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Mental Health Outcomes of Children and Youth Accessing Residential Programs or a Home-Based Alternative

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In Ontario, Canada, a wide range of services has been developed to support children and youth with severe mental health problems. After services have ended, many of these children continue to live with emotional and behavioral challenges. However, the clinical outcomes of children discharged from residential mental health centers and home-based alternatives are not well known. The purpose of this report was to document mental health outcomes from standardized measures of symptom severity and functioning of children and youth involved in residential treatment or a home-based alternative. In general, some clinical and psychosocial improvements from admission to discharge and follow up were revealed, although not all measures were statistically significant.

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Furthermore, many youth continued to function within the clinical range of impairment. Implications for mental health services are discussed.

KEYWORDS mental health of children and youth, residential treatment, home-based intervention

There has been recent interest in improving systems of care for children and youth with mental health problems in both Canada (Kirby, 2008) and the United States (Price & Austin, 2005; Ringel & Sturm, 2001). In Canada, a new Ministry of Children and Youth Services was created in 2004 to encompass a wide range of services and supports such as childcare, children's mental health and child protection, youth probation, and custody services (Ministry of Children and Youth Services, 2004). In Ontario, there are 82 children's mental health centers providing a range of services including therapy for children, families and groups; parent training; family-based treatment; crisis services; day treatment; and residential treatment (Children's Mental Health Ontario, 2004). A considerable proportion of these services are provided by social workers with specialization in mental health. Residential treatment centers (RTC) offer intervention within a range of services for children with mental health disorders and their families. RTC have been defined as 24-hour facilities that offer mental health treatment programs for children with severe emotional and behavioral disorders and that are not licensed as a hospital (Tuma, 1989). RTC are among the most restrictive and costly of such services. Criteria for placement in RTC are vague and vary widely across centers (Wells, 1991). In the United States there is some indication that demographic factors such as ethnicity, gender, and age have a greater influence on diagnosis and service placements than severity of presenting problems (Mak & Rosenblatt, 2002; Sheppard & Benjamin-Coleman, 2001). Nonetheless, RTC are often reserved for children and youth with the most serious mental health problems. Reported outcomes for children and adolescents discharged from RTC are varied and scarce. In this report, the mental health outcomes of children and youth who accessed residential treatment centers or the home-based alternative are documented.

CHARACTERISTICS OF CHILDREN WITH MENTAL HEALTH DISORDERS

The prevalence rates of mental health disorder in children range from 10.1–25.9% (Angold & Costello, 1995; Briggs-Gowan et al., 2003; Links, Boyle, & Offord, 1989; McGee et al., 1990; Statistics Canada, 2003).

Children with mental health disorders display social, behavioural, and emotional problems such as disruptive and/or hyperactive behavior, depression, anxiety, self-harm, addictions, defiance, and deviant behavior such as violence and damage to property. Some children may also display symptomatology consistent with psychotic disorder and pervasive developmental disorders. Presenting problems include externalizing behaviors such as problems in attention or impulsivity, Disruptive Behavioral Disorder, Conduct Disorder (CD), and internalizing behaviors, including anxiety and depression.

The substantial overlap between conditions previously thought to be distinctively different, and the high rates of comorbidity increase the challenge of presenting typical characteristics of children with mental health disorder (Rutter, 2003). Generally, comorbidity was estimated in more than half of the children with a diagnosable mental health disorder and associated with the onset of other disorders as the child ages (Robins & Price, 1991; Statistics Canada, 2003). When looking at specific disorders, the rate of comorbidity appears higher than the 56% presented by Statistics Canada. For example, of 27 children diagnosed with CD, 23 (85%) were also diagnosed with another behavioral or pervasive developmental disorder (PDD), specifically, attention deficit hyperactivity disorder (ADHD) (67%), oppositional defiant disorder (ODD) (70%), mental retardation (30%), and 26% were also diagnosed with verbal IQ lower than performance IQ (Harada et al., 2002). In a population-based study, comorbid ADHD occurred in 73% of cases with fetal alcohol syndrome (FAS; Burd, Klug, Martsolf, & Kerbeshian, 2003). In a final example, in a clinical sample of 104 children with ADHD presenting to treatment in a community mental health clinic, 62 (60%) were also found to have a mood disorder (Dilsaver, Henderson-Fuller, & Akiskal, 2003). Comorbidity of CD with other disruptive and emotional problems and anxiety disorders with mood and addictive disorders have been reported (Lahey, Loeber, Burke, Rathouz, & McBurnett, 2002; Regier, Rae, Narrow, Kaelber, & Schatzberg, 1998). Comorbidity appears quite common and may present as a major challenge to successful treatment.

Many children with emotional and behavioral disorders (EBD) continue to face challenges as they develop. For example, the developmental trajectory for adolescents with depression has been found to be less than favorable. Adolescents with depression were at increased risk for later major depression, anxiety disorders, substance use disorders, suicide attempt, educational underachievement, unemployment, and early parenthood (Fergusson & Woodward, 2002). There appears to be some evidence available regarding their transition to adulthood. In one community-based study adolescents with psychiatric disorders were approximately 14 times less likely to complete secondary school, four times less likely to be employed or attend post-secondary education, three times more likely to

be involved in criminal activity, and over six times more likely to have gotten pregnant or impregnated someone than adolescents without psychiatric disorders (VanderStoep et al., 2000). Poor grades and dropping out of school have also been shown for children with EBD, as well as high offense rates (Davis, Banks, Fisher, & Grudzinkas, 2004; Steinhauer, 1998). Some research has also been focused on factors associated with clinical outcomes. For example, predictors of outcomes of children with ODD and CD have been reported as stability of the disorder, severity, early age of onset, comorbidity with ADHD, low intellectual ability, and poor social environment (Frick & Loney, 1999). In an examination of youth who were not living with their families Pottick and colleagues reported that these youth were more seriously mentally ill and more likely to be admitted to RCT than youth with families (Pottick, Warner, & Yoder, 2005). Thus, developmental outcomes characteristic of children with EBD often include poor scholastic achievement, poor relations with family or friends that are often conflictual, violent, or delinquent behavior, and sometimes self-harm.

There is a dearth of published research describing the outcomes for children who have accessed residential treatment (RT). Some outcome studies have attempted to measure clinical improvement. In an examination of ecological outcomes of adolescents ($n = 111$) discharged from psychoeducational residential treatment facility, approximately 30% were rated as performing satisfactorily in all three domains examined (legal, school, level of care), while 70% were reported as performing satisfactorily in at least two of the three domains over a 24-month span (Hooper, Murphy, Asenath, & Hultman, 2000). Performing satisfactorily was determined by telephone contact by case managers 6, 12, 18, and 24 months post-discharge, and meant "that the youngster was continuing to function on a modestly adaptive level" (p. 494). In a study of the outcomes of severely disturbed adolescents receiving intensive, short-term residential treatment, improvements in standardized measures of symptom severity, functioning, and psychosocial adaptation were noted at three months post-discharge, but there were no changes in these measures between three and 12 months post-discharge (Leichtman, Leichtman, Barber, & Neese, 2001). In a 10-year follow up of children discharged from residential ($n = 16$) and day ($n = 45$) treatment, two-thirds of the children were deemed to have shown improvement at follow up based on non-standardized measures of social and personal adjustment; however, these children were less well-adjusted 10 years later as compared to children with presenting symptoms of mild intensity (Erker, Searight, Amanat, & White, 1993). However, in few studies have the long-term outcomes (beyond 2 years) using standardized measures for children discharged from RTC been reported.

Two studies could be located that used relatively large samples. In an examination of a continuum of care approach, Bickman and colleagues

found that the long-term mental health outcomes in broad continuum-treated children ($n = 574$) were no better than the comparison group ($n = 410$) on standardized measures (e.g., symptom severity & family strain) over a 5-year follow-up period (Bickman, Lambert, Andrade, & Penaloza, 2000). However, in an attempt at national representation, Greenbaum and colleagues described the outcomes for children and youth ($n = 812$) with serious EBD who received mental health services using a series of standardized measures (e.g., symptom severity, family adaptability; Greenbaum et al., 1996). At 5-year follow up, clinical improvements were evident with younger cohorts still in the clinical range, but not older cohorts. With these larger studies, the outcomes of children with EBD appear inconsistent.

Taken together, the outcomes of children and youth who received residential treatment are uncertain. There is some indication that children discharged from RTC do not fare well (Davidson-Methot, 2004). In some studies, only short-term gains were shown, and in the long-term studies either unvalidated measures were used or no confirmation of high end-state functioning was reported (Bickman et al., 2000; Erker et al., 1992). Furthermore, absence of clinical findings does not necessarily translate into a sense of wellbeing or happiness (Kazdin, 1990). It may be that the social and interpersonal skills training in RTC do not transfer to the community upon discharge, and it has been suggested that personality functioning may prevent this transference (Zimmerman, 2002). The reporting of clinical and functional outcomes can facilitate understanding of these youth as well as their successes and challenges.

The clinical and functional outcomes and perceived health of Canadian children and youth discharged from residential mental health centers in Southwestern Ontario are not well known. In a preliminary report (Preyde, Adams, Cameron, & Frensch, 2009) the personal functioning and life circumstances of youth discharged from RTC ($n = 57$) and a home-based alternative ($n = 55$) were reported. One main finding concerned the differences at admission between families of children participating in residential treatment (i.e., many were Child Welfare guardians) and families of children accessing the home-based alternative (i.e., guardians were mainly the child's parent). Children and youth who have participated in children's mental health services often continue to live with a variety of emotional and behavioral challenges after service involvement has ended. The purpose of this report was to document the clinical and functional outcomes that were collected in a larger study of community adaptation of children and families participating in mental health residential ($n = 106$) and home-based services ($n = 104$). Initially, all of these children were on a wait list for residential treatment. However, the alternative to residential treatment (i.e., home-based treatment) was possible for some children; thus, the purpose of this report is to document the outcomes of all the

children initially considered for residential treatment (i.e., both residential and home-based treatment). In this report the clinical outcomes of children and youth at admission, discharge, and 1 to 2 years follow up are documented.

METHODS

Participants

From 2006 to 2008, participants were recruited from five children's mental health agencies in South-western Ontario, Canada. Three of these agencies served children aged 5 to 12 years and their families at intake. The remaining two agencies served youth aged 12 to 16 years and their families at intake. The words child and youth are used interchangeably in this report. In the overall study, two recruitment strategies were utilized. In the first, all caregivers of youth entering residential treatment or the home-based programs in our five partner agencies were invited to participate (98 parents/caregivers of youth were recruited with this strategy). In the second, all caregivers of youth discharged from our partner agencies within the previous 12 to 18 months were invited to participate (112 parents/caregivers were recruited with this strategy). For both strategies, agency staff made the initial contact with families. Staff requested permission to give parents'/caregivers' contact information to the research team. If agreement was obtained, then a research assistant contacted the family and provided full details of the study and obtained informed consent to participate and to have access to their agency files. A small number of parents did not provide the initial consent to staff. Furthermore, research assistants were not able to contact several parents who did provide the initial consent to staff because their contact information quickly became obsolete. Since we only could obtain data from those who consented, comparisons to those who did not participate cannot be made. Respondents were caregivers (parents or legal guardians) who completed standardized measures of parent-reports of parent or youth well-being. Admission (e.g., Child and Adolescent Functional Assessment Scale [CAFAS], Brief Child and Family Phone Interview [BCFPI]) and available discharge data (e.g., BCFPI) were gleaned from agency files. In follow up interviews with caregivers, standardized measures of well-being were obtained and the BCFPI was readministered. Interviews with caregivers ($n = 210$) were conducted in the families' homes; however, on a few occasions, participants chose to meet at another location such as at the university or local library. Participants received $25.00 for their participation. All participants provided informed consent. Ethics approval was obtained from Wilfrid Laurier University Research Ethics Board, and the participating mental health agencies.

Interventions

Residential Treatment (RT) refers to family- and child-centered treatments from multidisciplinary teams who create individual treatment plans for each child based on cognitive-behavioral, psychoeducational, brief, and solution-focused models. RT is provided in a safe and structured environment. Children go to either their own community school or an on-site school. While most children go home for the weekend, and most children referred by Children's Aid Society remain in residential care on weekends, children spend as much time as possible with their families. The expected length of stay is usually 3 to 9 months.

Intensive-family service (IFS) is the home-based alternative to RT, which was developed in an attempt to shorten the waiting list of children, youth, and their parents who were hoping to access residential services. IFS is intended for children and youth who have difficulties of comparable severity to those accessing the RTC; however, in the home-based model, children remain living at home, and the family receives a range of intensive, home-based services similar to those offered in residential care. Specifically, the goals of IFS are to improve overall family functioning and address any system problems affecting the family. Social workers provide approximately 10 hours per week of mental health services employing a variety of strategies building on the families' strengths, such as crisis intervention and management, direct teaching (e.g., budgeting, problem solving), parent coaching and education, advocacy, and resource finding.

Measures

Clinical data gleaned from agency files included The Brief Child and Family Phone Interview, 3rd version (BCFPI-3) at admission and discharge, and the CAFAS at admission. Both measures are mandated for use at admission in all children's mental health agencies in Ontario. The CAFAS was readministered at discharge and the BCFPI was readministered at 1 to 2 years post-discharge (follow up) by trained research assistants. The use of existing clinical data reduces burden for clinicians and enhances the cost efficiency of research when the data reflect measures appropriate to the participants and research question.

The BCFPI-3 is an interview tool, not a diagnostic tool. A trained mental health professional completes it through an interview with the parent or caregiver of the youth. It provides a descriptive measure of problem severity of three externalizing problems (corresponding to attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder), and three internalizing disorders (corresponding to separation anxiety disorder, anxiety, general mood, and self-harm; Cunningham, Pettingill, & Boyle, 2002). Caregivers are asked to indicate how often, for example, the youth

"has no interest in his/her usual activities," "worries about doing the wrong thing," or "is overly upset while away from loved ones." It also provides a descriptive measure of child functioning (social participation, quality of relationships, and school participation and achievement), and impact on the family (social activities and comfort). The questions used in this computerized tool were taken from the Revised Ontario Child Health Study, for which *t*-scores are generated. A *t*-score greater than 70, which would be a score higher than 98% of the normal population, is considered indicative of a significant problem. Internal consistency scores range from .73 to .85, and content validity has been established (Cunningham et al., 2002). The BCFPI is a well-validated clinical tool (e.g., Boyle et al., 2009) for clinical evaluation of internalizing (e.g., anxiety, mood disorder) and externalizing (e.g., conduct disorder) problems.

The CAFAS was designed to assess impairments in day-to-day functioning secondary to behavioral, emotional, psychological, psychiatric, or substance use problems (Hodges, 2000). It is completed by a trained mental health clinician in consultation with a parent or caregiver. Eight subscales assess functioning in various domains: role performance at school or work, home, community (reflects delinquent acts), behavior toward others, mood/emotions (primarily anxiety and depression), self-harm behavior, substance use, and problems in thinking. Each subscales score can be 0, 10, 20, or 30 depending on the degree of dysfunction. A score of 20 or higher is indicative of moderate to severe impairment on that subscale, specifically, "*major or persistent . . . disruption*" in the lives of youth as a result of negative emotions. Correspondingly, strengths or resources related to material needs and family/social support are also assessed. This scale has shown sensitivity to change, good concurrent-criterion validity and predictive validity, good discriminant validity and reliability, and has been widely used (Hodges, Doucette-Gates, & Kim, 2000; Hodges & Kim, 2000; Hodges & Wong, 1996; Hodges, Xue, & Wotring, 2004; Leichtman et al., 2001). In this report, the subscales related to internalizing or externalizing behaviors were reported.

DATA ANALYSIS

For the CAFAS, frequencies were generated to estimate prevalence of clinical severity, and for the CAFAS, Wilcoxon Signed-Ranks Test was used to assess change over time, while for the BCFPI changes from admission to discharge and follow up were analyzed with Repeated Measures Analysis of Variance. Differences between the RT and IFS groups were analyzed with *t*-tests and these reflect group differences unrelated to type of mental health treatment. That is, the groups were different before admission and this study was not designed to evaluate differences resulting from intervention between RT and IFS.

RESULTS

For the RT programs, 106 parents or guardians and 104 parents or guardians in the IFS programs participated. A notable difference between groups was that for the RT youth only 48 respondents were parents while for the IFS youth 101 were parents. The remaining respondents were guardians (e.g., caseworkers) from Children's Aid Society. At admission, the mean age of youth was 13.88 years (*SD* 2.84), and most were male ($n = 158$, 75%). There were no differences between groups on age, gender, or length of service. At admission, a greater number ($p < .05$) of RT youth had criminal charges (Table 1), and fewer RT youth were living with biological caregivers ($p < .05$). Apart from the small number of RT whose parents were the respondents, there were no statistically significant differences between groups on parental age, relationship status, source of income, and salary (Table 2). Only the demographic data of the parents are reported; that is, the data for the guardians of youth in the care of Child Welfare (e.g., caseworkers) are not reported.

Internalizing Behaviors

For the CAFAS, data were available for 79 RT and 90 IFS youth, and for the BCFPI data were available for 102 RT and 104 IFS youth. Several subscales of the CAFAS and BCFPI indicate level of functioning with respect to

TABLE 1 Child Characteristics

	At admission		At follow up	
	RT $n = 106$	IFS $n = 104$	RT $n = 106$	IFS $n = 104$
Attending School, *n* (%)	92 (88%)	99 (95%)*	79 (76%)	90 (86%)
School, grade	$n = 87$	$n = 97$	$n = 76$	$n = 89$
Grades 2–5	31 (36%)	34 (35%)	17 (22%)	20 (22%)
Grades 6–8	39 (45%)	34 (35%)	17 (22%)	28 (31%)
Grades 9–10	12 (14%)	26 (26%)	34 (45%)	23 (26%)
Grades 11–12	1 (1%)	2 (2%)	8 (11%)	20 (22%)
Child employed	$n = 107$	$n = 105$	$n = 105$	$n = 105$
Yes	6 (6%)	5 (5%)	9 (6%)	21 (20%)**
Trouble with the law	$n = 105$	$n = 104$	$n = 105$	$n = 104$
Yes	37 (35%)	33 (32%)	51 (49%)	32 (31%)**
Formal charges	$n = 37$	$n = 33$	$n = 51$	$n = 32$
Yes	21 (57%)	14 (42%)	33 (65%)	15 (47%)**
Length of service, months	$n = 94$	$n = 93$		
Mean (SD)	7.8 (5.82)	5.25 (3.62)**		

*Statistically significant difference between RT and IFS groups at $p < .05$.
**Statistically significant difference between RT and IFS groups at $p < .01$.

TABLE 2 Parental Characteristics

	RT $n = 48$	IFS $n = 101$
Age, in years, mean (*SD*)	41.0 (6.5)	40.7 (6.9)
Relationship status, *n* (%)	$n = 48$	$n = 101$
Married	19 (40%)	40 (40%)
Single	6 (13%)	16 (16%)
Common law	5 (10%)	12 (12%)
Divorced	8 (17%)	14 (14%)
Separated	10 (21%)	18 (18%)
Source of Income, *n* (%)	$n = 48$	$n = 96$
Employment	34 (71%)	61 (64%)
Disability	10 (21%)	20 (21%)
Social Assistance	1 (2%)	10 (10%)
Other	3 (6%)	5 (5%)
Salary range, *n* (%)	$n = 43$	$n = 95$
0–29,999	14 (33%)	41 (43%)
30,000–59,999	21 (49%)	36 (38%)
60,000–89,999	5 (12%)	12 (13%)
90,000+	3 (7%)	6 (6%)

anxiety and depression. Though not always statistically significant, in almost all subscales, the scores for the RT youth indicated poorer functioning than the IFS youth, and the RT and IFS youth in this sample indicated poorer functioning than Ontario norms for children and youth receiving inpatient and outpatient mental health services (Table 3; Ministry of Children and Youth Services, 2006).

On the CAFAS Moods subscale, at admission, almost 60% of both RT and IFS youth were reported to have scores of 20 or higher indicating moderate to severe impairment. At discharge, this percentage dropped to 40% for RT and 30% for IFS youth. There was a statistically significant change in CAFAS Mood scores for both RT ($Z = -3.9$, $p = .00$) and IFS ($Z = -4.2$, $p = .00$) from admission to discharge, with the majority (RT 47%; IFS 46%) indicating a reduction in severity, some showing an increase in severity (12%; 9%), and many with no change (41%; 45%).

At admission, the majority of RT (66%) and IFS (73%) youth were reported to have no impairments in their thinking, while over 20% of RT youth and 13% of IFS youth exhibited major or severe disruption in thinking suggesting extreme difficulty or incapacitation for normal friendships, school attendance, or adequate interaction in the community. At discharge, over 11% of RT and almost 9% of IFS youth were reported to have major or severe disruption, with a trend toward significance for RT youth ($Z = -1.9$, $p = .052$) and statistically significant improvements for IFS youth ($Z = -2.17$, $p = .03$)

In the BCFPI Separation from parents, both groups had means scores lower than the clinical cut-off of 70, and there was no statistically significant

TABLE 3 Outcomes at Admission, Discharge, and Follow up

	Admission		Discharge		Follow up	
Measure, *M* (*SD*)	RT	IFS	RT	IFS	RT	IFS
Internalizing						
CAFAS moods	16.5 (8.6)	15.44 (9.0)	12.71 (9.3)	10.24 (9.2)	N/A	N/A
CAFAS thinking	5.9 (9.1)	4.0 (7.1)	3.7 (7.3)	2.7 (6.1)‡	N/A	N/A
BCFPI separation	61.5 (16.6)	61.9 (18.4)	N/A	N/A	61.2 (17.0)	61.1 (16.1)
BCFPI anxiety	59.5 (15.5)	59.9 (16.5)	N/A	N/A	57.7 (13.9)	59.6 (13.9)
BCFPI mood	74.1 (19.7)	73.4 (20.1)	N/A	N/A	65.8 (18.1)	64.7 (17.3)‡
BCFPI internalizing	67.9 (16.1)	67.7 (19.0)	N/A	N/A	64.1 (13.4)	65.0 (15.4)‡
Externalizing						
CAFAS substance	2.9 (7.5)	3.4 (8.0)	2.0 (6.3)	2.2 (6.7)	N/A	N/A
CAFAS self-harm	7.3 (9.6)	4.0 (7.8)*	3.3 (7.9)	1.2 (4.3)‡	N/A	N/A
CAFAS behave	21.4 (6.9)	16.6 (7.8)*	13.0 (8.9)	8.9 (8.7)*‡	N/A	N/A
BCFPI self-harm	79.8 (20.8)	78.7 (23.6)	75.0 (30.0)	59.2 (22.1)†	N/A	N/A
BCFPI attention	72.0 (10.5)	73.1 (10.9)	N/A	N/A	69.2 (11.2)	70.0 (11.9)
BCFPI impulsivity	69.0 (9.0)	68.4 (10.0)	N/A	N/A	64.1 (12.0)	66.8 (11.1)‡
BCFPI +activity	72.3 (9.6)	72.6 (10.1)	N/A	N/A	68.4 (11.7)	70.0 (11.5)‡
BCFPI cooperation	77.3 (8.4)	76.9 (8.9)	N/A	N/A	68.4 (11.2)	70.6 (10.1)‡
BCFPI conduct	93.3 (28.7)	89.0 (30.5)	N/A	N/A	74.1 (25.6)	73.6 (25.0)‡
BCFPI externalizing	82.5 (10.0)	81.4 (11.0)	N/A	N/A	72.2 (13.9)	74.4 (12.2)‡
BCFPI total	79.1 (10.9)	78.6 (12.2)	N/A	N/A	70.9 (12.9)	72.4 (12.4)‡

N/A indicates not available.

*Differences between groups statistically significant at $p < .05$.

‡Statistically significant differences ($p < .050$) in both groups from admission to discharge or follow up with no difference between the groups in pattern of change over time.

†For this measure of self-harm, the sample sizes dropped to 12 (RT) and 26 (IFS), rendering insufficient power to detect statistically significant differences between groups.

change from admission to follow up. Similarly with the BCFPI Managing Anxiety subscale, at admission both groups had a mean score less than the clinical cut-off score of 70, and there was little change at follow up. However, on the BCFPI Managing Mood subscale, both groups had mean scores above 70 (no statistically significant difference between groups). There was a statistically significant difference for both groups in improved scores from admission to follow up ($F = 21.4$, $p < .001$). Taken together, then, it is not surprising that the mean scores of both groups on the BCFPI Internalizing Composite scale were lower than 70, and there was no statistically significant difference between groups, and the scores for both groups improved somewhat at follow up ($F = 6.5$, $p = .012$).

Externalizing Behaviors

Several subscales of the CAFAS and BCFPI indicate level of functioning with respect to substance use, self-harm behaviors, attention regulation, impulsivity, cooperation, and conduct. In almost all subscales, the scores for the RT youth indicated poorer functioning than the IFS youth, and all of the RT and the majority of IFS youth in this sample indicated poorer functioning than Ontario norms for children and youth receiving inpatient and outpatient mental health services (Table 3; Ministry of Children and Youth Services, 2006).

On the CAFAS Substance Use subscale, at admission, approximately 11% of both RT and IFS youth were reported to have moderate to severe disruption in their lives as a result of substance use. At discharge, this percentage dropped to 6% for both RT and IFS youth. There were no statistically significant changes in CAFAS Substance Use scores for both RT ($Z = -1.0$, $p = .30$) and IFS ($Z = -1.5$, $p = .14$) from admission to discharge, with the majority (RT 85%; IFS 85%) indicating no change in severity of impairment, some youth showing a reduction in severity (12%; 11%), and few showing an increase in severity of impairment (3%; 4%).

On the CAFAS Self Harm Behavior subscale, at admission, approximately 25% of RT and 11% of IFS youth were reported to have scores in the clinical range (20 or higher) indicating disruption in their lives as a result of intentional self injury or mutilation. At discharge, this percentage was approximately 11% for RT and 1% for IFS youth. There was a statistically significant improvement in CAFAS Self Harmful Behavior scores for both RT ($Z = -3.2$, $p = .001$) and IFS ($Z = -2.9$, $p = .003$) from admission to discharge. From admission to discharge, many of the youth showed a reduction in severity (RT 32%; IFS 22%), the majority (59%; 74%) indicated no change in severity, and some youth showed an increase in severity (9%; 4%). The BCFPI Self Harm items were administered only if there were elevated scores (i.e., above the clinical cut-off score of 70) on the BCFPI Managing Mood Subscale. Consistent with the CAFAS, the BCFPI Self Harm subscale results

revealed that both groups had mean scores above the clinical cut-off of 70. At discharge, RT youth had a mean score above the clinical cut-off whereas IFS youth had mean score below the clinical cut-off.

The CAFAS Behavior Toward Others Subscale assesses appropriateness of behavior toward others including displays of anger, poor judgment, inappropriate sexual behavior, and cruelty to animals. At admission approximately 85% of RT and 58% of IFS youth were reported to have scores of 20 or higher indicating serious disruption in their lives. At discharge, approximately 39% of RT and 25% of IFS youth had scores above 20. There was a statistically significant decrease in CAFAS Behave scores for both RT ($Z = -5.473$, $p < .001$) and IFS ($Z = -6.069$, $p < .001$) from admission to discharge.

The BCFPI Cooperation subscale was used to measure the extent to which the child is part of cooperative relationships with others, such as noncompliance, defiance, and the existence of resentful relationships with adults and peers. At admission, both groups were reported to have mean scores of 70 or higher. At follow up, mean scores for the RT group were below the clinical cut-off whereas mean scores for the IFS group were above the clinical cut-off. Both groups showed a significant difference in scores from admission to follow up ($F = 62.01$, $p < .001$). The BCFPI Conduct subscale measured serious rule violations and antisocial behavior. At admission and follow up both groups had mean scores above the clinical cut-off. There was a significant improvement in mean scores from admission to follow up for both groups ($F = 40.75$, $p < .001$).

According to the BCFPI Regulating Attention subscale results, at admission both groups had mean scores above the clinical cut-off score of 70. At follow up, RT youth had mean scores below the clinical cut-off and IFS youth had scores about the clinical cut-off. There was a statistically significant difference for both groups in improved scores from admission to follow up ($F = 11.19$, $p = .001$). Similarly with the Regulating Attention, Impulsivity and Activity Level subscale, at admission results revealed that both groups had scores above the clinical cut-off. At follow up, RT mean scores were below the clinical cut-off and IFS mean scores were slightly above the clinical cut-off. Repeated measures analyses revealed that from admission to follow up, there was a statistically significant difference across time for both groups ($F = 20.7$, $p < .001$). For the BCFPI Regulating Impulsivity and Activity Level subscale the mean scores were below the clinical cut-off both at admission and at follow up, and there was a significant improvement in scores from admission to follow up ($F = 20.1$, $p < .001$).

The BCFPI Externalizing Behavior Composite Scale includes items from the Regulating Attention, Impulsivity, and Activity Level Subscale, the Cooperativeness Subscale, and the Conduct Subscale. At admission and follow up, both RT and IFS youth had scores above the clinical cut-off. Repeated measures analyses revealed that there were significant changes

over time from admission to follow up for the two groups combined ($F = 62.2$, $p < .001$).

The BCFPI Total Problems Composite Scale includes items from both the internalizing and externalizing behaviors composite scales. At both admission and follow up, both groups displayed mean scores above the clinical cut-off. Although the follow up scores remained above the clinical cut-off, additional analyses revealed that there was a statistically significant decrease in scores over time ($F = 44.7$, $p < .001$).

DISCUSSION

At admission, the clinical scores suggest that many youth were experiencing significant challenges. With respect to internalizing behavior, the only group mean above the clinical cut-off for both RT and IFS groups was for mood, or the extent to which youth have lost interest in their usual activities and relationships which once brought them enjoyment. Scores for this sample of youth suggested that they were not experiencing much anxiety. However, for externalizing behavior, *all* BCFPI subscales were in the clinical range except for impulsivity. Most worrisome are the high percentage of youth who appeared to display anger, poor judgement, inappropriate sexual behavior, cruelty to animals, non-compliance, resentful relationships, rule violations, and anti-social behavior. These results raise many important questions, such as those concerning access to care. One might wonder if the admission process is affected by the presence of these clinical levels of externalizing behaviors, or if RT is more exclusively reserved for youth with serious mental health problems manifested in externalized behaviors. At admission, youth in both groups displayed similar levels of poor functioning and this finding is consistent with the referral process: All the youth were referred to RT and were placed on a waiting list; however, only some youth were able to access the home-based alternative to RT.

It is most encouraging that statistically significant improvements were evident for some youth, in particular on two internalizing subscales, the total internalizing subscale, and the majority of the externalizing subscales. Given that RT is reserved for the most severe expression of EBD, even some improvements give reason for hope. It is possible that some youth will begin or continue on a new, more positive trajectory than their pre-RT path of development or life course, although it is disheartening that many youth were still considered within the clinical range post-discharge. In some instances, such as the CAFAS Substance Use subscale, no significant changes were evident across time. However, the percentage of youth with scores of 20 or 30 on the substance abuse subscale was small at admission; hence, there was not much room for change as the majority were already not reported to have substance use issues.

With regard to the CAFAS substance use data, it is possible that admission scores may have been affected by social desirability factors such that caregivers may have attempted to present their youth in an initially favorable manner. However, the long wait lists for access to residential care or the home-based alternative requires caregivers to present the children as dysfunctional in order to receive treatment. It is also possible that the caregivers were not aware of the substance use behavior of their children. This may be one reason why no significant improvements from admission to discharge were evident in the CAFAS substance use data. Furthermore, because there were small sample sizes for the BCFPI self-harm subscale, a statistical analysis of change in mean scores from admission to follow up was not appropriate (as noted in Table 3). The BCFPI is a computerized interview tool. Because the BCFPI self-harm subscale is only administered if there were scores at or above the clinical cut-off on the BCFPI Managing Moods subscale, small samples for the BCFPI self-harm at discharge may be viewed favorably. It appeared that fewer youth at discharge displayed high levels of impairment with respect to levels of anxiety, depression, moodiness, fear, worry, irritability, tenseness, panic, and anhedonia. However, regarding mood, BCFPI scores of less than clinical cut-off of 70 suggested that youth were not experiencing clinical levels of internalizing behaviors except for depression, although their scores overall suggest considerable challenges in managing anxiety and depression. Similarly, the BCFPI Regulating Attention, Impulsivity and Activity Level subscale revealed significant decreases in scores from admission to follow up. Any evidence of progress can be considered laudable; however, it should be noted that in the course of "normal" child development, attention improves and impulsivity decreases with increasing age.

Several subscales of the BCFPI revealed mean scores that were still above the clinical cut-off at follow up. With this observation in mind, it is important to highlight that the admission scores for these subscales (i.e., BCFPI Conduct, Externalizing, and Total) were well above the clinical cut-off. Because these scores were relatively high at admission, the noted changes from admission to follow up are therefore still positive changes. The clinical values at admission were also above Ontario norms, and this finding perhaps confirms that RT or the home-based alternative is reserved for or accessed by children and youth with the most severe presentation of emotional and behavioral problems. As such, even small improvements can be important ones. Overall, there were no differences between groups in patterns of change over time; that is, both groups showed similar patterns of improvements from admission to discharge or follow up. However, the clinical values for some youth (e.g., CAFAS Mood subscale) reflected an increase in severity over the study period while other youth continued to exhibit clinical symptoms of EBD. This finding brings into view the concern regarding continuity of mental health care. As noted, the scores for many youth

post-discharge suggest that their mental health problems were ongoing yet RT or home-based services were not. If youth were discharged and referred to other community services, it is quite likely that they would be placed on a long and chaotic waiting list (McDonald et al., 1998; Smith, Hadorn, and The Steering Committee, 2002). The fragmentation in the system of care is a major barrier to mental health.

There are important differences in the challenges faced by youth accessing residential treatment and youth in intensive home-based treatment. Many of the youth entering the residential treatment program were not living with their family at the time of admission while more youth in the IFS program were living with their families. This important difference for these youth is consistent with Pottick and colleagues' study, in that youth in residential care were less likely to be living with their families than youth accessing the home-based alternative (Pottick et al., 2005). Furthermore, at admission, many youth in the RT programs were not functioning as well as youth in the IFS programs. Perhaps of greatest significance is the reliance on parent or guardian reported data: the majority of respondents for RT youth were legal guardians (CAS) while for IFS youth the respondents were parents. Preyde and colleagues (2009) have noted that these differences may have had an enormous influence on how the youths' behaviors were interpreted and how the measures were scored, with implications for practice and research. The data analyzed in this report were gleaned from agency files; that is, both practitioners and researchers are relying on measures of the existence and severity of problems based on the perceptions of parents or guardians who may have very different experiences with the youth (regard the youth as a family member versus a client) and very different ideas about youth symptoms and perhaps even tolerance for these symptoms. This substantial difference between youth accessing residential treatment and youth involved in home-based treatment contributes to the complexity of understanding mental health outcomes.

It is worth noting that at follow up, the attention, activity, cooperation, and conduct subscales of the BCFPI were still above the clinical cut-off for IFS youth but only the BCFPI conduct and self-harm at follow up were above the clinical cut-off for RT youth. This is a curious finding given that the RT youth generally had higher scores at admission reflecting worse functioning than the IFS youth. It is possible that the RT programs are effective for helping children and youth control their impulsivity, activity, and attention. As noted earlier, the differences in respondents (parent versus guardian) for the two groups may be a factor associated with the differences between the two groups. Further investigation with the use of objective measures may be warranted to understand why the long-term outcomes for youth involved in the home-based intervention programs had higher mean clinical cut-off scores compared to those who were involved in the residential programs.

In this study much of the data were gleaned from agency files, which would reduce the burden on participants. Moreover, these data reflect

routine clinical practice and as such this research may have greater clinical relevance than research in which other data are collected. Furthermore, in using clinical data, important discoveries were identified. This study is one of the first to report that many youth accessing RT are substantially different (e.g., in the care of child welfare) at admission than those accessing the home-based alternative. This is a remarkable finding that has many implications: (1) the two programs may not be comparable given this enormous baseline and pre-baseline difference yet there is some interest in statistically comparing the two treatments (e.g., Barth et al., 2007), (2) These standardized measures (CAFAS & BCFPI) are mandated for use in mental health clinics in Ontario, and they require completion by a trained mental health professional in consultation with the parent or caregiver; however, for many youth in RT, the consultation occurs with a worker from child welfare, which further reduces the comparability between the two groups, and (3) It appears that RT and the home-based alternative serve two very different groups of children and youth. These are highly relevant findings at this time when many countries, including Canada and the United States, are examining systems of care, and wondering about the appropriateness of residential care especially with the movement toward deinstitutionalization. While home-based intervention may be desirable, from this study, it appears that RT may be the only treatment option for certain youth.

Study Limitations

There were several limitations with the study. Recruitment in this mental health research project was affected by several factors. In many instances the contact information of the participants received by the research assistants quickly became obsolete. The transient nature affected initial recruitment as well as efforts to collect post-discharge and follow up data. Other difficulties in conducting research with this population stem from the various systems these families wilfully or involuntarily access. For example, it is not uncommon for youth and families with mental health problems to have involvement in the child welfare and legal systems. It is also quite possible that many potential participants held negative beliefs or were distrustful toward those who they may consider authority figures. Thus, the representativeness of this sample is not known.

Most of the data were abstracted from agency records, and as such, they were not available for all time points. There were data missing from the agency files, thus we were only able to glean available agency data through retrospective review of paper files at each participating organization. Cases where the data were missing were dropped from that particular analysis. Furthermore, the accuracy of the clinical files is unknown, and it is not known how the phenomenon of missing data affected the findings. Nonetheless, this study provides useful results that draw attention to

the need for further inquiry in research on mental health services and the functioning of youth as they transition to adulthood.

Implications for Social Work in Mental Health Services

In the participating mental health agencies, social work mental health professionals form a critical part of the care team, not only within each agency, but in collaborative efforts with child welfare to serve and treat these children. Similarly, social work practice research forms a critical part of the literature on the outcomes of children and youth accessing mental health services. Notwithstanding the limitations, this is only the second study in which the outcomes of children and youth accessing mental health services in the five participating agencies in Ontario (Canada) at one to two years post-discharge have been reported. Youth with mental health difficulties in this study continued to face many challenges that extended well beyond discharge from mental health treatment programs. The magnitude of the problems these youth and their families encountered were daunting, and possibly present as challenges to mental health service delivery. These findings provide strong support for identifying the challenges of and barriers to providing long-term services to these populations, and examining the continuum of mental health care available for youth and their families—especially as these youth transition from adolescent to adult systems of care. A key consideration in fostering the long-term community adaptation of these children and youth is the need for ongoing management of emotional and behavioral challenges.

This study has national and international relevance because few studies have reported the clinical outcomes and personal sense of well being of youth accessing residential treatment centers, and only one could be located in which Canadian data were reported. Such cross-nation contributions to the research literature can promote understanding of similarities, differences, and common challenges in social work practice in mental health, and mobilize the resources for further research and program development. This study points to fragmentation in the system of care, and provides further evidence to justify bridging and transitional services for these youth.

REFERENCES

Angold, A., & Costello, E.J. (1995). Developmental epidemiology. *Epidemiology Review*, *17*, 74–82.

Barth, R.P., Greeson, J., Guo, S., Green, R.L., Jurley, S., & Sisson, J. (2007). Outcomes for youth receiving intensive in-home therapy or residential care: A comparison using propensity scores. *American Journal of Orthopsychiatry*, *77*(4), 497–505.

Bickman, L., Lambert, E.W., Andrade, A.R., & Penaloza, R.V. (2000). The Fort Bragg continuum of care for children and adolescents: Mental health outcomes over 5 years. *Journal of Consulting and Clinical Psychology*, *68*(4), 710–716.

Boyle, M., Cunningham, C.E., Georgiades, K., Cullen, J., Racine, Y., & Pettingill, P. (2009). The Brief Child and Family Phone Interview (BCFPI): 2. Usefulness in screening for child and adolescent psychopathology. *Journal of Child Psychology and Psychiatry*, *50*(4), 424–431.

Briggs-Gowan, M.J., Owens, P.L., Schwab-Stone, M.E., Leventhal, J.M., Leaf, P.J., & Horwitz, S.M. (2003). Persistence of psychiatric disorders in pediatric settings. *Journal of the American Academy of Child and Adolescent Psychiatry*, *42*(11), 1360–1369.

Burd, L., Klug, M.G., Martsolf, J.T., & Kerbeshian, J. (2003). Fetal alcohol syndrome: Neuropsychiatric phenomics. *Neurotoxicology and Teratology*, *25*(6), 697–705.

Children's Mental Health Ontario (2004). *Children's mental health: High needs, high returns*, 1–19.

Cunningham, C.E., Pettingill, P., & Boyle, M. (2002). *The Brief Child and Family Phone Interview (BCFPI-3). Interviewers manual*. Canadian Centre for the Study of Children at Risk.

Davidson-Methot, D.G. (2004). Calibrating the compass: Using quality improvement data for outcome evaluation, cost control, and creating quality organizational cultures. *Residential Treatment for Children and Youth*, *21*(3), 45–68.

Davis, M., Banks, S., Fisher, W., & Grudzinskas, A. (2004). Longitudinal patterns of offending during the transition to adulthood in youth from the mental health system. *Journal of Behavioral Health Services and Research*, *31*(4), 351–366.

Dilsaver, S.C., Henderson-Fuller, S., & Akiskal, H.S. (2003). Occult mood disorders in 104 consecutively presenting children referred for the treatment of attention-deficit/hyperactivity disorder in a community mental health clinic. *Journal of Clinical Psychiatry*, *64*(10), 1170–1176.

Erker, G.J., Searight, H.R., Amanat, E., & White, P.D. (1993). Residential versus day treatment for children: A long-term follow up study. *Child Psychiatry and Human Development*, *24*(1), 31–39.

Fergusson, D.M., & Woodward, L.J. (2002). Mental health, educational, and social role outcomes of adolescents with depression. *Archives of General Psychiatry*, *59*(3), 225–231.

Frick, P.J., & Loney, B.R. (1999). Outcomes of children and adolescents with Oppositional Defiant Disorder and Conduct Disorder. In H.C. Quay & A.E. Hogan (Eds.), *Handbook of disruptive disorders* (pp. 507–524). New York: Kluwer Academic/Plenum Publishers.

Greenbaum, P.E., Dedrick, R.F., Friedman, R.M., Kutash, K., Brown, E.C., Lardieri, S.P., & Pugh, A.M. (1996). National adolescent and child treatment study (NACTS): Outcomes for children with serious emotional and behavioral disturbance. *Journal of Emotional and Behaviorial Disorders, 4*, 130–146.

Harada, Y., Satoh, Y., Sakuma, A., Imai, J., Tamaru, T., Takahashi, T., & Amano, N. (2002). Behavioral and developmental disorders among conduct disorder. *Psychiatry Clinical Neuroscience*, *56*(6), 621–625.

Hodges, K. (2000). *Child and Adolescent Functioning Assessment Scales* (*2nd rev.*). Ypsilanti: Eastern Michigan University.

Hodges, K., & Kim, C. (2000). Psychometric study of the Child and Adolescent Functional Assessment Scale: Prediction of contact with the law and poor school attendance. *Journal of Abnormal Child Psychology*, *28*(3), 287–297.

Hodges, K., & Wong, M.M. (1996). Psychometric characteristics of a multidimensional measure to assess impairment: The Child and Adolescent Functional Assessment Scale. *Journal of Child and Family Studies*, *5*(4), 445–467.

Hodges, K., Doucette-Gates, A., & Kim, C. (2000). Predicting service utilization with the Child and Adolescent Functional Assessment Scale in a sample of youths with serious emotional disturbance served by center for mental health services-funded demonstrations. *Journal of Behavioral Health Services Research*, *27*(1), 47–59.

Hodges, K., Xue, Y., & Wotring, J. (2004). Use of the CAFAS to evaluate outcome for youths with severe emotional disturbance served by public mental health. *Journal of Child and Family Studies*, *13*(3), 325–339.

Hooper, S.R., Murphy, J., Asenath, D., & Hultman, T. (2000). Ecological outcomes of adolescents in a psychoeducation residential treatment facility. *American Journal of Orthopsychiatry*, *70*(4), 491–500.

Kazdin, A.E. (1990). Psychotherapy for children and adolescents. *Annual Review of Psychology*, *41*, 21–54.

Kirby, M. (2008). Mental health in Canada: Out of the shadows at last. *Canadian Medical Association Journal*, *178*(10), 1320–1322.

Lahey, B.B., Loeber, R., Burke, J., Rathouz, P.J., & McBurnett, K. (2002). Waxing and waning in concert: Dynamic comorbidity of conduct disorder with other disruptive and emotional problems over 7 years among clinic referred boys. *Journal of Abnormal Psychology*, *111*(4), 556–567.

Leichtman, M., & Leichtman, M.L., Barber, C., & Neese, D.T. (2001). Effectiveness of intensive short-term residential treatment with severely disturbed adolescents. *American Journal of Orthopsychiatry*, *71*(2), 227–235.

Links, P.S., Boyle, M.H., & Offord, D.R. (1989). The prevalence of emotional disorder in children. *Journal of Nervous and Mental Disorder*, *177*(2), 85–91.

Mak, W., & Rosenblatt, A. (2002). Demographic influences on psychiatric diagnoses among youth served in California systems of care. *Journal of Child and Family Studies*, *11*(2), 165–178.

McDonald, P., Shortt, S., Sunmartin, C., Barer, M., Lewis, S., & Sheps, S. (1998). *Waiting lists and waiting times for health care in Canada: More management!! More money??* Ottawa: Health Canada.

McGee, R., Feehan, M., Williams, S., Partridge, F., Silva, P.A., & Kelly, J. (1990). DSM-III disorders in a large sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*(4), 611–619.

Ministry of Children and Youth Services. (2006). *Ontario's children's mental health needs report*. Ontario, Canada: CAFAS in Ontario.

Ministry of Children and Youth Services (2004). *McGuinty government brings services for children and youth under one roof*. Retrieved from http://www.children.gov.on.ca/CS/en/newsRoom/newsReleases/040319.htm

Pottick, K.J., Warner, L., & Yoder, K.A. (2005). Youths living away from families in the U.S. mental health system: Opportunities for targeted intervention. *Journal of Behavioral Health Services and Research*, *32*(3), 264–281.

Preyde, M., Adams, G., Cameron, G., & Frensch, K. (2009). Outcomes of children participating in residential and intensive family services: Preliminary findings. *Residential Treatment for Children & Youth, 26*(1), 1–20.

Price, J., & Austin, M.J. (2005). Inter-agency collaboration in child welfare and child mental health services. *Social Work in Mental Health*, *4*(1), 1–16.

Regier, D.A., Rae, D.S., Narrow, W.E., Kaelber, C.T., & Schatzberg, A.F. (1998). Prevalence of anxiety disorders and their comorbidity with mood and addictive disorders. *British Journal of Psychiatry. Special Issue: Recognition and Management of Anxiety Syndromes*, *173*(Suppl. 34), 24–28.

Ringel, J.S., & Sturm, R. (2001). National estimates of mental health utilization and expenditures for children in 1998. *Journal of Behavioral Health Services and Research*, *28*(3), 319–332.

Robins, L.N., & Price, R.K. (1991). Adult disorders predicted by childhood conduct problems: Results from the NIMH Epidemiologic Catchment Area project. *Psychiatry*, *54*(2), 116–132.

Rutter, M. (2003). Categories, dimensions, and the mental health of children and adolescents. *Annals of the New York Academy of Science*, *1008*, 11–21.

Sheppard, V.B., & Benjamin-Coleman, R. (2001). Determinants of service placements for youth with serious emotional and behavioral disturbances. *Community Mental Health Journal*, *37*(1), 53–65.

Smith, D.H., Hadorn, D.C., and The Steering Committee of the Western Canada Waiting List Project (2002). Lining up for children's mental health services: A tool for prioritizing waiting lists. *Journal of the American Academy of Child and Adolescent Psychiatry*, *41*(4), 367–376.

Statistics Canada (2003). *Canadian community health survey: Mental health and well-being*. Retrieved from www.statscan.ca/Daily/English/030903/d030903a.htm

Steinhauer, P.D. (1998). Developing resiliency in children from disadvantaged populations. In Canada Health Action: Building on the Legacy (National Forum on Health), *Determinants of Health: Children and Youth* (Vol. 1, pp. 51–102). Quebec: Editions MultiMondes.

Tuma, J. (1989). Mental health services for children. *American Psychologist*, *44*, 188–199.

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

Wells, K. (1991). Placement of emotionally disturbed children in residential treatment: A review of placement criteria. *American Journal of Orthopsychiatry*, *61*(3), 339–347.

Zimmerman, P.D. (2002). Research and practice in social- and life-skills training. *Residential Treatment for Children and Youth*, *20*(2), 51–75.