Paternal involvement in Multisystemic Therapy: Effects on adolescent outcomes and maternal depression

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Abstract

The association between paternal involvement in therapy, adolescent outcomes and maternal depression was examined within the context of Multisystemic Therapy (MST), an empirically supported, family- and community-based treatment for antisocial adolescents. Ninety-nine families were recruited from five mental health agencies providing MST. We compared families with paternal involvement in therapy (PIT) to families with no paternal involvement in therapy (NPIT) in pre-post change in adolescents' externalizing and internalizing behaviours and also in maternal depression. There was a significant reduction in both groups in externalizing and internalizing behaviours. However, the magnitude of improvement was significantly greater for the PIT families. Both groups saw a significant reduction in maternal depression but no significant group differences were found. Results suggest that if possible, paternal figures should be encouraged to actively participate in therapy, as adolescents outcomes are enhanced when mothers and paternal figures participate in MST together.

Keywords:
MST
Adolescent behaviour problems
Fathers
Maternal depression
Outcome research

Multisystemic therapy (MST) has been identified as one of the most effective treatment programs for antisocial and violent youth (Kazdin & Kendall, 1998; Weersing & Weisz, 2002). There is variability in treatment outcomes however, as not all families and youth benefit from this treatment approach (Littell, 2006). This variability is not well understood because there has been limited research investigating the mechanisms of change that are responsible for successful outcomes, not only in the case of MST (Henggeler et al., 2009; Huey, Henggeler, Brondino, & Pickrel, 2000), but for most evidence-based practices (Kazdin, 2002). Uncovering the aspects of MST that may contribute to successful outcomes is particularly important for MST because the therapists combine a variety of evidence-based intervention strategies and tailor these strategies to meet the individual needs of each family. This flexibility is a unique strength of MST, but it also means that therapy may look very different from one family to the next. On the most basic level, even the participants or clients of MST vary from family to family. The main goal of the proposed study is to examine parental participation in MST, specifically the role of fathers in the therapy process, and if paternal involvement is related to differential changes in adolescent externalizing and internalizing behaviour. A secondary aim is to investigate whether fathers’ participation in therapy may be linked to differential changes in maternal depressive symptoms.

Paternal involvement in therapy

Research on parent involvement in child psychopathology has focused primarily on mothers, with fathers included to a far lesser extent. Phares and Compas (1992) found fathers were significantly underrepresented in child psychopathology...
research with only 26% of studies involving both parents and providing separate analyses for the father and mother, and a mere 1% of research included fathers only. A recent update by Phares, Fields, Kamboukos, and Lopez (2005) confirms fathers continue to be neglected, although there appears to be a promising trend towards including fathers in research as children age (Cassano, Adrian, Veits, & Zeman, 2006). There is little doubt that fathers significantly influence many domains in the lives of their children (Connell & Goodman, 2002; Flouri & Buchanan, 2003; Mullan Harris, Furstenberg, & Marmer, 1998; Phares & Compaś, 1992); thus, it seems likely that fathers could also have a strong impact on the therapeutic process (Phares, Fields, & Binitie, 2006). Interestingly, although there is growing evidence that fathers are important in the healthy development of their children, consensus does not exist regarding the merit of including fathers in parenting interventions (Lundahl, Tollefson, Risser, & Lovejoy, 2008; Tiano & McNeil, 2005).

A recent meta-analysis of father involvement in parent training (Lundahl et al., 2008) found immediate positive changes in children’s and parents’ behaviours when fathers participated but these changes did not extend to parents’ perceptions of child rearing and by follow-up, no significant differences in outcomes were apparent between studies that included or did not include fathers (Lundahl et al.). In contrast, other studies report that when fathers are involved in therapy there is little evidence they have an impact on therapeutic outcomes, but by long-term follow-up there appears to be improvements (Bagner & Eyberg, 2003; Phares, 1996). Tiano and McNeil (2005) reviewed outcomes from three behavioural parent-training programs and found the literature provided insufficient data about fathers and treatment effectiveness to reach any meaningful conclusions about the impact of fathers. The discordant literature may be due in part to the numerous ways “father” is operationally defined across studies. With changing conceptualizations of family, the definition of a father has expanded in the past few decades to include more than just biological fathers. While most studies do not explicitly define what constitutes a father, others like Bagner and Eyberg (2003) defined fathers based on their direct involvement in therapy. For example, a father that lived with the child and attended at least one therapy session was considered involved and an uninvolved father lived in the home but did not participate in any sessions. Although there are contrasting viewpoints on exactly what constitutes a father and the merits of including fathers in therapy, there is overwhelming support for the efficacy of parent-training programs in changing parenting behaviour and in ameliorating child behaviour problems (Kaminski, Valle, Filene, & Boyle, 2008; Kazdin, 1997; Reyno & McGrath, 2006).

MST therapists strive to engage all adults with primary care giving responsibilities for the youth into the therapeutic process, although lack of participation by an eligible caregiver does not prohibit the remaining caregivers from partaking in therapy. In practice, the majority of parents participating in therapy are mothers. In some cases, however, fathers or significant paternal figures (e.g., step-fathers) are actively and equally involved in therapy alongside the mother. We aimed to investigate whether this paternal involvement in therapy would contribute to successful outcomes for antisocial adolescents.

Maternal depression

Maternal depression has been repeatedly shown to have deleterious effects on child and adolescent adjustment (Goodman & Gotlib, 1999). In turn, decreases in maternal depression seem to be one mechanism by which adolescent outcomes improve (Gunlicks & Weissman, 2008; Weissman et al., 2006). Mothers who become less depressed over the course of treatment may become better able to implement parenting strategies that are being introduced during MST; they may be sleeping better, and feeling more energetic and, thus, their efforts at monitoring and disciplining may be more effective as their depression is alleviated.

There is emerging evidence that fathers play a crucial role in child psychopathology when the mother is depressed. Chang, Halpern, and Kaufman (2007) found fathers’ positive involvement buffered children from the harmful effects of maternal depression. Similarly, Tannenbaum and Forehand (1994) reported a strong father-adolescent relationship can be a protective factor for children with depressed mothers. In the current study, we were interested in examining the role of fathers in the therapeutic process itself, particularly when mothers enter treatment depressed.

Aims and hypotheses

In this study, we sought to determine if paternal involvement in MST was associated with child outcomes and maternal depression. Our research addresses two gaps in the existing literature by exploring paternal involvement in therapy, and if this involvement is related to differential changes in both adolescent outcomes and maternal depression within the context of MST. We hypothesized that families with fathers who participated in therapy, compared to those without paternal participation, would show more pronounced decreases in adolescents’ externalizing and internalizing behaviors, as well as larger decreases in maternal depressive symptoms.

Methods

MST model

Adopting major tenets from social ecological (Bronfenbrenner, 1979) and family systems theory (Haley, 1976; Minuchhen, 1974), MST views the adolescent as nested within multiple environmental systems that operate bi-directionally, including family, peers, school, and the community (MST Services, 2007). Treatment goals and interventions are determined...
collaboratively by therapists and caregivers with the aim of ameliorating the factors within the adolescents’ social ecology that contribute to antisocial behaviour (Henggeler, Cunningham, Pickrel, Schoenwald, & Brondino, 1996). In MST, the ecological validity of treatment is important, for when new skills are acquired and practiced in the context of the adolescents’ customary surroundings, positive outcomes are more likely (MST Services, 2007). MST operates in accordance with the Family Preservation Service model of mental health service delivery. The fundamental aim of this model is to prevent recidivism and out-of-home placement (e.g., incarceration or residential treatment) of youth by focusing on intensive, goal-oriented, and time-limited services within the context of the youths’ home and family (Knitzer, 1982; Knitzer & Cole, 1989).

Unlike other programs, MST does not have a strict manual with each week of therapy outlined and applied exactly the same to all families. Instead, the unique strength of MST is that clinicians use a variety of empirically-supported therapies as appropriate for each family. Cognitive-behavioural approaches, behaviour therapies, behavioural parent training, pragmatic family therapies and pharmacological interventions are just some of the techniques employed by MST therapists. Caregivers are viewed as key to long-term positive outcomes. Therapists focus on supporting and empowering caregivers to change the factors that promote and maintain adolescent antisocial behaviour. Some of these factors are related to parenting, including changing harsh and inconsistent discipline practices and improving monitoring skills so that the adolescent’s exposure to like-minded antisocial peers and to other potentially violent contexts is minimized. Therapists also teach the skills needed to effectively interact with the adolescent’s teachers, probation officers, judges and other community members that can monitor and discipline the adolescent in the community. In order to deliver services consistent with the MST model whilst allowing therapists to tailor interventions for each family, the MST assessment and intervention process is guided by nine principles (see Table 1).

Therapy sessions are conducted with the child’s primary caregiver(s) in their home or in the community, several times each week with the frequency and duration of sessions dictated by the needs of the family. Therapists have low caseloads consisting of four to six families at a time, permitting therapists to provide intensive services and be available to families 24 h per day, seven days a week. The duration of treatment typically ranges from 4 to 6 months. In the current study, MST treatment was delivered by five MST teams, each consisting of three or four therapists, a clinical supervisor and an off-site MST expert consultant. The average length of treatment was 5.48 months ($SD = 1.17$).

**Fidelity to MST model**

MST has an intensive quality-assurance system focused on promoting therapist adherence. Several studies have demonstrated the association between therapist adherence to the MST model and short- and long-term youth outcomes (Schoenwald, 2008). All therapists and supervisors were trained through MST Services, LLC, a university-licensed technology-transfer organization. Training involves a 5-day orientation to MST theory and practice for both therapists and supervisors, on-site weekly group supervision of therapists by a supervisor who is receiving additional MST training from the MST expert consultant, weekly group (therapists and supervisor) consultation with an MST expert, and quarterly booster sessions to address special challenges encountered by the MST team (Schoenwald, Sheidow, & Chapman, 2009).

The quality-assurance system provides feedback regarding the degree of adherence to MST by therapists, supervisors and organizations. The Therapist Adherence Measure (TAM) is a 26-item measure evaluating therapists’ adherence to the nine principles of MST as reported by the primary caregiver of the referred youth. In 2007, the psychometric properties of the TAM were improved, resulting in the 28-item TAM-Revised (TAM-R; Henggeler, Borduin, Schoenwald, Huey, & Chapman, 2006). TAM-R items closely correspond to the nine MST treatment principles. For example, Principle 1 states, “the primary purpose of assessment is to understand the fit between the identified problems and their broader systemic context” and the corresponding TAM-R item is “the therapist tried to understand how the family’s problems all fit together” (Schoenwald, 2008). The TAM-R is administered over the telephone by trained agency or research staff other than the family’s therapist during the second week of MST treatment, then once every 4 weeks thereafter. In the current study, caregivers provided a mean of

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**Table 1**

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<tr>
<th>Multisystemic therapy treatment principles</th>
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<tr>
<td>1. The primary purpose of assessment is to understand the fit between the identified problems and their broader systemic context.</td>
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<td>2. Therapeutic contacts should emphasize the positive and should use systemic strengths as levers for change.</td>
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<td>3. Interventions should be designed to promote responsible behaviour and decrease irresponsible behaviour among family members.</td>
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<td>4. Interventions should be present-focused and action-oriented, targeting specific and well-defined problems.</td>
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<td>5. Interventions should target sequences of behaviour within or between multiple systems that maintain identified problems.</td>
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<td>6. Interventions should be developmentally appropriate and fit the developmental needs of the youth.</td>
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<td>7. Interventions should be designed to require daily or weekly effort by family members.</td>
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<td>8. Intervention effectiveness is evaluated continuously from multiple perspectives, with providers assuming accountability for overcoming barriers to successful outcomes.</td>
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<tr>
<td>9. Interventions should be designed to promote treatment generalization and long-term maintenance of therapeutic change by empowering caregivers to address family members’ needs across multiple systemic contexts.</td>
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4.45 TAM ratings (SD = 1.3; range = 1–7 TAMs per family). The parent was asked questions that refer to the most recent two or three therapy sessions with answer choices on a 5-point likert scale ranging from 1 (Not at All) to 5 (Very Much). Mean adherence scores of 4.28 (SD = .38) in the present study are slightly below those of a 45-site transportability study (M = 4.41, SD = .49; Schoenwald, Sheidow, Letourneau, & Liao, 2003) but above those of a recently completed randomized effectiveness trial (M = 3.99, SD = .68; Letourneau et al., 2009).

Participants and procedures

Families were recruited between October 2004 and September 2007 from five mental health agencies in Ontario providing MST services. Across these sites, MST was conducted by 21 therapists (14 women and 7 men). Therapists approached families to participate in the study at the commencement of MST. Importantly, refusal to participate did not exclude families from access to the MST treatment program. Inclusion criteria set by the community agencies’ protocols included youth imminently at risk for out-of-home placement and/or youth exhibiting physical aggression at home and at school or in the community. Exclusion criteria included youth living independently or where there was no primary caregiver; youth in need of crisis stabilization because of active suicidal, homicidal, or psychotic behaviour; sex offenders and autistic youth. Therapists recruited 106 families who met eligibility criteria and began study participation. Of these, seven were excluded from data analysis due to events occurring during the course of therapy, including: new therapist assigned to family (n = 3), child surrendered to Children’s Aid Society (n = 1), child residing with other parent not participating in therapy (n = 1), therapy discontinued for summer break (n = 1), or parent opting to discontinue participation (n = 1).

Two-thirds of the youth were male (68%), with an average age of 13.1 years (SD = 2.4; range = 8–18); 78% were Caucasian, 5% were African/Caribbean, 4% were Asian, 2% were Aboriginal, and 11% identified as other or mixed ethnicity. Parents were on average 43.1 years (SD = 7.2; range = 28–63). One-quarter of the youth had parents who did not graduate from high school, 18% finished high school, another 18% completed some college or university, 36% graduated from college or university, and 3% completed graduate or professional school. Approximately one-third (35%) of the families earned ≤$30,000 annually, another 35% earned ≥$60,000, the remaining 30% of families had incomes between these two groups. Marital status was described as either married or common law (57%), separated or divorced (24%), single (14%), or other which included widowed (5%). A partner or spouse was living in the home and involved in the child’s life in 58% of the families, 13% of the parents were living elsewhere but still involved in the child’s life, 22% were living elsewhere and not involved, and 7% of families identified as other which included deceased.

All parental figures actively participating in therapy were required to sign a consent form. It was on this basis we distinguished families with no paternal involvement in therapy (NPIT) from families with paternal involvement in therapy (PIT). Each participating family consented to the audio-recording of all therapy sessions. These recordings permitted us to confirm active paternal participation in therapy. There were slightly more PIT families (58%) than NPIT families represented. For PIT families, one primary contact person was established at the beginning of the study and for most families (95%) this was the mother, while fathers were the primary contact in 4% of the cases, and grandmothers 1%.

Questionnaires measuring child and family functioning were administered over the phone to the primary contact parent at pre- and post-treatment by a research assistant. Families were compensated $10 at pre-treatment and $30 at post-treatment. In addition, every four weeks for the duration of therapy, a questionnaire measuring therapists’ adherence to the MST model was administered over the phone to the primary contact parent. Clinicians reported data at pre- and post-treatment. On average, families received 164 days of therapy (5.4 months of therapy; SD = 35.1; range = 61–255).

Measures

The Brief Child and Family Phone Interview (BCFPI; Cunningham, Pettingill, & Boyle, 2000) is a 30- to 45-min computerized, structured phone interview with the parent conducted by a research assistant blind to the hypotheses and to treatment status. The BCFPI is the standard intake tool for all children’s mental health agencies in Ontario. It provides nine standardized scores including six that correspond to the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; American Psychiatric Association, 2000) (Attention Deficit Hyperactivity Disorder, Oppositional Disorder, Conduct Disorder, Separation Disorder, Anxiety Disorder, and Depression) and three composite scores for Externalizing, Internalizing and Total scores. Higher scores reflect greater impairment. Support for the psychometric properties of the BCFPI is strong and its use as a screening tool for child psychopathology has been found to be comparable to checklists such as the Child Behaviour Checklist (CBCL; Achenbach, 1991; Boyle et al., 2009; Cunningham, Boyle, Hong, Pettingill, & Bohaychuk, 2009; Cunningham, Pettingill, & Boyle, 2006).

The Child and Adolescent Functional Assessment Scale (CAFAS; Hodges & Wong, 1996) measures degree of impairment across behavioural and emotional domains in children and youth 6–17 years of age. The CAFAS was completed by clinicians at intake to assess level of impairment and at post-treatment to assess outcomes and change over time. For the purpose of our study, we examined the externalizing subscale only. The severity levels range from Severe, Moderate, Mild, to Minimal, with higher scores indicating greater levels of impairment. The reliability and validity of the instrument have been well established (Hodges & Gust, 1995; Hodges & Wong, 1996) and, critically, the CAFAS has been shown to be sensitive to clinical change over time (Hodges, Wong, & Latessa, 1998).
Center for Epidemiologic Studies—Depression Scale (CES-D; Radloff, 1977) measures depressive symptomatology in the general population. We used the 9-item CES-D Short Form, which correlates strongly with the original 20-item CES-D (Santor & Coyne, 1997). Participants indicated, on a 4-point scale, how often they had experienced a series of depressive symptoms in the past week; responses ranged from 0 (Rarely or None of the Time) to 3 (Most or All of the Time), with higher scores reflecting greater levels of depressive symptoms. The CES-D has been shown to be a reliable and valid measure for assessing depressive symptoms across racial, gender, and age categories (Knight, Williams, McGee, & Olaman, 1997; Radloff, 1977; Roberts, Vernon, & Rhoades, 1989).

Results

Preliminary analyses

We first compared our NPIT and PIT groups on the demographic variables using independent samples t-tests, chi-square analyses, or Fisher’s exact tests as appropriate. All tests were two-tailed. As expected, the groups differed significantly in marital status, $x^2(3, N = 99) = 66.35, p < .0001$, household size, $t(97) = -3.63, p < .001$, and income, $x^2(7, N = 96) = 31.39, p < .001$, with the PIT group more likely to be married (versus separated or divorced, single or widowed) and thus having more members in the household and greater family income. The groups also differed in the extent to which the respondents’ spouse or partner was involved in the child’s life (versus not involved, whether or not the spouse/partner shared a home with the child). In the PIT group, 56 of 57 respondents partners were involved in the child’s life, while in the NPIT group only 14 of 42 respondents’ partners were involved, $p < .0001$. The groups did not differ significantly on any of the other demographic variables, including child age, gender and ethnicity; parent age, and education. The two groups were roughly equally distributed across the various agencies and the specific therapists treating the families, and did not differ in the time period during which they entered the study and received therapy (i.e., whether they entered the study earlier or later). Furthermore, the NPIT and PIT families did not differ significantly in their mean TAM-R scores ($M = 4.29, SE = .40$; $M = 4.27, SE = .37$, respectively). Thus, the two groups received treatment that was equivalent in degree of adherence to MST principles.

Active participation in therapy

For each of the measures of interest (BCFPI Externalizing and Internalizing, CAFAS and CES-D), we conducted a mixed 2 (Time; pre-, post-treatment) by 2 (Group; PIT, NPIT) analysis of variance (ANOVA), with Time as the within-subjects variable and Group as the between-subjects variable. Table 2 shows the means and standard deviations for each measure.

The ANOVA results for the BCFPI Externalizing and Internalizing scales were analogous. There were significant main effects of Time (Externalizing: $F(1, 97) = 46.58, p < .0001$; Internalizing: $F(1, 94) = 15.93, p < .0001$), indicating improvement from pre- to post-treatment. These findings were qualified by significant Time by Group interactions (Externalizing: $F(1, 97) = 5.84, p < .02$; Internalizing: $F(1, 94) = 5.66, p < .02$). The means for the two groups did not differ significantly at pre-treatment. However, the means for the PIT group were significantly lower than the means for the NPIT group at post-treatment ($p < .03$ for Externalizing and $p < .01$ for Internalizing). Although both groups improved significantly over time, the magnitude of improvement was greater for the PIT families compared to the NPIT families. In order to ensure that our results were particular to paternal involvement in therapy and not just about fathers’ presence in the home or marital status, we conducted additional analyses. We conducted the same ANOVA substituting marital status (married or not married) or amount of involvement of the mother’s spouse or partner in the child’s life (involved or not involved) for the Group variable. No significant differences in outcomes were found based on marital status or extent of involvement in the household.

Alternatively, treatment efficaciousness may be measured by assessing the degree of clinically significant improvement. We operationalized clinically significant improvement on the BCFPI externalizing and internalizing measures as a decrease in five points, or half of a standard deviation (Lewis et al., 2008). To determine if our groups met this criterion after treatment, we conducted separate one-sample t-tests comparing the mean change scores for each group (NPIT and PIT) to five. For both measures, whereas the magnitude of change was not significantly different from five for the NPIT families, it was significantly greater than five for the PIT families (Externalizing: $t(56) = 3.97, p < .0001$; Internalizing: $t(54) = 2.09, p < .04$). Thus, the NPIT group met the criteria for clinically significant improvement while the PIT group exceeded it.

Table 2

<table>
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<th>Scale</th>
<th>Pre- and post-treatment means and standard deviations of all outcome variables for families with NPIT and PIT.</th>
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<td></td>
<td>Pre</td>
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<tr>
<td>BCFPI Externalizing</td>
<td>76.48 (10.59)</td>
</tr>
<tr>
<td>BCFPI Internalizing</td>
<td>65.53 (13.44)</td>
</tr>
<tr>
<td>CAFAS Externalizing</td>
<td>76.76 (26.25)</td>
</tr>
<tr>
<td>CES-D</td>
<td>3.57 (2.87)</td>
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Note: Standard deviations are in parentheses next to mean score. BCFPI = Brief Child and Family Phone Interview; CAFAS = Child and Adolescent Functional Assessment Scale; CES-D = Center for Epidemiologic Studies Depression Scale.
Another way to think about the effectiveness of treatment is in terms of whether or not the adolescents’ level of functioning met borderline clinical or clinical levels at pre- and at post- treatment. The conventional cutoff for borderline clinical-level functioning for the BCFPI externalizing and internalizing scales is 65 (Cunningham et al., 2006). Accordingly, participants were categorized as borderline clinical/clinically impaired if they scored 65 or higher. The categorization was done for pre- and post-treatment, for each scale separately. Chi-square analyses revealed that, for both measures, the two groups did not differ significantly in the proportion of adolescents categorized as borderline clinical/clinical at the outset of therapy. On the externalizing scale, 91% of the NPIT group met or exceeded the cutoff score of 65 at pre-treatment, while 86% of the PIT group met or exceeded this level. A smaller proportion of youth met or exceeded the borderline clinical/clinical cutoff on the internalizing scale, with 52% of the NPIT group and 51% of the PIT group considered borderline clinical/clinically impaired at the outset of therapy. However, only the PIT group saw a significant reduction in the total number of borderline clinical/clinical cases from pre- to post-therapy (p < .02 and p < .003 for Externalizing and Internalizing for the PIT group; Fisher’s exact test). The BCFPI outcome scores were reported by parents, so reporting biases may have influenced our results. To corroborate our findings, we examined therapist-rated externalizing behaviour as well.

The ANOVA comparing PIT and NPIT families on CAFAS scores showed main effects of group (F(1, 80) = 9.61, p < .003) and time (F(1, 80) = 191.26, p < .0001). In general, CAFAS externalizing scores improved significantly from pre- to post-treatment, but the NPIT families remained significantly more impaired than the PIT families across time. Both groups exceeded the widely accepted criterion for improvement of a decrease of at least 20 points (t(32) = 3.61, p < .001 for the NPIT group and t (48) = 6.47, p < .0001 for the PIT group).

We conducted Pearson product moment correlations to assess the relationship between parent-reported and therapist-reported externalizing scores using pre-, post-, and pre- to post-treatment change scores. All tests were two-tailed. At pre-treatment, parent-reported scores were not significantly correlated with therapist-reported scores; however, by post-treatment, externalizing scores from the two reporting sources were found to be positively correlated, r = .35, n = 99, p = .001. Analysis of pre- to post-treatment change scores revealed a positive correlation between the parent-reported BCFPI externalizing and therapist-reported CAFAS externalizing scores, r = .24, n = 99, p = .03.

Finally, we examined the influence of paternal involvement in therapy on maternal depressive symptoms. The only significant finding from the ANOVA for the CES-D was a significant main effect of time (F(1, 97) = 17.57, p < .0001), indicating that both groups saw a significant reduction in parent depression from pre- to post-treatment. Although differences between PIT and NPIT groups were in the hypothesized direction, no significant differences by group were found. For the shortened version of the CES-D (used here), it has been suggested that a score of four or more reliably indicates clinical levels of depression (Santor & Coyne, 1997).

We therefore categorized families according to this criterion at pre- and also at post-treatment. The proportion of depressed mothers did not differ significantly between the NPIT and PIT groups at the start of treatment (43% and 44% for the NPIT and PIT families, respectively). However, both groups saw significant reductions from pre- to post-treatment in the number of mothers with scores in the clinical range (p < .004 and p < .007 for the NPIT and PIT families, respectively; Fisher’s exact test).

Discussion

Overall, both PIT and NPIT families demonstrated significant improvements in adolescent behaviour and maternal depressive symptoms. Although variability in outcomes was apparent, our findings are consistent with previous research that has established the efficacy of MST (Borduin, Schaeffer, & Heilbrum, 2009; Borduin et al., 1995; Henggeler, Melton, Brondino, Scherer, & Hanley, 1997; Henggeler, Melton, & Smith, 1992; Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993; Henggeler, Pickrel, & Brondino, 1999; Schaeffer & Borduin, 2005; Timmons-Mitchell, Bender, Kishna, & Mitchell, 2006). To the best of our knowledge, this is the first study to examine paternal involvement in MST. Results provide preliminary evidence that including fathers in MST leads to improved treatment outcomes for antisocial youth. As hypothesized, adolescents with PIT exhibited significantly fewer parent-rated externalizing and internalizing problems than adolescents with NPIT at post-treatment. This was true both in terms of continuous measures of improvement and categorical classifications of clinical status. In addition, we predicted that clinician-rated adolescent functioning would be significantly better in adolescents with PIT. We found that adolescents with PIT had significantly lower CAFAS externalizing scores at pre and post-treatment than adolescents with NPIT although the decrease in scores was comparable for both PIT and NPIT families. Contrary to our hypothesis however, fathers’ involvement in MST was not predictive of more significant improvements in maternal depressive symptomatology. Results revealed that maternal depression significantly decreased in both PIT and NPIT families. Although the results were in the expected direction, there were no significant differences between PIT and NPIT families in maternal depressive symptomatology.

Our results suggest that whether or not fathers participate in MST may have important ramifications for youth outcomes. We suspect that the enhanced outcomes achieved by families with PIT may be attributed to the support parental figures provide each other in implementing the strategies learned in MST, the consistency of new skill application, and exposing the adolescent to new parenting skills in a greater number of settings over a longer period of time (Phares et al., 2006). Of course, at this stage, the precise means by which paternal involvement in therapy imparts increased benefits remains at the level of speculations. Additional studies are needed to examine the kinds of input fathers provide during the therapy sessions themselves.
Conversely, future research should continue to investigate how child-oriented therapy programs might better meet the needs of fathers. For example, according to Carr (1998), fathers respond better to more structured and directive interactions in therapy and respond well to the offer of extra therapy sessions focusing strictly on parental concerns such as job stress or personal concerns. Considering the flexible nature of MST, it is feasible for therapists to tailor their interaction style when interacting with fathers in order to keep them engaged and to offer therapy sessions focused on particular paternal concerns. A recent survey of clinicians providing therapy to children and families found that there are a number of personal and professional characteristics that are related to the inclusion of fathers in therapy, including (a) length of time in clinical practice (b) supporting a family-systems orientation, (c) the number of family-therapy related continuing education classes taken in the past year, and (d) the number of family-related books and journal articles read over the past year (Duhig, Phares, & Birkeland, 2002).

Continuous clinician training is inherent in the MST model, therefore, it should be relatively easy to bring new information to clinicians' awareness. For example, one of the quarterly 1½ day MST booster sessions could focus on family therapy, providing an opportunity for clinicians to learn more about a therapeutic orientation with a good track record of engaging fathers in therapy. Another consideration is the match between therapist-father gender and ethnicity. Previous research has found that fathers often feel more comfortable participating in therapy when their gender and ethnicity is the same as their clinician (Tiano & McNeil, 2005).

Other suggestions should be considered by therapists when they attempt to engage fathers in therapy. First, because fathers can feel marginalized in the therapeutic process, therapists should reassure fathers regarding their importance in the family and in the therapeutic change of the child (Duhig et al., 2002). Secondly, fathers should be encouraged to participate in the initial intake and assessment process because if they realize their input is valuable they may be more inclined to participate in the treatment process (Duhig et al.).

Several aspects of this study instill confidence in the reliability and generalizability of our findings. First, because our research was conducted in community-based child and family agencies, and not in the more usual academic research contexts, the findings provide immediate and important information about how MST works in "real world" community settings. Second, both parent and therapist reports were used to assess adolescent behaviour and functioning; these independent reports yielded support for our hypothesis that paternal involvement in therapy boosts treatment effectiveness. Although parent and therapist reports were not correlated at pre-treatment, both post-treatment and pre-post change scores were significantly positively correlated. While the correlations appear rather modest, it has been well established that different informants' ratings of behaviour problems in children are often discrepant, with correlations commonly in the .20 range (De Los Reyes & Kazdin, 2005). The benefits of including multiple informants in research on children's emotional and behavioural functioning are many (Achenbach, 1985; Duhig, Renk, Epstein, & Phares, 2000), with each informant contributing unique information regarding the young person's behaviour based on the context in which the child is viewed (Achenbach, McConaughy, & Howell, 1987). Third, treatment effectiveness was measured using multiple methods, with outcomes analyzed using both continuous and categorical measures of adolescent functioning.

Despite the study's strengths, a number of limitations warrant mention. First, because our research was done in partnership with community-based agencies providing MST, a randomized controlled trial was not feasible. As our research design was not experimental, causality cannot be demonstrated. However, it is important to note that our research was aimed at understanding individual differences in outcomes within a sample of families undergoing MST, not to establish whether MST is effective in general; thus, a randomized control trial was not necessary to meet our goals (Grimbos & Granic, 2009). Second, because the sample size was fairly small, replication of these findings is required in a larger sample of families before definitive conclusions can be drawn. A third limitation relates to rater bias. Even though previous research investigating bias in maternal ratings has shown maternal bias accounts for a small proportion of the variance in child behaviour ratings (Youngstrom, Izard, & Ackerman, 1999), it is important to note that the clinical status of the mothers in this study may have coloured the maternal reports (Fergusson, Lynskey, & Horwood, 1993). In addition, therapist-reported CAFAS ratings could be considered biased: after many months of working with a family, the therapist has a vested interest in their improvement, not to mention that the therapists' progress with each family is closely monitored by MST supervisors. Finally, although this study suggests that fathers are important to include in therapy, it remains unclear the mechanism by which their contribution helps boost treatment effectiveness; a process-level study that can pinpoint the differences between MST sessions with and without fathers present may help to clarify fathers' contributions.

Our results expand the research base of MST by studying the correlates of treatment success. Specifically, our findings suggest that paternal figures should be encouraged to actively participate in therapy. We do acknowledge that not all father involvement is beneficial to adolescents in that fathers with high levels of antisocial behaviour who are involved in caregiving have children with worse outcomes than antisocial fathers who are not involved in their children's lives (Blazei, Iacono, & McGue, 2008; Jaffee, Moffitt, Caspi, & Taylor, 2003). Father involvement may also be contraindicated when domestic violence is an issue or with maltreating fathers because they often have a tendency towards overly controlling behaviours (Phares et al., 2006). Future studies are needed to make stronger causal claims and further specify the mechanisms of change that are responsible for successful outcomes in MST; specifically, the mechanisms through which paternal support enhances adolescent outcomes. A more complete understanding of the mechanisms of change that contribute to the success of MST will be critical for maximizing its effectiveness for diverse families and youth and to move towards more effective program dissemination (Hughes, 2000; Kazdin, 2000). In order to address the issue of rater bias, future studies may consider incorporating ratings from impartial sources such as police records of recidivism rates or perhaps teacher reports of child
behaviour. Finally, while we are pleased our main hypothesis was supported, from a clinical standpoint, it is important to emphasize that NPII families are still achieving gains through MST; thus, single-parent status does not mean that adolescents are not significantly benefiting from MST. This is certainly an encouraging finding that should not be overlooked when results are disseminated to MST therapists.

References


