

# Family-based Interventions for Teenagers

## EVIDENCE BRIEF

Most of the international evidence suggests that family-based interventions are effective at reducing offending among teenagers. This is very important given that crime rates peak in adolescence and a small group of youth offenders is likely to continue engaging in offending behaviour into adulthood.

### OVERVIEW

- The teenage years are vital from a crime prevention perspective. A typical offender will commit most of their offences during adolescence.
- In this brief the term 'family-based interventions' refers to (a) programmes that attempt to strengthen parents' parenting skills and (b) approaches that aim to improve functioning in multiple domains of a teenager's life (including family, peer group, school and/or community).
- Most of the evidence suggests that these interventions reduce offending among teenagers.
- International research indicates that five to ten teenagers need to receive a family-based intervention in order to prevent one teenager from offending.
- In general, services for young people are more effective when they are (a) targeted at high-risk individuals and (b) delivered as intended in the original design, by highly skilled clinicians.
- While a range of family-based services are provided in New Zealand, there is limited research on the effectiveness of these types of interventions in the New Zealand context.

- Research suggests that further investment in these services is likely to improve outcomes.
- Ideally any future investment would include funding for: (a) the roll out of evidence-based interventions and (b) the evaluation of such programmes, in consultation with programme providers.

### EVIDENCE BRIEF SUMMARY

Evidence rating:	Strong
Unit cost:	About \$10,000 per intervention
Effect size (number needed to treat):	About 5-10 teenagers need intervention (\$50,000-\$100,000) to prevent one from offending, on average
Total central government funding:	About \$4m
Unmet demand:	Moderate-high

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## DO FAMILY-BASED INTERVENTIONS FOR TEENAGERS REDUCE CRIME?

This evidence brief uses the generic term 'family-based interventions' to refer to:

(a) family-based programmes that attempt to strengthen parents' behaviour management and communication skills;

(b) approaches that aim to improve how the teenager, their family, peer group, school and/or community function (such as Multisystemic Therapy (MST)).

### International evidence

Seven systematic reviews<sup>i</sup> of interventions for youth offenders found that family-based interventions are moderately effective at reducing offending among adolescents.

Recent reviews assessing MST have found that it is effective at reducing offending among adolescents.<sup>ii</sup>

Ten studies of Functional Family Therapy (FFT) – a home-based intervention that addresses problem behaviours and the family context in which they occur – found that it is moderately successful in reducing reoffending.<sup>iii</sup>

Based on three studies, Lee et al.<sup>iv</sup> concluded that Treatment Foster Care Oregon<sup>1</sup> – an intensive therapeutic programme designed to provide youth with a positive experience of living in a family – effectively reduces youth offending.

Individual evaluations of other types of family-based interventions have been completed (see for example [www.crimesolutions.gov](http://www.crimesolutions.gov)).

### New Zealand Evidence

There is limited New Zealand research about the effectiveness of both family-based interventions and alternative youth-focussed types of programmes in reducing offending.

The Reducing Youth Offending Programme has been piloted in New Zealand. This programme is based on MST.

Grace et al.<sup>v</sup> evaluated the first phase of the Reducing Youth Offending Programme (April 2003-June 2006) and found that it was not effective at reducing crime. The findings from the evaluation of the first phase prompted changes to the programme. The modified programme was piloted in the second phase.<sup>2</sup> Grace et al. evaluated the second phase (September 2006-November 2007) and found that the programme was moderately successful in reducing re-offending.

In a study of MST in New Zealand, Curtis et al.<sup>vi</sup> found that fewer of the teenage participants offended after treatment and across the 12-month follow-up period.

A pilot study of FFT in New Zealand found that it is moderately effective in reducing conduct problems among adolescents.<sup>vii</sup>

### Other considerations

We do not know whether these interventions work best before or after any formal proceedings.

Multi-faceted interventions such as MST need to be considered for young people who present with multiple problems, such as mental health or substance abuse issues.

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<sup>1</sup> Previously known as Multidimensional Treatment Foster Care.

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<sup>2</sup> Different families participated in each phase of the programme, so the evaluation of phase 2 is not a longer term follow-up study of phase 1 participants.

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## WHAT MAKES FAMILY-BASED INTERVENTIONS FOR TEENAGERS EFFECTIVE?

### What factors increase success in reducing crime?

Most of the cited systematic reviews did not explore the conditions under which family-based interventions are more or less effective.

The main exceptions are Latimer and van der Stouwe et al.<sup>viii</sup> who found that programmes targeted at youths under the age of 15 tended to be more effective.

Van der Stouwe et al.<sup>ix</sup> suggest that MST might be more effective with teenagers aged 15 and over when the therapy focuses on factors related to peer relationships and school.

Lipsey's<sup>x</sup> comprehensive meta-analysis of interventions for juvenile offenders found that targeting high-risk individuals, and ensuring the intervention is implemented as intended (programme fidelity), increases effectiveness.

More specifically, Evans-Chase and Zhou's<sup>xi</sup> review found that delivering the MST model as intended increased its positive effect on self-reported delinquency and rearrest rates.

### How do family-based interventions for teenagers reduce crime?

Family-based interventions attempt to improve either the parents' behavioural management skills, the general communication dynamics between family members, or both. There is evidence that anti-social peers are more influential when parental strategies are ineffective.<sup>xii</sup>

More specifically, MST is based on the assumption that a young person's behaviour is the result of multiple factors (e.g. the youth's social and cognitive development, family relations, peer interactions and community

influences), and that each of these factors can be targeted to promote positive behavioural change.

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## WHAT OTHER BENEFITS DO FAMILY-BASED INTERVENTIONS FOR TEENAGERS HAVE?

Four systematic reviews examined the effectiveness of family interventions in reducing teenagers' drug use.

Vermeulen-Smit et al., Baldwin et al. and van der Stouwe et al.<sup>xiii</sup> found that these programmes are likely to be effective in reducing drug use.

However, when looking specifically at the effectiveness of FFT on reducing drug abuse among young people in treatment for non-opioid drug use, Filges et al.<sup>xiv</sup> concluded there was insufficient evidence to assess the effectiveness of this treatment in this context.

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## CURRENT INVESTMENT IN NEW ZEALAND

A range of family-based services is provided in New Zealand. Provision is largely decentralised and coverage is localised to particular geographical areas.

These services are typically provided by contracted organisations, including:

- Youth Horizons Trust
- Central Health Ltd.

There are eight MST teams in the country, seven of which are in the North Island.

FFT is provided by the Youth Horizons Trust in many centres across the country, with notable exceptions such as Christchurch.

The Youth Horizons Trust delivers Treatment Foster Care Oregon in Auckland and the Waikato.

A number of district health boards (DHB) are using family-based interventions, including the Hutt Valley, Waikato, Bay of Plenty and Waitemata DHBs.

Overall, there appears to be good scope to improve coverage nationally.

Any expansion would need to be considered in light of the Advisory Group on Conduct Problems' (AGCP)<sup>xv</sup> recommendation that programmes should be explicitly evaluated in relation to effectiveness for Māori adolescents, given that Māori youth are over-represented in offending statistics. The AGCP group highlights the need for western science and kaupapa Māori research methods to be combined in assessments of programme effectiveness.

Additional services would also need to be integrated with other forms of family-based wraparound support, particularly those, such as Whānau Ora, which focus on Māori families.

Costs vary depending on the programme and funder, but available information indicates these programmes cost approximately \$10,000 per family.

## EVIDENCE RATING AND RECOMMENDATIONS

Each Evidence Brief provides an evidence rating between Harmful and Strong.

Harmful	Robust evidence that intervention increases crime
Poor	Robust evidence that intervention tends to have no effect
Inconclusive	Conflicting evidence that intervention can reduce crime
Fair	Some evidence that intervention can reduce crime
Promising	Robust international <i>or</i> local evidence that intervention tends to reduce crime
Strong	Robust international <i>and</i> local evidence that intervention tends to reduce crime

According to the standard criteria for all Evidence Briefs<sup>3</sup>, the appropriate evidence rating for family-based interventions for teenagers is Strong.

According to the standard interpretation, this rating means that:

- there is robust international and local evidence that interventions tend to reduce crime
- the investment may well generate a return if implemented well
- could benefit from further evaluation to confirm interventions are delivering a positive return and to support fine-tuning of the intervention design.

Among the investments with a Strong rating, family-based interventions for teenagers is a good area for future investment because:

- international evidence suggests these kinds of programmes are moderately effective and there is the potential to reduce the number of

<sup>3</sup> Available at [www.justice.govt.nz/justice-sector/what-works-to-reduce-crime/](http://www.justice.govt.nz/justice-sector/what-works-to-reduce-crime/)

young people entering the criminal justice system

- there is potential to also deliver wider health, education and other benefits
- many areas of the country do not currently have access to these services
- there is currently a lack of evidence-based family therapy services in New Zealand.

However, it is vital to robustly evaluate these services in New Zealand because (a) of their high unit cost, (b) there are some gaps in the international evidence and (c) there is limited New Zealand research.

It is also important that strategies which optimise implementation fidelity (such as guidelines, training, supervision, monitoring) are funded adequately as international evidence shows that programmes implemented as intended are more likely to achieve their desired outcomes.

The decentralised provision of family-based interventions in New Zealand and the incomplete national coverage provide ideal conditions for randomised controlled trials or other similarly robust approaches to evaluation to be conducted, which could potentially lift the evidence rating for this investment class to Very Strong.

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## FIND OUT MORE

### Go to the website

[www.justice.govt.nz/justice-sector/what-works-to-reduce-crime/](http://www.justice.govt.nz/justice-sector/what-works-to-reduce-crime/)

### Email

[whatworks@justice.govt.nz](mailto:whatworks@justice.govt.nz)

### Recommended reading

Advisory Group on Conduct Problems (2013). *Conduct Problems: Adolescent Report*. Wellington: Ministry of Social Development.

Lipsey, M. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and Offenders*, 4.

Woolfenden, S., Williams, K. & Peat, J. (2009). Family and parenting interventions in children and adolescents with conduct disorder and delinquency aged 10-17. *The Cochrane Library*, 2009.

## SUMMARY OF EFFECT SIZES FROM META-ANALYSES

Treatment type	Meta-analysis	Outcome measure	Effect size	Number of estimates meta-analysis based on	Assuming 50% untreated recidivism		Assuming 20% untreated recidivism	
					Percentage point reduction in offending	Number needed to treat	Percentage point reduction in offending (to prevent one person from reoffending)	Number needed to treat (to prevent one person from reoffending)
Treatment Foster Care Oregon	Lee et al 2012	Crime	d=0.61*	3	0.25	4	0.12	8
Family Functional Therapy	Lee et al 2012	Crime	d=0.59*	8	0.24	4	0.12	8
Family/parenting interventions	Woolfenden et al 2009	Incarceration	RR=0.5*	2	0.23	4	0.09	11
Multisystemic Therapy	Curtis et al 2004	Number of arrests	d=0.55	6	0.23	4	0.12	9
Multisystemic Therapy	Curtis et al 2004	Days incarcerated	d=0.55	2	0.23	4	0.12	9
Multisystemic Therapy	Littell et al 2009	Arrest or conviction	OR=0.39	5	0.22	5	0.11	9
Multisystemic Therapy	Lee et al 2012	Crime	d=0.43*	11	0.19	5	0.10	10
Family/parenting interventions	Woolfenden et al 2009	Self-reported delinquency	d=0.41*	3	0.18	6	0.09	11
Multisystemic Therapy	Welsh and Farrington 2003	Delinquency/antisocial behaviour	d=0.414*	6	0.18	6	0.09	11
Family/parenting interventions	Woolfenden et al 2009	Re-arrest	RR=0.66*	5	0.17	6	0.07	15
Family-based treatment	Latimer 2001	Recidivism	Φ=0.15	35	0.13	7	0.07	14
Multisystemic Therapy	Littell et al 2009	Imprisonment	d=0.25	4	0.11	9	0.06	16
Multisystemic Therapy	Littell et al 2009	Self-reported delinquency	d=0.21	3	0.09	11	0.05	19
Variety of family therapies	Baldwin et al 2012	Delinquency/substance abuse	d=0.21*	11	0.09	11	0.05	19
Wraparound	Suter and Bruns 2009 <sup>xvi</sup>	Juvenile-justice-related outcomes	d=0.21	5	0.09	11	0.05	19
Multisystemic Therapy	Van der Stouwe et al 2014	Delinquency	d=0.201*	22	0.09	11	0.05	19
Family counselling	Lipsey 2009	Recidivism	Φ=0.065	29	0.06	17	0.04	29
Multisystemic Therapy	Curtis et al 2004	Self-reported delinquency	d=0.07	2	0.03	32	0.02	51
Home/community programmes	Welsh and Farrington 2003	Delinquency/antisocial behaviour	d=0.181*	8	0.03	34	0.02	55
Multi-modal approaches	Lipsey 2009	Recidivism	Φ=0.013	32	0.01	85	0.01	135
<b>Family interventions and adolescent drug use</b>								
Variety of family-based programmes	Vermeulen-Smit et al 2015	Starting to use marijuana	OR = 0.72	8	NA	NA	NA	NA

\* Statistically significant at a 95% threshold  
d=Cohen's d or variant (standardised mean difference)

RR=Relative risk  
Φ=phi coefficient (variant of correlation coefficient)

OR=Odds ratio

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