Chapter Two

Evidence-Based Practices and Processes in Systems of Care

Top Five Reasons NOT to Use Evidence-Based Programs— Results from the 17th Annual Research Conference: A System of Care for Children's Mental Health

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Authors' Note. The authors would like to make it clear that they are professionally very supportive of evidence-based programs and believe that the benefits for children, families and adult consumers far outweigh the challenges, concerns, and barriers.

Introduction

In the past 5 years, major summaries of human services have been issued by the Surgeon General (Department of Health and Human Services, 1999; 2001), the NIMH National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention Development and Deployment (2001), Bernfeld, Farrington, & Leisheid (2001), Institute of Medicine (2001), and the New Freedom Commission on Mental Health (2003). These reports agree that we know much about "what works" but make little use of it to help achieve important behavioral health outcomes for children, families, and adults nationally. Given the emphasis on evidence-based programs and practices in these reports, the human services fields need to find better ways of implementing them with fidelity and good outcome. The purpose of the survey reported here was to obtain information on some of the impediments to adopting evidence-based practices and programs.

Methods

At the poster session sponsored by the Conference, the authors developed an interactive presentation on 'The Top Five Reasons NOT to use Evidence-Based Programs.' in which the authors interviewed conference attendees who passed by the poster location. Conference attendees who voluntarily participated in this interactive presentation were asked if they were currently involved in using an evidence-based program. If the participant replied in the negative, the authors then asked them about their reasons for not using an evidence-based program. If the participant replied in the affirmative, the authors asked what their experience had been on the front end when the evidence-based program was being considered and just starting to be implemented. Participants were then asked if they would like to contribute their comments to the authors' list of *Reasons NOT to Use Evidence-Based Programs*. Participant's comments were then placed on the poster, where other participants and conference attendees could see their comments.

Results

The authors categorized the participant's comments to arrive at the top five reasons not to use evidence-based programs. The impediments to using evidence-based programs are briefly summarized below.

1. Research base is not convincing

- The research base is not extensive enough.
- Evidence-based programs do not work.
- Why change what already works?
- It is really the therapeutic alliance that matters.
- Evidence-based programs may not contribute more than therapeutic alliance.
- Evidence-based programs are not based on qualitative research.
- Evidence-based programs are not the only effective alternatives.
- There is not enough feedback about current programs to realize it is not working and adopt a new evidence-based program.

- Research is not the only thing that matters when deciding what to do with children and families.
- Evidence-based programs devalue clinical judgment.
- There is too much focus on the technology of the program and not enough focus on basic scientific principles that might be generalizable.
- Evidence-based programs are difficult to implement
- There is no buy-in across disciplines.

2. Evidence-based programs are a time investment for children and families and other competing interests within the family.

- It is hard to get key decision makers on board.
- We do not know how to implement yet.
- There are difficulties adapting to individual communities.
- No evaluation tool has been created that is sufficiently sensitive to change.
- Evidence-based programs require a lot of face-to-face contact – salesmanship and marketing.
- Evidence-based program development is not started soon enough.
- Buy-in is hard to achieve.
- There is unfamiliarity with evidence-based programs.

3. Evidence-based programs require too much change

- The director of our agency does not want to give up control to an outside group that dictates what we will do.
- Evidence-based programs require too much work.
- Evidence-based programs are difficult to mandate in a system.
- There is not enough good leadership.
- There is a lack of collaboration.
- Evidence-based programs have to be in an effective service delivery system.
- Therapy is an art, not a science.
- What if we are wrong and it does not turn out well?
- Evidence-based programs stifle ground-up innovation.

4. Evidence-based programs are incomplete given the problems we face

- Our children and families have complex problems that go beyond any simple evidence-based program.
- Evidence gathered is too uni-modal; real life is multi-modal.
- Evidence-based programs are too fragmented (symptom specific).
- Evidence-based programs may not apply to communities of color.
- Evidence-based programs are too focused on symptoms and do not address the underlying problems.
- Cost and time are not attached to evidence so we cannot compare different programs.
- The cookie-cutter approach to treatment is not acceptable.
- Evidence-based programs are not designed for use in the real world.
- Follow-up work with families is not built into evidence-based programs after the program is over.
- Most evidence-based programs do not take into account motivation of families.
- The cultural and developmental piece is not applicable.
- Higher education is inconsistent or does not prepare clinicians to conduct evidence-based treatment.
- Evidence-based programs are not used in a flexible way with other approaches.

5. Infrastructure for implementation does not exist or is not supported

- Evidence-based programs need good supervision; supervisors are not trained.
- There is not enough training for seasoned clinicians beyond the manual.
- There is no budget at the community level for training and coaching.
- Evidence is not used in the mental illness field. Evidence-based program stigma in mental illness field.
- Evidence-based programs are not affordable (too resource intensive).
- Agencies forget to hire program evaluators.
- Evidence-based programs are too costly to implement.
- There is a need to develop a more permanent infrastructure for support.

Discussion

These interviews were conducted to gain insight into the real-world problems faced by practitioners and administrators in the field. Needless to say, the sample was self-selected and the results are not generalizable. However, they do provide a glimpse of what some people are thinking and they might stimulate some discussion and thought. It was interesting that the evidence bases for most evidence-based practices and programs are simply not convincing for many professionals. The other issues regarding the difficulties involved in implementation were anticipated and fit with the more general comments found in the literature.

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The Evidence-Based Treatment Knowledge and Practice of Children's Mental Health Service Providers: Preliminary Findings from the Evidence-Based Treatment Survey

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Introduction

As the evidence-base around effective treatments for children and adolescents with mental disorders continues to grow (Burns, Hoagwood, Mrazek, 1999; Compton, Egger, Burns & Robertson, 2002; Farmer, Compton, Burns, Robertson, 2002; Kazdin & Weisz, 1998), increasing attention is being paid at the local, state and federal level to the required implementation of evidence-based treatments (Burns & Hoagwood, 2002; Kazdin & Kendall, 1998). As the children's mental health services field attempts to move into an era where treatments with demonstrated effectiveness are those most often implemented, an understanding of current provider practices and knowledge about evidence-based treatments is critical. An understanding of the front-line service perspective and practice is the foundation upon which a movement toward evidence-based treatment must be built.

To this end, the Evidence-based Treatment Survey (EBT Survey) was developed. The EBT Survey is a survey of mental health clinicians across systems-of-care communities funded in 1997 and 1998 under the Comprehensive Community Mental Health Services for Children and Their Families Program. Specifically clinicians who provide mental health services to children eligible to receive systems-of-care services (i.e., children with serious emotional disturbance) were solicited for participation in the survey. The survey is ongoing, and its primary purpose is to gain a better understanding of what mental health clinicians know about evidence-based treatments, the type of training that they receive, and the extent to which evidence-based treatments are practiced.

Methods

Participants

Data collection for the EBT Survey began in late August 2003 and continued through January 2004. Survey responses were received from 615 individuals from 26 communities who were identified via 23 system-of-care funded sites (funded in 1997/98) and two comparison sites (44% response rate), across 20 States. These preliminary findings are based on available data from 519 respondents for whom data entry had been completed by February 2004.

Provider respondents were predominantly White (89.0%), and female (66.0%), with an average age of 42.1 years (*SD* = 10.7) and an age range of 23 to 66 years. They reported having worked as a mental health service provider for an average of 11.2 years (*SD* = 8.6), and as a mental health service provider for children with serious emotional disturbance for an average of 9.0 years (*SD* = 7.7). The majority of respondents were licensed mental health service providers (72.7%), had earned a master's degree (86.3%), and held a current position of clinician/therapist/clinical social worker (61.0%) or case manager/care coordinator (9.8%).

Description of Measure

The Evidence-based Treatment Survey (EBT Survey) was designed as a web-based survey, however hard copies of the survey are made available upon request. The EBT Survey is a 65-item survey (completion time approximately 20 minutes) that contains questions related to the mental health clinician's knowledge, training, and use of evidence-based treatments in their practice. Specifically, clinicians are questioned about: (a) their knowledge about various evidence-based treatments; (b) their perceived effectiveness of evidence-based treatments; (c) the extent to which evidence-based treatments

are practiced, and the extent to which they are practiced according to guidelines; (d) the training received in evidence-based practice approaches; and (e) the extent to which employers provide support and continued training opportunities for evidence-based practice. In addition, basic demographic information (e.g., age, race, gender, level of education, etc.) is also requested. The current study presents information on provider knowledge of evidence-based treatments, their perceived effectiveness, and the extent to which they are practiced.

Procedure

A two-stage process (i.e., modified snowball approach) was used to identify a comprehensive list of mental health clinicians from each targeted community. The first stage involved a structured phone contact with the community director during which they were asked to identify all agencies and organizations that provide mental health services to children eligible for or enrolled in systems-of-care services. There were 28 first-stage contacts; one contact each from 26 sites in 23 system-of-care funded communities and two non-funded comparison study communities. Five hundred and seventy-one appropriate agencies were identified at stage one (range 1 - 129 agencies per stage-one contact; average number of agencies per stage-one contact = 19.7).

The second stage involved contact with each agency/organization identified at stage one, and a request for a list (including names and addresses) of their mental health clinicians (1,669 appropriate respondents identified; range 1 - 90 per agency; average number of appropriate respondents per stage-two contact = 5.5). In addition, the second-stage contacts were also asked to identify other agencies/organizations in the area who provide services to these same children. Any agency/organization not previously identified at stage one was added to the stage-two contact list.

A proportional sample (using an average of 50 respondents per community for a total of 1,402 respondents as the target) was selected from the list of identified potential respondents. Sampling was performed within any systems-of-care community where 80 or more potential respondents were identified. A five-stage mailing process was used to recruit selected potential respondents for the cross-sectional EBT Survey.

Results

Provider Knowledge of Evidence-based Treatments and Their Perceived Effectiveness

Approximately 60% (n = 519) of the respondents were familiar with the term *evidence-based treatment*, the remainder reported they were either unfamiliar (26.0%) or did not know if they were familiar with the term (15.1%). Respondents were asked to define evidence-based treatment, regardless of their reported familiarity with the term. Over 80% of respondents that reported familiarity with the term included "researched effectiveness" when asked to define evidence-based treatment. Comparatively fewer respondents who reported they were unfamiliar with the term, or did not know if they were familiar, included "researched effectiveness" in their self-reported definition of evidence-based treatment (26.0% and 15.1%, respectively).

Provider respondents were presented with 33 treatments that were deemed evidence-based by experts (personal communication with Barbara Burns, 2003) and were asked if they believed the treatment resulted in positive outcomes for children and families. As indicated in Table 1, the percentage of respondents indicating the treatment was effective ranged from 6.1% to 90.5%, depending on the treatment in question. The treatments endorsed as resulting in positive outcomes by 80% or more of the respondents included: family education and support (90.5%), social skills training (90.1%), cognitive behavioral therapy (88.6%), antidepressants for mood disorders (87.8%), behavior therapy (86.4%), stimulant medication for Attention Deficit/Hyperactivity Disorder (84.4%), modeling (84.1%), anger management/coping (83.7%), problem solving skills training (82.4%), mentoring (80.8%), and case management (80.3%).

Those treatments that were endorsed as unfamiliar by more than 25% of the respondents included: functional family therapy (25.5%), common sense parenting (28.4%), self-control instruction training (28.6%), behavioral teacher training (28.6%), exposure therapy (32.0%), emotive imagery therapy (37.1%), voucher-based contingency management (61.0%) and Webster Stratton's parent and children series (81.8%).

The Extent to Which Evidence-based Treatments are Practiced

Over one-half (55.6%, *n* = 387) of the respondents were in the primary employment of a mental health agency, 4.7% by a hospital, 3.1% by the education system, 3.6% by child welfare, 1.3% by juvenile justice, and 15.5% reported they were in private practice. Approximately 36% of respondents

Table 1
Evidence-based Treatment Familiarity and Perception of Effectiveness

	Do you believe this treatment results in positive outcomes for children and families?			
Evidence-Based Treatment	*YES (%)*	*NO (%)*	*Familiar with the treatment but does not know whether it results in positive outcomes. (%)*	*Not familiar with the treatment listed. (%)*
Family Education and Support (*n* = 464)	90.5	1.5	7.1	.9
Social Skills Training (*n* = 466)	90.1	3.0	5.8	1.1
Cognitive Behavioral Therapy (*n* = 465)	88.6	1.9	8.2	1.3
Antidepressants for mood disorders (*n* = 467)	87.8	2.1	9.4	.6
Behavior Therapy (*n* = 463)	86.4	5.4	7.3	.9
Stimulant medication for ADHD (*n* = 467)	84.4	3.9	10.7	1.1
Modeling (*n* = 465)	84.1	2.2	12.3	1.5
Anger Coping/Management (*n* = 465)	83.7	3.0	11.8	1.5
Problem Solving Skills Training (*n* = 466)	82.4	1.9	13.3	2.4
Mentoring (*n* = 463)	80.8	3.7	14.5	1.1
Case Management (*n* = 466)	80.3	5.2	13.9	.6
Relaxation Training (*n* = 462)	78.1	3.2	16.7	1.9
Respite (*n* = 465)	75.9	4.5	18.1	1.5
Respite (*n* = 465)	75.9	4.5	18.1	1.5
Wraparound (*n* = 464)	75.0	5.2	14.2	5.6
Behavioral Parent Training (*n* = 466)	73.2	1.7	15.9	9.2
Parent-Child Interaction Therapy (*n* = 464)	68.5	1.3	14.4	15.7
Assertiveness Training (*n* = 464)	67.0	3.2	25.4	4.3
Cognitive Behavioral Group Therapy for Adolescents (*n* = 466)	66.3	4.7	23.4	5.6
Multisystemic Therapy (*n* = 465)	66.0	1.7	17.8	14.4
Therapeutic Foster Care (*n* = 464)	65.5	6.9	24.1	3.4
Parent Management Training (*n* = 466)	62.7	1.3	16.3	19.7
Interpersonal Therapy for Adolescents (*n* = 463)	57.5	4.3	22.2	16.0
Brief Strategic Family Therapy (*n* = 461)	55.7	7.6	26.2	10.4
Systematic Desensitization (*n* = 467)	53.5	6.4	31.0	9.0
Rational Emotive Therapy (*n* = 465)	50.8	8.6	29.9	10.8
Functional Family Therapy (*n* = 462)	47.4	2.2	24.9	25.5
Common Sense Parenting (*n* = 465)	46.0	3.9	21.7	28.4
Self-Control Instruction Training (*n* = 465)	44.3	4.1	23.0	28.6
Behavioral Teacher Training (*n* = 465)	39.4	3.9	28.2	28.6
Exposure Therapy (*n* = 462)	29.2	7.8	31.0	32.0
Emotive Imagery Therapy (*n* = 461)	17.6	8.7	36.7	37.1
Voucher-Based Contingency Management (*n* = 464)	13.6	3.9	21.6	61.0
Webster Stratton's Parent and Children Series (PACS) (*n* = 461)	6.1	1.1	11.1	81.8

indicated that they were required by their agency to provide evidence-based treatments and 40.2% of those employed by a mental health agency were required by their agency to provide evidence-based treatments as compared to 71.4% in child welfare, 41.7% in education, 40.0% in juvenile justice, 27.8% in hospital settings, and 13.3% in private practice.

Approximately 93% of the respondents surveyed indicated that they used an evidence-based treatment in their practice, and 93.0% of those respondents indicated that they used evidence-based treatments with more than half of their clients. When asked what factors influence their decisions to use an evidence-based treatment with a specific child, 68.9% indicated that the child's diagnosis, 60.0% age, 57.2% situation at home, 48.4% caregiver, 22.6% cultural background, 18.9% race/ethnicity, and 16.0% gender, almost always/always affected the decision to use a particular evidence-based treatment. In addition, 52.2% indicated that the treatment setting and 48.4% indicated that the child's caregiver always/almost always affected their evidence-based treatment decisions (see Table 2).

Table 2
Factors that Affect Decisions to Use Evidence-based Treatments

	How often does each factor influence your decision to use an evidence-based treatment with a specific child?				
Factors	*Never (%)*	*Almost Never (%)*	*Sometimes (%)*	*Almost Always (%)*	*Always (%)*
Child's age (n = 422)	9.5	5.5	25.1	33.2	26.8
Child's gender (n = 418)	35.4	24.4	24.2	9.3	6.7
Child's race/ethnicity (n = 419)	30.3	20.8	30.1	10.5	8.4
Child's cultural background (n = 420)	20.7	16.2	40.5	13.1	9.5
Child's parent/caregiver (n = 420)	10.5	6.7	34.5	30.5	17.9
Child's diagnosis (n = 422)	7.3	4.7	19.0	39.8	29.1
Child's situation at home (n = 420)	8.1	5.7	29.0	34.3	22.9
Treatment setting (n = 419)	9.3	8.4	30.1	30.5	21.7

Providers were asked to name their three most commonly used evidence-based treatments, other than medication. As indicated in Table 3, 41 different treatments were named.

The most commonly reported treatments included cognitive behavioral therapy (61.7%), wraparound (18.2%), anger management (14.6%), social skills training (13.5%), case management (11.4%), and rational emotive therapy (10.1%).

Discussion

There is great variation in both the reported knowledge and practice of evidence-based treatments among providers of service to children with serious emotional disturbance. While the majority of providers have heard of evidence-based treatment and many use such practices in their work, the variability in the awareness of available treatments and the perception of treatment effectiveness is considerable. In a time of increasing attention to the use of evidence-based treatments, and when more and more agencies are demanding such treatments be provided to children and their families, provider education around the availability, effectiveness, and transportability of these treatment options is paramount.

The apparent discrepancy that exists between perceived effectiveness and practice warrants attention. For example, while 88.6% of respondents indicated a perception of effectiveness for cognitive behavioral therapy, only 61.7% reported its practice. Even more striking is that while 90.1% of respondents reported perceived effectiveness of social skills training, only 13.5% reported its practice. Similar discrepancies were seen across treatments. Understanding these discrepancies is critical as the field attempts to enhance the field-based infrastructure around the practice of evidence-based treatment.

Future analyses of the EBT Survey responses will provide additional information on the perceived advantages and disadvantages of using evidence-based treatment approaches, as well as the training and treatment guideline adherence of providers using evidence-based approaches.

Table 3
Providers Report of the Treatments Used (*n* = 446)

Other than medication, list the three primary evidence-based treatments that you use in your work.	
Reported Treatments (n = 446)	*(%)*
Cognitive Behavioral Therapy	61.7
Wraparound	18.2
Anger Management	14.6
Social Skills Training	13.5
Case Management	11.4
Rational Emotive Therapy	10.1
Parent Education	9.9
Behavior Modification	9.4
Parent/Behavior Management Training	8.7
Behavior Therapy	8.5
Multisystemic Therapy	7.8
Parent-Child Interaction Therapy	7.6
Family Systems Theory/Therapy	7.4
Modeling	7.0
Relaxation Therapy	7.0
Solution Focused Therapy	6.7
Problem Solving Skills Training	5.2
Family Education and Support	4.7
Functional Family Therapy	4.5
Play Therapy	4.5
Brief Strategic Family Therapy	4.3
Assertiveness Training	3.4
Interpersonal skills/Therapy	3.4
Eye Movement Desensitization and Reprocessing	3.1
Systematic Desensitization	3.1
Reality-based Therapy	2.9
Dialectical Behavior Therapy	2.7
Exposure Therapy	2.2
Therapeutic Foster Care	2.2
Mentoring	2.0
Contingency Management	1.8
Psychodynamic/Psychotherapy	1.6
Individual Therapy	1.3
Common Sense Parenting	1.1
Client-Centered Therapy	0.9
Muisic/Art Therapy	0.9
Respite	0.9
Self Control Instruction Training	0.7
Medication	0.6
Narrative therapy	0.4
Family Preservation	0.2

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Symposium
A University-Public School Partnership to Implement Empirically Sound Practice for Children with Severe Emotional Disturbance

Chair
Eric M. Vernberg

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Symposium Introduction

Eric M. Vernberg

These presentations describe features and outcomes of the Intensive Mental Health Program (IMHP) model for delivering comprehensive, coordinated treatment and educational services for elementary school age children with severe and chronic early-onset disturbances of conduct and emotions (SED). The IMHP offers a full range of evidence-based mental health interventions while maintaining the child's attendance half-day in the referring school. Much direct treatment is provided in half-day therapeutic classrooms housed in standard elementary school buildings, although substantial intervention is also carried out in home, community, and regular education settings. Of interest to service providers, school administrators, children's services evaluators, and policymakers, this symposium demonstrates the potential effectiveness and portability of the IMHP model by summarizing data on funding and staffing considerations, feasibility, comprehensiveness, clinical benefit, and consumer satisfaction. Notable aspects of the IMHP include its strong university-public school partnership and its emphasis on service coordination between students' families, communities, schools, and outside service providers.

Staffing Constraints, Training Opportunities, and Interprofessional Collaboration within the Intensive Mental Health Program

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Introduction

Relationships between key public school personnel and psychologists from the KU Clinical Child Psychology Program (CCPP) were forged during the needs assessment and district readiness phase of the IMHP. A continually strong university-public school linkage is critical to ensure that adequate numbers of well-trained specialists are available to staff IMHP classrooms. As well as assigning a full-time teacher and para-educator to each classroom, the school district assigns school psychologists, school social workers, and SPED administrators to attend staff meetings and assist in students' treatment plans. The CCPP provides doctoral-level clinical supervisors and, most importantly, 2 half-time master's-level therapists for each classroom.

In the current model, therapists alternate days, each providing about 7.5 hours of direct service in the classroom proper per week. After classroom team meetings and clinical supervision, about 10 hours each week are available for therapists to schedule collateral contacts and home visits. That the balance of effort is toward persons, environments, and systems outside the therapeutic classroom itself speaks to the IMHP's strong ecological orientation, collaborative spirit, and emphasis on generalization and maintenance of treatment outcomes. Therapists are strongly committed to enhancing students' functioning in their neighborhood school, home, and community settings and seek to secure natural supports to encourage and maintain functional gains.

Special education budget allocations permit the local school district to hire CCPP personnel as therapists and clinical supervisors. A working IMHP manual outlines roles and responsibilities for each staff member. This prevents significant overlap and ensures that all treatment needs for IMHP students

can be distributed appropriately. Grant money secured by CCPP faculty has also funded half-time clinical data managers and program evaluators for each classroom. This capacity is extremely valuable to efforts to disseminate the IMHP model and demonstrate its efficacy. IMHP staffing is further detailed in Vernberg, Roberts, and Nyre (2002).

Method for Program Expansion

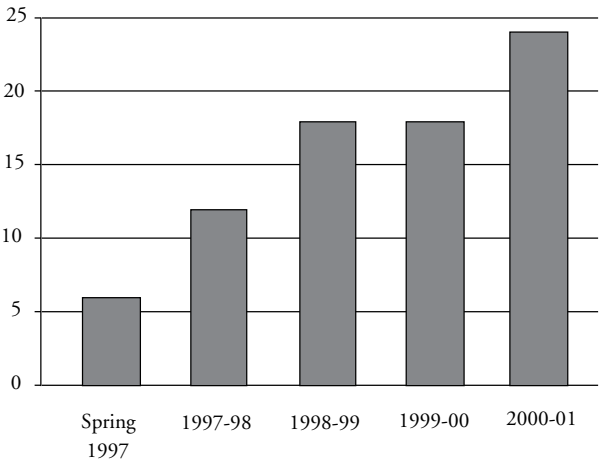
After detailed planning, the IMHP commenced with 1 half-day classroom, two therapists, one teacher, one para-educator, and four freshly-referred students in February 1997. The IMHP was approved for summer programming and admitted two more students in June 1997, reaching its capacity. Via positive feedback from students' neighborhood schools and with administrative support, the IMHP expanded to 2 half-day programs in autumn 1997, staffing 10 students by late August. By December, both classrooms were at capacity (12 total), with one new referral replacing a student who had transitioned back to his neighborhood school full-time after 10 months with the IMHP. By autumn 1998, the public school system created another half-day program in a separate elementary school. In this case, the school's lead resource teacher and paraprofessional designated half of their work days to the IMHP. In autumn 2000, a fourth full-day classroom was added to address the more pervasive or severe needs of some IMHP students. In this classroom, therapeutic programming is similar to that of the half-day classrooms, yet the teacher, paraprofessional, and behavioral program are consistent throughout the day.

Results

Program allocation. Currently, the four IMHP classrooms employ three teachers (one is half-time) and eight mental health therapists. Additionally, time is allocated for the assistance of four school psychologists and four school social workers (one each per classroom). Given the rate and number of appropriate referrals, coupled with the typical length of IMHP enrollment, this level of staffing for a capacity of 24 severely impaired students seems adequate for a district-wide elementary school population of about 5000 students (10,000 students in all grades, see Figure 1). The school district's graduated approach to expansion has ensured that fiscal and human resources have been well apportioned.

Training opportunities for clinical child psychologists. Currently, eight trainees in the CCPP receive funding as IMHP master's-level therapists. Of 40 CCPP students who have been eligible to be IMHP therapists since the program's inception (Master's-level, incoming after Fall 1994), 30 have served in this role for at least one year (75%). Almost all of the current eligible trainees are or were IMHP therapists, underlining this clinical site as an important training venue for the KU CCPP. From our perspective, aspects of the experience that are especially valuable for clinical psychology trainees are participation on interdisciplinary teams, community involvement (via direct service, as well as psychoeducation), and collaboration with public school programming.

Figure 1
IMHP Program Expansion across 4 years



Note. The IMHP currently serves 24 seriously-impaired elementary age student in a 10,000-student school district.

The latter aspect is vital, as therapists are permitted an intimate view of pragmatic constraints on their recommendations and treatment plans. Given the complex symptomatology of IMHP students, therapists are challenged clinically to select and adapt appropriate empirically supported treatments. A consumer focus is engendered by therapists' interdisciplinary involvement. Each team meeting is an opportunity for feedback and calibration. Regular feedback from the families with whom therapists work is also vital, as we have demonstrated that family involvement portends positive treatment effect. IMHP therapists provide in-home family therapy as part of most all students' treatment plans. Building strong alliances with the families of children with severe impairment valuably augments therapists' typical outpatient clinic experiences (Roberts, Jacobs, Puddy, Nyre, & Vernberg, 2003).

Clinical supervision for IMHP therapists. Doctoral-level supervision is provided by CCPP psychologists. Group consultation is offered to the each of the 4 classrooms' treatment teams during hour-long weekly meetings. The two therapists staffing each IMHP classroom also meet together for at least 1.5 hours of clinical supervision each week. During these conferences, group therapy progress is reviewed and topics are planned for the next weeks, based on classroom-wide social skills needs (e.g., social problem-solving, anger management, interpersonal boundaries-safety). Therapeutic needs and functioning across domains are then discussed for each IMHP student. During this time, the adequacy of each student's treatment plan and response to the IMHP behavioral system are reviewed. This review is typically assisted by contemporary graphical data (e.g., symptom levels X day, target behavior ratings X environment). Each classroom's program evaluation consultant prepares the graphs and also maintains data regarding supervision quality (e.g., whether supervisors mention the evidence base when recommending treatment strategies, whether progress across settings was discussed for each student) and therapeutic follow-through with planned actions.

Indices of supervision quality are described in Table 1. Percentages reflect data for each student X each weekly supervision meeting in the months detailed. Each IMHP student's progress was reviewed in almost all supervision meetings across the first two years of the grant period. Other indices show improvements across the grant period. Additional IMHP records also demonstrate a high rate of therapist follow-through with planned actions.

Table 1
Quality of Clinical Supervision in the IMHP, across Years 1 and 2 of Data Collection

Supervision Feature	*October* Year 1 %*	*October Year 2 %*	*April Year 2 %*
Review individual child's progress	98	100	98
Review objective indices of progress	72	80	78
Review progress in individual therapy	79	92	94
Discuss individual therapy strategy	68	89	73
Review progress in group therapy	69	80	96
Discuss group therapy strategy	78	20	88
Provide research-based justification for clinical strategy or case-conceptualization	30	49	72
Review neighborhood school's cooperation with IMHP	61	80	78
Review neighborhood school's implementation of student's treatment plan	78	74	87
Discuss strategies to enhance neighborhood school's (NS) implementation of treatment plan	61	77	90
Problem-solve communication and collaboration with NS	75	70	87
Review home environment's cooperation with the student's treatment plan	56	88	91
Review home's implementation of treatment plan	59	na	88
Problem-solve communication and collaboration with home	41	84	96

Discussion: Clinical Psychology within a School Setting

The presence of mental health in a public school environment is uniquely strong in the IMHP model. A new conceptualization of school psychology incorporates more involvement in the severe end of psychopathology now presenting in schools. Because school psychologists have traditionally held positions within school settings, the entrance of clinical child psychologists in the system presents heightened potential for so-called turf problems (Roberts, Jacobs, Puddy, Nyre, & Vernberg, 2003). That the IMHP venture was established in part by a doctoral-level district school psychologist and a clinical psychologist with a background in special education helped establish mutual respect between professions, as well as helped predict and prevent potential tensions. School and clinical psychologists' training emphases and vantages differ in subtle, yet meaningful ways. School psychologists, for example, develop in an environment that seeks to bridge the fields of applied psychology and education. School psychologists may have particular interest and expertise in working with the school environment to influence children's education and adjustment. A focus on the setting in which children function is stronger than is the focus on individual child factors. Although clinical psychologists' training emphasizes children's ecologies, this notion is broader and encompasses individual differences along bio-psycho-social dimensions. Training is less likely to emphasize assessment and intervention in particular settings, such as schools.

The IMHP offers opportunity for mental health professionals to complement each other's relative training strengths and weaknesses. It also offers opportunity to build competencies via dialogue and modeling. Considering cross-setting linkages, clinical psychology trainees are afforded the opportunity to attend to the feasibility of their treatment recommendations. School psychologists assist teams by ensuring that clinical recommendations are phrased in ways that promote children's learning behaviors, augmenting their functioning in the school setting. Based on interdisciplinary meeting notes, this symposium compared and contrasted the relative contributions of clinical and school psychologists in IMHP students' treatment planning.

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Service Coordination as a Predictor of Functioning in a School-Based Intensive Mental Health Program

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Introduction

This paper describes the role of service coordination in predicting adaptive functioning at 6-months, 12-months, and discharge, as measured by the Child and Adolescent Functional Assessment Scale (CAFAS, Hodges, 2000), among 51 children enrolled during the first five years of an innovative school based intensive mental health program (IMHP). The IMHP was developed to meet the needs of children with severe disturbances in behavior and emotions, and has been funded by the local public school system as part of its special education services. Service coordination has often been thought to impact the functioning of children with severe emotional disturbances (SED). However, it has rarely been tested using a behavioral approach to quantify occurrences, nor has it been linked to outcomes, particularly functioning.

In order to address methodological flaws of past service coordination research, Bryant and Bickman (1996) developed a theoretical model of case management services for use during the Fort Bragg Evaluation Project. These activities involved several components of quality case management including treatment planning (e.g., comprehensive initial assessment, client and family participation, multi-disciplinary team participation), linkage (e.g., regular communication among client, family, providers, and case manager, assistance with arrangements for treatment, single point of contact for family and providers), and monitoring (e.g., review of treatment progress, review of restrictiveness of care).

Building on the work of Bryant and Bickman (1996), the present researchers sought to advance the understanding of service coordination by developing a behavioral trace method of quantifying service coordination using retrospective analyses of detailed charts compiled for children in a school-based mental health program. In contrast to traditional rating techniques or perception-based approaches, the researchers developed a system of quantifying service coordination components, dose, and quality through the use of the behavioral trace approach. This approach measured indications that some behavior associated with service coordination occurred as evidenced by entries in the student's chart. Data presented here describe service coordination dosage, quality of contact, and components (planning, linking, and monitoring) received by the child and family throughout their involvement in the IMHP. Treatment duration for this sample averaged 12.61 months, with a range of 1 to 48 months. Additional sample characteristics were presented in other components of this paper.

As a test of the importance of service coordination in its ability to contribute to the overall outcomes, it was hypothesized that service coordination would predict functioning at 6-months, 12-months, and discharge. Thus, the present study had two goals: (a) to describe a behavioral trace approach to service coordination, and (b) to describe the predictive relationship of dose, quality of contact, and components of service coordination toward changes in overall functioning over the course of involvement in the program through discharge.

Method

Service coordination was quantified to include several aspects including dose or frequency of the occurrence, quality of the act, and service coordination component. Dose was determined by recording specific dates on which service coordination occurred and then aggregated across time. Quality of contact used a three tiered system describing whether the type of interaction involved (a) logistical exchange about the case, (b) basic information-exchange about the case, or (c) detailed or advanced information-exchange about the case. Components of service coordination included acts involving planning, linking, or monitoring and combinations thereof.

The CAFAS provides a system for rating adaptive functioning in eight domains. Five of these domains assess child functioning, and three assess aspects of the child's social environment. Trained raters reviewed detailed chart records of 51 children enrolled in the first five years of the IMHP. Service coordination ratings were made on each existing piece of information in a student's chart. CAFAS ratings were made following a review of all available case material for the three months period preceding each measurement point.

Results and Discussion

The service coordination study involved a retrospective chart review of 51 elementary students enrolled in the IMHP from spring 1997 through fall 2002. Approximately 16,669 occurrences of service coordination were coded for inclusion in the study. Results indicated that 97.2% of acts of service coordination resulted in some form of contact with a recipient. Results indicated that in 82.4% of the events, *basic information-exchange about the case was shared*, while *detailed-involved information-exchange about the case* was shared in approximately 9.5% of events, and *logistical exchange about the case* was shared in 6.4% of the events. Results also indicated that the majority of events of service coordination

were successful and focused primarily on monitoring, then linking, and finally planning. Consistent with expectations about the way service coordination dose, quality of contact, and components function during the course of involvement in the IMHP, paired sample *t*-tests revealed the following:

Dose. Service coordination overall dose, $t = 2.53$, $p = .014$, at intake was statistically significantly higher than service coordination overall dose at discharge. Service coordination quality 3 (in-depth information exchange) dose at intake was statistically higher than at the midpoint, $t = 3.56$, $p = .001$, and at discharge ($t = 4.24$, $p = .000$).

Quality. Service coordination overall quality at intake was statistically significantly higher than service coordination overall quality at discharge, $t = 2.83$, $p = .007$. Similarly, service coordination quality sum at intake was statistically significant higher than at the half way point, $t = 2.15$, $p = .038$, and service coordination quality mean total was statistically significant higher at intake than at discharge, $t = 3.04$, $p = .001$.

Components. Service coordination planning was statistically significantly higher at intake than at the midpoint, $t = 2.81$, $p = .009$, at intake than at discharge, $t = 5.28$, $p = .000$, and at the midpoint than at discharge, $t = 2.51$, $p = .018$. Service coordination linking was statistically significantly higher at intake than at the midpoint, $t = 4.33$, $p = .000$, and at intake than at discharge, $t = 3.63$, $p = .001$. Service coordination monitoring was statistically significantly higher at intake than at discharge, $t = 2.38$, $p = 0.21$. Total planning-linking-monitoring was statistically significantly higher at intake than at discharge, $t = 2.60$, $p = .012$.

These results imply that upon entry and during the first half of involvement in the IMHP, service coordination is being delivered at a higher dose focusing on in-depth exchanges of information in order to coordinate the multiple number of service providers involved with the child as well as to understand the complex nature of the child and family themselves. As children progress through the IMHP, particularly during the second half of their involvement, service coordination dosage is reduced as the team is functioning in a more coordinated manner for the child and family until discharge. Likewise, planning appears to be higher at intake and decreases significantly over involvement through discharge. Linking appears to decline from intake through midpoint but not significantly at discharge and monitoring appears to gradually decline from intake to discharge.

CAFAS Total, $t = 11.09$, $p = .000$, as well as seven of the subscales used in the study were all statistically significantly higher at intake than at discharge, i.e., school, $t = 9.53$, $p = .000$, home, $t = 6.84$, $p = .000$, community, $t = 2.68$, $p = .010$, behavior towards others, $t = 7.11$, $p = .000$, moods-emotions, $t = 6.46$, $p = .000$, self harmful behavior, $t = 5.88$, $p = .000$, and thinking, $t = 4.87$, $p = .000$. These results suggest that child functioning tends to improve from intake to discharge through involvement in the IMHP.

To examine the predictive ability of service coordination to impact functioning over time, several series of multiple regression analyses were conducted. At six months, the linear combination of service coordination dose at intake, quality 2 (basic information exchange) at intake, and linking at intake were significantly associated with CAFAS total scores, $F(3, 44) = 3.67$, $p = .019$. The adjusted coefficient of multiple determination (Adj R^2) was 0.20, revealing 20% of the variance in CAFAS total scores can be explained by the 3-factor model of service coordination. Dosage, basic information exchange, and linking were also predictive of several individual scales of functioning at six months including moods, $F(3, 44) = 3.99$, $p = .014$, Adj $R^2 = 0.21$, and self-harm, $F(3, 44) = 2.87$, $p = .047$, Adj $R^2 = 0.16$, as well as, material needs, $F(3, 38) = 3.36$, $p = .029$, Adj $R^2 = 0.21$, and family social support, $F(3, 44) = 6.40$, $p = .001$, Adj $R^2 = 0.34$).

At twelve months, the linear combination of service coordination dose at intake, quality 2 (basic information exchange) at intake, and linking at intake were significantly associated with CAFAS total scores, $F(3, 26) = 3.08$, $p = .045$. The adjusted coefficient of multiple determination (Adj R^2) was 0.26, revealing 26% of the variance in CAFAS total scores can be explained by the 3-factor model of service coordination. Dosage, basic information exchange, and linking were also predictive of several individual scales of functioning at twelve months including behavior towards others, $F(3, 26) = 10.39$, $p = .000$, Adj $R^2 = 0.55$, and self-harm, $F(3, 26) = 3.23$, $p = .037$, Adj $R^2 = 0.27$, as well as, family social support, $F(3, 24) = 4.96$, $p = .008$, Adj $R^2 = 0.38$.

At discharge, the linear combination of service coordination overall program dose, overall program quality, average program quality, and linking at discharge were significantly associated with CAFAS total scores, $F(4, 28) = 3.33$, $p = .024$. The adjusted coefficient of multiple determination (Adj R^2) was 0.32, revealing 32% of the variance in CAFAS total scores can be explained by the 4-factor model of service coordination. Overall program dosage, overall program quality, average program quality, and linking at discharge were also predictive of several individual scales of functioning at discharge including community, $F(4, 28) = 6.32$, $p = .001$, Adj $R^2 = 0.37$, and self-harm, $F(4, 28) = 3.58$, $p = .018$, Adj $R^2 = 0.34$.

These results suggest the importance of service coordination dosage (early intensive services decreasing over time), quality of contact (basic exchanges about the case), and content (linking) as key ingredients in improving functioning for youth with SED enrolled in school-based mental health programs. They also suggest that coordinating services (planning, linking, and monitoring) for children and families, with particular emphasis on linking, should be considered an intervention unto itself when working with severe emotional and behavioral disorders. These findings have policy implications in that they highlight the critical importance of service coordination in any program serving children with SED and they advocate for the support and funding of high quality intensive coordination of services for these children.

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Positive Changes for Children in the Intensive Mental Health Program

Eric M. Vernberg, Camille J. Randall, Bridget K. Gamm & Anne K. Jacobs

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Introduction

The Intensive Mental Health Program (IMHP) was developed to meet the needs of children with very severe disturbances in behavior and emotions, and has been funded by the local public school system as part of its special education services (Vernberg, Roberts & Nyre, 2002; Nyre, Vernberg, & Roberts, 2003; Roberts, Jacobs, Puddy, Nyre & Vernberg, 2003). Core elements of the program include: (a) full range of evidence-based mental health interventions (e.g., diagnostic services, behavior management, medication effects monitoring, individual therapy, social skills-emotion management group therapy, family treatments) delivered through a school-based treatment program, (b) comprehensive service coordination, (c) individualized behavior management plan used in IMHP classroom, neighborhood school, and home, and (d) individualized educational plan. Children in the IMHP continue to attend their neighborhood school for a half day (with consultation and support from IMHP staff), with the goal of returning children to full-time placement in the neighborhood school. IMHP staff represent an interdisciplinary group of mental health specialists and educators, including masters level clinical psychologists as primary therapists, doctoral level clinical psychologists as supervisors, school social workers, certified special education teachers, school psychologists, and paraprofessional staff. School nurses and child psychiatrists are also often involved. The current study evaluated changes in adaptive functioning, based on multiple indicators, among children treated in the IMHP.

Method

Participants. The sample comprised 66 children treated in the IMHP between 1998 and 2003. All children had a recent history of one or more episodes at school or home involving acute threat of harm to self or others, such as attacking teachers or peers, serious threats of self-injurious behavior, or markedly disorganized or bizarre behavior at the time of admission. Referring schools had exhausted treatment as usual resources for managing the child's emotions and behavior and were requesting placement in a restricted setting. All met criteria for one or more Axis I DSM-IV diagnoses on admission. Common diagnoses included attention deficit-hyperactive disorder (ADHD), disruptive behavior disorders, anxiety disorders (particularly post-traumatic stress disorder [PTSD]), and mood disorders. A majority also had a diagnosed learning disability and was receiving very poor grades at school. About half of the children exhibited notable impairment in thinking at some point during treatment. Serious family dysfunction (e.g., history of child maltreatment, psychiatric or behavior disturbance in parent, domestic abuse, foster care placement) was noted in 70% of cases, with mild to moderate family dysfunction reported for the remainder.

Treatment length was determined by the child's performance at home and school. The average treatment was 11.9 months. Most children treated in the IMHP (73%) remained in the Lawrence Public Schools through treatment and discharge. Of those who left the school system, four were placed in residential treatment or a juvenile detention center, and 14 moved to another school system because of a family move or a change in foster placement.

Measures. Three primary indicators of functioning were drawn from the extensive clinical protocol used to monitor progress and inform treatment decisions. These include (a) clinician ratings of functioning the using the Child and Adolescent Functional Assessment Scales (CAFAS, Hodges, 2000), (b) ratings by school personnel and parents on the Behavioral Assessment System for Children (BASC, Reynolds & Kamphaus, 1992), and (c) points earned in the behavior management system used in the IMHP and in the neighborhood school. Both the CAFAS and the BASC were administered at intake and discharge. The percentage of points earned for appropriate behavior in the in the first, second, third, third-to-last, second-to-last, and last month of treatment were used in analyses.

Results

Figure 1 shows children's CAFAS scores at intake and discharge, grouping participants based on their functioning at discharge. Children in all three discharge groups entered the IMHP with functional impairment classified at Level 4 or 5, which indicate the need for intensive services (Level 5, total scores equal to 140 or more) or care more intensive than outpatient with multiple sources of supportive care (Level 4, total scores 100-130). As a reference, Level 3 (50-90) suggests the need for additional service beyond outpatient care, Level 2 (20-40) suggests outpatient treatment is sufficient, and Level 1 (0-10) suggests little or no noteworthy impairment. Change from one severity level to another is clinically meaningful in terms of the level of required support or treatment, restrictiveness of placement, and severity of impairment to meet age-appropriate demands for adaptive functioning. As seen in Figure 1, a large percentage of children showed improved functioning at discharge. Of the 62 children with complete intake and discharge CAFAS data, 24 (39%) exhibited functional impairment at Level 1 or 2, 23 (37%) were at Level 3, and 15 (24%) were at Level 4 or 5 at discharge.

As presented in Table 1, behavior rating scales completed by parents and teachers show a similar pattern of clinically meaningful, statistically significant improvement in both externalizing and internalizing problems. Supplementing the CAFAS findings, parents and teachers also reported significant gains in adaptive functioning.

To gain a picture of children's responses to the behavioral point system by degree of impairment at discharge, children were again grouped according to CAFAS impairment level at discharge. As seen in Figures 2 and 3, even children with the most persistent impairments earned an average of over 80% of their points in both the IMHP and neighborhood school settings, suggesting that they responded well to the behavioral system.

Figure 1
Level of CAFAS Impairment by Discharge Group

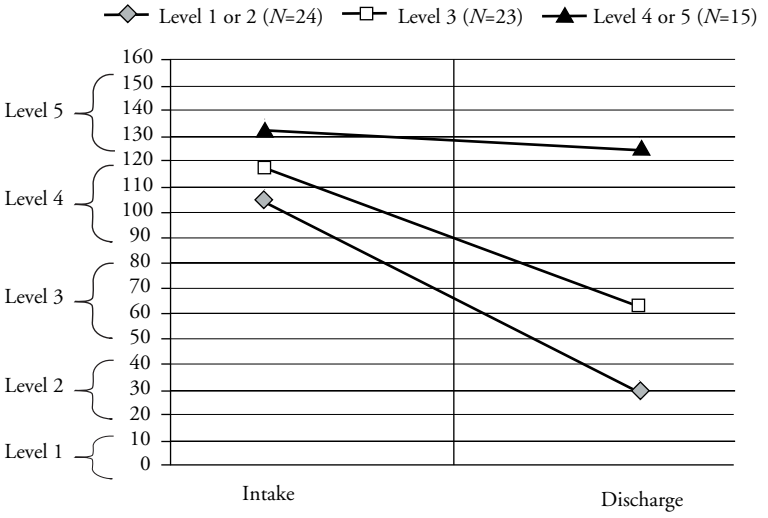


Table 1
Mean Scale T-Scores from Parent, Neighborhood School (NS) Teacher, and IMHP Teacher Reports on the Behavior Rating System for Children (BASC)

	Parent		*NS Teacher*		*IMHP Teacher*	
Scale	*Intake*	*Discharge*	*Intake*	*Discharge*	*Intake*	*Discharge*
Internalizing	56.4	52.4	64.1	61.5	67.2	57.5
Externalizing	63.7	57.0	65.0	58.8	64.1	58.5
Total Problems (BSI)	66.4	60.4	66.6	63.9	69.4	60.9
Adaptive Skills	38.6	40.8	34.9	39.2	35.7	40.5

Discussion

Results indicate that most children showed substantial improvement on multiple domains of functioning across settings. Even in the few cases that did not show improvement, evidence suggests that the IMHP prevents progression to greater impairment that is typical of children with early-onset severe emotional and behavioral disturbance (Greenbaum et al., 1996, Loeber, Burke, Lahey, Winters, & Zera, 2000). Further, data from the behavioral point system suggested that children responded well to this integral aspect of IMHP programming. That children typically earned at least 80% of their points in the IMHP and neighborhood school settings suggests that the IMHP helps maintain children with severe emotional and behavioral disturbances in the regular school environment.

Findings support the IMHP as a viable model for achieving generalized treatment gains in the home, neighborhood school, and community settings. Intense and often lengthy intervention can pay off. The unique combination of IMHP services that likely contribute to success include a behavior management system implemented throughout children's waking hours, individually-tailored evidence-based psychosocial interventions, regular consultation with caregivers, school personnel, and other service agencies, and frequent opportunities for in vivo practice of emotion regulation and social skills. Further, the provision of services in a regular school building and the comprehensive coordination of IMHP and other services likely contribute to generalized improvements in functioning. Although out-of-home

Figure 2
IMHP Classroom Points Earned
by CAFAS Discharge Level

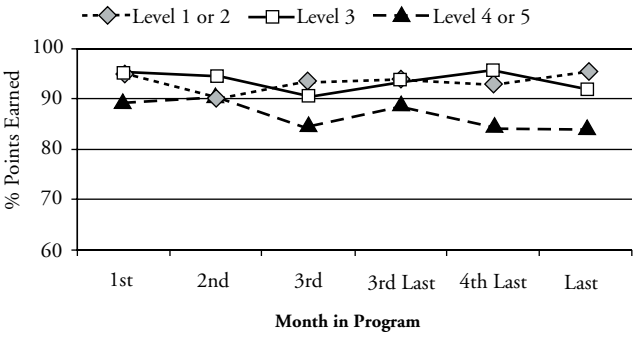
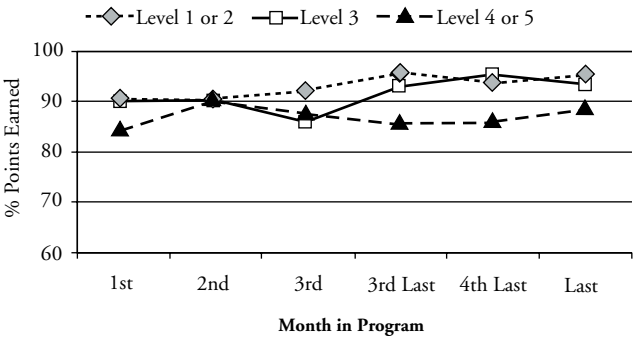


Figure 3
Neighborhood School Points Earned
by CAFAS Discharge Level



placements are typical of this population, children served in by the IMHP continue to live with their parents or long-term guardians and most continue to attend their neighborhood school part-time. While the current results are promising, further study of IMHP outcomes is needed, with direct comparisons to children receiving alternative treatments.

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Staying the Course: Correlates and Effects of Therapist Adherence to the Multi-Systemic Therapy Model

Sarah Hurley
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Introduction

The use of evidence-based treatment models has been shown to be effective in improving the lives of children and their families. Numerous studies have demonstrated that provision of Multi-Systemic Therapy (MST) to children with a variety of different presenting issues results in lower levels of contact with juvenile justice authorities (Henggeler, Melton, & Smith, 1992), fewer psychiatric hospitalizations (Schoenwald, Ward, Henggeler, & Rowland, 2000) and better long-term outcomes (Borduin, et al., 1995). Achieving such outcomes outside of carefully controlled clinical trials is dependent upon practitioner fidelity to the treatment model. Recent findings from a transportability study of the MST model suggest that therapist adherence, as reported by caregivers, is predictive of changes in problem behaviors (Schoenwald, Sheidow, Letourneau, & Liao, 2003). The present study examines the impact of therapist adherence on outcomes of children six months after initiating treatment. Correlates of adherence, including family and client demographics, presenting issues, and initial assessment scores are also considered, in order to determine which factors may influence treatment fidelity.

The issue of therapist adherence is of primary concern in the implementation of evidence-based treatment models in community settings. Of particular importance in adherence to the MST model is a therapist's engagement with the family, which is crucial to the therapeutic process. Many factors can influence family engagement, including a therapist's experience with the model, demographic match between therapist and client, and prior experience with particular presenting problems (Schoenwald, Halliday-Boykins, & Henggeler, 2003). In addition, several client and family characteristics may affect the therapist's effectiveness, including caregiver's perception of the importance of gender and ethnic match between client and therapist and the family's willingness to expend effort to address referral behaviors. Caregiver's education and income may also have an impact on their level of cooperation with the intensive approach of MST (Schoenwald, et al., 2003). Examining the factors that relate to therapist adherence is an important step in understanding how evidence-based models are implemented in community-based settings.

Methods

Data for the present study come from a quasi-experimental study that was conducted to examine the efficacy of providing MST services to children at high risk of entering state or juvenile justice custody. Previously, most MST trials had been conducted by university-affiliated researchers with children who already had significant involvement with intensive mental health services or the juvenile justice system. This project differed in that it was carried out by a community-based provider, and the target population was children who had not previously received intensive mental health services and had not been in state custody. Subjects were referred from schools, Juvenile Court, the Community Services Agency (CSA; associated with the state child welfare department), or self-referred, and were assigned to either MST or the current best practices group following an intake interview. The treatment group received home-based intensive services based on the MST model, and the control group received referrals to current best community practices, which included home-based therapy from other providers (non-MST services), counseling at local community mental health centers, and school-based counseling. The present analysis focuses only on the 118 clients who were assigned to the MST condition and received treatment (two additional participants who were assigned to the MST condition declined treatment).

Client level characteristics were assessed at baseline though a semi-structured interview which included information on sociodemographics, referral characteristics, youth functioning, characteristics of the family and home environment, and peer delinquency. Psychosocial functioning was assessed at

baseline and six months using the Child Behavior Checklist (CBCL; Achenbach, 1991), the Youth Self-Report (YSR; Achenbach, 1991), and the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1997). Delinquent behavior was measured with the Self-Report Delinquency Scale (SRDS; Elliot & Ageton, 1980). Caregiver psychological functioning was examined using the Brief Symptom Inventory (BSI; Derogatis, 1993).

Treatment fidelity was assessed using the MST Therapist Adherence Measure (TAM; Henggeler & Bourduin, 1992), a 26-item measure designed to gauge adherence to the primary treatment principles of MST. The TAM was administered to the primary caregiver two weeks after treatment initiation, and every four weeks following until discharge. For the present study, scores were averaged across administrations, and analyses were based on a single composite score derived from the sum of 15 of the items (Letourneau, Sheidow, & Schoenwald, 2003).

Associations between baseline client-level variables and therapist adherence were investigated using independent-samples *t*-tests and one-way ANOVA. The relationships between therapist adherence level and changes in psychosocial functioning and self-reported delinquency were assessed in the following manner. Mean scores on the TAM were separated into tertiles representing low, moderate, and high levels of therapist adherence. Changes on each of the outcome measures between families who reported low versus high levels of adherence were investigated using ANCOVA. Scores on the assessment measures at the six-month follow-up served as the dependent variables, with baseline scores included as covariates. Due to a skewed distribution, scores on the SRDS were log-transformed prior to analysis.

Results

A brief description of demographic and referral source information can be found in Table 1. Examination of therapist adherence levels according to client-level characteristics revealed several interesting findings. First, therapists of African American youth demonstrated a higher average level of treatment fidelity than those of Caucasian participants, $t(113) = 1.99$, $p = .049$. Families with income levels less than $20,000 also reported greater therapist adherence than those with income levels higher than $20,000, $t(109.9) = 2.15$, $p = .034$.

Level of adherence differed according to referral source, $F(3, 117) = 4.77$, $p = .004$, with therapists of those referred from Juvenile Court and from the CSA exhibiting higher levels of adherence than those referred from the child's school, $p < .05$. Additionally, families whose primary referral problem centered around the child's oppositional behavior reported marginally lower levels of therapist adherence than those referred for other reasons, $t(116) = 1.72$, $p = .089$.

Several characteristics of the family and home environment were related to therapist adherence. Families who had prior contact with the Department of Children's Services reported higher levels of therapist adherence than those with no prior contact, $t(77.8) = 2.84$, $p = .006$. Additionally, families of children whose mother had a history of substance abuse reported higher levels of therapist adherence, $t(59.8) = 2.28$, $p = .026$. Families whose child had run away at least one time in the past reported marginally lower treatment adherence levels, $t(79.2) = 1.8$, $p = .081$.

We also examined the relationship between therapist adherence level and the match between client and therapist demographic characteristics. No differences were found in adherence levels

Table 1
Client Demographics

Demographic Variable	*N*	*%*
Age Group		
4 to 8	7	5.9%
9 to 11	22	18.6%
12 to 14	57	48.3%
15 to 17	32	27.1%
Gender		
Female	60	50.8 %
Male	58	49.2 %
Race/Ethnicity		
African American	96	81.4 %
Caucasian	19	16.1 %
Hispanic	1	0.8 %
Multiracial	2	1.7 %
Referral Source		
CSA	31	26.3%
Juvenile Court	48	40.7 %
School	22	18.6 %
Self-Referred	17	14.4 %

according to whether or not the youth and therapist were of the same gender, $t(116) = .408$, $p = .684$ or racial/ethnic background, $t(116) = .082$, $p = .935$.

Among measures of peer delinquency, only friends' history of substance use was related to treatment fidelity levels, with therapists of children whose friends had a positive history of alcohol and drug use exhibiting marginally higher levels of adherence to MST principals, $t\ (99) = 1.99$, $p = .050$.

Finally, youths' average school conduct grades were related to therapist adherence ratings. Families of children who received unsatisfactory conduct grades reported higher levels of therapist adherence than those with satisfactory conduct, $t(63.5) = 2.71$, $p = .009$.

Looking at changes in psychosocial functioning between baseline and follow-up, the data show that youth whose therapists exhibited high levels of treatment adherence demonstrated a significantly greater improvement in school competence, $F(1, 67) = 4.9$, $p = .03$, and delinquency, $F(1, 72) = 6.35$, $p = .014$, as measured by the CBCL. Higher therapist adherence also was associated with a marginally greater reduction in total problems, $F(1, 72) = 2.94$, $p = .091$. On the YSR, significantly greater levels of improvement were observed on measures of aggressive behavior, $F(1, 62) = 6.26$, $p = .015$, and externalizing problems, $F(1, 62) = 5.73$, $p = .02$, among youth with therapists exhibiting high levels of adherence. Higher levels of therapist adherence also were associated with marginally greater improvements in activities competence, $F(1, 62) = 2.83$, $p = .097$, and school competence, $F(1, 60) = 3.82$, $p = .056$. Finally, youth whose therapists exhibited high levels of therapist adherence demonstrated significantly greater improvement over time on the Total Score from the CAFAS, $F(1, 68) = 4.73$, $p = .033$.

In terms of caregiver functioning as evidenced by scores on the BSI, higher levels of therapist adherence were associated with a marginally greater level of improvement in phobic anxiety, $F(1, 71) = 3.12$, $p = .082$. Change in self-reported delinquency based on the SRDS did not differ according to level of therapist adherence.

Finally, we examined 12-month court outcomes according to level of therapist adherence. The likelihood of coming into contact with Juvenile Court did not differ significantly between youth with therapists exhibiting high (35.9%) versus low (41.0%) adherence, $\chi^2(1) = .217$, $p = .642$. The proportion of participants who were placed outside of the home, $\chi^2(1) = .586$, $p = .444$, or who experienced a change in custody during the 12-month follow-up also did not differ according to therapist adherence level, $p = .24$ (based on Fisher's Exact Test).

Discussion

Understanding the factors that influence a therapist's adherence to the MST model, including engagement with families, is essential to improving implementation in community-based settings. This study provides information about several areas that may influence adherence, including client and family characteristics, presenting issues, and school functioning. Further study is recommended to determine the mechanisms through which these characteristics influence therapist adherence. Additionally, the study points to several measures of client outcome that are predicted by therapist adherence. Much work remains in explaining the relationship between client and family characteristics, therapist adherence, and outcomes experienced by children and families.

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Using Communities of Practice to Increase Readiness for Change and Support Implementation of Evidence-Based Practices

Melanie Barwick

Introduction

The desire to move children's mental health toward evidence-based practice is hampered, in part, by practitioners' receptivity and readiness to implement and adopt new practices. We propose an innovation that would see communities of practice as a primary strategy for building receptivity and readiness for change among practitioners and organizations. Implementing and sustaining practice change is complex and relates to many factors including availability of resources, political climates, insufficient training and/or monitoring of fidelity, attitudes and interest, and motivation. Individual practitioners and organizations are ready for different things at wholly different times. As such, the ability to improve readiness for change can have an important impact on the extent to which they are receptive to the implementation of evidence-based practices. The work of Rogers (1983) was instrumental in defining the stages for the innovation decision-making process: *knowledge* (first awareness of the innovation), *persuasion* (changing attitudes), *decision* (adopting the idea), *implementation* (trying it out), and *confirmation* (where it is used again or discontinued after initial trial). The community of practice concept can influence all of these stages.

The Community of Practice Model

The concept of community of practice has been emerging in the management literature over the past decade, and is now diffusing rapidly into the health care sector. A community of practice is generally defined as a group of people who share knowledge, learn together, and create common practices (Wenger, McDermott & Snyder, 2002). Wenger et al. (2002) describe communities of practice as a unique combination of three fundamental elements: (a) a *domain of knowledge*, which creates common ground, a sense of common identity, and inspires members to contribute and participate; (b) a *community* of people who care about the domain, thus creating the social fabric for learning, sharing, inquiry, and trust; and (c) the *shared practice* made up of frameworks, tools, references, language, stories, documents, that community members share. Members of a community of practice are bound together by common interests and a desire to continually interact. Communities of practice often emerge spontaneously among like-minded people, but in recent years many organizations have also chosen to deliberately foster the formation of communities of practice in order to reap the creative and productive benefits that often ensue from these groupings. The community of practice model is being applied in the Children's Mental Health sector of Ontario to support the implementation of screening and outcome assessment practices.

The Model in the Business Sector

The community of practice is a special type of informal network that emerges from a desire to work more effectively or to understand work more deeply among members of a particular society or work group. The seminal community of practice story comes from Xerox Corporation (Brown & Duguid, 1991), where service representatives working for the company attempted to apply information from the company manual and course training to repair their complex systems. Too often, their official manuals proved inadequate and successful service representatives learned in lunch room conversations and other informal occasions key "war stories" about ways to fix certain machine problems that had resisted documented solutions in the official repair manuals. Representatives also exchanged stories about how to work with difficult customers that proved useful, but again went well beyond their formal repositories of accumulated wisdom. Thus, the informal social setting served as a forum for the sharing of tacit "non-canonical" learning and was referred to by Brown and Duguid as a community of practice. A great many other companies in the business sector have formed communities of practice for the very purpose of knowledge management and sharing of tacit knowledge (e.g., British Petroleum, The World Bank, World Health Organization, American Health Information Management Association).

The Model in Systems of Care

In Ontario, we have trained clinicians and intake workers in the use of a screening tool and outcome measure. This has involved rater reliability training, software training, development of clinical guidelines for special populations, and web support. Yet, these support strategies only go part way in building practice change. Sustaining positive change efforts in the midst of ambiguity and lack of resources, promoting new working relationships among professionals, and enabling organizations to transfer what is learned from one practitioner to another, and from one location to another, are all essential *social* processes. That is why communities of practice can be powerful instruments for helping practitioners deal with organizational change initiatives, including such things as implementing new practices in screening and outcome assessment.

Because of their personal interaction, face-to-face traditional communities of practice develop knowledge and understandings that go beyond "book learning" and formal certification in a trade or field. Through informal interactions with like specialists, practitioners develop new information about how to do their job and how to act in certain settings. The notion of "practice" is critical in this model, pointing out that the group concentrates on learning that emerges only through working, or actually practicing one's craft. Thus, the gains made by organizations considered to be early adopters of the screening and outcome tools can be shared and can influence those organizations that are late adopters. Champions of the measurement initiative can influence others in the field, and managers and clinicians can share what they have learned through experience. This tacit knowledge really needs to be communicated in a face-to-face format because it is especially difficult to document and convey in other modalities. Communities of practice have been credited with the following benefits:

- facilitating knowledge transfer
- improving organizational knowledge retention by decreasing the learning curve for new employees and reducing "reinvention of the wheel"
- spawning new ideas – for products, structures, work roles, etc.
- increasing organizational innovation and flexibility
- improving staff relationships and morale: better team work, increased staff retention

The development of regional communities of practice represents one of several knowledge transfer strategies funded by the Ontario Ministry of Children and Youth Services to support practitioner change and evolving best practices for use of the tools (for an overview of the knowledge transfer infrastructure, see Barwick, Boydell, & Omrin, 2002).. Leads from the implementation teams for the screening and outcome assessment tools travel to 9 provincial regions to meet face-to-face with practitioners who are using the tools in their children's mental health centers. Regional program supervisors from the Ministry are also in attendance, and often serve as hosts, securing the meeting venue, disseminating the meeting agenda, and providing lunch. A recent gathering of 36 "community" members in the South West region of Ontario involved presentations by the tool implementers of provincial and regional data on both measures, and facilitated small group work and an all-member discussion of the evolving client-level and organizational-level uses of the tools.

The discussion is recorded in field notes and a summary of the "Community of Practice Lessons Learned and Shared" is posted on the tool websites to benefit users from other regions. It has taken several visits to each region over the last 3 years to develop the level of trust and interactivity reflected in this most recent meeting. As described by Wenger et al (2002), communities evolve through five stages of community development: potential, coalescing, maturing, stewardship, and transformation. In Ontario, regional communities of practice have evolved variably, as a function of implementer time, and provider attitudes and resistance to the tools. Some regions require greater focus on how increased networking and knowledge sharing can be valuable, whereas others are beginning to coalesce. Development of these communities will continue through government funding, and we continue to seek funding to study the process and anticipated outcomes.

Conclusion

While others in health have attempted to use the community of practice model, its use has greater potential than is currently realized. For instance, in 1996, teams of leading heart surgeons from five New England medical centers observed one another's operating-room practices and exchanged ideas about their most effective techniques in a collaborative learning environment. The result: was a 24% drop in their overall mortality rate for coronary bypass surgery, or seventy-four fewer deaths than predicted (Davenport & Prusak, 2000).

If we are to be successful in implementing evidence-based practices in the field of children's mental health, we have to learn how to increase practitioners' readiness for change and we have to support the implementation process in an effective manner. Based on our experience with the training and implementation of screening and outcome tools in Ontario, we propose that the community of practice model can accomplish both goals.

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Provider and Program Correlates of Attitudes Toward Adoption of Evidence-Based Practice

Gregory A. Aarons

Introduction

The dissemination and implementation of evidence-based practices (EBPs) is an important priority area in children's mental health, however attitudes toward adoption of EBPs in mental health organizations have not been well studied. A number of theories have been developed to improve our understanding of attitudes and attitude change in organizations. Frambach and Schillwaert (2002) recently proposed a model of innovation adoption in organizations. Their model posits that attitudes can be an important factor in the adoption of innovation in the workplace (Aarons, 2005). Evidence-based practices can be considered innovations in mental health services and principles of individual and organizational influences on the use of EBP may inform research and practice (e.g. Schoenwald, Ashli, Letourneau, & Liao, 2003).

The dissemination and implementation of EBPs can best be facilitated if researchers and practitioners take into account the complexity inherent in real-world service settings (Fraser & Greenhalgh, 2001; Hasenfeld, 1992; Henggeler & Schoenwald, 2002; Jankowicz, 2000; Simpson, 2002). Among other factors, such complexity includes federal, state, and county policies and regulations, contracting provisions, leadership, supervision quality and process, organizational norms and expectations, and climate (Aarons, 2005; Glisson, 2002). There have been several calls suggesting the need for a better understanding of the context into which EBPs are likely to be disseminated (e.g., Burns, Hoagwood, & Mrazek, 1999; Glisson, 2002; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Schoenwald & Hoagwood, 2001).

Common technology transfer methods in social services such as treatment manuals and off-site training sessions generally fail to account for real-world complexity (Addis, 2002; Backer, David, & Soucy 1995; Backer, Liberman, & Kuehnel, 1986; Henggeler & Schoenwald, 2002; Strupp & Anderson, 1997). The guiding premise of the present study is that it is important to consider attitudes toward adoption of EBPs held by providers who are embedded within the complex organizational context of mental health service systems (e.g., Burns, Hoagwood, & Mrazek, 1999; Garland, Kruse, & Aarons, 2003; Glisson, 1992, 2002; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001). The purpose of this study was to examine organizational and individual provider correlates of attitudes toward adoption of EBPs. This study examines a theory-based model of influences on mental health provider attitudes toward adoption of EBPs, identifies domains of provider attitudes, and examines organizational and individual influences on such attitudes.

Methods

A brief measure of provider attitudes toward adoption of EBPs, the Evidence-Based Practice Attitude Scale (EBPAS; Aarons, 2004), was developed and providers from mental health agencies were surveyed. Participants were 322 clinical and case management service providers and 51 program managers from 51 public sector programs providing mental health services to children and adolescents and their families in San Diego County, California. Eighty percent of respondents were full-time employees and primary disciplines included marriage and family therapy (33.9%), social work (32.3%), psychology (22.4%), psychiatry (1.6%), and "other" (9.9%; e.g., criminology, drug rehabilitation, education, public health). Interns were less prevalent in the service system (24.9%) relative to fully employed staff (75.1%), and interns represented disciplines of marriage and family therapy (46.8%), social work (24.7%), psychology (20.8%), psychiatry (1.3%), and "other" (6.5%).

Participant programs were publicly funded child/adolescent mental health programs providing outpatient treatment (52.9%), day treatment (23.5%), case management (11.8%), wraparound services

(7.8%), and inpatient treatment (3.9%). Most programs were contracted with the County to provide services (83.7%) in contrast to operating under County administration structure (16.3%).

Measures. Provider surveys were used to assess attitudes and individual level variables. Program manager interviews were used to assess organizational level variables. Responses were scored on a Likert scale, 0, *not at all*, to 4, *a very great extent*. The provider survey incorporated questions regarding provider demographics including education level, professional status as indicated by whether the respondent was an intern or employed professional. Primary discipline was identified as marriage and family therapy, social work, psychology, psychiatry, and "other." The "other" category included disciplines that were not one of those mentioned above (e.g., criminal justice, drug rehabilitation, education, public health). Psychiatrists were included in the "other" category for analyses because of the low number of participants indicating psychiatry as primary discipline (n = 5). Primary discipline was dichotomously dummy coded with psychology as the reference group. Organizational climate and culture were assessed with the Children's Services Survey (Glisson, 2002).

Survey Procedures. Programs were participants in a study of organizational factors in child and adolescent mental health services in San Diego County. Permission was obtained to interview each program manager and to survey service providers who worked directly with youth and families. Surveys were generally completed at the program site in a group administration format.

Results

Factor analyses of the EBPAS identified four factors in keeping with hypothesized dimensions. The factors represented four subscales: (1) Appeal (4-items; α = .80) is the extent to which the provider would adopt a new practice if it is intuitively appealing, makes sense, could be used correctly, or is being used by colleagues who are happy with it; (2) Requirements (3-items; α = .90) is the extent to which the provider would adopt a new practice if it is required by an agency, supervisor, or state; (3) Openness (4-items; α = .78) is the extent to which the provider is generally open to trying new interventions and would be willing to try or use new types of therapy; and (4) Divergence (4-items; α = .59) is the extent to which the provider perceives research-based interventions as not clinically useful and less important than clinical experience. Organizational variables associated with attitudes toward EBP included type of program (e.g. outpatient, wraparound, day treatment), level of bureaucracy, and having formalized policies about practice. Providers working in less bureaucratic programs and programs with formal practice policies endorsed more positive attitudes toward adopting EBPs. Individual level variables associated with attitudes toward EBP included provider educational attainment and intern status. Interns and providers with higher educational attainment endorsed more positive attitudes toward adopting EBPs. Organizational culture and climate were also associated with attitudes toward EBPs.

Discussion

Mental health provider attitudes toward adoption of EBPs were explored through this survey process and the EBPAS subscales were found to represent four distinct factors involving willingness to adopt EBPs given their intuitive appeal, willingness to adopt new practices if required, general openness toward new or innovative practices, and perceived divergence of usual practice with academically developed or research-based practices. The EBPAS demonstrated good internal consistency reliability. Further study will be needed to examine the temporal reliability of the EBPAS and provide a more extensive assessment of validity. The EBPAS is a very brief (15-item) measure of provider attitudes toward adoption of EBP that can be used for research and practice. While many factors influence the adoption of innovation, it is important to understand how attitudes may facilitate or hinder implementation efforts. Attitudes to EBP represent just one aspect of the complex landscape of health service. Further research should examine attitudes in relation to organizational and provider characteristics in order to better tailor DI strategies to be most effective.

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Effectiveness of Innovations in Time-Limited Intensive Services

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Introduction

The Transition-Learning-Change (TLC) program at Mme Vanier Children's Services provides time-limited, intensive services for children and adolescents age 7-14 years old. Systems-of-care principles such as individualized treatment from a broad range of services, least restrictive appropriate treatment, and family involvement are considered central to the TLC program (Stroul, 2002; TLC Team, 2003). Evidence-based clinical interventions are integral to systems of care, as well, but in reality, few interventions have been tested on the population typically served (Stroul, 2002). The program evaluation project described in this summary begins to establish an empirical basis for the TLC interventions by examining the degree to which clients experience reduced symptoms and improved functioning. Additionally, this study addresses the level of symptomology for youth served by TLC as related to the population receiving mental health services in Ontario as a whole. Consensus has yet to be reached in the literature regarding the relative value of research on efficacy (i.e., outcome assessment under strictly controlled conditions) and effectiveness (i.e., outcome assessment in "real-world" settings; Nathan, Stuart, & Dolan, 2000). It is important to note that the study described emphasizes effectiveness over efficacy; results reported here therefore will be of most interest to service providers in similar, community-based, short-term intensive service settings.

Intervention

Referrals to the TLC program are made by the Community Services Coordination Network or one of the local Children's Aid Societies for children between the ages of 7 and 14 years with emotional and behavioral problems. Treatment typically follows one of two streams: Residential, or Intensive Family Services (IFS).

The Residential stream usually consists of 3 phases, each up to 3 months long: (a) Phase 1 provides education for the child and family; (b) Phase 2 provides the main treatment/s for the child, such as: social skills training, problem-solving, basic life skills, the residential milieu, an on-campus school, parenting groups, and family and individual therapy; and (c) Phase 3 concerns the child and family's transition from Vanier's services to the community. During this phase, children and their families are connected with community resources.

In the IFS stream, a Child and Youth Counselor (CYC) provides in-home support to the family for up to 12 hours a week. The IFS program is based on the belief that families have the solutions to their own problems. The program is also based on the belief that community resources are important to total family success and that these resources need to be further developed and strengthened. Intervention strategies generally are cognitive behavioral with an emphasis on problem-solving and practical "hands-on" teaching.

Children involved in either stream are eligible for additional supports, including Day Treatment, specialized assessments, Family Therapy, Individual Therapy, and community-based Summer Programming. In typical practice, children usually receive either IFS or Residential services, but a substantial minority of children receive both. The treatment philosophy centers on empowering parents to establish goal areas and to be in charge of their child's treatment plan. Intervention strategies include: (a) traditional milieu treatment and parent education and counseling (see, e.g., Cunningham, Bremner, & Secord-Gilber, 2000); (b) Solution-Focused (e.g., White & Epston, 1990) and Narrative (e.g., DeShazer, 1985) approaches; (c) specialized services, such as Emotion-Focused Family Therapy (EFFT; see Greenberg & Johnson, 1988;

Johnson & Greenberg, 1994), specialized individual therapy (e.g., Cognitive Behavioral Therapy), or individual therapy for parents.

Emotion-Focused Family Therapy (EFFT) is usually provided by a social worker and a CYC.EFFT is offered to families when the team believes that usual forms of therapy have not been effective because of relationship issues. Although the exact number of sessions are negotiated with the family, they usually number between 8 and 20. The goals include expanding and re-organizing key emotional responses, creating a shift in family members' interactional positions, and fostering the creation of secure bonds between family members.

Method

Participants. Data were routinely collected on all clients registered in the TLC program for a two year period (September 2001 to September 2003). Data were available for 117 clients who received services during this time period; no apparent pattern differentiated clients for whom data were available from clients with missing data. The sample consisted of 88 boys and 29 girls, and the average age was 11.8 years (*SD* = 1.8 years). Of the total group (*N* = 117), 69 (59%) participated in residential treatment, along with a mix of complementary support services and treatment intervention. Fifty-four clients (46%) were served within the IFS stream only. Presenting issues included Attention Deficit/Hyperactivity Disorder, Mood and Anxiety Disorders, psychosis, aggressive behaviour, peer issues, school avoidance, withdrawal, substance abuse problems, self-harm behaviour, and unresolved emotional trauma due to family disruption, violence, child abuse, and parent substance abuse.

Measures. Level of symptomatology was measured with The Brief Child and Family Phone Interview (BCFPI; Cunningham, Pettingill, & Boyle, 2003). The BCFPI is a 30-minute structured, computerized intake interview that provides 19 standardized scores. For this project, the child was compared to children from the general population. The BCFPI was administered at intake, and immediately following discharge from treatment. Level of functioning was determined with the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000). The CAFAS provides 12 scores, including the client's level of functioning in eight domains, a Total score, and two Caregiver Resources scales. The CAFAS was administered within the first 30 days of intake, and within 30 days after discharge.

Results and Discussion

Symptom reduction. BCFPI data collected for the Ontario government (Ministry of Community, Family, and Child Services, MCFS) indicated that Vanier tends to serve clients whose symptoms are at least as severe as those served by similar centres in the province of Ontario (MCFS, 2002). Mean scores at intake for Vanier clients were clearly in the clinical range for most symptom areas, and the outcome data provide, "A consistent picture suggesting that cases served [at Vanier] improve very substantially over the course of service, for all measured mental health and functioning domains" (MCFS, 2002, p. 20).

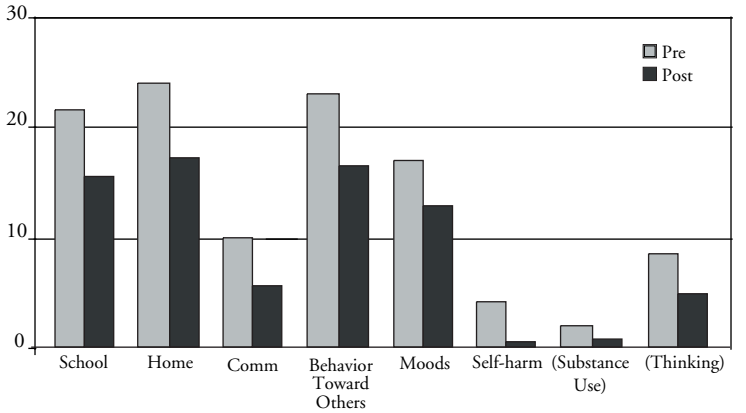
BCFPI scores were calculated for clients served by the TLC team. The most severe problems related to Family Activities (T = 96.5) and Social Participation (T = 92.4). T-scores in the eighties were found for Global Family Situation, Mood and Self-Harm, Conduct, and Global Functioning. T-scores in the seventies were found for summary scores regarding Externalizing problems and Total Mental Health, as well as for item scores regarding Family Comfort, Managing Mood, School Participation and Achievement, Cooperativeness, Regulation of Attention, Regulation of Attention, Impulsivity and Activity. Scores in the high average range (T-scores in the 60s) were found for Quality of Relationships (T = 69.4), Internalizing (T = 67.6), Regulation of Impulsivity and Activity (T = 67.0), Separation from Parents (T = 63.0), and Managing Anxiety (T = 62.0). Each of these scores is higher than the corresponding score for the region (overall $p < 0.001$).

As measured by the BCFPI, Vanier's outcomes tended to be exceptionally good, with greater effect sizes than previously published evaluations of treatment (Personal Communication, P. Pettingill, BCFPI Inc., October 30, 2003). TLC clients demonstrated statistically significant improvements (Wilcoxon signed-ranks test, all $p < .05$) regarding Impulsivity and Activity, Family Activities, Family Comfort, and Global Family Situation. Scores on other scales did not show statistically significant improvement.

Improved Functioning. At admission, the CAFAS Total scores were in the range requiring intensive services ($M = 106.2$; $SD = 42.1$), but at discharge they were significantly lower ($M = 70.8$; $SD = 43.2$; Wilcoxon signed ranks test, $p < .005$). Figure 1 shows the results for specific scales, most of which are also statistically significant.

Figure 1

CAFAS scores for the TLC team, Pre- and Post-Treatment*



**Note:* All improvements are statistically significant (Wilcoxon signed ranks test, all $p < 0.05$), except for Substance Use and Thinking, which were not in the clinical range at intake.

Two initiatives are underway to increase our understanding of the factors that contribute to the program's effectiveness. First, the Day Treatment Rating Scales (DTRS; Carter, 2002), which rate typical and lowest functioning in five domains, were developed at Vanier and implemented in September 2003. Pilot data indicate that interrater reliability is at least as good as a previously published global measure (Carter, 2002). Similar measures will be developed for the EFFT intervention specifically, and possibly for the IFS and Residential streams. Second, family involvement is considered critical to the TLC program, and a qualitative study is underway to explore parent perspectives and experiences of being a significant member of the treatment teams.

Conclusion

Previous research (Wilmshurst, 2002) indicates that the three-month IFS program at Vanier is at least as effective as residential treatment, except for those children who required Day Treatment for school-related issues. Results of the current study are positive. The range of treatment options provided, the out-patient component of the program, and strong family involvement reflect the systems-of-care philosophy and provide additional empirical support to the research base. Future efforts will include further testing of the DTRS, and a qualitative study of family involvement in their child's care.

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