencies provided MH services, followed by education (20%), substance abuse (9%), juvenile justice (3%), and child welfare (2%). About half of the agencies served individuals of all ages, and about a quarter each served only adolescents or only adults. Respondents answered questions about the quality of county services, their agency's characteristics, and how they exchange information, resources, and referrals with the other 99 agencies. Multivariate analyses identified which types of organizations were bridging services (i.e., promoting transitions) within this system of care.

Highlighted Results

Most agencies (55-81%) provided the types of services that can help bridge systems for youth during the transition system, such as case management, transitional planning, follow-up on referrals, and long term planning. These continuity of care practices were associated with larger staff size ($r = .29, p = .001$), perceived quality of care in the county ($r = .23, p = .02$), and culturally competent practices ($r = .43, p = .001$). Stronger interorganizational linkages should provide better opportunities for bridging between systems for youth in transition. Agencies with greater staff size, less individualized care (i.e., higher provider consumer ratio), and a view of the system as accessible had stronger interorganizational linkages.

¹Methods and results of the *Voices of Youth in Transition in Massachusetts* study are available at <http://www.cgi-mass.org/Youth-in-Transition-Final-Report.pdf>.

Young Adult Outcomes in a Community-Based Sample

Presented by Ann Vander Stoep

Young adult outcomes of adolescents with and without psychiatric disorders were examined in a community-based sample from The Children in Community Study. This study began in 1975 with an initial cohort of 1,100 young children from randomly selected households in two counties in upstate New York. Successive in-person, in-home interviews gathered information about the child's family, neighborhood, school, early development, peer relations, adaptive functioning, and diagnoses (Cohen et al., 1993). Eighteen percent of the sample met diagnostic criteria for depression, anxiety, disruptive behavior and/or substance use disorder.

Highlighted Results

For young adults with a psychiatric disorder in adolescence, the odds of failing to complete school were 14 times higher than for their unaffected peers. The odds of not being gainfully active were 4 times higher, of getting in trouble with the police, 3 times higher, and the odds of pregnancy were 6.6.5 times higher (Vander Stoep et al., 2000) than young adults without psychiatric disorders from the same community and social class.

The sampling approach used in the Children in Community Study permitted an estimation of the proportion of failure to complete secondary school in the United States that is attributable to psychiatric disorder. Of those persons in the U.S. population who do not complete high school, 54% have a psychiatric disorder. The proportion of failure to complete secondary school in the U.S. population that is attributable to psychiatric disorder is 46% (Vander Stoep, Weiss, Saldanha, & Cheney, 2003).

Outcomes From a Model Transition Program in Vermont

Presented by Hewitt "Rusty" B. Clark, Theodore Tighe, & Olga Pschorr

The *Jump on Board for Success* (JOBS) transition program focuses on helping 16-21 year olds with SED secure paid employment, increase community life functioning, acquire living/job skills, and decrease dependence on public assistance. The JOBS program embodies the current best practice guidelines of the Transition to Independence Process (TIP) system for youth with MH conditions in transition to adulthood².

Highlighted Results

Outcome indicators for the first 80 graduates (i.e., securing 90 days of employment) were compared between service closure and service entry and revealed improvement across each of the indicators. More young adults graduated high school or obtained a GED (83% vs. 53%), and were employed (100% vs. 39%), while fewer were homeless (5% vs. 30%), in residential treatment (5% vs. 25%), involved in corrections (13% vs. 43%), received intensive MH services (7% vs. 80%), and received social security or welfare benefits (15% vs. 51%).

The average cost per person for corrections involvement, welfare benefits, and social/supplemental security benefits were calculated and applied to the number of graduates diverted from these expenses in FY 2000 to yield total estimated savings by government programs. JOBS saved the government \$687,912 in corrections expenditures, \$42,336 in welfare benefit expenditures, and \$37,911 in social/supplemental security benefit expenditures. Details of this program and related findings can be found in Clark, Pschorr, Wells, Curtis, and Tighe (in press).

² See <http://tip.fmbi.usf.edu> for more about the Transition to Independence Process (TIP).

Summary

Findings from these studies provide glimpses into the experience of transition and transition services in the U.S. by young adults with SED. It is clear from child MH administrators, parents, and youth that child MH systems provide insufficient transition support services. This system process is, by the evidence presented here, typically “terrible” and even detrimental. While potential bridges between child and adult services may exist, as in St. Louis, more work needs to be done to ensure adequate transition supports and continuity of those supports into adulthood. The two studies of outcomes demonstrate that there is no doubt that transition supports in many domains of functioning are needed, and that model programs can help many youth assume adult roles. Taken in combination, these studies suggest that transition services are needed, that our knowledge of best practices increases, but that the will to put these kinds of programs and approaches in place has not yet been realized for most youth with SED in transition to adulthood.

References

- Bullis, M., Fredericks, H. D. Bud, Lehman, C. & Paris, K. et. al. (1994, August). Description and evaluation of the Job Designs Project for adolescents and young adults with emotional or behavioral disorders. *Behavioral Disorders, 19*(4), 254-268.
- Cheney, D., Malloy, J., & Hagner, D. (1998). Finishing high school in many different ways: Project RENEW in Manchester, New Hampshire. *Effective School Practice, 17*(2), 45-52.
- Clark, H. B., Pschorr, O., Wells, P., Curtis, M., & Tighe, T. (in press). Transition into Community Roles for Young People with Emotional/Behavioral Difficulties: Collaborative systems and program outcomes. In Cheney, D. (Ed.) *Transition issues and strategies for youth and young adults with emotional and/or behavioral difficulties to facilitate movement into community life*. Arlington, VA: Council for Exceptional Children.
- Clark, H. B., Unger, K. & Stewart, E. (1993). Transition of youth and young adults with emotional/behavioral disorders into employment, education and independent living. *Community Alternatives International Journal of Family Care, 5*, 21-46.
- Cohen, P., Cohen, C., Kasen, S., Velez, C. N., Hartmark, C., Johnson, J., Rojas, M., Brook, J., & Streuning, E. L. (1993) An epidemiological study of disorders in late adolescence and adolescence: I: Age- and gender-specific prevalence. *Journal of Child Psychology and Psychiatry, 34*, 851-867.
- Cohen, P., & Hesselbart, C. (1993). Demographic factors in the use of children’s mental health services. *American Journal of Public Health, 2*, 49-52.
- Cook, J. A., Solomon, M. L., Farrell, D. & Koziel, M. (1997). Vocational initiatives for transition-age youths with severe mental illness. In S. W. Henggeler, A. B Santos, (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 139-163). Washington, DC: American Psychiatric Press, Inc.
- Davis, M. (2001). *Transition supports to help adolescents in mental health services*. Alexandria, VA: National Association of State Mental Health Program Directors.
- Davis, M. (1996). Mental health service utilization by transitional youth. In C. Liberton, K. Kutash, R. M. Friedman (Eds.), *The 8th Annual Research Conference Proceedings, A System of Care for Children’s Mental Health, Expanding the Research Base* (pp.295-304). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children’s Mental Health.
- Davis, M., & Butler, M. (2002). *Service system supports during the transition from adolescence to adulthood: Parent perspectives*. Alexandria, VA: National Association of State Mental Health Program Directors.
- Davis, M., & Vander Stoep, A. (1997). The transition to adulthood among children and adolescents who have serious emotional disturbance Part I: Developmental transitions. *Journal of Mental Health Administration, 24*(4), 400-427.

Morrissey, J. P., Ridgely, M. S., Goldman, H., & Bartko, W. T. (1994). Assessments of community mental health support systems: A key informant approach. *Community Mental Health Journal*, 3(6), 565-579.

Silver, S. (1996). How to promote (and not interfere with) effective transition. In C. Liberton, K. Kutash, R. M. Friedman (Eds.), *The 8th Annual Research Conference Proceedings, A System of Care for Children's Mental Health, Expanding the Research Base* (pp. 295-304). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.

Vander Stoep, A., Beresford, S., Weiss, N. S., McKnight, B., Cauce, A. M., & Cohen, P. (2000). Community-based study of the transition to adulthood for adolescents with psychiatric disorder. *American Journal of Epidemiology*, 152(4), 352-362.

Vander Stoep, A., Weiss, N. S., Saldanha, E., & Cheney, D. (2003). What proportion of failure to complete secondary school in the U.S. population is attributable to adolescent mental illness? *Journal of Behavioral Health Services and Research*, 30, 119-124.

CONTRIBUTING AUTHORS

Marian Butler

Family Resource Coordinator, Worcester Communities of Care, University of Massachusetts Medical School, 55 Lake Ave., Worcester MA 01655; 508-856-5452; e-mail: Marian.butler@umassmed.edu

Leopoldo J. Cabassa, M.S.W.

Doctoral Student, GWB School of Social Work, Washington University, One Brookings Dr. Campus Box 1196, St. Louis, MO 63130; 314-935-6447; e-mail: ljcl@gwbmail.wustl.edu

Hewitt B. "Rusty" Clark, Ph.D.

Professor and Director, Transition to Independence: System Development & Evaluation, Department of Child & Family Studies, FMHI, University of South Florida, 13301 Bruce B. Downs Blvd., MHC 2332, Tampa, Florida 33612-3807; 813-974-6409, fax: 813-974-6257; e-mail: Clark@fmhi.usf.edu

Maryann Davis, Ph.D.

Center for Mental Health Services Research, Department of Psychiatry WSH 8C-29, University of Massachusetts Medical School, 55 Lake Avenue, Worcester, MA 01655; 508-856-8718; e-mail: maryann.davis@umassmed.edu

Jonathan Delman

Executive Director, Consumer Quality Initiatives, Inc., 197 Ashmont St., Dorchester, MA 02124; 617-929-4400, fax: 617-929-4128; e-mail: jdelman@mass-cst.org

Jessel-Paul Smith

Young Adult Advocate, Consumer Quality Initiatives, 197 Ashmont St., Dorchester, MA 02124; 617-929-4400, fax: 617-929-4128; e-mail: jesselpaul2002@yahoo.com

Michael Polgar, Ph.D.

Penn State, 76 University Dr., Hazleton PA 18202, 570-450-3103; e-mail: mfp11@psu.edu

Olga Pschorr

Division of Vocational Rehabilitation, State of Vermont, 103 South Main Street, Waterbury, VT 05671; 802-241-2417; e-mail: olga@dad.state.vt.us

Theodore Tighe

Assistant Research Professor, Psychology/Education, University of Vermont, Burlington, VT 05401; 802-651-1600; e-mail: tedtighe@sover.net

Ann Vander Stoep, Ph.D.

Assistant Professor, Department of Psychiatry and Behavioral Sciences and Department of Epidemiology, University of Washington, Child Mental Health Research Unit, Box 354920, Seattle, WA 98195; 206-543-1538, fax: 206-616-4623; e-mail: annv@u.washington.edu

Use of Complementary and Alternative Medicine (CAM) among Children Recently Diagnosed with Autism Spectrum Disorders

**Susan E. Levy
David S. Mandell
Stephanie Merhar
Richard F. Ittenbach
Jennifer A. Pinto-Martin
Margaret Souders**

Acknowledgements: This study is one in a series of projects initiated by the newly-funded Center of Excellence in Autism Epidemiology and Research (CADDRE), which is funded by the Center for Disease Control and Prevention at the University of Pennsylvania School of Nursing and The Children's Hospital of Philadelphia. The findings reported here were published in the Journal of Developmental and Behavioral Pediatrics, December 2003, Vol. 24(6), 418-423.

Introduction

While there are many case studies and much anecdotal evidence concerning treatments for children with autism, few have been tested in a systematic, controlled fashion (Campbell, Schopler, Cueva., & Hallin, 1996; Matson, et al., 1996). Current consensus suggests that the best approach for ameliorating the core symptoms of autism includes a program of coordinated intensive behavioral and educational interventions (Volkmar, Cook, Pomeroy, Realmuto & Tanguay, 1999).

Many families of children with autism turn to complementary and alternative medicine (CAM). Levy and Hyman divide these treatment approaches into four categories: (a) unproven benign biological treatments that are commonly used but have no basis in theory (e.g., vitamin supplements such as B₆ and magnesium, gastrointestinal medications, antifungal agents); (b) unproven benign biological treatments that have some basis in theory (e.g., gluten-free or casein free diets, vitamin C, secretin); (c) unproven, potentially harmful biological treatments (e.g., chelation, immunoglobins, large doses of vitamin A, antibiotics, antiviral agents, alkaline salts, withholding immunizations); and (d) nonbiological treatments (e.g., auditory integration training, interactive metronome, craniosacral manipulation, facilitated communication). For further description of these treatments, see Levy and Hyman's reviews (Hyman & Levy, 2000; Levy & Hyman, 2002).

Nickel reports that 50% of children with autism use these and other unconventional treatment strategies (Nickel, 1996). In many cases, physicians are unaware of the use of these treatments (Committee on Children with Disabilities, 2001). There has been little research on the prevalence of CAM strategies, and on child and family characteristics that predict their use. The goal of this study was to estimate the use of CAM in a sample of children recently diagnosed with autism and to determine the correlates of CAM use.

Methods

The sample comprised all 284 children evaluated between July 2000 and December 2002 at the Regional Autism Center at the Children's Hospital of Philadelphia. Data were obtained on children's first visits, during which time they were assessed to confirm the diagnosis of autism.

Measures

Use of CAM. During the initial evaluation, the attending physician asked children's caregivers "what treatments related to autism have you tried with your child?" All responses were noted in the child's medical chart. Caregivers could give multiple responses.

Diagnoses. The diagnosis of Autism Spectrum Disorder (ASD) was confirmed using two of three methodologies: comparison to DSM-IV-TR checklist (American Psychological Association, 2000) the Childhood Autism Rating Scale (Schopler, Reichler, DeVellis & Daly, 1980); or the Autism Diagnostic Observation Schedule (Lord et al., 1989).

Presence of Other Medical Conditions. The presence of other developmental diagnoses or medical conditions was determined and recorded during intake.

Wait Time for an Appointment. The number of months between the parent's first call for an appointment and the date of the appointment was considered the wait time.

Demographic Characteristics, Other Medical Conditions, and Number of Providers Previously Seen were abstracted from the child’s medical record. Parental occupation was coded using the Systematic Occupation Classification Scheme developed for the United States 2000 census (U.S. Census Bureau, 2000).

Analyses

The proportion of children using each CAM strategy was calculated. Children could be counted multiple times if they used more than one strategy. Two sets of logistic regression were conducted to estimate the association of different characteristics with CAM use. In the first, the dependent variable of interest was Any CAM Use. In the second, the dependent variable of interest was Any Use of Potentially Harmful Biological CAM. Because of the large number of variables of interest and the relatively small sample size, only variables whose association with CAM use was significant at $p \leq 0.2$ were included in the adjusted model.

Results

Of the 284 children in the sample, 83.1% ($n = 236$) were male. The average age when seen at the Regional Autism Center (RAC) was 55.5 months ($SD = 31.4$). Whites comprised 82.7% of the sample, African-Americans 10.2%, Asians 3.5% and Latinos 3.2%. Approximately a quarter of all children had siblings and 85.3% were from two-parent homes. Most parents (68.7%, $n = 195$) had occupations requiring at least a college degree.

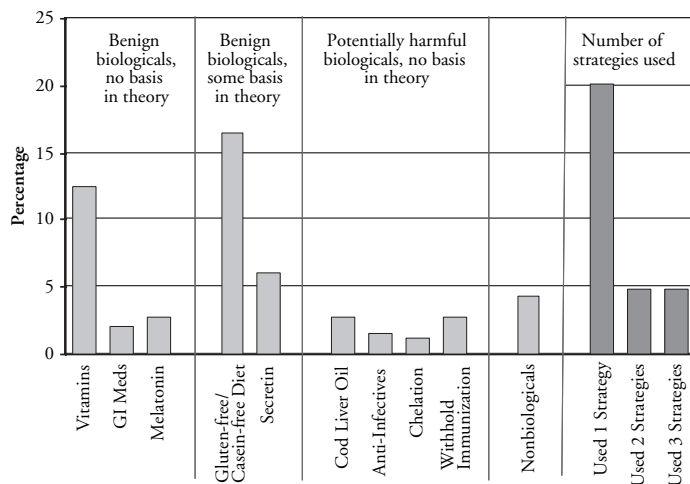
Children waited an average of 7.7 months ($SD = 7.7$) for an appointment. For 30.6% of children, the RAC was the first provider from which they obtained the diagnosis of autism. For 25.2% of children, the RAC was the second provider. Of all children, 18.3% had a relative with autism, and 14.8% had an additional diagnosis, the most common of which was mental retardation (9.2% of the total sample).

Figure 1 provides the prevalence of different CAM strategies in this sample. Of the 284 children in the sample, 31.7% were using some CAM; 16.9% were using some biological treatment with no basis in theory; 15.5% were using some biological treatment with some basis in theory; 8.8% were using some potentially harmful biological treatment; 3.9% were using some nonbiological treatment. With regard to number of strategies tried, 20.8% had tried only one, 5.3% had tried two, and 5.6% had tried three or more.

Table 1 provides the results of the analyses regarding the correlates of CAM use. Latino children had 4.5 times the odds of using CAM compared with children of other ethnicities. Children with additional diagnoses were 70% less likely to use CAM compared with children with no diagnoses other than autism. Male sex of the child, having seen a provider regarding the child’s condition prior to coming to the RAC, and being African American were of marginal significance in predicting any CAM use. In the adjusted logistic regression, only the presence of additional diagnoses remained significant at the $p \leq 0.05$ level.

Table 1 also provides the results of the analyses regarding the correlates of potentially harmful CAM use. Older children were more likely to engage in potentially harmful CAM strategies. Having seen a provider regarding the child’s condition prior to coming

Figure 1
Proportion of Children Using Complementary and Alternative Medicine



to the RAC also increased the risk of using a potentially harmful CAM. Being Caucasian was the only other variable whose association with potentially harmful CAM use approached significance. In the adjusted logistic regression, only having seen a provider regarding the child's condition prior to coming to the RAC remained significant at the $p \leq 0.05$ level.

Table 1
Unadjusted and Adjusted Odds of Any CAM Use or Potentially Harmful CAM Use

	<i>Any CAM (unadjusted)</i>	<i>Any CAM (adjusted)</i>	<i>Potentially harmful CAM (unadjusted)</i>	<i>Potentially harmful CAM (adjusted)</i>
Age at intake (years)	1.0	–	1.2 ^d	1.1 ^b
Sex	1.9 ^b	1.7 ^a	1.1	–
Caucasian	1.1	–	2.6 ^a	2.9 ^a
African American	0.5 ^a	0.5 ^a	0.3	–
Latino	4.5 ^c	4.0 ^b	1.3	–
Asian	0.9	–	.01	–
Additional diagnosis	0.3 ^d	0.3 ^c	0.8	–
Family member with ASD	1.3	–	1.2	–
Saw provider prior to RAC	1.6 ^b	1.8 ^a	3.1 ^d	2.6 ^c
Wait time for appt. (months)	1.0	–	1.0	–
≥1 parent with white collar occupation	1.1	–	1.5	–

^a $p < 0.20$ ^b $p < 0.10$ ^c $p < 0.05$ ^d $p < 0.01$

To explore possible reasons for the association of potentially harmful CAM use and having seen prior providers, additional *t*-tests were conducted on all variables to examine differences between children who had seen previous providers and those who had not. Compared to children who had not seen other providers, those who had done so reported longer wait times for an appointment at the RAC (9.2 vs. 5.4 months respectively, $p < 0.001$) and were older at the time they called for an appointment at the RAC (5.4 vs. 3.3 years respectively, $p < 0.001$). There were no other significant associations with having previously seen a provider.

Discussion

Even among a group of children only recently diagnosed with autism, almost one third of the families were engaged in CAM. The fact that Latino children appeared more likely to engage in these strategies suggests that there are important cultural differences related to treatment decisions that bear further exploration. There are a number of possible explanations for the fact that children who had seen previous providers were more likely to engage in potentially harmful CAM. Families of these children may have been aware of the presence of autism for longer than other families because other providers suggested the diagnosis. Longer waiting times for an appointment and the older average age of those who had seen previous providers may have been associated with greater frustration among the parents of these children, leading to the use of CAM with higher associated risks. Longer wait times also allow for obtaining information from less reliable sources. It is important to note that the analyses associated with understanding the relationship between prior providers and dangerous CAM use were exploratory. Further study is needed to understand the reasons for this finding.

The American Academy of Pediatrics guidelines (Committee on Children with Disabilities, 2001) strongly encourage clinicians to ask about the use of these practices for children with ASD. Given the fact that parents may not report all treatment activities, clinicians should discuss the benefits and dangers of different strategies regardless of whether they are brought up by parents. It is of primary importance is that these issues be discussed in a non-accusatory, nonjudgmental manner. If parents feel that clinicians are unwilling to negotiate around the use of addition treatment strategies, these strategies may become more alternative than complementary.

References

- American Psychological Association. (2000). *Diagnostic and statistical manual of mental disorders* [Fourth Ed., Text Revision]. Washington, DC: Author.
- Campbell, M., Schopler, E., Cueva, J. E., & Hallin, A. (1996). Treatment of autistic disorder. *Journal of the American Academy of Child & Adolescent Psychiatry* 35:134-143.
- Committee on Children with Disabilities. (2001). Counseling families who choose complementary and alternative medicine for their child with chronic illness or disability. *Pediatrics* 107:598-601.
- Committee on Children with Disabilities. (2001). Technical Report: The pediatrician's role in the diagnosis and management of autistic spectrum disorder in children. *Pediatrics*:107(5):e85.
- Hyman S., & Levy, S. (2000). Autistic spectrum disorders: when traditional medicine is not enough. *Contemporary Pediatrics* 17:101-116.
- Levy S., & Hyman S. (2002). Alternative/complementary approaches to treatment of children with autistic spectrum disorders. *Infants and Young Children* 14:33-42.
- Lord C., Rutter M., Goode S., Heemsbergen, J., Jordan, H., Mawhood, L., & Schopler, E. (1989). Autism Diagnostic Observation Schedule: A standardized observation of communicative and social behavior. *Journal of Autism & Developmental Disorders* 19:185-212.
- Matson, J. L., Benavidez, D. A., Stabinsky Compton, L., Paclawskyj, T., & Baglio C. (1996). Behavioral treatment of autistic persons: a review of research from 1980 to the present. *Research in Developmental Disabilities* 17:433-465.
- Nickel, R. (1996). Controversial therapies for young children with developmental disabilities. *Infants and Young Children* 8:29-40.
- Schopler E., Reichler R., DeVellis R., & Daly, K. (1980). Toward objective classification of childhood autism: Childhood Autism Rating Scale (CARS). *Journal of Autism & Developmental Disorders* 10:91-103.
- U.S. Census Bureau, Equal Employment Opportunity (EEO) Special Tabulation. (2000). *Industry and Occupation Classification System Overview*. Retrieved from <http://www.census.gov/hhes/www/ioindex/view.html>.
- Volkmar F., Cook E., Pomeroy J., Realmuto, G., & Tanguay, P. (1999). Practice parameters for the assessment and treatment of children, adolescents and adults with autism and other pervasive developmental disorders. *Journal of the American Academy of Child & Adolescent Psychiatry* 38:32S-54S.

CONTRIBUTING AUTHORS

Susan E. Levy, M.D.

Regional Autism Center, Children's Seashore House of The Children's Hospital of Philadelphia, Philadelphia, PA; 215-590-7528; e-mail: levys@email.chop.edu

David S. Mandell, Sc.D.

Department of Psychiatry, Department of Pediatrics, School of Medicine of the University of Pennsylvania, Philadelphia, PA; 215-662-2504; e-mail: mandell@mail.med.upenn.edu

Stephanie Merhar, B.A.

School of Medicine of the University of Pennsylvania, Philadelphia, PA; 215-751-0366; e-mail: merhar@mail.med.upenn.edu

Richard F. Ittenbach, Ph.D.

Department of Biostatistics and Epidemiology, The Children's Hospital of Philadelphia, Philadelphia, PA; 215-590-5943; e-mail: ittenbach@email.chop.edu

Jennifer A. Pinto-Martin, Ph.D.

School of Nursing of the University of Pennsylvania, Philadelphia, PA; 215-898-4726; e-mail: pinto@nursing.upenn.edu

Margaret Souders, M.S.N., C.R.N.P.

Regional Autism Center, Children's Seashore House of The Children's Hospital of Philadelphia, Philadelphia, PA; 215-590-7901; e-mail: souders@email.chop.edu

The Quality of the Therapeutic Relationship and Youth Clinical Characteristics

**Ann Doucette
Ana Regina Andrade
Mary Beth Rauktis
Luke McDonough
Lynne Boley**

Acknowledgements: This research was funded by Pressley Ridge Foundation.

Introduction

Attention to the quality and function of the therapeutic relationship has increased in the past decade (Norcross, 2002). This is largely the result of a consistent association between therapeutic alliance (TA) and a treatment outcome that has been reported in research findings, independent of treatment modality and measurement approach (Norcross, 2002; Horvath & Symonds, 1991). Despite this fact little attention has been directed toward the role of therapeutic alliance and child/adolescent mental health treatment outcomes, and what contributes to building and supporting a favorable therapeutic relationship. This paper examines the association between the quality of the therapeutic relationship and child/adolescent characteristics such as hopefulness, experience of victimization and trauma, and social competence.

There has been much research on clinician and client factors that contribute to treatment effectiveness and enhanced therapeutic alliance. However, this research has targeted adult psychotherapy samples as opposed to youth. The client factors that are most often researched include expectancy (Meyer, et al., 2002), level of pre-treatment impairment (Kazdin, 1991), and motivation to change. With regard to research directed at children and adolescents, there are other considerations such as having an understanding of what therapy/intervention is about, or role induction (Beutler & Clarkin, 1990), and whether the information shared by the youth is confidential (given that there is no legal mandate for child-therapist confidentiality).

Little is known as to how these issues affect the willingness of youth to self-disclose their own perspective about their emotional and behavioral status, to candidly interact with the therapist to address identified problems, and to collaborate as a team with the therapist to change troubling behaviors. For example it is well known that youth diagnosed with conduct disorder or attention deficit hyperactivity disorder seldom see their behavior as troubling as do their caregivers, teachers, and so forth (Barkley, 1990). Youth are reported to provide better assessment of internal states than caregivers or teachers, but they are far less accurate in terms of externalizing behavior problems. Cognitive, emotional, physical and behavioral changes have the potential for differential youth conceptualization of the treatment process and the therapeutic relationship (Kendall, 1984). Developmental stage is also likely to have impact on the accuracy of self-reflection and reporting (Weiss, et al., 1991).

Method

Subjects

This summary presents data yielded from a sample of approximately 120 youth receiving treatment in a Day School setting and 20 teacher/counselors who work with these youth. Youth range in age between five and 20 years of age. Forty-seven percent identify themselves as Caucasian, 43% as African American. Eighty percent of the youth are male. All youth are diagnosed as having a serious emotional disorder, and all have an individualized education plan (IEP). Most children (72%) have multiple diagnoses. Forty-two percent of the children have two separate diagnoses, 30% have three or more. Externalizing disorders are the most prevalent diagnoses for the Day School youth. Conduct disorder is the most commonly diagnosed disorder (32%), followed by Attention Deficit Hyperactive Disorder (ADHD; 30%), bipolar (16%), and depression (15%). Youth with a primary diagnosis of either conduct disorder or ADHD are likely to have a secondary diagnosis of either conduct disorder or ADHD, as these two diagnoses are often co-occurring for these youth.

Seventy-one percent of the teacher/counselors at the time of the study are female, and all identify themselves as Caucasian. Forty-two percent of the teacher/counselors have a BA level education, 26% are working toward a MA/MS degree, and 32% have completed Master's level education. Forty-two percent of the teacher/counselors have been at the Day School less than one year, 25% for one to two years, and 33% have worked at the Day School for three years or more.

Measures

The teacher/counselors at the Day School, along with youth 11 years of age and older, completed the Therapeutic Alliance Scale (TAS; Doucette & Bickman, 2001a) and the Child Adolescent Measurement System (CAMS; Doucette & Bickman, 2001b). The TAS is comprised of two scales: *Resistance* and overall *Quality of the Relationship*. The TAS Resistance Subscale assesses the child's openness to intervention, beliefs that intervention/therapy can be beneficial, an intent to deceive intervening adults in terms of a youth's problems, and so forth. The Quality of the Therapeutic Relationship Scale assesses the emotional bond between the youth and the teacher/counselor, the perceived openness/truthfulness of the relationship, and agreement on therapeutic tasks, or the goals of treatment. The CAMS includes an assessment of acuity (e.g., suicidal and other self-harming behaviors), symptomatology and functional behavioral status, hopefulness, experience of victimization, and social adaptive behavior and competence.

Results and Discussion

Significant gender differences were noted on the TAS. While youth ratings of the overall quality of their relationships did not vary by gender, males reported significantly more resistance to the interventions of their teacher/counselors, $t = 3.93$, $df = 103$, $p = .000$. Teacher-counselor ratings of the therapeutic relationship and the resistance of the youth to intervention were significantly different for male and female youth (therapeutic alliance: $t = 2.43$, $df = 115$, $p = .017$; resistance: $t = 2.65$, $df = 115$, $p = .009$). Age differences were also noted. Teacher/counselors reported that youth age 11 to 16 years were the most resistant to therapeutic intervention compared to both younger (ages 6 to 10 years) and older (16 to 20 years) counterparts, $F = 6.088$, $df = 2$, $p = .003$. This same age cohort was also less likely to be perceived by teachers as having highly favorable therapeutic relationships with their teachers than were younger or older youth, $F = 4.409$, $df = 2$, $p = .014$. Diagnostic differences were also noted. As a group, youth diagnosed with autism, Asperger's, and pervasive developmental disorders were also perceived by teacher/counselors as having more resistance to intervention compared to youth diagnosed with other disorders such as ADHD, conduct, depression, and bipolar, $F = 3.182$, $df = 4$, $p = .017$.

Preliminary analyses indicate that youth externalizing behavior ratings are significantly associated with youth perceptions of resistance and acceptance of therapeutic intervention. Neither internalizing nor externalizing problems were associated with youth ratings of the quality of the therapeutic relationship. Day School youth who rated their externalizing behavior as less problematic also indicated that they are less accepting/more resistant to intervention. Youth indicating that their behavior is more problematic (i.e., showing a closer correspondence with the teacher/counselor rating of the youth's behavior) were more likely to be more accepting of intervention (see Figure 1). This finding is not unexpected since youth seldom see their troubling behavior as problematic as do their teachers and caregivers. Figure 2 illustrates the correspondence between youth and teacher ratings on internalizing and externalizing behavior. As is indicated, there is greater correspondence between teachers and youth on internalizing behaviors.

Analyses also revealed that youth who had experienced sexual and/or physical abuse were significantly more likely to indicate greater resistance to intervention, $t = 3.03$, $df = 61$, $p = .004$, than youth who had not had these experiences. However, these youth did not report lower ratings on the overall quality of the therapeutic relationship compared to those youth not experiencing physical/sexual abuse. In addition, youth reporting the use of alcohol and drugs also rated the overall therapeutic alliance between the youth and his/her teacher/counselor as significantly less favorable ($p = .03$). Youth self-report of using alcohol

Figure 1
Association Between Youth Resistance to Intervention
and Reports of Externalizing Behavior

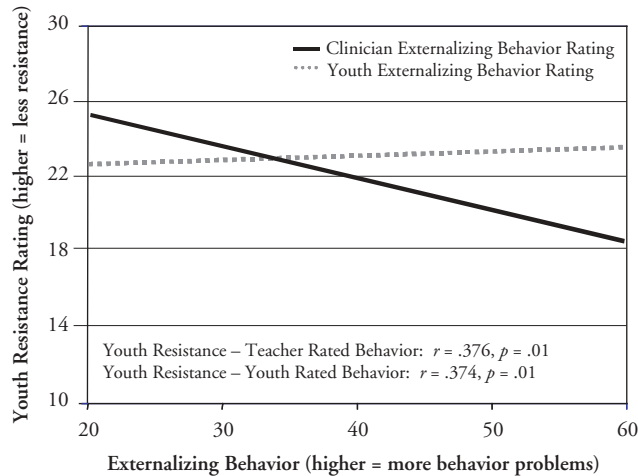
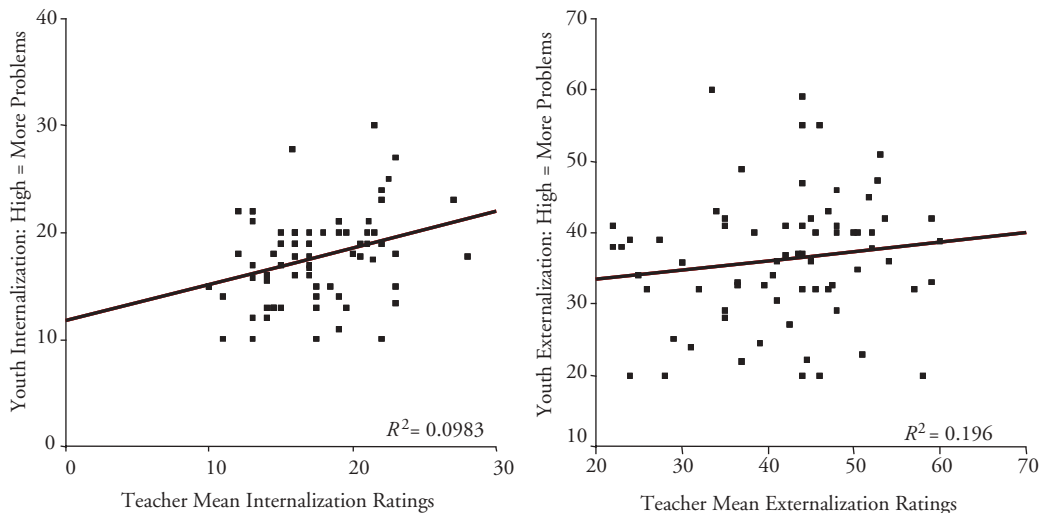


Figure 2
Youth and Teacher Views of Troubling Behavior



and/or drugs was also significantly related to positive perceptions of social competence (social adaptive behavior) and higher levels of hopefulness. The youth's perception of higher levels of social competence was not shared by the teacher/counselors rating those youth. It is likely that the youth's use of alcohol and drugs distorts realistic self-assessment. Similarly, the fact that youth using alcohol and drugs also reported higher levels of hopefulness is another possible misrepresentation of reality. Youth with higher teacher-rated social competence reported more favorable alliance.

Lastly, it is important to note that youth do not view the construct of therapeutic alliance in the same manner as do teacher-counselors. A Rasch analysis (Wright & Masters 1982; Wright, 1977) of the TAS Quality of the Therapeutic Relationship Scale indicated a markedly different item order for youth and teacher/counselors, as shown in Table 1. Essentially, items are ordered in terms of descending ability—from high (favorable TA) to low (poor TA). The item *Teacher/counselor knows what I want to accomplish* is markedly more difficult for youth to endorse than it is for their teacher/counselors. For youth, items near the top of the table are characteristically associated with highly favorable therapeutic relationships. For teacher/counselors, sticking with the youth no matter what his or her problems are, and knowing when it is difficult for youth to self-disclose are associated with favorable therapeutic relationships. From the youth's perspective, the teacher-counselor has no choice other than to “stick it out with them.” Only two items are ordered by both youth and teacher/counselor at the same level: (a) *Matters to me what client/counselor thinks about me*, and (b) *I know when things aren't going well/Counselor wants to know when things aren't going well*. Most other items are markedly different in terms of the item ability order. This item order analysis (Rasch model) has been replicated with two other samples, (1) youth and therapists in a clinical settings, and (2) youth and foster parents. This finding has implications in terms of the need for intervening adults to take into account the fact that they may view the world differently than do youth.

Table 1
Item Order Analysis of TAS Quality of the Therapeutic Relationship Scale, Youth and Counselors

Youth	Counselor
Counselor knows what I want to accomplish	Know when it is difficult for client to talk
Can talk to my counselor about things bothers me	Would stick with client
Matters to me what counselor thinks about me	Matters to me what client thinks about me
Counselor listens to changes I want to make	Client doesn't get upset if I disagree
Counselor helps me communicate with parents	I really listens to what my client says
Counselor tells me what supposed happen in TX	Client can talk to me about things bothers him/her
Counselor and I agree changes needed in behavior	Encourage client to talk things that trouble him/her
Counselor knows when it is difficult for me to talk	Client respects me
Counselor explains to me about confidentiality	Help client think through my problems
Counselor and I work on my problems as a team	Tell client what is supposed to be happen in TX
Counselor doesn't get upset if I disagree	Client and I agree changes needed in behavior
Counselor really listens to what I have to say	My client accepts me
Counselor helps me think through my problems	Liked by my client
Counselor help see things I can do make life better	Explains to client about confidentiality
Counselor encourages me talk things that trouble me	Listen to changes client wants to make in TX
Counselor wants to know things aren't going well	I know when things aren't going well
My counselor accepts me	Help client see there things I can do make life better
Counselor would stick with me	Help client me communicate with parents
I like my counselor	Knows what client wants to accomplish in TX
Counselor respects me	Client and I work on my problems as a team

References

- Barkley, R. A. (1990). A critique of current diagnostic criteria for attention deficit hyperactivity disorder: Clinical and research implications. *Journal of Developmental & Behavioral Pediatrics*, 11(6) 343-352.
- Beutler, L. E. & Clarkin, J. E. (1990). *Systematic treatment selection: Toward targeted therapeutic interventions*. Philadelphia, PA, US: Brunner/Mazel, Inc.
- Doucette, A., & Bickman, L. (2001a). *Therapeutic Alliance Scale (TAS)*. Nashville, TN: Authors.
- Doucette, A., & Bickman, L. (2001b). *Child Adolescent Measurement System (CAMS)*. Nashville, TN: Authors.
- Horvath A. & Symonds D. Relationship between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counseling Psychology*, 38, 139-149.
- Kazdin, A. E. (1991) Effectiveness of psychotherapy with children and adolescents. *Journal of Consulting & Clinical Psychology*, 59(6) 785-798
- Kendall, P. C. (1984). Behavioral assessment and methodology. *Annual Review of Behavior Therapy Theory and Practice*, 9, 39-94.
- Meyer, B., Pilkonis, P. A., Krupnick, J. L., Egan, M. K., Simmens, S. J., & Sotsky, S. M. (2002). Treatment expectancies, patient alliance and outcome: Further analyses from the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Journal of Consulting & Clinical Psychology*, 70(4) 1051-1055
- Norcross, J. C. (2002). *Psychotherapy relationships that work*. New York: Oxford University Press.
- Weiss, B., Weisz, J. R., Politano, M, Carey, M., Nelson, W. M., & Finch, A. J. (1991). Developmental differences in the factor structure of the Children's Depression Inventory. *Psychological Assessment*, 3(1) 38-45
- Wright, B. D. (1977) Solving measurement problems with the Rasch model. *Journal of Educational Measurement*, 14, 97-115.
- Wright, B. D., & Masters, G. N. (1982). *Rating scale analysis: Rasch measurement*. Chicago, IL: Mesa Press.

CONTRIBUTING AUTHORS

Ann Doucette, Ph.D.

Senior Research Associate; Center for Mental Health Policy, Vanderbilt University, 1207 18th Avenue South, Nashville, TN 37212; 615-343-1655, fax: 615-322-7049; e-mail: adoucette@aol.com

Ana Regina Vides de Andrade, Ph.D.

Research Associate; Center for Mental Health Policy, Vanderbilt University, 1207 18th Avenue South, Nashville, TN 37212; 615-343-1655, fax: 615-322-7049; e-mail: ana.regina.andrade@vanderbilt.edu

Mary Beth Rauktis, Ph.D.

Director of Research; Pressley Ridge, 530 Marshall Avenue, Pittsburgh, PA 15214; 412-442-4442, fax: 412-321-5313; e-mail: mr02@mail.pressleyridge.org

Luke C. McDonough, M.S.

Program Director, Pressley Ridge, 530 Marshall Avenue, Pittsburgh, PA 15214; 412-442-4442, fax 412-321-5313; e-mail: LM02@mail.pressleyridge.org

Lynne Boley, M.ED.

Program Director Day School, Pressley Ridge, 530 Marshall Avenue, Pittsburgh, PA 15214; 412-442-4442, fax 412-321-5313; e-mail: LB01@mail.pressleyridge.org

Therapeutic Alliance and Youth's Aggressive Behavior

Acknowledgements: This research was funded by Pressley Ridge Foundation.

Introduction

In a collaborative effort, Pressley Ridge and Vanderbilt University are gathering information on therapeutic alliances (TA) between Pressley Ridge youth and their teacher/counselors (T/C). Two Pressley Ridge sites participate in this effort: the Day School/Partial Hospitalization, and the Therapeutic Wilderness Camp at Ohiopyle. At both sites, youth and T/Cs meet in classrooms with two or three T/Cs and ten to fifteen youth per classroom. Both the T/Cs and the youth report TA data. In addition, both sites gather an extensive body of information about youth behavior, one of the most important being the measure of youth aggressive behavior toward peers, T/Cs, or other staff members at the schools. A detailed description of the data collection procedures and TA measures is presented elsewhere (Bickman et al., in press).

This paper examines the relationship between TA and youth aggressive behavior at both the Day School/Partial Hospitalization and the Therapeutic Wilderness Camp at Ohiopyle. The main goals are to determine whether aggressive behavior deters both the youth and T/Cs from building better alliances and whether youth aggressive behavior disrupts the youth and T/Cs' therapeutic alliance at a given time.

Methods

Data

Between September 7, 2002 and January 4, 2003, both the youth and their counselors were asked to complete TA questionnaires regarding their therapeutic alliances with each other. Youth aggressive behavior was also tracked through incident reports filled out by T/Cs. This study uses the data collected from both the TA questionnaires and the incident reports.

At the Day School, TA data collection started during the first school week, when the relationships between the youth and the T/C were still new. At the Wilderness Camp (referred to as Ohiopyle hereafter), those relationships were already well established when TA data collection started. Data were collected on a total of 203 youths and 39 T/Cs. Youth TA data, regarding the youths' views of their relationships with their T/Cs, was collected once or twice a month, (depending on the class activities and youth school attendance on the date of TA data collection). Only T/Cs from the Day School rated their alliances with the youths in their classroom, and these T/Cs ratings were collected once a month.

Pressley Ridge also tracked incidents of youth aggressive behavior. Every time a youth exhibited an aggressive behavior toward self, peers or staff that resulted in staff intervention and physical restraint, Pressley Ridge staff created an incident report. The incident report lists each person involved in the incident, including the target of aggression and the T/C or staff member restraining the youth. It also notes the duration of the restraint and describes the circumstances that triggered the incident. After the restraint, the T/C "debriefs" with the youth, talking with him or her about any antecedents to the aggressive acts, the other possible choices the youth could have made, how he or she felt about the restraint, and what future actions the youth will take in similar situations. The youth also sign the incident report.

**Ana Regina Andrade
Ann Doucette
Len Bickman
Mary Beth Rauktis
Luke McDonough
Joyce Kurnot
Lynne Boley**

Analysis Model

In order to address the nested structure of the TA and incident data, we used a Hierarchical Linear Longitudinal Model (HLM). This model is appropriate for our study because the TA data involve multiple levels: youth and teacher/counselor (dyad) are within classrooms and school sites (Hedeker, Gibbons, & Flay, 1994; Littell, Milliken, Stroup, & Wolfinger, 1996). This study estimates a HLM model where aggressive behavior is included as a moving covariate, that is, violence classification of the youth varies with every time unit. The aggressive behavior then takes the value of one when there is an aggressive incident during a one-week period and zero otherwise. The youth group classification is compiled for every week. A negative moving covariate coefficient would suggest that the TA is lower during the week of the incident; better yet, TA ratings are higher in weeks with no youth aggressive incidents. Besides controlling for aggressive behavior, the HLM model measured two other main effects and one interaction effect as follows:

$$\text{Alliance}_{\text{Dyadic}} = F(\text{Aggressive Behavior, Time, Teacher/Counselor, Aggressive Behav} * \text{Time})$$

The variable *Time* determines the TA slope and the interaction effect between *aggressive behavior* and *time* determines whether TA disruptions have the same intensity or whether they diminish across time units.

Results

Data Description

In both school settings, the youth were on average 14.5 years of age, Caucasian (53%), and non-Hispanic (95%). At the Day School, 60% of the students were male, and 58% of the youth had at least one aggressive incident between September 2002 and January 2003. At Ohiopyle, all of the students were male, and 86% of the youth had at least one aggressive incident within the same time period. At Ohiopyle, Youth who exhibited aggressive behavior at the Day School had an average of 5.6 aggressive incidents, whereas at Ohiopyle, aggressive students generated an average of 4.8 incident reports each (Std 6.5 and 4.6 respectively). The Day School had fewer students who were involved in violent incidents than at Ohiopyle, but out of the youth involved, the youth from the Day School have more aggressive incidents than at Ohiopyle.

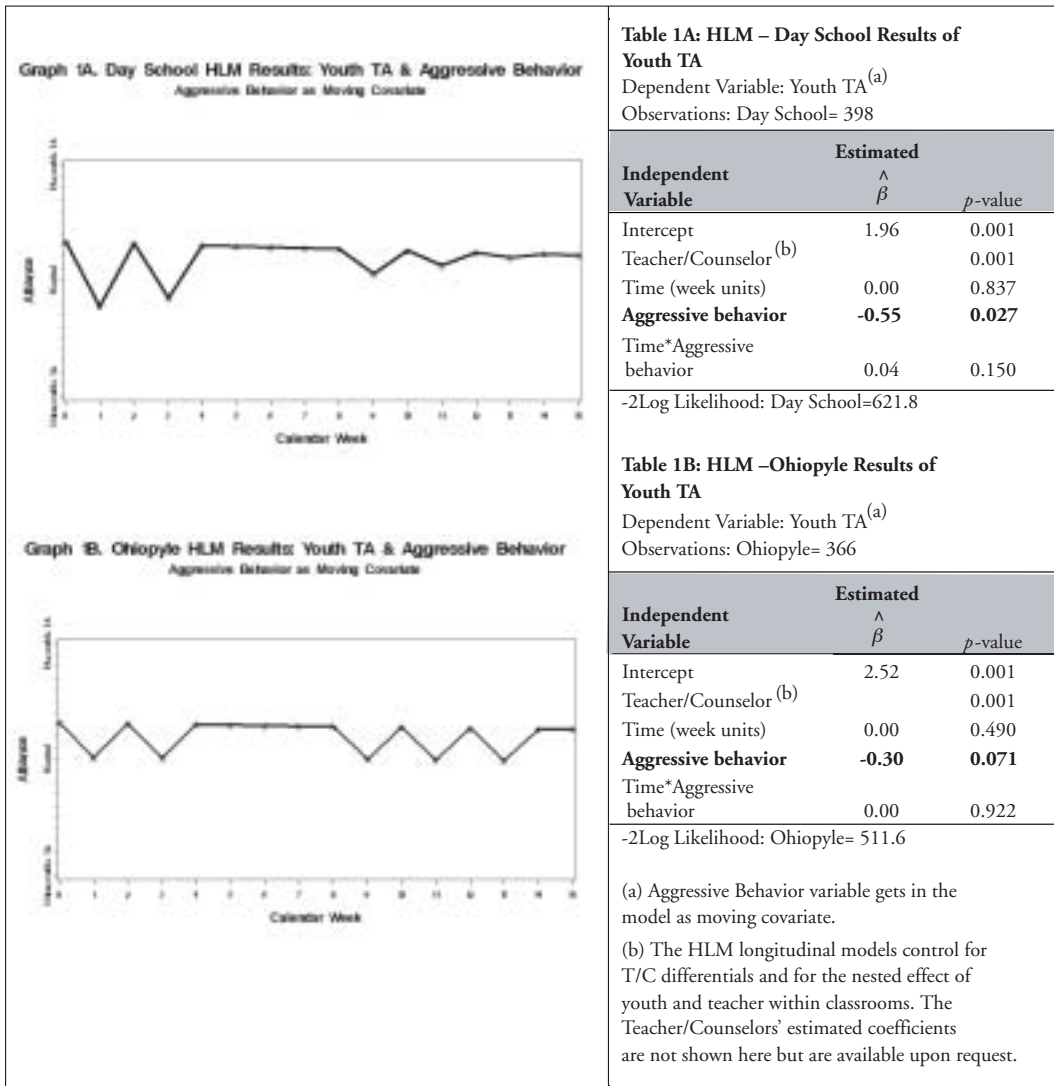
HLM Results

To facilitate interpretation, HLM results are presented both graphically and in a table. The table contains all betas and other statistics. Figure 1 shows the HLM results on youth alliance. At the Day School, results suggest that, at the beginning of the school year, youth TA ratings were 1.96 ($p = 0.001$). There was a significant range of ratings for T/Cs, and youth ratings varied among T/Cs ($p = 0.001$)¹. On average, the youth TA slope did not statistically change over time ($p = 0.84$). With regard to the disruption of youth aggressive behavior on youth alliance, TA ratings dropped by 0.55 points during weeks when there were youth incidents, a large size effect (ES 0.8 STDs). During the weeks without incidents, the youth TA ratings returned to average TA levels (1.96 TA points). The results also suggest that the disruptions of youth aggression on TA lessen over time (see Figure 1, Graph 1a), indicating that as the relationships between the youth and the T/Cs strengthen, the disruption from the youth aggressive behavior decreases. We are cautious regarding the robustness of the diminishing effect of violent behavior over time (the interaction effect is not statistically significant; $p = 0.15$).

At Ohiopyle, occasions with aggressive incidents decreased the youth TA ratings, but their impact was not statistically significant ($p = 0.07$). At Ohiopyle, results indicate that, in September, the average youth

¹At the Day School, six T/Cs received much higher TA ratings than other T/Cs; at Ohiopyle, two teachers received much lower youth ratings than the others. Due to space limitations, the T/C TA differentials at the mean (each intercept) are not shown in Tables 1A or 1B, but they are available upon request.

Figure 1
HLM Youth Alliance Results: Does Aggressive Behavior Disrupt the TA Ratings?

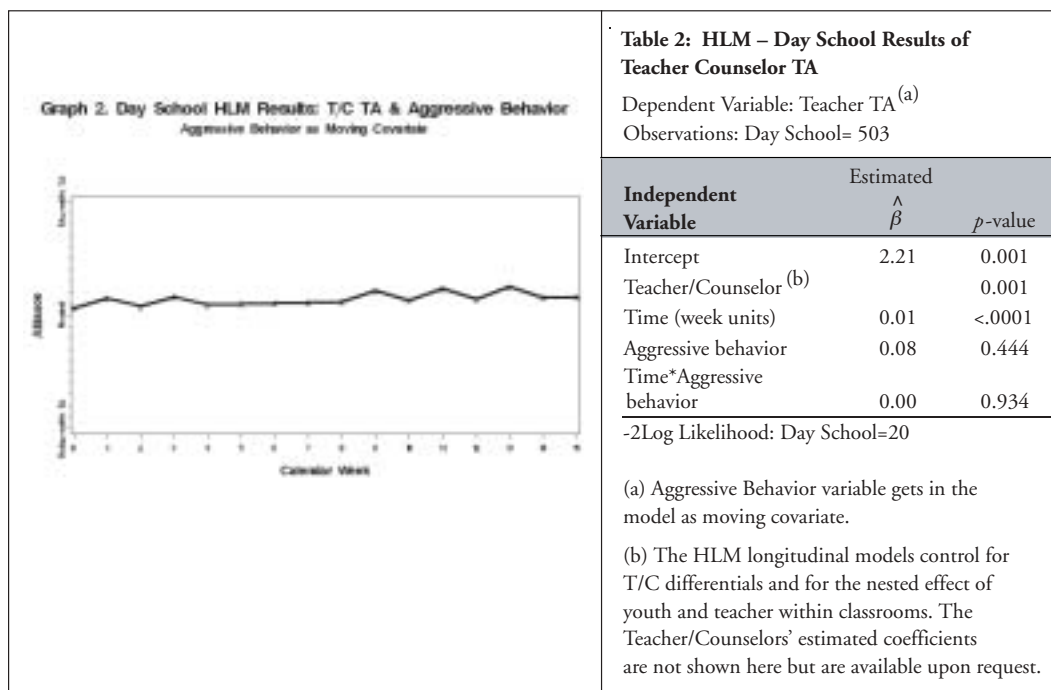


score was 2.52 ($p = 0.001$); again, there was a significant range of ratings for the T/Cs among the youth ratings (0.001). The average ratings did not significantly change over time ($p = 0.49$).

When comparing the modeled TA scores from both Pressley Ridge sites, youth ratings at intake were higher at Ohiopyle than at the Day School (2.45 vs. 1.96). It is important to recall that, in September 2002, when TA data collection started, the youth from Ohiopyle had already established alliances with their T/Cs, while at the Day School these relationships were still new. The ongoing relationships at Ohiopyle may account for the school site differences at intake. Another possible explanation is that the increased contact time for youth treated in a residential setting like Ohiopyle enables them to build and sustain favorable alliances with their T/Cs more quickly than do the youth at the Day School, who return home each day and have discontinuous contact time with teachers.

Figure 2 shows the HLM results on T/C alliance. The presence or absence of youth aggressive behavior within a week does not disrupt the T/C ratings. Weeks with or without incidents have the same ratings at the mean ($p = 0.44$) and have the same slope ($p = 0.934$). T/Cs believe their alliance improved over time; the time coefficient is positive and significant ($p < 0.001$).

Figure 2
HLM Teacher/Counselor Alliance Results: Does Aggressive Behavior Disrupt the Counselors' TA Ratings?



Conclusion and Discussion

In conclusion, counselors tend to view their relationships more positively than do youth. T/Cs are also more likely to believe that those alliances improve over time. It is important to note that occasions with youth aggressive behavior did not result in a deterioration of the relationship with the teacher/counselor. Results from the Day School indicate that even though the youth perceived their TAs more negatively during weeks when they engaged in aggressive actions, such disruptions were minimized as the alliances strengthened over time. Due to the sample size, we are cautious about the impact of the diminishing effect of violent behavior over time; we will continue to examine this association as the project continues.

Research findings such as these have several implications for programs serving similar groups of youth. First, clinicians need to routinely check with youth about their perceptions of how the alliance is developing. Secondly, clinicians should debrief with the youth after a physical restraint, as this may be a period when the alliance is temporarily lower for the youth. Finally, these data replicate the findings of the earlier study (Bickman et al., in press), which showed that T/Cs do not have an accurate picture of their TA. Counselors tend to see the relationship as more positive and improving more over time than do the youth. Thus, the objective measurement of youth TA may be the only accurate way to assess the client-counselor relationship.

References

Bickman, L., Andrade, A. R., Lambert, E. W., Doucette, A., Sapyta, J., Boyd, A. S., Rumberger, D., Moore-Kurnot, J., McDonough, L., & Rautkis, M. B. (in press). Youth therapeutic alliance in intensive treatment settings. *Journal of Behavioral and Health Services Research*.

Hedeker, D., Gibbons, R. D., Flay, B. R. (1994). Random-effects regression models for clustered data with an example from smoking prevention research. *Journal of Consulting & Clinical Psychology* 62(4): 757-765.

Littell, R. C., Milliken, G. A., Stroup, W. W., & Wolfinger, R. D. (1996). *SAS System for Mixed Models*. Cary, NC, SAS Institute.

CONTRIBUTING AUTHORS

Ana Regina Vides de Andrade, Ph.D.

Research Associate; Center for Mental Health Policy, Vanderbilt University, 1207 18th Avenue South, Nashville, TN 37212; 615-343-1655, fax: 615-322-7049; e-mail: ana.regina.andrade@vanderbilt.edu

Ann Doucette, Ph.D.

Senior Research Associate; Center for Mental Health Policy, Vanderbilt University, 1207 18th Avenue South, Nashville, TN 37212; 615-343-1655, fax: 615-322-7049; e-mail: adoucette@aol.com

Len Bickman, Ph.D.

Director; Center for Mental Health Policy, Vanderbilt University, 1207 18th Avenue South, Nashville, TN 37212; 615-322-8694; e-mail: bickman@attglobal.net

Mary Beth Rauktis, Ph.D.

Director of Research; Pressley Ridge, 530 Marshall Avenue, Pittsburgh, PA 15214; 412-442-4442, fax 412-321-5313; e-mail: mr02@mail.pressleyridge.org

Luke C. McDonough, M.S.

Program Director; Pressley Ridge, 530 Marshall Avenue, Pittsburgh, PA 15214; 412-442-4442, fax 412-321-5313; e-mail: LM02@mail.pressleyridge.org

Joycelynn L. Moore-Kurnot, B.S.

Treatment Liaison; Pressley Ridge, 305 Pressley Ridge Road, Ohio, PA 15470; 724-329-8300, fax 724-329-0858; e-mail: jm13@mail.pressleyridge.org

Lynne Boley, M.ED.

Program Director Day School; Pressley Ridge, 530 Marshall Avenue, Pittsburgh, PA 15214; 412-442-4442, fax 412-321-5313; e-mail: LB01@mail.pressleyridge.org

Training Students in a System-of-Care Model: Measuring the Effects of an Interdisciplinary Training Course on Student's Attitudes

Acknowledgements: Preparation of the course described in this manuscript was supported in part by a contract from the North Carolina Division of Mental Health/DD/SAS, Child and Family Services Section to the East Carolina University Social Sciences Training Consortium.

**Shaun W. Davenport
Susan L. McCammon
David Dosser
D. Handron
J. Y. Powell
Sandra Spencer
Karl L. Wuensch
John Cope**

Introduction

In the last twenty years the delivery of mental health services for children and adolescents has changed dramatically, and continues to change. One new service delivery model supported by the Center for Mental Health Services' Child & Adolescent Service System Program (CASSP) was the system-of-care model developed by Stroul and Friedman (1986). This model is based on a collaborative perspective that attempts to reduce repetition among treatment providers, and allows families to participate and even lead in the planning of treatment services with professionals (Stroul & Friedman, 1986). However, the training and education of the professionals who will work under this and other collaborative mental health systems remains primarily traditional (Hanley & Wright, 1995). Little research exists on the effectiveness of graduate training as a means of instilling system-of-care values into future mental health professionals, and to better prepare them for work within collaborative systems.

The present study investigated whether a multidisciplinary graduate training course, focused on teaching system-of-care principles, would have a significant effect on the attitudes of graduate students toward parent-professional collaboration. It was hypothesized that students would agree more strongly with a collaborative ideology after taking the course.

Method

A total of 135 East Carolina University graduate students participated in this study. Ten were male, and seventy-two were female. Graduate students from various health and human service disciplines (e.g., social work, psychology, child development and family relations, and nursing) participated in an elective course entitled, Interdisciplinary Practice: Services for Children with Serious Emotional Disorders and Their Families. The course was originally developed and funded in collaboration with a federally funded state-directed system-of-care initiative called the Pitt-Edgecomb-Nash Public Academic-Liaison (PEN-PAL) Project. During the course, students engaged in various types of coursework (e.g. lectures, discussion, presentations, readings, role play, case studies, and group work) designed to prepare them to participate in holistic interdisciplinary team practice. Before beginning the course, students completed the Community Mental Health Ideology Scale (CMHI; Baker & Schulberg, 1967), which assesses attitudes toward the community mental health ideology, and the Providers' Beliefs About Parents Questionnaire (PBAP; Johnson, Cournoyer, & Fisher, 1994), which measures attitudes about parent-professional collaboration. At the conclusion of the course, students completed the CMHI and the PBAP a second time. A detailed description of the course objectives, course content, and teaching methods is available (Dosser, Handron, McCammon, Powell & Spencer, 2001).

Results

To determine the effects of the independent variables (Course Completion and Student Discipline), on the dependent variables (scores on questionnaires), a mixed factorial analysis of variance was conducted for the CMHI scale and for each of the PBAP subscales. As shown in Table 1, a significant main effect for course completion was found on five of the six scales, suggesting that taking the course resulted in a significant change in students' responses to the items on the CMHI scale, and on the Blame, Inform, Validate and Instruct subscales of the PBAP. Table 1 shows that post-course, students endorsed

attitudes that were more consistent with the Community Mental Health Ideology. Their post-course attitudes were also more consistent with *informing*, and *validating* parents, and less consistent with *blaming*, and *instructing* parents. The main effects for students' discipline are shown in Table 2. There was a main effect for discipline on only two of the six scales, the CMHI scale, $F(3, 78) = 8586.37, p = .008$, and the Validate subscale, $F(3, 77) = 7248.15, p = .025$. The interaction between Discipline and Course Completion fell short of statistical significance in all cases ($p > .23$ in all cases).

Table 1
Pre and Post Mean Values for Each Scale

Scale	Pre Course Mean (SD)	Post Course Mean (SD)	<i>p</i>
CMHI scale	5.31 (.56)	5.80 (.63)	< .001
"Blame" Subscale	2.18 (.48)	1.69 (.56)	< .001
"Inform" Subscale	3.01 (.46)	3.34 (.48)	< .001
"Validate" Subscale	3.01 (.44)	3.61 (.33)	< .001
"Medicate" Subscale	2.30 (.58)	2.42 (.67)	.193
"Instruct" Subscale	2.83 (.69)	2.59 (.86)	.025

Table 2
Mean Scores by Discipline on the CMHI Scale and "Validate" Subscale

Discipline	CMHI Scale			"Validate" Subscale		
	Mean Score	SD	<i>N</i>	Mean Score	SD	<i>N</i>
Nursing	5.89 ^a	.29	10	3.38 ^{ab}	.28	10
Social Work	5.62 ^{ab*}	.50	35	3.46 ^a	.25	34
Psychology	5.58 ^{ab}	.63	16	3.32 ^{ab}	.36	16
CDFR	5.26 ^b	.44	21	3.28 ^b	.39	21

*Means that share a letter are not significantly different at $p = .05$

Discussion

Overall, there was a significant difference in the attitudes of the students prior to taking the course and upon completion of the course, as evidenced by a change in scores on the PBAP and the CMHI. Also, it appears that students agreed more strongly with the CMHI and parent-provider collaboration post course, as student's scores on the scales associated with greater collaboration (CMHI; Parent Validation, Informing Parents) increased and those associated with less collaboration (Blaming Parents) decreased. There were no significant differences in the students' attitudes or changes in their attitudes across disciplines. These findings support the assertion that the course under investigation successfully increased collaborative system-of-care attitudes among students regardless of discipline. Thus, it appears that such attitudes can be fostered through multidisciplinary courses. By changing the attitudes of the professional (and not just the environment), the professional should be better prepared to work within system-of-care service delivery systems. This course and the method of course evaluation may serve as a framework for the development of future multidisciplinary courses.

References

- Baker, F. & Schulberg, H. C. (1967). The development of a community mental health ideology scale. *Community Mental Health Journal, 3*, 216-225.
- Dosser, D. A., Jr., Handron, D. S., McCammon, S. L., Powell, J. Y., & Spencer, S. S. (2001). Challenges and strategies for teaching collaborative interdisciplinary practice in children's mental health care. *Families, Systems, & Health, 19*, 65-82.
- Johnson, H. C., Cournoyer, D. E., & Fisher, G. A. (1994). Measuring worker cognitions about parents of children with mental and emotional disabilities. *Journal of Emotional and Behavioral Disorders, 2*, 99-108.
- Hanley, J. & Wright, H. H. (1995). Child mental health professionals: The missing link in child mental health reform. *Journal of Child and Family Studies, 4*, 383-388.
- Stroul, B. A. & Friedman, R. M. (1986). *A system of care for children with severe emotional disturbances*. Washington: CASSP Technical Assistance Center for Child Health and Mental Health Policy, Georgetown University.

CONTRIBUTING AUTHORS

Shaun W. Davenport, M.A.

Principal Investigator; Department of Management, 408 Stokely Management Center, Knoxville, TN 37996-0545; 865-693-7598; fax: 865-974-3163; e-mail: swd@utk.edu

Susan L. McCammon, Ph.D.

Co-Investigator; Psychology Department, East Carolina University, Greenville, NC 27858; 252-328-6357, fax: 252-328-6283; e-mail: mccammons@mail.ecu.edu

David Dosser, Ph.D.

Co-Investigator; Department of Child Development and Family Relations, East Carolina University, Greenville, NC 27858; 252-328-4236 e-mail: dosserd@mail.ecu.edu

D. Handron, Ph.D.

Co-Investigator; Community Nursing Systems, East Carolina University, Greenville, NC 27858; 252-328-4184; e-mail: handrond@mail.ecu.edu

J. Y. Powell, Ph.D.

Co-Investigator; Department of Social Work, East Carolina University, Greenville, NC 27858; 252-328-4379; e-mail: powellj@mail.ecu.edu

Sandra Spencer

Co-Investigator; East Carolina University, Greenville, NC 27858; 252-328-6357

Karl L. Wuensch, Ph.D.

Co-Investigator; Department of Psychology, East Carolina University, Greenville, NC 27858; 252-328-6309; e-mail: WuenschK@mail.ecu.edu

John Cope, Ph.D.

Co-Investigator; Department of Psychology, East Carolina University, Greenville, NC 27858; 252-328-6497; e-mail: copej@mail.ecu.edu

Can a Brief Educational Intervention Change University Students' Attitudes Toward Children with SED?

**Scott W. Minor
Shawn Acheson
Harrison Kane**

Introduction

Epidemiological research in the United States suggests that approximately 20% of children have a diagnosable mental disorder, and that approximately 5% of those children have a Serious Emotional Disturbance (SED; Costello, et al., 1996). Children with SED are those with a diagnosable mental disorder who also have significant functional impairment and other difficulties that often require multiple agency involvement. Although different approaches have been utilized to address the needs of children with SED and their families, the treatment of choice today is a Systems-of-Care (SOC) approach. Treatments administered within a SOC differ from more traditional treatment approaches for children with SED by providing services that are community-based, family-centered, agency-integrated and culturally competent (Minor, 2001).

One of the difficulties frequently reported by those who enter the workforce at an SOC site is that their university training had focused on traditional approaches to treatment for children with SED, and minimized, or not covered at all, the SOC approach. To address this problem, state universities in North Carolina formed Public Academic Liaisons (PALs) to increase collaboration among universities, the public sector, and families (Shelton & Baumhover, 2002). One of the major goals of the PALs is to involve university faculty in the SOC model of service delivery so they can better prepare those students who will eventually work in the state mental health system. PALs accomplishes this goal by incorporating SOC principles into academic curricula, by enlisting parents and public service staff as guest classroom lecturers, and by involving students in relevant practica and internship experiences that utilize the SOC approach.

Although universities in the North Carolina PALs, and other universities, have attempted to change student's attitudes and behaviors toward children with SED and their families, there has been very little empirical work done to document these changes. Waring, Reed-Ashcraft and Blanchard-Kittle (2001) did find that students who completed an internship consistent with SOC principles and values emerged from the program with a better understanding of SOC related concepts. These students also placed a high value on inter-agency collaboration, and had a better grasp of the role parents can play in their child's treatment.

The current research sought to determine whether a brief educational intervention incorporating basic information about children with SED and the SOC approach would result in changes in students' attitudes toward children with SED and their families. Researchers felt this could be impactful because students with more positive attitudes toward children with SED and a SOC treatment approach should be more amenable to participate in further educational experiences, such as practica and internships, that incorporate SOC principles and values.

Method

The participants were 115 students enrolled in introductory psychology or education classes at Western Carolina University. All participants completed the Attitudes Towards Children with Serious Emotional Disturbance Scale (ATCSED; Minor, et al., 2002). One week later, students were exposed to a 30-minute presentation that described the SOC approach and how it differed from more traditional approaches to serving children with SED. This presentation included the following sections:

- Characteristics of children with SED
- What has been done in the past; traditional approaches to serving children with SED
- The SOC approach: Integrated Services, Case Management, Child and Family Teams, Community-Based Services, Family-Centered Services, Strength-Based Services, Culturally Competent Services.

Immediately following this presentation, all students again completed the ATCSED. The ATCSED consists of 22 statements about children with SED that are answered on a 5-point Likert-type scale (1 = *strongly agree*, to 5 = *strongly disagree*). Two factor analytic studies of the ATCSED have revealed three major factors: Social Ecology, Family Ecology, and Parenting (Minor, et al., 2002). The ATCSED has been found to be internally consistent with Chronbach's alpha at .70; internal Chronbach's alpha consistency estimates for Social Ecology, Family Ecology and Parenting were .59, .71 and .68, respectively. For this research, a Critical Items Scale, containing 10 items, was developed; we predicted that this scale would be sensitive to changes in students' attitudes.

Results

The data were analyzed by performing MANOVAs for the pre- and post-test scores for the three factor scales and the Critical Items Scale. When the MANOVA was significant, appropriate univariate ANOVAs were performed. The MANOVA for the Social Ecology Scale was significant, $F(1,114) = 11.01, p < .001$, and the MANOVA for the Critical Items Scale was significant, $F(10,101) = 5.19, p < .001$. The MANOVAs for the Family Ecology and Parenting Scales were not significant. The specific univariate analyses for each of the 10 items making up the Critical Items Scale are presented in Table 1.

Table 1
Mean Scores for Pre-test and Post-test on Critical Items Scale
(Range: 1 = *strongly agree* to 5 = *strongly disagree*)

<i>Item</i>	<i>Pre-test</i>	<i>Post-test</i>
1. Children with SED are often the result of ineffective parenting.	2.95	3.05
2. Most parents of children with SED are doing the best they can.	2.86	2.59*
3. Most parents of children with SED are usually a big part of the problem.	2.88	3.03
4. The parents of children with SED can be an important part of any solution to the problems of their children.	1.96	1.65**
5. Children with SED should be separated from their parents during treatment.	3.46	3.88**
6. Parents of a child with SED should be more involved in treatment planning for their child.	2.02	1.57**
7. Most children with SED would have fewer problems if they were removed from their parents.	3.43	3.71**
8. Parents of children with SED should be involved in all decisions regarding treatment for their children.	2.49	1.91**
9. The cultural beliefs and values of most families of a child with SED are different from the norm.	3.21	2.95*
10. Poor parenting is a major factor in most children with SED.	2.75	3.03*

* $p < .05$, ** $p < .01$

Discussion

It was encouraging to find that a brief educational intervention resulted in some significant attitude changes among the students. Most importantly, the students reported more positive attitudes toward the parents of a child with SED. Students were more likely to agree that parents were doing the best they could, that parents should be a part of the solution to problems, and that parents should be more involved in their child's planning and treatment decisions. Students were also more likely to disagree that children should be separated from their parents during treatment or removed from their parent's home, and that poor parenting was a major factor for children with SED.

This research resulted in a number of questions worthy of follow-up. First, it is not known how long students' attitude changes will remain stable. With such a brief intervention and no follow-up, it is unclear whether students' attitudes will revert back to pre-test levels. Second, the relationship between changed attitudes toward children with SED and the student's actual behavior toward children with SED is not clear. For example, will these students be more likely to seek out practica and internship experiences that expose them to SOC and children with SED?

The most serious limitation of this research is the lack of a comparison or control group. Although it is reasonable to expect that the students' attitudes would not have changed in the one week interval between the pre-test and post-test, one cannot rule out the possibility that these attitude changes could have occurred without the educational intervention.

Future research will address these issues by replicating the study with a more lengthy intervention early in the semester, including a comparison group that receives an attention-placebo intervention and a follow-up post-test toward the end of the semester. Also, we plan to follow-up with these students one year later to see if they were more likely to seek practica and internship experiences that involve exposure to SOC and children with SED.

References

- Costello, E. J., Angold, A., Burns, B. J., Stangl, D. K., Tweed, D. L., Erkanli, A., & Worthman, C. M. (1996). The Great Smoky Mountains Study of Youth. Goals, design, methods, and the prevalence of DSM-III-R disorders. *Archives of General Psychiatry*, *53*, 1129-1136.
- Minor, S. W. (2001). *A system of care for children of western Jamaica: The WFACT project*. Paper presented at the IV International Conference on Latin American and Caribbean Psychology.
- Minor, S., Acheson, S., Kane, H., Calahan, E., Leverentz, K., Pasden, A., & Wegener, M. (2003). Teacher's Attitudes Toward Children with Serious Emotional Disturbance. In C. Newman, C. Liberton, K. Kutash, & R. M. Friedman (Eds.), *The 15th Annual Research Conference Proceedings, A System of Care for Children's Mental Health: Expanding the Research Base* (pp. 221-223). Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.
- Shelton, T., & Baumhover, L. (2002). Topical Discussion: The North Carolina Public-Academic Liaisons: Facilitating collaboration between university and community. Overview. In C. Newman, C. Liberton, K. Kutash, & R. M. Friedman (Eds.), *The 14th Annual Research Conference Proceedings, A System of Care for Children's Mental Health: Expanding the Research Base* (pp. 421-427). Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.
- Waring, D., Reed-Ashcraft, K. & Blanchard-Kittle, C. (2001). An interdisciplinary field training effort and preliminary evaluation. Paper presented at *The 14th Annual Research Conference Proceedings, A System of Care for Children's Mental Health: Expanding the Research Base*. Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.

CONTRIBUTING AUTHORS

Scott W. Minor, Ph.D.

Professor of Psychology; 828-227-3369, fax: 828-227-7388; e-mail: minor@wcu.edu

Shawn Acheson, Ph.D.

Assistant Professor of Psychology; 828-227, fax: 828-227-7388; e-mail: sacheson@wcu.edu

Harrison Kane, Ph.D.

Assistant Professor of Psychology; 828-227, fax: 828-227-7388; e-mail: hkane@wcu.edu

*Western Carolina University, Department of Psychology, Room 301, Killian Bldg.
Cullowhee, NC 28723*

520 – Research and Training Center for Children’s Mental Health – Tampa, FL – 2004