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The International Implementation of Multisystemic Therapy

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Abstract

The purpose of this article is to consider, through the lenses of theory and research on technology transfer and the adoption and implementation of innovation, the international transport of evidence-based psychosocial treatments for youth, using Multisystemic Therapy (MST) as an example. MST is a well-validated family and community-based approach originally developed in the United States to treat serious juvenile offenders. This article describes challenges to MST transport internationally by virtue of the political, legal, economic, and cultural contexts in different nations. Modifications used to address these challenges and facilitate the international implementation of MST are described and pertain to pre-implementation processes, clinical staff, training materials and procedures, and clinical service delivery.

Keywords

evidence-based treatment; treatment implementation; technology transfer; Multisystemic Therapy

Within the last decade, theory and research on technology transfer has increasingly informed research designed to bridge the gap between the effectiveness of services delivered in usual care and university-based randomized trials (National Institute on Drug Abuse, 2004; National Institute of Mental Health [NIMH], 2006). Recent reviews have attempted to synthesize from the diverse fields and literatures spanned by such theory and research lessons pertinent to the transport and implementation of evidence-based psychosocial treatments (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005; Schoenwald & Hoagwood, 2001; Southam-Gerow, Austin, & Hershberger, in press; Stirman, Crits-Christoph, & De Rubeis, 2004). These reviews identify challenges to the transport and implementation of such treatments. Chief among these is addressing the legitimate concerns of local stakeholders about the relevance and transferability of an intervention model developed elsewhere to the local context while protecting against the documented vulnerability of “soft technologies,” including mental health and substance abuse treatments, to significant adaptations that compromise their effectiveness (Backer, David, & Soucy, 1995; Brown, 1995, 2000; Glisson, 1992; Grimshaw et al., 2001; Rogers, 1995). Factors affecting the implementation and outcomes of a particular treatment can arise at multiple levels

of the practice context, including the client, clinician, provider organization, and service system (Ferlie & Shortell, 2001).

In recent years, several evidence-based treatments for serious antisocial behavior in adolescents, including Functional Family Therapy (Sexton & Alexander, 2002), Multisystemic Therapy (MST; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998), and Multidimensional Treatment Foster Care (Chamberlain, 2003), have been transported domestically and abroad. Narrative accounts of strategies designed to transport these treatments and some evidence-based primary prevention interventions (see, e.g., Olds, Hill, O'Brien, Racine, & Moritz, 2003) are consistent with the notion that influences at multiple levels of the practice context can affect implementation and outcomes. This article focuses on MST, which has been transported to 30 states and 8 countries (Australia, Canada, Denmark, Ireland, Netherlands, New Zealand, Norway, and Sweden).

Overview of MST

Because details of the MST treatment model for adolescent antisocial behavior are described in detail elsewhere (Henggeler et al., 1998), the description here will be brief and focus on the aspects of MST that are especially relevant to its use with diverse populations. MST is an intensive, family-based treatment originally developed for delinquent youths at imminent risk of incarceration or other out-of-home placements and their families. It targets those factors in each youth's social ecology (family, peers, school, neighborhood, and community) contributing to his or her antisocial behavior. MST treatment is informed by the social ecological theory of human behavior articulated by Bronfenbrenner (1979) and by prospective research identifying the multiple predictors of serious antisocial and related behavior in adolescents in the United States. Given the youths' imminent risk of placement, overarching treatment goals often relate to keeping the youth in the home and reducing criminal behavior. Specific goals and the interventions to achieve them are designed collaboratively with the youth's caregivers, who also implement the majority of the interventions, initially with the instrumental and social support of the therapist.

The combination of intervention techniques applied and the expected impact of intervention procedures vary in accordance with the circumstances of each youth and family. A scientific method of hypothesis testing, referred to as the Analytic Process, encourages clinicians to generate specific hypotheses about the combination of factors that sustain a particular problem behavior, provide evidence to support the hypotheses, test the hypotheses by intervening, collect data to assess the impact of the intervention, and use that data to begin the assessment process again. Interventions typically include improving specific caregiver discipline practices, enhancing family affective relations, decreasing youth association with deviant peers, increasing youth association with prosocial peers and activities, improving youth school or vocational performance, and developing an indigenous support network of extended family, neighbors, and friends to help caregivers achieve and maintain such changes. Specific treatment techniques used to facilitate these gains are integrated from those therapies that have the most empirical support, including cognitive behavioral, behavioral, and the pragmatic family therapies.

A home-based model of service delivery is used to provide comprehensive and intensive clinical interventions when and where they are needed (i.e., clinicians are available 24 hours a day, 7 days a week to respond to crises), with duration and frequency of treatment sessions varying in accordance with changing circumstances, needs, and treatment progress. MST therapists operate in teams of no fewer than two and no more than four therapists (plus the clinical supervisor). Each therapist's caseload ranges between four and six families so that therapists are able to provide sufficiently intensive and individualized services to their families.

The average length of MST is relatively brief (i.e., 3 to 5 months), with the intensity of treatment usually decreasing from inception to termination.

MST Research Outcomes

U.S.-based research outcomes—MST was initially developed by Drs. Scott Henggeler and Charles Borduin in university-based quasi-experimental and randomized controlled trials (RCTs) in which doctoral students served as MST therapists for inner-city and chronic juvenile offenders (see, e.g., Borduin et al., 1995; Henggeler et al., 1986) with continued development and validation of MST in RCTs involving community-based mental health practitioners employed either by the university investigators or community mental health centers (see, e.g., Henggeler, Melton, Brondino, Scherer, & Hanley, 1997; Henggeler, Melton, & Smith, 1992; Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993; Henggeler, Pickrel, & Brondino, 1999). Across numerous RCTs, MST consistently achieved significant reductions in rates of recidivism and conduct problems for criminal offending and substance abuse, with follow-ups ranging from 1.7 to 13.7 years (for review, see Henggeler & Sheidow, in press). Several federal government research and service agencies (National Institute on Drug Abuse, 1999; President's New Freedom Commission on Mental Health, 2003; U.S. Public Health Service, 2001) and the Blueprints for Violence Prevention (Elliott, 1998) have identified MST as an effective treatment for serious antisocial behavior in adolescents.

International research outcomes—The publication of findings from the domestic RCTs of MST prompted the interest of other nations in importing MST. The international transport of MST was characterized in some instances by relatively rapid program expansion, owing largely to the national reach of the policies and resources of ministries in democratic social welfare states. This program expansion facilitated the conduct of RCTs outside the United States. Completed randomized trials in Norway (Ogden & Halliday-Boykins, 2004) and Canada (Leschied & Cunningham, 2002) generally show that at posttreatment, youth randomized to MST demonstrated a greater decrease in both internalizing and externalizing behavior problems, self-reported criminal activity, self-reported antisocial beliefs and attitudes, and frequency and length of stays in out-of-home placements than youth receiving usual services. Long-term outcomes from Norway indicated that at 2 years postintake, youth who received MST continued to demonstrate significantly reduced time in out-of-home placement, parent report of internalizing problems, youth report of delinquency, and teacher report of both internalizing and externalizing behavior problems compared to youth in the control group (Ogden & Hagen, 2006). These findings suggest favorable MST outcomes can generalize across cultural and ethnic groups and across international borders, and RCTs of MST are currently underway in Sweden and the Netherlands.

Quality Assurance System

Following the publication of long-term positive outcomes of MST for juvenile offenders (Borduin et al., 1995; Henggeler et al., 1993), state and county juvenile justice and mental health systems sought the model developers' assistance in establishing MST programs. Consistent with technology transfer theory and research, early experiences with several communities suggested clinician, provider organization, and service system factors affected the implementation and outcomes of MST (Schoenwald & Henggeler, 2003) and potentially of other evidence-based treatments (Schoenwald & Hoagwood, 2001). Moreover, randomized trial findings linked therapist adherence to MST to youth outcomes (see Schoenwald, in press, for review).

In 1996, MST Services, LLC (MSTS; www.mstservices.com), was formed and licensed by the Medical University of South Carolina to assist interested communities in the development and implementation of MST programs using treatment and implementation protocols validated in

research on MST. The protocols specify the initial onsite training for therapists and the onsite clinical supervisor; weekly onsite clinical supervision; weekly telephone consultation with an MST expert (generally remote from the program site); quarterly booster training, program support materials, and procedures for the organization; measures of adherence for therapists, supervisors, and consultants; pre-implementation and semi-annual assessments of program implementation and factors affecting it; and a Web-based implementation tracking and feedback system provided through the MST Institute (www.mstinstitute.org). Published findings from a 45-site NIMH-funded study of the transport of MST domestically and in Canada support linkages between expert consultation, supervisor adherence, therapist adherence, and youth outcomes (see Schoenwald, in press, for review). In addition, a “train the trainer” mechanism was developed to support the internal capacity of communities, states, and nations to cultivate more locally the expertise necessary to transport MST via Network Partner (NP) organizations.

Pre-Implementation Phase

Standard Process and Common Challenges

Before clinical implementation of MST begins, a mutual assessment process is undertaken in which stakeholders and MST purveyors assess together the compatibility of MST with the goals and needs of the host community, identify referral and funding incentives and disincentives that could affect long-term sustainability of the program, establish the interagency collaboration necessary for the MST program and client families to take the lead in clinical decision making, and align the structure, procedures, and culture of the service provider organization hosting the MST program to support therapist and supervisor adherence to MST and provider accountability for family engagement and outcomes. That process can take up to a year to complete and culminates in a site-specific *MST Program Goals and Guidelines* document (Edwards, Schoenwald, Henggeler, & Strother, 2001; Strother, Swenson, & Schoenwald, 1998).

Stakeholders

Governments and service systems hosting MST programs—In the United States, the government and service system stakeholders involved in the initial development of an MST program vary considerably as a function of the diversity of policy and payment source across municipalities and states. Such variation appears less common abroad, particularly in democratic social welfare states in which a ministry with authority for a nation’s service sector sponsors the development of MST programs. Under such circumstances, the relative uniformity of national policy and service financing strategies across regions and municipalities can expedite the program development and expansion process. At the same time, a single change—positive or negative—at the national policy level can affect all MST programs nationally, rather than programs within a single region or city.

Identifying and collaborating with stakeholders—Considerable time is spent investigating the unique cultural and social characteristics of the communities into which MST is being introduced and the “fit” of MST with the community and to anticipate and generate potential solutions to implementation difficulties arising specifically from the cultural context. In some nations, it has been important to initiate partnerships with specific cultural groups and key community providers and educational institutions collaborating with those groups. For example, in Australia and New Zealand, program administrators and developers consulted and created formal alliances with Aboriginal and Maori cultural groups, respectively. These alliances were instrumental to developing and maintaining an adequate referral flow and helped the MST program establish a reputation for providing culturally responsive treatment. In Australia, Denmark, the Netherlands, and Norway, proactive outreach to a broad spectrum of

potential stakeholders has included the development and distribution of brochures in the national language explaining the MST model and program goals.

Understanding legal and social standards—Legal standards and ethical and social norms governing society that vary across nations are considered in the initial development of an MST program (and in training and clinical activities, described subsequently). MST is targeted toward high-risk juvenile offenders. Accordingly, barriers to MST implementation and program sustainability vary across international sites. For example, in the Netherlands, referral to a particular treatment program for an arrested youth must be agreed on by multiple systems (e.g., Youth Protection Council, Bureau of Youth Care) and then endorsed by three different judges. The judges cannot legally advocate for parents to be involved in treatment, however, so use of the judicial system as a lever for engagement is not possible. Thus, understanding the legal sanctions and acceptable judicial system alternatives for youth in the Netherlands was needed to obtain adequate referrals to the MST program.

Clinical Staff

Therapists and clinical supervisors—Determining which types of therapists and clinical supervisors are best suited to implement MST in a particular country can be challenging, because educational and clinical training programs vary widely across different countries. Although the majority of MST therapists working in the United States have master's degrees and significant clinical experience conducting empirically based interventions (e.g., cognitive-behavioral, behavioral techniques; MST Services, 2005), empirical evidence suggests neither advanced degree nor years of experience predict therapist adherence in the United States (Schoenwald, Letourneau, & Halliday-Boykins, 2005) or client outcomes internationally (Curtis, 2004). The proportion of MST program applicants having the equivalent of a master's degree is far smaller in countries outside the United States and even smaller for the minority groups in those countries. Clinicians with a reasonably strong degree of clinical acumen and familiarity with evidence-based interventions seem, anecdotally, to be more successful and satisfied with MST. And there is some evidence to suggest professional behaviors and personal characteristics that predict success domestically may also do so in other countries (Curtis, 2004).

MST expert consultants—MST and its NPs are staffed predominantly with doctoral-level consultants who are experts in the areas needed to operate successful MST programs. In general, all MST consultants should have a comprehensive knowledge base regarding the MST model and empirically based treatment techniques as well as the capacity to impart that knowledge in a clear, confident, and flexible manner (Schoenwald, 1998). Based on anecdotal reports from the Norway, Denmark, and New Zealand NPs, use of local consultants has served to minimize cultural barriers and increase mutual understanding and comfort between the consultant, the clinical staff, and other key stakeholders.

Clinical Implementation of MST

Training and Treatment Materials and Processes

As noted previously, clinical training in MST involves a 5-day onsite initial orientation for therapists and clinical supervisors, weekly onsite clinical supervision, weekly telephone consultation from an MST expert, and quarterly booster training.

Translation—Provision of training materials that are linguistically and conceptually understandable, as well as culturally and ethnically appropriate, is key to the international transport of MST. The challenges of translation have taken two primary forms: (a) the translation of materials from English to other languages and (b) the adaptation of culturally

specific symbols, meanings, and interventions within these materials to contextually appropriate versions. Agencies implementing MST typically have taken responsibility for the translation process (e.g., Henggeler et al., 1998, in Norway). Costs and time demands of translation can be significant and should be considered prior to MST program development. The translation process should include translation and back translation, participation of an individual who understands the clinical meaning of key concepts in the translation process (Ferrer-Wreder, Stattin, Lorente, Tubman, & Adamson, 2004), and review by an MST expert to ensure the content and meaning conveyed is accurate. A related issue is that symbols and images carry different meanings across diverse cultural contexts and should be considered when adapting clinical materials for use in other countries. For instance, vignettes used in training exercises in the United States have been revised so that the names, activities, and circumstances portrayed are culturally relevant (e.g., a youth playing baseball in an American version becomes a youth playing rugby or netball in New Zealand and Denmark, respectively).

Tweaking therapeutic interventions—Although the principles of MST and associated assessment and intervention strategies appear to remain applicable across international sites, the specific behaviors embodied within some common intervention strategies have been altered to better conform to cultural norms within different countries. For example, the nature of praise and reward offered in different countries may vary considerably. In some Scandinavian countries, praise is typically used sparingly, and even small gifts (e.g., a bouquet of flowers) that seem innocuous in an American context might be perceived as overly generous and inappropriate to a Scandinavian family.

Integration of culturally appropriate protocols—Another consideration in adapting MST internationally is the integration of culturally appropriate protocols into the training and support process. Anecdotal evidence from Australia, Denmark, and New Zealand suggests that integrating certain protocols (e.g., including respected cultural elders or other revered community stakeholders in clinical trainings, following culinary customs and social norms within the training sessions) facilitates trainees' comfort with the training process and enhances their willingness and ability to learn. For instance, in acknowledgement of New Zealand's multicultural society, traditional Maori and Pacific Island protocols for opening group meetings were integrated into many of the MST training sessions. These protocols included a song and prayer at the beginning of each training day and use of traditional Maori words and phrases within the training content. In Scandinavian countries, modifications were as subtle as changing the start and end times of the training day, adjusting the frequency and length of breaks, and altering how interactive sessions occur. Trainees have reported that even these small changes have increased their satisfaction with the training process and engagement with the treatment model.

Service Delivery

As the number of sites implementing MST internationally has grown, some program standards pertaining to service delivery have been reassessed and modified to better reflect the employment and cultural norms of other nations.

Duration and intensity of treatment—In the United States, MST is deployed using a short-term, intensive, home-based model of service delivery. Given the imminent risk in the United States of restrictive (i.e., institutional) out-of-home placement of delinquent youth, the ability to intervene quickly, intensively, and when and where problems arise has been a priority in domestic transport. Experience suggests certain cultures might have more difficulty engaging in the therapeutic relationship than others. For instance, MST therapists in New Zealand and Hawaii (not an international site, but one characterized by a prevalence of Pacific Islanders and associated cultural influence that differs from the continental United States;

Rowland et al., 2005) report Maori and Pacific Islander families respond negatively to questions about their extended families or presenting problems during sessions early in treatment. Direct questioning or references to professional business in the initial phases of treatment can be detrimental to successful engagement within these cultures. Rather, spending time together and having increasingly personal interactions over time are the means by which trust is gained.

Another potential driver for longer treatment lengths in international sites may reflect differences between common MST techniques and prevalent cultural norms and therapeutic standards overseas. For instance, accessing natural social supports outside of the immediate family is a common MST intervention in the United States. Accessing such indigenous supports is apparently a much less accepted practice in Denmark, the Netherlands, Sweden, and Norway. Accordingly, therapists from these countries devote more time toward helping families become accustomed to the concept of seeking support and extending their social support networks. Observed differences in service duration may also arise from combination of the shorter workweek and greater leave time of clinicians in international sites described next.

Time and caseload standards—Traditionally, within the context of American employment standards (i.e., 40-hr workweek and 3 weeks of annual leave), the caseload of an average MST therapist is four to six families. In European and South Pacific nations, however, an average workweek ranges from 36 to 39 hr. The annual leave provided abroad is also greater (i.e., 4 to 8 weeks per year) relative to the United States. Some international sites also compensate workers for the 24-hr-a-day, 7-day-a-week availability of therapists in MST programs with additional leave. In the first international sites implementing MST, caseloads were thus reduced to three to five families per therapist, with costs recalculated accordingly.

On-call systems—The reduced workweek and increased leave time have implications for procedures used to ensure families will receive treatment as needed at all times, including evenings, weekends, and in the event of therapist illness or vacation time. Therapists on international teams serve one another's families more frequently and for longer periods of time than therapists in the United States; families abroad thus experience more frequent substitutions of therapists. To manage this adaptation, therapists introduce and familiarize families to the concept of a therapeutic "team" at the outset of treatment, informing families they likely will work with several therapists during the course of treatment. Therapists must keep one another informed frequently outside of team supervision (where case progress, challenges, and plans are typically discussed) about the goals, progress, and challenges associated with each of their respective cases to ensure continued progress and adequate accountability for such progress.

Cultural advisors—The use of cultural advisors (sometimes referred to as "cultural supervisors") as a resource to MST clinical staff has been introduced in Australia, where the cultural advisor is a full-time team member and employee, and in New Zealand, where the advisor is available to therapists and supervisors on a limited basis as a consultant. Although the stated purpose of cultural advisors varies across communities in these countries, the role generally has encompassed any or all of the following tasks: (a) providing clinical staff with information to increase their awareness and knowledge of relevant norms, treatment expectations, and behaviors within particular cultural groups; (b) providing advice about how to adjust MST training and clinical support protocols to better conform to local teaching standards; (c) providing a liaison with culturally appropriate natural supports in the community; (d) facilitating the family's engagement with the MST therapist by accompanying the therapist to select initial meetings; and (e) when indicated, assisting the therapist with interventions to ensure that they are being implemented in a culturally appropriate manner.

Protocols to guide the use of cultural advisors are being refined to ensure the respective responsibilities of the therapist and advisor are clarified when the team is established. In Australia, for example, the distinct responsibilities of therapist and advisor are described in job interviews and again during the initial 5-day MST orientation training. In addition, the optimal role of the therapist, supervisor, and advisor with respect to the family is assessed to ensure that each person's expectations fit the demands of the role. The individual needs of a family are never superseded by the cultural advisor's assumptions of the family's cultural needs.

Future Directions

It is important to note that studies designed to test the effects of international adaptations on MST implementation and outcomes (e.g., studies comparing standard and adapted implementation in international sites) have not yet been undertaken. Research is needed to better understand the effects of international adaptations on the implementation and outcomes of MST and other treatment models developed and validated in the United States. To the extent that some common data elements characterize ongoing international and domestic evaluations of MST exist, a first step in identifying elements of implementation that reliably differentiate domestic and international sites and are linked with outcomes may be possible. Randomized trials conducted in other nations continue to provide important opportunities to test model effectiveness (but not necessarily adaptations) in international contexts. Meanwhile, the vision, political will, and tenacity evidenced by stakeholders dedicated to improving the effectiveness of mental health care for youth and families in their respective nations continues to provide opportunities for the developers and purveyors of evidence-based treatments such as MST to learn through collaboration how to better meet that goal in diverse nations.

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