Multisystemic Therapy (MST)

An overview of model development and implementation in Northern Ireland

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Multisystemic Therapy (MST) is an intensive community based model that uses evidence-based interventions to address problem behaviours and attempts to mitigate the risks associated with out of home placement (Cary et al, 2013) by placing the family at the centre of all elements of the work (Oruche et al, 2015). By increasing an understanding of the 'fit' of the problems, MST intervenes directly in the systems and processes related to those areas.

Driven by a belief that programmes seeking to influence problem behaviours were at best costly and also potentially ineffective, the Family Services Research Centre at the Medical University of South Carolina developed MST within a research context during the 1980's (Henggeler et al, 2009). It was then applied in field situations in the United States before being transported internationally. The developers were motivated by a desire to change mainstream juvenile justice approaches. The evidence, Henggeler argued, demonstrated that these approaches were not only economically problematic but also ineffective in achieving behavioural change (Carey et al, 2013). From the inception of MST within the research setting, the model has since developed further in the field and has been replicated across numerous jurisdictions. The reported effectiveness of MST has resulted in not only replication in its indigenous country, but also significant expansion internationally (Olsen, 2010). Today there are around 500 MST teams across 15 countries worldwide in areas such as Ireland, Chile, New Zealand, Norway, Denmark and the UK (Littell, 2005 Olsson, 2010; Tighe et al, 2012).

"MST has been extensively evaluated in randomised clinical trials (RCT)" (Cary et al, 2013:1) and "*across numerous RCT's, MST has consistently achieved significant reductions in problematic behaviours with follow ups ranging from 1.7 to 13.7 years" (*Schoenwald et al, 2008:*214).* Further evidence was provided by the *"9 treatment outcome studies (including 3 controlled trials) [that] have been published and for 7 of these follow-up data from 1-4 years have been reported …to be effective for those who completed the treatment programmes" (*Carr, *2005: 429).* During an evaluation of a pilot of MST delivered between 2003 and 2006, the researchers found *that "families who received the MST support as opposed to services as*

usual, experienced …more improved treatment outcomes, and less juvenile justice involvement…[and] experienced a significantly higher level of clinical improvement in mental health symptoms that did the usual service group…' (Painter, 2009: 321).

Whilst much of the mainstream literature has indeed focussed on the aforementioned success of MST in responding to and impacting upon complex behaviours, a small number of reviews have challenged the evidence base for MST. For example, in her systemic review of MST research, Littell (2005) argued that intrinsic design flaws, reporting bias, confirmation bias and under analysis of findings, limit the extent to which the evidence can be effectively appraised and therefore the inferences that can be drawn from any findings.

Despite the empirical limitations there has been significant interest in MST from other nations who are each attempting to deal with both the social and economic costs associated with problem behaviours (Schoenwald et al, 2008). *"From a societal view, the greatest gains lie in an interventions ability to impact the onset or communication of costly psychosocial and behavioural problems. This is because, relatively speaking, intervention costs are minimal compared to the long-term consequences of this problem behaviour" (*Olsson, 2010*: 568).* With behavioural change comes both direct and indirect cost savings to the State. In the short term, reducing the costly alternatives to family placements can aide resource re-allocation and in the long term, improved family functioning and reductions in anti-social behaviour mitigate the risks of sustained mandatory state supports (Cary et al, 2013). Researching the replication of the MST model in Sweden, Olsson (2010) not only found that families in receipt of MST treatment had very low comparative drop-out rates and placement breakdown during the treatment process compared with beneficiaries of other programmes, but *"a follow up study of treatment effectiveness conducted 2 years after intake to treatment showed that MST was more effective than regular services…." (Ogden et al: 587).* Similar results were found in Norway with 87% of the 487 families referred to MST in 2005 achieving treatment goals (Ogden et al, 2009). Reflecting on the UK experience of MST implementation, sufficient evidence exists to argue that the "*findings of the clinical and economic evaluation provide initial indications that MST may be a promising approach to tackle youth offending in the UK"* (Carey et al, 2013: 5).

It is important to recognise however, that whilst the model being presented here is indeed the MST model, the intention of the research is not to prove or disprove previous studies that have indicated that relative success (or lack thereof) of MST on the population it serves, but rather to explore the characteristics of staff who deliver the model and the outcomes that are attained in their engagement with families.

At the core of MST is a desire to affect and change problematic behaviour (Carr, 2005). When attempting to empower parents with the skills and motivation to address poor behaviour, the therapist's central concern is how to best engage the family system as well as other systems around them (Mytton et al, 2015). This is often done in a context of poor relationships between families and the child welfare system (Oruche et al, 2015). Therefore the clinical skills of the therapists are key prior to and during treatment (McCracken et al, 2007).

When attempting to understand problem behaviours likely to lead to out of home placement and increase the likelihood of custodial or care alternatives to family placements, Schoenwald et al (2000) argue that *"a combination of individual (attributional bias, anti-social attitudes), family (low warmth, high conflict, harsh and/or inconsistent discipline, low monitoring of youth whereabouts, parental problems, low social support), peer (association with deviant peers), school (low family-school bonding, problems with academic and social performance), and neighbourhood (transience, disorganisation, criminal sub-culture) factors are linked with serious anti-social behaviour in adolescence"* (p.114). In this sense, MST treatment theory is informed by the Social Ecological Theory of Behaviour most notably developed by Uri Bronfenbrenner (1979) (Schoenwald et al, 2008). Implicit within the Social Ecology Model is the belief that behaviour can be better understood when it is observed within the natural environment in which it occurs and also to achieve best results, interventions targeting the problem areas must impact upon *'various subsets of the factors contributing to the factors identifying problems'* (Schoenwald et al, 2000: p114). As Carr (2005) points out:

In MST, it is assumed that because anti-social behaviour is caused and maintained by many factors within a youth's multi-systemic social network, effective treatment involves identifying specific factors relevant to each case and then tailoring a multi-systemic intervention package to modify these…in this sense, MST rests on a social- ecological conceptualisation of adolescent violence (p.428)

Therefore MST does not focus on the individual whose behaviours are the presenting concerns, but rather emphasis is placed on supporting the other systems within the local ecology of the young person that are driving and maintaining those behaviours (Henggeler et al, 2009). With decades of research around the known determinants of violent and anti-social behaviour (Tolan et al, 1998), MST employs empirically based treatments and approaches to empower parents and caregivers with the skills, resources and strategies to influence the behaviours of their young people. To this end, MST is underpinned by decades of published evidence around 'what works'. Littell (2005) remarked that whilst MST has been long

established as a treatment model, the intervention techniques themselves are by no means unique. Indeed MST operates within a framework of pragmatic and problem focussed treatment models approaches. Consolidating treatment approaches such as strategic and structural family therapies, cognitive behavioural therapies and parent behavioural training (Woodford, 1999), MST can intervene not only in one problematic area but actually address interconnected and interrelated barriers to change (Asscher et al, 2007). Within MST, the different types of interventions are not delivered as separate elements, but rather the specific type of intervention is chosen on the basis of the presenting problem, the assessment of 'fit' and done so with clinical agreement between therapist, supervisor, consultant and indeed the family. To date, MST has shown to be one of the few models effective in decreasing risk factors associated with youth anti-social behaviour. These outcomes have been demonstrated both in the short term at the close of the treatment process and also in long term follow up studies (Schoenwald et al, 2000).

A central feature of the MST treatment process is the home based model of delivery (Sheidow et al, 2003). This approach ensures that therapists are more likely to understand the behaviours within the ecology of each family but also allows for very intensive support. The intensity of service delivery and 24/7 support to families ensures that therapists can respond to needs as and when they arise. The hypothesis therefore is that families are more likely to persist with change efforts. However, this intensity can vary in accordance with the needs and treatment gains experienced by families. *"… daily contact is common early during treatment and when periodic set-backs occur, with contact reduced to several times per week as treatment progresses"* (Schoenwald et al, 2000: 214). Because of the case intensity, MST therapists must hold low caseloads. Caseloads are limited to about 4-5 per full-time therapist (Olsson, 2010). Treatment is time-limited, lasting only 3-5 months per family depending on the seriousness of the problems and success of interventions (Henggeler et al, 2009).

Employing well established and validated treatments, MST teams must understand when a particular treatment, tool or process is best suited. To this end, MST employs an analytic process, sometimes referred to as the *'do-loop'* (Ibid). This a guide or framework by which problems, barriers or indeed advances can be best understood and addressed (Sheidow et al, 2003). Supervisors within each MST team are charged with the task of encouraging therapists to engage in hypothesis testing when they have hunches, beliefs or theories about: a) the causes and correlates of particular problems in a family; b) the reasons why improvements have occurred; and c) barriers to change (Schoenwald et al, 2000). Based on the presenting evidence, MST teams, through clinical supervision, agree on areas to be targeted in order of priority, the treatment approaches to be used and the resources needed

to effectively and efficiently support parents and caregivers to target the most appropriate area likely to achieve a desired goal.

As an evidenced-based model, MST sites are supported to deliver the treatment with a high degree of fidelity to the original programme design (Asscher et al, 2007). Numerous studies exploring successful replication of evidence based programmes indicate that maintaining fidelity to the original programme components is strongly associated with achieving the best outcomes for the users the models wish to support (Henggeler et al, 1997; Fixsen et al, 2005). In order to assure this fidelity, MST services, supported by the MST Institute manage a comprehensive and rigorous quality assurance process which is undertaken constantly throughout the life of a programme. At a service user level, families are asked for feedback on adherence levels for the therapists who are providing the face to face support. This takes place each month by an objective data collector. The feedback takes the form of 26 standardised questions called Therapist Adherence Measures (TAM's) (Ogden et al, 2009). The data is input directly into a system managed by the MST Institute (MSTI). From these measures, an adherence score is produced for each therapist ranging between 0 and 1 with an adherence threshold of .61. This threshold has been purported in previous studies to be the minimum score necessary to predict future positive outcomes (Butler at al, 2011). Whilst it has been argued that this score (as a measure of 'doing MST') is a strong predictor of ultimate outcomes (Schoenwald et al, 2005), some others have suggested that rather than being a measure of 'doing MST', TAM is a measure of good clinical skill or a therapeutic alliance(Littell, 2006). The TAM measure has never been subject to a study which discriminates between MST and another service. Nevertheless, this measure has been validated in several previous studies as a strong predictor of ultimate outcomes and the data is available to each MST site. This data can be interrogated by the MST team and reports around adherence and areas of need can be generated at any given time to identify the adherence scores of a chosen therapist or team. The data also evidences areas that score higher or indeed on the measure. This information allows for clinician development planning (CDP).

At an operational level, therapists avail of weekly group supervision where each case is explored using the analytic 'do-loop' process. Supervision is the forum where advances and barriers are discussed, conceptualised through 'finding the fit' of current problems, labelling top clinical concerns for that week and prioritising areas needing immediate attention. The outcome of this process is the group agreement on intervention/s for the week ahead. As Schoenwald et al, (2000) highlight, *"… supervision serves three interrelated purposes: a)development of cases-specific recommendations to speed progress toward outcomes for*

each client family, b)monitoring of therapist adherence to MST treatment principles in all cases, and c) advancement of 'clinicians' development trajectories with respect to each aspect of the on-going MST assessment and intervention process" (p.114). Whilst not unique, group supervision within preventative programmes is uncommon. Group supervision as opposed to individual supervision provides several benefits. Therapists within a given team learn from each other and can generate solutions to presenting problems. Therapists can also practice and rehearse partial clinical sessions in a safe environment (Costley, 1998).

Each MST team also avails of consultative support from an MST expert who ensures that the clinical direction is appropriate, that interventions fit with the MST model and that both the therapists and supervisor have the resources needed to carry out each specific goal related to each top clinical concern (Wiggins et al, 2010). As Schoenwald et al (2000) notes, "*MST consultation is designed to support therapist and supervisory fidelity to the MST treatment model on an on-going basis. For this reason, weekly consultation from an MST expert is a central component of the comprehensive training and quality assurance package developed for use with providers who wish to establish MST programmes" (p.123).*

MST in Northern Ireland

MST was introduced to Northern Ireland as part of a response to "Children Matter", (DHSS, 1998) the report of the review of residential child care services published in October 1998. The report established an action plan for the expansion and reconfiguration of children's residential services. The Extern Organisation, responding to a tender opportunity within the Homefirst and Causeway Trust areas (now the Northern Heath and Social Care Trust) developed a programme designed to provide a wraparound service to young people aged 13 – 17 on the edge of care as well as those young people leaving the care and youth justice systems to return to their family homes. Extern's model included a short-term residential component, as well as incorporating some components of existing Extern programmes as part of the package (Breakaway and Youth Support). The programme also included a teacher based in the residential unit and a social skills person responsible for assisting young people in the residential home attain independence skills in areas such as cooking, cleaning and budgeting.

The final component of the wraparound service was Multisystemic Therapy. MST offered a model of practice with a local evidence base and a very strong track record of successful engagement with families in Northern Ireland. The first MST team started in March 2001, and

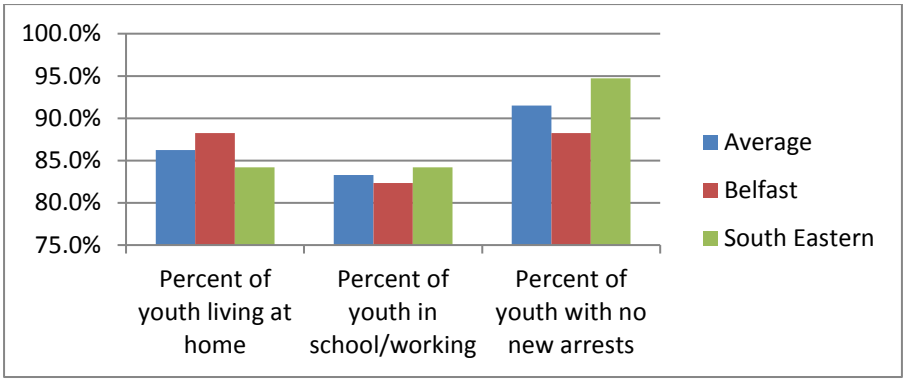
is still providing the service in the Northern Health and Social Care Trust (NHSCT). Shortly after MST was established in Northern Ireland, there were two teams established in England, one in Cambridgeshire which was part of the Youth Offending Service, followed by one in the Brandon Centre in London.

As a well-established team, adherence and outcome data show a direct link between fidelity measures and outcomes for those engaged in the programme. Over a three year period, the team had an above average adherence level of .87. The basic premise is that with increased adherence to the model, services should see a corresponding increase in positive outcomes achieved. In the same period, the team saw an average of 84% of young people remaining at home.

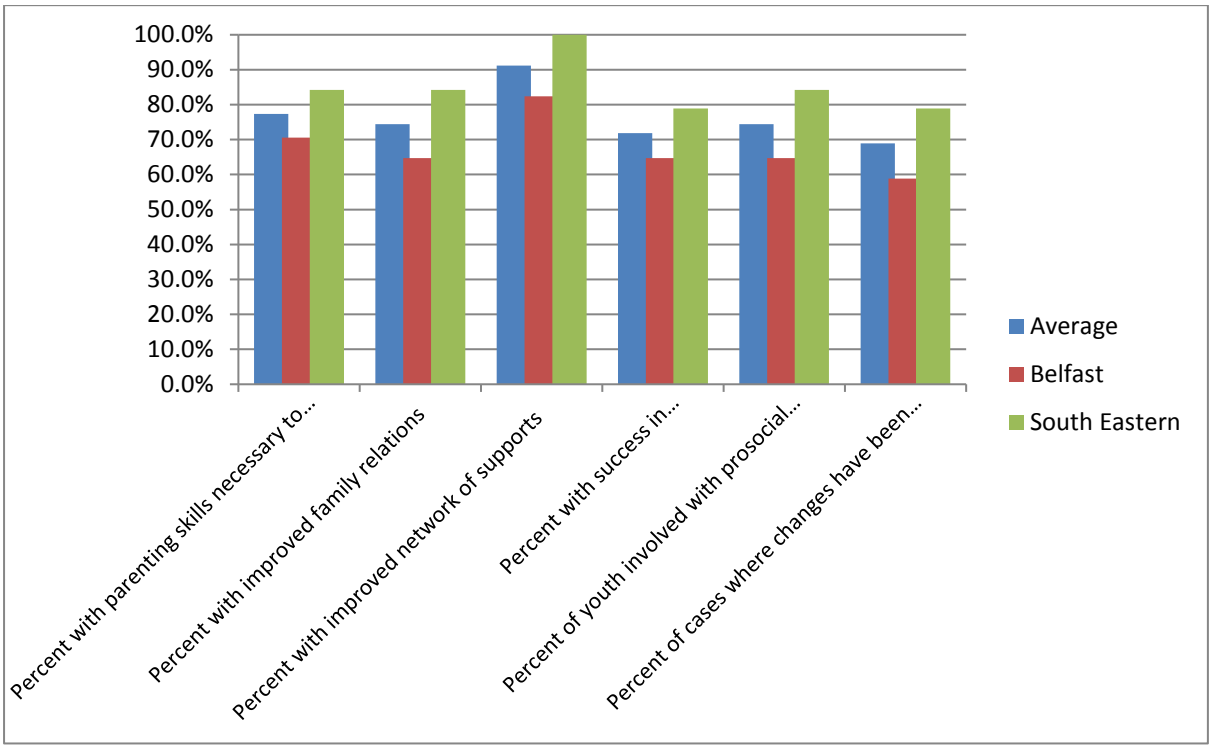
Building upon the success of the replication of MST in the NHSCT, combined with the shifting policy climate in the UK which made access to funds for evidence based programmes more likely, an application was made to the Big Lottery's Realising Ambition (RA) programme. The key drivers of this application were the organisational experience of implementation of MST in one area of Northern Ireland, the demonstrable outcomes attained and assumed to be replicated in the other Trust areas and a strategic desire to provide a service key to achieving policy objectives in Northern Ireland.

The *Realising Ambition* (RA) programme was a UK wide funding stream worth up to £25M intended to support organisations with experience in delivering early intervention and evidence based programmes to children, young people and families with complex needs. In 2011, Extern secured that funding from Big Lottery to replicate MST into the Belfast Health and Social Care Trust (BHSCT) and South Eastern Health and Social Care Trust (SEHSCT) areas.

Outcome data for the RA programme show a high correlation between model adherence and outcomes. During the period 2012-2014, almost 85% of young people remained at home and were attending school at the point of closure, and almost 95% had no further arrests during the MST intervention.



Similar findings emerged when instrumental outcomes were reviewed. These are intended to be strong predictors of how well the ultimate outcomes would be sustained and within the SEHSCT area in particular, the instrumental outcomes were very positive.



Due to the increased interest in EBPs' potential to meet complex behavioural needs, MST was integrated as a core component of the pilot Intensive Family Support Service in the Belfast area. Operational since 2014, two MT teams provide the model to 99 families per year, each of whom meet the criteria for IFSS referral. As part of the Delivering Social Change (DSC) agenda and Early Intervention Programme (EITP), it is hoped that any positive outcomes attained through the delivery of models such as MST are replicated across the other Trust areas at the end of the pilot.