

GUIDEBOOK

Published March 2018 | Last updated February 2022

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Multisystemic Therapy

Review: February 2018

Multisystemic Therapy (MST) is for families with a young person aged 12–17, who are at risk of going into care due to serious antisocial and/or offending behaviour.

MST therapists provide the young person and their parents with individual and family therapy over a four to six-month period with the aim of doing 'whatever it takes' to improve the family's functioning and the young person's behaviour.

Evidence
rating: **4+ ***

Cost rating: **5**

EIF Programme Assessment

Multisystemic Therapy has **evidence of a long-term positive impact** on child outcomes through multiple rigorous evaluations.

Evidence
rating: **4+ ***

What does the evidence rating mean?

Level 4 indicates **evidence of effectiveness**. This means the programme can be described as evidence-based: it has evidence from at least two rigorously conducted evaluations (RCT/QED) demonstrating positive impacts across populations and environments lasting a year or longer.

What does the plus mean?

The plus rating indicates that a programme's best evidence is level 4 standard, and there is at least one other study at level 4, and at least one of the level 4 studies has been conducted independently of the programme provider.

What does the asterisk mean?

The asterisk indicates that this programme's evidence base includes mixed findings: that is, studies suggesting positive impact alongside studies that on balance indicate no effect or negative impact.

More detail on mixed findings for this programme

- **4+** reflects the strength of the international MST evidence-base suggesting positive impact (including Butler et al. 2011, Borduin et al., 1995, Ogden et al. 2004, and also one robust study conducted in the UK – Butler et al., 2011)
- **Mixed findings** reflects the fact that there are also robust studies with more equivocal findings. Particularly, we have reviewed two studies, one conducted in Sweden (Sundell, 2008) and another conducted in the UK (Fonagy et al., 2018), which did not demonstrate that MST was consistently more effective than standard services at improving the primary outcomes of the evaluation.
- This rating also reflects the fact that of the two UK trials, one suggests positive effects (Butler et al., 2011), and another with less positive and more equivocal findings, including some outcomes where participants receiving standard services improved more relative to those receiving MST (Fonagy et al., 2018). For more detail on EIF's assessment of this study and its findings, please see 'About the evidence'.
- For more information on EIF's approach to mixed findings, see: [What happens when the evidence is mixed?](#)

MST is underpinned by a substantial number of internationally conducted studies. The rating of 4+ is based on three of the most robust studies (including one conducted in the UK – Butler et al., 2011), selected for inclusion as they were sufficient to demonstrate the strength of MST’s international evidence base (i.e. to warrant the 4+ rating), as well to exemplify the range of findings of these studies.

Cost rating

A rating of 5 indicates that a programme has a high cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of more than £2,000.

Cost rating: 5

Child outcomes

According to the best available evidence for this programme's impact, it can achieve the following positive outcomes for children:

Supporting children's mental health and wellbeing

Reduced emotional problems

Based on study 5

Improved wellbeing and adjustment

Based on study 5

Preventing child maltreatment

Reduced out-of-home placement

Based on study 3a

19.55-percentage point decrease in proportion of participants with out of home placements (measured using social services administrative records)

Immediately after the intervention

Based on study 3b

25-percentage point decrease in proportion of participants with out of home placements (measured using social services administrative records)

Improvement index: **+26**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 76% and worse outcomes than 24% of their peers, if they had received the intervention.

Long-term A year and a half later

Preventing crime, violence and antisocial behaviour

Reduced youth offending

Based on study 1

28-percentage point decrease in proportion of participants offending (measured using police administrative records)

Improvement index: **+15**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 65% and worse outcomes than 35% of their peers, if they had received the intervention.

Long-term A year and a half later

Reduced aggression

Based on study 1

1.70-point improvement on the Child Behaviour Checklist

Improvement index: **+6**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 56% and worse outcomes than 44% of their peers, if they had received the intervention.

6 months later

Reduced delinquency

Based on study 1

3-point improvement on the Child Behaviour Checklist (Delinquency Scale - Parent Report)

Improvement index: **+14**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 64% and worse outcomes than 36% of their peers, if they had received the intervention.

6 months later

Based on study 1

17.4-point improvement on the Self Report of Youth Behaviour (Self Report)

Improvement index: **+21**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 71% and worse outcomes than 29% of their peers, if they had received the intervention.

6 months later

Based on study 3b

13.72-point improvement on the Self Report Delinquency Scale

Improvement index: **+5**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 55% and worse outcomes than 45% of their peers, if they had received the intervention.

Long-term A year and a half later

Reduced psychopathic traits

Based on study 1

1.50-point improvement on the Antisocial Process Screening Device

Improvement index: **+7**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 57% and worse outcomes than 43% of their peers, if they had received the intervention.

Immediately after the intervention

Reduced reoffending (ever rearrested)

Based on study 2a

45-percentage point decrease in proportion of participants ever being rearrested (measured using police administrative records)

Improvement index: **+39**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 89% and worse outcomes than 11% of their peers, if they had received the intervention.

Long-term 4 years later

Based on study 2b

31-percentage point decrease in proportion of participants ever being rearrested (measured using police administrative records)

Improvement index: **+31**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 81% and worse outcomes than 19% of their peers, if they had received the intervention.

Long-term 13.7 years later

Based on study 2c

20-percentage point decrease in proportion of participants ever being rearrested (measured using police administrative records)

Improvement index: **+19**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 69% and worse outcomes than 31% of their peers, if they had received the intervention.

Long-term 21.9 years later

Reduced antisocial behaviour

Based on study 2a

0.10-point improvement on the Revised Behaviour Problem Checklist

Improvement index: **+5**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 55% and worse outcomes than 45% of their peers, if they had received the intervention.

Immediately after the intervention

Reduced reoffending (number of times rearrested)

Based on study 2b

2.14 decrease in average number of arrests (measured using police administrative records)

Improvement index: **+21**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 71% and worse outcomes than 29% of their peers, if they had received the intervention.

Long-term 13.7 years later

Reduced family-related civil court cases

Based on study 2c

17-percentage point decrease in proportion of participants being involved in family-related civil court cases (measured using court administrative records)

Improvement index: **+17**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 67% and worse outcomes than 33% of their peers, if they had received the intervention.

Long-term 21.9 years after the intervention

Reduced reoffending (number of misdemeanour arrests)

Based on study 2c

1.46 decrease in average number of misdemeanour arrests (measured using police administrative records)

Improvement index: **+13**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 63% and worse outcomes than 37% of their peers, if they had received the intervention.

Long-term 21.9 years later

Reduced internalising behaviour problems

Based on study 3a

Improvement on the Child Behaviour Checklist (Internalising Scale)

Immediately after the intervention

Based on study 3b

5.73-point improvement on the Child Behaviour Checklist (Internalising Scale)

Improvement index: **+35**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 85% and worse outcomes than 15% of their peers, if they had received the intervention.

Long-term A year and a half later

Improved social competence

Based on study 3a

Improvement on the Social Competence with Peers Questionnaire

Immediately after the intervention

Reduced behavioural problems

Based on study 3b

10.62-point improvement on the Child Behaviour Checklist

Improvement index: **+19**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 69% and worse outcomes than 31% of their peers, if they had received the intervention.

Long-term A year and a half later

Reduced conduct problems

Based on study 5

Reduced hyperactivity/inattention symptoms

Based on study 5

Improved prosocial behaviour

Based on study 5

Reduced callous/unemotional traits

Based on study 5

Preventing substance abuse

Reduced variety of substance misuse

Based on study 5

Reduced volume of substance misuse

Based on study 5

This programme also has evidence of supporting positive outcomes for couples, parents or families that may be relevant to a commissioning decision. Please see the 'About the evidence' section for more detail.

Key programme characteristics

Who is it for?

The best available evidence for this programme relates to the following age-groups:

- Preadolescents
- Adolescents

How is it delivered?

The best available evidence for this programme relates to implementation through these delivery models:

- Individual

Where is it delivered?

The best available evidence for this programme relates to its implementation in these settings:

- Home

How is it targeted?

The best available evidence for this programme relates to its implementation as:

- Targeted indicated
-

Where has it been implemented?

Australia, Belgium, Canada, Chile, Denmark, Germany, Iceland, Ireland, Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom, United States

UK provision

This programme has been implemented in the UK.

UK evaluation

This programme's best evidence includes evaluation conducted in the UK.

About the programme

What happens during delivery?

How is it delivered?

- MST is delivered by a therapist to young people and families on an individual basis in their homes or other community settings. Therapists are available to the family 24/7 and carry a caseload of four to six families at a time.
- Therapy sessions typically last between 50 minutes and two hours.
- The frequency of the sessions may vary depending on the needs of the family and the stage of the treatment, typically ranging from three days a week to daily.

What happens during the intervention?

- The MST model views the parents as the primary agents of change. Each family's treatment plan therefore includes a variety of strategies to improve the parents' effectiveness and the quality of their relationship with their child. It is essential that these strategies 'fit' with each family's unique set of strengths and weaknesses.
- A key aim of the therapy is to identify strategies that work for each individual young person and family. Work is also undertaken with the network of formal and informal supports around the young person and family to improve family relationships with agencies such as schools but also to develop sustainable positive supports in the community.
- A second aim of the intervention is to help families assume greater responsibility for their behaviours and generate solutions and skills for solving their family problems now and in the future. A variety of evidence based intervention strategies are used with individuals, families, and caregivers, including family sessions, role plays, structural and strategic family therapy, parent training, including use of behaviour plans, safety planning, and cognitive behavioural therapy. There may also be specific targeted interventions for substance abuse in young people.
- The strategies follow a set of MST principles and the MST analytical process, so that problems are resolved in a strategic way with the families. All of these interventions are related to the aims of (1) reducing antisocial / offending and high-risk behaviours in young people, (2) keeping young people safely at home, improving family relationships and reducing out-of-home placement, and (3) helping support young people to be successful in school, work and other community activities.

What are the implementation requirements?

Who can deliver it?

- The practitioner who delivers this programme is an MST therapist/practitioner with QCF-6 level qualifications.

What are the training requirements?

- The practitioners have 40 of programme training (a five-day MST orientation). Booster training of practitioners is required.

How are the practitioners supervised?

Practitioner supervision is provided through the following processes:

- It is required that practitioners are supervised by one host-agency supervisor (qualified to QCF-7/8 level), with 40 hours of MST practitioner training plus 16 hours of MST supervisor training.
- It is required that practitioners are supervised by one programme developer supervisor (qualified to QCF-7/8 level).

What are the systems for maintaining fidelity?

Programme fidelity is maintained through the following processes:

- training manual
- other printed material
- other online material
- video or DVD training
- face-to-face training
- fidelity monitoring.

Is there a licensing requirement?

Yes, there is a licence required to run this programme.

How does it work? (Theory of Change)

How does it work?

- MST is informed by ecological theory that assumes that a young person's behavioural problems are multi-determined by risks that occur at the level of the child, family, school and community.
- MST therapists help families identify strengths within each ecological level that will help them overcome the risks that contribute to the child's behavioural problems.
- Families also develop strategies specific to their risks to strengthen family relationships and reduce behavioural problems.
- Parenting behaviours improve, family communication improves, the family's links to external support improves, the young person's behaviour improves and his or her relationship to the school and community improves.
- Improvements in school attendance and engagement, reductions in offending rates and a reduced need to go into prison or out-of-home care.

Intended outcomes

Supporting children's mental health and wellbeing
Enhancing school achievement & employment
Preventing crime, violence and antisocial behaviour

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About the evidence

Multisystemic Therapy has evidence from at least three rigorously conducted RCTs, with at least one study demonstrating long-term impact, and impact on assessment measures independent of study participants (not self-reports). At least one study has been conducted independently of the programme developer.

These studies identified statistically significant positive impact on a number of child and parent outcomes.

Study 1

Citation: Butler et al., 2011 | **Design:** RCT

Country: United Kingdom | **Study rating:** 3

Sample: 108 families, with children aged 13–17

Timing: Post-intervention; 12 month & 18 month follow-up

Child outcomes:

Reduced youth offending

Reduced aggression

Reduced delinquency

Reduced delinquency

Reduced psychopathic traits

Other outcomes:

Improved parenting behaviours

Butler, S., Baruch, G., Hickey, N., & Fonagy, P. (2011). A randomized controlled trial of Multisystemic Therapy and a statutory therapeutic intervention for young offenders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 50(12), 1220-1235.

Available at [http://www.jaacap.com/article/S0890-8567\(11\)00880-X/abstract](http://www.jaacap.com/article/S0890-8567(11)00880-X/abstract)

Study design and sample

The first study is a rigorously conducted RCT.

This study involved random assignment of children to a MST or to a standard package of youth offending services involving individual and family support. The trial involved 108 youths and their parents. Treatment allocation was determined by a stochastic minimization program (MINIM) balancing for type of offending (violent vs. nonviolent), gender and ethnicity.

This study was conducted in the UK with a sample of children. Families were eligible if they had a child between the ages of 13 and 17, who was living at home with at least one parent or caregiver, and was a recipient of a court order within the last three months.

Measures

Information about youth offending was gathered from police records at six months pre-treatment, six months post-baseline (typically just post-treatment), 12 months and 18 months. Parents and youths also complete a battery of validated self-report measures at baseline and at six-months – i.e. immediately post-treatment. These measures included:

- Self-report of Youth Behaviour (SRYB) (self-report)
- delinquency and aggression subscales of the Youth Self-Report (YSR) (self-report)
- Child Behavior Checklist (CBCL) (parent completed)
- Antisocial Beliefs and Attitudes Scale (ABAS) (self-report)
- Loeber et al.'s parent completed measure of positive parenting and disciplinary practices (PP) along with parent monitoring and supervision (parent-report)
- Subjective Family Image Test [SFIT]: A family measure completed by both the young person and primary caretaker looking at the quality of the emotional bond between adolescent and parent (emotional connectedness) (family-report)
- Antisocial Process Screening Device (APSD), a parent-completed measure of youth psychopathic traits (parent-report)
- a 16-item scale measuring the youth's involvement with delinquent peers (IDP) adapted from the Youth in Transition Study' (self-report).

Findings

This study identified statistically significant positive impact on a number of child and parent outcomes.

The study observed statistically significant reductions in MST youth's offending behaviour. The study further observed significant reductions in MST parent- and youth-reported aggression and delinquent behaviour.

Study 2a

Citation: Borduin et al., 1995 | **Design:** RCT

Country: United States | **Study rating:** 3

Sample: 176 youths with a criminal arrest aged 12-17

Timing: Post-intervention; 4 year follow-up

Child outcomes:

Reduced reoffending (ever rearrested)

Reduced antisocial behaviour

Other outcomes:

Improved supportiveness of child
Reduced psychological symptoms
Increased family cohesion

Borduin, C. M., Mann, B. J., Cone, L. T., Henggeler, S. W., Fucci, B. R., Blaske, D. M. & Williams, R. A. (1995). Multisystemic treatment of serious juvenile offenders: Long-term prevention of criminality and violence. *Journal of Consulting and Clinical Psychology*, 63, 569-578.

Available at <http://psycnet.apa.org/fulltext/1995-44513-001.html>

Study design and sample

The second study is a rigorously conducted RCT.

This study involved random assignment of children to a MST or to individual therapy alongside a constellation of other youth offending services. Participants were randomly assigned via coin toss to MST or individual therapy.

This study was conducted in the USA, with a sample 176 youth offenders. Youths were eligible if they were (1) between the ages of 12 and 17, (2) had at least two previous arrests – with a detention within the previous four weeks, (3) living with at least one parent and (4) no evidence of psychosis or dementia.

Measures

Police and juvenile court records were used to determine the criminal activity of all youths prior to the start of programme and then at follow-ups taking place at 4, 13.7 and 21.9 years post-treatment. Information about other court involvement (civil suits, divorce proceedings) was also considered in the 21.9-year follow-up.

Secondary outcomes (parent and child psychological functioning, family cohesion, self-reported offending behaviour) were measured through a large battery of validated self-reported measures completed by the parent and youth immediately before and after MST or control treatment.

Findings

This study identified statistically significant positive impact on a number of child and parent outcomes. This includes:

- Fewer criminal arrests at 4 years post-intervention.

Study 2b

Citation: Schaeffer et al. 2005 | **Design:** RCT

Country: United States | **Study rating:** 3

Sample: 176 youths with a criminal arrest aged 12–17

Timing: 13.7 year follow-up

Child outcomes:

Reduced reoffending (ever rearrested)

Reduced reoffending (number of times rearrested)

Other outcomes:

Not measured

Schaeffer, C. M. & Borduin, C. M. (2005). Long-term follow-up to a randomized clinical trial of Multisystemic Therapy with serious and violent juvenile offenders. *Journal of Consulting and Clinical Psychology, 73*, 445-453.

Available at <http://psycnet.apa.org/fulltext/2005-06517-007.html>

Schaeffer et al. 2005 describes additional outcomes from study 2a described above. In this case:

- Police and juvenile court records were used to determine the criminal activity of all youths prior to the start of programme and then at follow-ups taking place 13.7 years post-intervention.
- This study identified statistically significant positive impact on a number of child outcomes. This includes fewer criminal arrests at 13.7 years post-intervention.

Study 2c

Citation: Sawyer et al., 2011 | **Design:** RCT

Country: United States | **Study rating:** 3

Sample: 176 youths with a criminal arrest aged 12–17

Timing: 21.9 year follow-up

Child outcomes:

Reduced reoffending (ever rearrested)

Reduced family-related civil court cases

Reduced reoffending (number of misdemeanour arrests)

Other outcomes:

Not measured

Sawyer, A.M, & Borduin, C.M. (2011). Effects of Multisystemic Therapy through midlife: A 21.9-year follow-up to a randomized clinical trial with serious and violent juvenile offenders. *Journal of Consulting and Clinical Psychology, 79*, 643-652.

Available at <http://psycnet.apa.org/record/2011-15472-001>

Sawyer et al., 2011 describes additional outcomes from study 2a described above. In this case:

- Police and juvenile court records were used to determine the criminal activity of all youths prior to the start of programme and then at follow-ups taking place 21.9 years post-intervention.
- This study identified statistically significant positive impact on a number of child outcomes. This includes fewer criminal arrests and civil court cases at 21.9 years post-intervention.

Study 3a

Citation: Ogden et al., 2004 | **Design:** RCT

Country: Norway | **Study rating:** 3

Sample: 100 youths with serious behavioural difficulties

Timing: Post-intervention

Child outcomes:

Reduced internalising behaviour problems

Improved social competence

Reduced out-of-home placement

Other outcomes:

Improved family cohesion

Ogden, T. & Halliday-Boykins, C. A. (2004). Multisystemic treatment of antisocial adolescents in Norway: Replication of clinical outcomes outside of the US. *Child and Adolescent Mental Health, 9*(2),77-83.

Available at

<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1475-3588.2004.00085.x>

Study design and sample

The third study is a rigorously conducted RCT.

This study involved random assignment of children to a MST or a treatment as usual group, which could include out-of-home placement in residential or foster care, or intensive home-based individual therapy.

The study was conducted in Norway, with a sample that consisted of 64 boys and 37 girls, averaging 14.95

years. Youths were referred for a range of behavioural and mental health problems, including behavioural problems and criminal offences. Youths were excluded if they were (1) receiving treatment from another agency, (2) they had a substance misuse problem without any additional behavioural issues, (3) there were issues with sexual offending, (4) they had autism, psychosis or imminent risk of suicide, (5) the youth posed a serious risk to other family members in the home, or (6) there was an ongoing investigation involving child maltreatment.

Measures

A composite score derived from the parent/teacher/youth ratings of the young's person's behaviour with the Child Behavior Checklist was used to measure behavioural outcomes. Out-of-home placements were also considered, as were youth self-ratings of their delinquency (Self-report delinquency scale), social competence (Social Competence with Peers Questionnaire) and social skills (Social Skills Rating System). Family cohesion was measured via the FACES (Family Adaptability and Cohesion Scale). Additional information about out-of-home placements was gathered through social services records. Data was collected at baseline, immediately post-treatment and at a two year follow-up with three-quarters of the sample.

Findings

This study identified statistically significant positive impact on a number of child and parent outcomes.

This includes internalising symptoms at the post-intervention point. Other positive outcomes included improve family functioning (FACES), improved social competence, and reduced out-of-home placements.

Study 3b

Citation: Ogden et al., 2006 | **Design:** RCT

Country: Norway | **Study rating:** 3

Sample: 100 youths with serious behavioural difficulties

Timing: 2 year follow-up (18 months post-treatment)

Child outcomes:

Reduced out-of-home placement

Reduced delinquency

Reduced behavioural problems

Reduced internalising behaviour problems

Other outcomes:

Not measured

Ogden, T. & Hagen, K.A. (2006). Multisystemic Therapy of serious behaviour problems in youth: Sustainability of therapy effectiveness two years after intake. *Journal of Child and Adolescent Mental Health*, 11, 142-149.

Available at

<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1475-3588.2006.00396.x>

Ogden et al., 2006 describes additional outcomes from study 3a described above. In this case:

- Data was collected at a two-year follow-up with three-quarters of the sample.
- This study identified statistically significant positive impact on a number of child outcomes. MST youths were significantly more likely to remain at home, and to be rated by their parents as having significantly improved behaviour (internalising and total CBCL scores). The teacher ratings also significantly favoured MST participants.

Study 4

Citation: Sundell, 2008 | **Design:** RCT

Country: Sweden | **Study rating:** NE

Sample: 156 anti-social youths aged 12–17

Timing: Post-intervention

Other outcomes:

None found

Sundell, K., Hansson, K., Löfholm, C.A., Olsson, T., Gustle, L., Kadesjo, C. (2008). The transportability of Multisystemic therapy to Sweden: short-term results from a randomized trial of conduct-disordered youths. *Journal of Family Psychology*, 22(4), 550-560.

Available at <http://psycnet.apa.org/record/2008-10898-007>

Study design and sample

The fourth study is a rigorously conducted RCT.

This study involved random assignment of children to an MST or a treatment as usual group. Those assigned to the control group received individual therapy alongside a constellation of other youth offending services and MST participants received an average of six months of MST.

The study was conducted in Sweden with a sample of antisocial youths. Youths were an average of 15 years. 67% had one previous arrest and 32% had a previous out-of-home placement. Youths were eligible if they fulfilled the criteria for a DSM IV-TR diagnosis of conduct disorder and whose parent(s) or parent surrogate(s) were motivated to engage in an intervention. Youths were ineligible if there was a history of sexual offending, substance misuse, a serious cognitive difficulty or other mental health problem, or treatment in another facility.

Measures

Social service and school attendance measures were collected for all participants. The following measures were also completed by the parent or youth.

Youth:

- Youth self-report
- Sense of Coherence Scale
- Self-report Delinquency Scale
- Alcohol Use Disorder Identification Test (AUDIT)
- Drug Use Disorder Identification Test (DUDIT)
- 'Bad Friends' subscale from the Pittsburgh Youth Study
- Social competence with Peers Scales (SCPQ)
- Social Skills Rating System (SSRS)

Parent:

- CBCL (Caregiver – but about child)
- Parenting measure developed in Sweden
- Maternal mental health – SCL-90.

Findings

There were no statistically significant differences between the groups.

Study 5

Citation: Fonagy, et al. (2018). | **Design:** RCT

Country: United Kingdom | **Study rating:** NE

Sample: 684 young people aged 11–17, with moderate-to-severe antisocial behaviour problems

Timing: Post-intervention; approximately 6-months follow-up (12 months after randomisation); approximately 12-months follow-up (19 months after randomisation)

Child outcomes:

Reduced conduct problems

Reduced emotional problems

Reduced hyperactivity/inattention symptoms

Improved prosocial behaviour

Reduced callous/unemotional traits

Reduced variety of substance misuse

Reduced volume of substance misuse

Improved wellbeing and adjustment

Other outcomes:

Improved Alabama Parenting Questionnaire – problems of monitoring and supervision

Improved Loeber parental support score

Improved FACES family satisfaction

Improved FACES family cohesion

Improved FACES family communication

Improved General Health Questionnaire scores

Fonagy, P., Butler, S., Cottrell, D., Scott, S., Pilling, S., Eisler, I., ... & Ellison, R. (2018). Multisystemic therapy versus management as usual in the treatment of adolescent antisocial behaviour (START): a pragmatic, randomised controlled, superiority trial. *The Lancet Psychiatry*.

Available at

<https://www.sciencedirect.com/science/article/pii/S2215036618300014>

Study design and sample

The fifth study is a rigorously conducted RCT.

This study involved random assignment of children to an MST group and a management as usual (MAU) group. Stochastic minimisation, stratifying for treatment centre, sex, age at enrolment to study and age at onset of antisocial behaviour was used. MAU involved the provision of best available local services for young people; the interventions were multicomponent and no less resource-intensive than MST.

This study was conducted in the UK with a sample of children who were between 11 and 17 years old, with moderate-to-severe antisocial behaviour problems. 65% of the sample had persistent and enduring violent and aggressive interpersonal behaviour, more than 80% met DSM-IV criteria for any conduct disorder, and 26% had been permanently excluded from school for antisocial behaviour.

Measures

Data was collected at post-intervention (6 months after randomisation), approximately 6-months follow-up (12 months after randomisation) and approximately 12-month follow-up (18 months after randomisation):

- Out-of-home placements were assessed using administrative data.
- Time to first offense was assessed using police administrative data.
- Proportion free of offending behaviour was assessed using police administrative data.
- Exclusion from school was assessed using administrative data (National Pupil Database).
- Behaviour problems were assessed using the Strengths and Difficulties Questionnaire (youth self-report and parent report versions).
- Callous and unemotional traits were assessed using the Inventory of Callous/Unemotional traits (youth self-report and parent report versions).
- Delinquency was assessed using the Self-Report Delinquency Measure (youth self-report).
- Antisocial beliefs and attitudes were assessed using the Antisocial Beliefs and Attitudes Scale (youth self-report).
- Materialistic attitudes were assessed using the Youth Materialism Scale (youth self-report).
- Young person wellbeing was assessed using the Moods and Feeling Questionnaire (youth self-report).
- ADHD symptoms were assessed using the Conners Comprehensive Behaviour Rating Scales – ADHD subscale (parent and teacher report).

- Behaviour disorders were assessed using the Development and Well-being Assessment measure (clinician report).
- Parent wellbeing was assessed using the General Health Questionnaire (parent report).
- Problems of monitoring and supervision in parenting were assessed using the Alabama Parenting Questionnaire (youth report and parent report versions).
- Parental support was assessed using the Loeber Parental Support measure (youth report and parent report versions).
- Family satisfaction, cohesion and communication were assessed using the Family Adaptability and Cohesion Evaluation Scale-IV (parent report).

Findings

This study identified statistically significant positive impact on a number of child and parent outcomes. This includes:

Post-intervention

- Improved SDQ – total score (parent report)
- Improved SDQ – impact score (parent report)
- Improved SDQ – conduct problems (parent report)
- Improved SDQ – emotional problems score (parent report)
- Improved SDQ – hyperactivity or inattention score (parent report)
- Improved SDQ – prosocial score (parent report)
- Reduced inventory of callous/unemotional traits (parent report)
- Reduced self-report delinquency measure scores – variety of substance misuse (young person self-report)
- Reduced self-report delinquency measure scores – volume of substance misuse (young person self-report)
- Improved Moods and Feelings questionnaire scores (young person self-report)
- Improved Conners Comprehensive Behaviour Rating Scales – ASDHD scores (parent report)
- Improved Alabama Parenting Questionnaire – problems of monitoring and supervision (parent report).
- Improved Loeber parental support score (parent report)
- Improved FACES family satisfaction (parent report)
- Improved FACES family cohesion (parent report)
- Improved FACES family communication (parent report)
- Improved General Health Questionnaire scores (parent report)

6-months

- Improved SDQ – total score (young person self-report)
- Improved SDQ – emotional problems score (young person self-report)
- Improved SDQ – total score (parent report)
- Improved SDQ – emotional problems score (parent report)
- Improved SDQ – hyperactivity or inattention score (parent report)
- Improved Moods and Feelings questionnaire scores (young person self-report)
- Improved FACES family satisfaction (parent report)
- Improved General Health Questionnaire scores (parent report)

12-months

- Improved inventory of callous/unemotional traits scores (young person self-report)
- Improved General Health Questionnaire scores (parent report)

A statistically significant negative impact was identified on:

- Increased criminal offenses at 12-month follow-up. It is worth noting that MST participants' outcomes did not worsen over time, but rather that MAU participants' outcomes improved *more* relative to MST participants.

This study receives a rating of NE (no effect) on a balance of considerations, including:

- The positive effects which are identified tend to occur early and not be sustained, with the MAU group catching up over time.
- The highest quality results in terms of lowest-attrition suggest that there was no effect (out of home placements), or that MAU participants' outcomes improved *more* relative to MST participants (arrests). The results suggesting positive impact (child- and parent-reports) are less robust due to higher attrition (18% at post-test, 29% at 6-month follow-up, and 31% at 12-month follow-up).
- The highest quality results in terms of objective measurement (versus self/parent-report) suggest that there was no effect (out-of-home placements), or that MAU participants' outcomes improved *more* relative to MST participants (arrests).
- There are negative results that suggest that MAU participants' outcomes improved *more* relative to MST participants.

Other studies

The following studies were identified for this programme but did not count towards the programme's overall evidence rating. A programme receives the same rating as its most robust study or studies.

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Guidebook

The EIF Guidebook provides information about early intervention programmes that have at least preliminary evidence of achieving positive outcomes for children. It provides information based on EIF's assessment of the strength of evidence for a programme's effectiveness, and on detail about programmes shared with us by those who design, run and deliver them.

The Guidebook serves an important starting point for commissioners to find out more about effective early interventions, and for programme providers to find out more about what good evidence of impact looks like and how it can be captured. As just one of our key resources for commissioners and practitioners, the Guidebook is an essential part of EIF's work to support the development of and investment in effective early intervention programmes.

Our assessment of the evidence for a programme's effectiveness can inform and support certain parts of a commissioning decision, but it is not a substitute for professional judgment. Evidence about what has worked in the past offers no guarantee that an approach will work in all circumstances. Crucially, the Guidebook is not a market comparison website: ratings and other information should not be interpreted as a specific recommendation, kite mark or endorsement for any programme.

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EIF

The Early Intervention Foundation (EIF) is an independent charity and a member of the What Works network. We support the use of effective early intervention for children, young people and their families: identifying signals of risk, and responding with effective interventions to improve outcomes, reduce hardship and save the public money in the long term.

We work by generating evidence and knowledge of what works in our field, putting this information in the hands of commissioners, practitioners and policymakers, and supporting the adoption of the evidence in local areas and relevant sectors.

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