This is a **PREPRINT** of an article published in Addressing the causes of offending: What is the Evidence?
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Fergusson D. Prevention, Treatment and Management of Conduct Problems in Childhood and Adolescence, In: *Addressing the causes of offending: What is the Evidence*? (Ed) Gabrielle Maxwell. Institute of Policy Studies 2009;103-114

The Prevention, Treatment and Management of Conduct Problems in Childhood and Adolescence.

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INTRODUCTION AND BACKGROUND

Disruptive, aggressive antisocial and related problems are amongst the most common forms of behavioural disturbance in childhood (Lahey, Loeber et al. 1997; Loeber, Burke et al. 2000; Church 2003; Moffitt, Arseneault et al. 2008; Moffitt and Scott in press). The terminology for describing these problems varies between disciplines. In Psychiatry these problems are described as oppositional defiant disorder or conduct disorder whereas, within Education, terms such as antisocial behaviour or challenging behaviour are used. A working definition that unifies these perspectives is:

Childhood conduct problems include a spectrum of antisocial, aggressive, dishonest, delinquent, defiant and disruptive behaviours. These behaviours may vary from none to severe and may have the following consequences for the child and those around him/her: stress, distress and concern to adult care givers and authority figures; threats to the physical safety of the young people involved and their peers; disruption of home, school and other environments; and involvement of the criminal justice system.

Estimates suggest that within 5% to 10% of the child population displays these problems with sufficient severity to merit intervention with the majority (75% approx) of these children being male (Feehan, McGee et al. 1994; Horwood and Fergusson 1998; Church 2003; Fergusson, Poulton et al. 2004; Maughan, Rowe et al. 2004; Nock, Kazdin et al. 2007).

New Zealand based longitudinal research has demonstrated that early conduct problems are a precursor and predictor of a wide range of adverse adult outcomes. These include:

- Crime (Bardone, Moffitt et al. 1996; Fergusson, Horwood et al. 2005)
- Traffic Offences (Fergusson, Swain-Campbell et al. 2003)
- Substance abuse and Dependence (Bardone, Moffitt et al. 1996; Fergusson, Horwood et al. 2005)
- Mental Health Problems (Bardone, Moffitt et al. 1996; Kim-Cohen, Caspi et al. 2003; Fergusson, Horwood et al. 2005)

- Suicidal Behaviours (Fergusson, Horwood et al. 2005)
- Inter- Partner Violence (Bardone, Moffitt et al. 1996; Magdol, Moffitt et al. 1998; Fergusson, Boden et al. 2008)
- Physical Health (Bardone, Moffitt et al. 1998; Odgers, Caspi et al. 2007)
- Dental Health (Locker, Poulton et al. 2001)

There is (probably) no other commonly occurring childhood condition that has such far reaching consequences for long term health and development.

THE EVIDENCE FOR EFFECTIVE PREVENTION TREATMENT AND MANAGEMENT PROGRAMMES

Over the last two decades there has been a growing body of research based on randomised controlled trials (RCTs) that has identified a series of effective methods for preventing, treating and managing conduct problems in childhood and adolescence. A brief summary of this evidence is given below:

1) ***Prevention Methods**:* These methods focus on providing preschool children from "at risk" family backgrounds with interventions that reduce the likelihood that these children will develop significant problem behaviours. Two approaches have been developed.

The first approach is through *intensive home-visiting* with children born into at risk families. Typically, these programmes are delivered by a trained family support worker; begin at birth and may last for 3-5 years (Livingstone 1998; Daro and Harding 1999; Olds, Henderson et al. 1999; St Pierre and Layzer 1999; Wagner and Clayton 1999; Fraser, Armstrong et al. 2000; Duggan, McFarlane et al. 2004; Fergusson, Horwood et al. 2005; Connor, Carlson et al. 2006). There have been a number of home visiting models proposed (Livingstone 1998; Daro and Harding 1999; Olds, Henderson et al. 1999; St Pierre and Layzer 1999; Wagner and Clayton 1999; Fraser, Armstrong et al. 2000; Duggan, McFarlane et al. 2004; Fergusson, Horwood et al. 2005; Connor, Carlson et al.

2006) but the majority of these have failed to show benefits (Gomby, Culross et al. 1999; Fergusson, Grant et al. 2005; Fergusson, Horwood et al. 2005). There have been two exceptions to this trend. The first and most impressive is the Nurse Family Partnership developed by Olds and his associates (Olds 1992; Olds and Kitzman 1993; Olds, Kitzman et al. 1997). The second is the New Zealand Early Start programme (Fergusson, Horwood et al. 1998; Fergusson, Horwood et al. 2005). Both programmes share the common feature of being purpose built programmes delivered in a research setting rather than a service provision setting. For both programmes there is evidence from RCTs that they reduce the prevalence of childhood problem behaviours (Olds, Henderson et al. 1988; Olds, Robinson et al. 2002; Olds, Robinson et al. 2004; Fergusson, Grant et al. 2005; Fergusson, Grant et al. 2006).

The alternative approach has been through *centre based programmes* in which children from at risk families or neighbourhoods attend preschool facilities designed to promote healthy physical, social and educational development. Successful models include the Abercederian program (Ramey and Ramey 1998; Masse and Barnett 2002) and the Perry Preschool Programme (Schweinhart 2005).

2) Treatment and Management Programmes

While early prevention programmes provide an important step in minimising the development of conduct problems, these programmes need to be supplemented by treatment and management programmes aimed at treating and managing childhood conduct problems. There is now a range of well established treatment and management programmes (Church 2003; McCart, Priester et al. 2006; Hahn, Fuqua-Whitley et al. 2007; Scott 2008). These include:

i) *Parent Management Training:* These programmes are most suited for children under the age of 12 and all derive from the principles of a social learning model developed at the Oregon Social Learning Centre by Patterson and his colleagues (Patterson 1976; Dishion, Spracklen et al. 1996). These programmes include: Triple P (Sanders 1999; Sanders, Turner et al. 2002); Incredible Years (Webster-Stratton 1986; RAND Corporation 2006) and Parent

Management Training Oregon (Patterson 1976; Dishion, Spracklen et al. 1996). Reviews of these programmes suggest that they are effective in reducing childhood conduct problems by between 50-60% (Church 2003).

ii) *Teacher Management Training*: Parallel to the development of parent management training there have been a number of teacher management training packages developed for the management of conduct problems in the classroom. These programmes include a number of packaged classroom systems including: Programme for Academic Skills (PASS) (Greenwood, Hops et al. 1977; Greenwood, Hops et al. 1977); Contingencies for Learning Academic and Social Skills (CLASS) (Hops, Walker et al. 1978; Hops and Walker 1988), Reprogramming Environmental Contingencies for Effective Social Skills (RECESS) (Walker, Hops et al. 1981), and the Teacher version of the Incredible Years programme (Webster-Stratton 1986; RAND Corporation 2006). Single subject studies and randomised trials have suggested that these programmes can reduce childhood problems behaviours by up to 80% (Church 2003).

iii) *Classroom and School wide Interventions*: Teacher management programmes may be supplemented by classroom based programmes such as the Good Behaviour Game (Ialongo, Poduska et al. 2001) and School Wide Interventions (Wilson and Lipsey 2005; Hahn, Fuqua-Whitley et al. 2007; Hahn, Fuqua-Whitley et al. 2007). School Wide Interventions adopt a range of perspectives and have been found to be effective in reducing rates of violent or aggressive behaviours at all grades (Hahn, Fuqua-Whitley et al. 2007).

iv) *Cognitive Behavioural Therapies:* Parent management; teacher management, classroom and school programmes are founded in a social learning model that emphasises the role of reinforcement and behavioural contingencies as a means of changing childhood behaviours. Evidence suggests that these therapies are most effective with children under the age of 8 and tend to decline with increasing age of the 12 (Scott 2008). Therapies that are more suited to older children (12+) are those based around cognitive behavioural principles that teach young people and the caregivers cognitively based skills and strategies to minimise

the likelihood of aggressive antisocial behaviours . Programmes for which there is evidence of efficacy include Functional Family Therapy (Alexander and Parsons 1982; Alexander, Pugh et al. 2000) and Multi-systemic Therapy (Henggeler, Schoenwald et al. 1998; Henggeler, Schoenwald et al. 2002). In addition, individualised cognitive behavioural therapies have been found to be effective (Ghafoori, Tracz et al. 2004; Mash and Barkley 2006; McCart, Priester et al. 2006; McMahon, Wells et al. 2006).

v) *Treatment Foster Care*: In a number of cases, childhood conduct problems may be so severe that they require the removal of the young person from his or her home environment. It has been well established that traditional forms of residential or foster care have had limited benefits in the management of conduct problems and may be counter-productive (Church 2003; Hahn, Lowy et al. 2004). A promising alternative is provided by multidimensional treatment foster care (MTFC). This approach was devised by the Oregon Social Learning Centre (Church 2003; Hahn, Lowy et al. 2004). The intervention involves the placement of the young person in the care of specially trained and professionally supervised foster parents who provide a structured programme which combines behavioural and cognitive treatments (Hudson, Nutter et al. 1994). This approach has been evaluated in at least two RCTs and has been found to have moderate to good effects in reducing further crime (Church 2003; Hahn, Lowy et al. 2004).

A RECOMMENDED PORTFOLIO OF TREATMENT AND MANAGEMENT PROGRAMMES

The Table below synthesises the evidence of on treatment and management to set out a portfolio of recommended interventions for children and young people with significant conduct problems. The Table is based around three general principles. First, the Table recognises that effective interventions will vary with the age of the child. For young children, behaviourally based interventions are likely to be effective whereas older children may benefit from cognitive

behavioural approaches. Second, the Table recognises the need for a mix of different programmes to meet the diverse needs of children with conduct problems. One of the risks in this area is that certain programmes tend to be marketed aggressively by their providers leading to possible distortions in the purchase and uptake of programmes. The final point is that all programmes have been based on evidence from either: a) at least two well conducted randomised trials or b) multiple single subject studies.

Table 1: Recommended Portfolio of Interventions for the Treatment and Management of Conduct Problems.

	Age		
Intervention	3-7	8-12	13-17
Parent Management Training	✓	✓	–
Teacher Management Training	✓	✓	✓
Combined Parent/Teacher Programmes	✓	✓	–
Classroom-based Intervention	✓	✓	–
Cognitive Behaviour Therapy	–	✓	✓
Multi-modal Interventions			
Multisystemic Therapy	–	✓	✓
Functional Family Therapy	–	✓	✓
Treatment Foster Care	✓	✓	✓

PROGRAMME IMPLEMENTATION ISSUES

1) ***The Prevention Science Paradigm***

Given the growing literature base in this area it is now relatively easy to identify potentially effective interventions. The key issue is that of translating this body to a New Zealand context. It is proposed in this paper that the best model for implementing programmes on a population wide basis is provided by the Prevention Science Paradigm (Mrazek and Haggerty 1994; Olds, Sadler et al. 2007). The key elements of this approach may be summarised as follows:

a) Potentially effective interventions should be identified on the basis of meta–analysis and systematic reviews of evaluations using randomised controlled trials.
b) The first stage of implementation should be the conduct pilot studies in which the proposed intervention is studied to determine whether it is appropriate and can be delivered within a New Zealand context.
c) Successful implementation requires more than pilot studies and first stage pilot studies need to be followed by "wait list" randomised trials to determine whether the programme is as effective as it claimed to be in the original evaluation.
d) Following successful pilot study and initial RCTs, the programme then may be rolled out on a population wide basis with care being taken to monitor the programme to ensure that treatment effects are sustained as the intervention is taken to scale.

While these steps may appear simple and logical it is, in fact, difficult to find New Zealand programmes that have been developed in this way.

2) ***Treaty Issues***

It has been well documented that Maori are at increased risk of conduct problems and related conditions (Fergusson, Poulton et al. 2004; Ministry of Social Development 2008). In addition there have been increasing concerns expressed by Maori about the need for social policies regarding Maori to be placed with a Te Ao Maori framework that acknowledges the role of Maori culture, language and values in the development of policy (Ministry of Social Development 2008). These rights are underwritten by article 2 of the Treaty of Waitangi which, in effect, guarantees Maori control of their cultural and social destiny.

These considerations raise the complex issue of reconciling social policy based on Western scientific research with the need for New Zealand social policy to acknowledge the rights of Maori guaranteed by the Treaty of Waitangi. One approach to reconciling scientific and Te Ao Maori

perspectives, is to adopt a two part solution based on articles 2 and 3 of the Treaty of Waitangi.

Specifically, article 3 which gives Maori rights of citizenship, requires that Maori must have access to any generic social policies targeted at all New Zealanders. Article 3 thus imposes the requirement that generic policies should be designed in a way that meets the cultural and social needs of all New Zealanders including Maori. This article may be used to justify the development scientifically based and culturally appropriate programmes targeted at all New Zealanders, including Maori.

However, under article 2 of the Treaty, Maori also have a right to develop Te Ao Maori approaches based on Maori culture, language and traditions. This treaty based resolution thus permits the development of both main stream programmes based on Western science (under article 3) and Te Ao Maori programmes based on Maori tradition values and culture (under article 2). The focus of this paper is clearly upon the obligations implied by article 3 of the Treaty of Waitangi. However, this focus does not preclude or prevent the development of by Maori for Maori programmes of intervention (Ministry of Social Development 2008).

NEXT STEPS

The evidence reviewed in this paper provides an outline of a systematic approach to managing conduct problems in children and young persons. The major challenges facing New Zealand in implementing this agenda is that of setting an infra-structure to fund, design, implement and evaluate the various components of this approach. The full development of the agenda is likely to be lengthy and take a time frame of up to 20 years to implement. To begin this process it may useful to start with programmes for 3-7 year olds. There are two reasons for this choice. First, it is widely acknowledged that early intervention is likely to have greater benefit than later intervention (Moffitt 1993; Church 2003; Scott 2008; Moffitt and Scott in press). Second, the evidence on the efficacy of interventions suggests that interventions for 3-7 year olds have the best research base and evidence of efficacy (Church 2003; Scott 2008). For both of these reasons setting up well designed, well

evaluated and culturally appropriate programmes to meet the needs of 3-7 year olds with marked conduct difficulties should be seen as a matter of high priority for the new Government. As noted in the Introduction to this article the long run benefits of such policies include, but extend well beyond, the area of crime prevention.

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