Behaviour Management in Schools

EVIDENCE BRIEF

Managing problem behaviour in schools is very important from an educational perspective. There is also clear international evidence that behavioural interventions in schools can reduce offending and victimisation.

OVERVIEW

- Managing the behaviour of students is an important prerequisite to effective learning.

- Effective behaviour management can also have wider benefits because, alongside families, schools are one of the most important sources of socialisation for children and young people.

- There is clear international evidence that well-run schools help reduce offending and victimisation.

- The clearest evidence is for two types of behaviour management.

- One type focuses on improving the management of problem behaviour, either at a classroom or whole-of-school level. Schools in which students report that the school rules are clearly stated, fair and consistently enforced have lower rates of problem behaviour, including offending.

- The other type of effective intervention focuses on teaching children social, cognitive and emotional skills to help them better manage their behaviour and improve their self-control.

- Several evidence-based models for skills training are available. These include the Good Behaviour Game, Child Development Project, and Positive Behavioural Interventions and Support (PBIS).

- In New Zealand, the main behavioural programme is known as Positive Behaviour for Learning (PB4L – this is based on PBIS). There is scope to extend this programme to more schools, and doing so would likely create benefits for the Justice sector by reducing crime and victimisation.

- Schools can also host or be a referral point to several other evidence-based services for children and young people, particularly for those who have started offending.

EVIDENCE BRIEF SUMMARY

Evidence rating:	Promising
Unit cost:	Unknown
Effect size (number needed to treat):	Intervention covering 10-20 individuals to prevent one instance of general offending, on average
Current spend:	Unknown, because partly at discretion of local schools
Unmet demand:	Moderate, but being addressed by the Ministry of Education

DOES SCHOOL-BASED BEHAVIOUR MANAGEMENT REDUCE CRIME?

International evidence

There are many different types of school-based behaviour management that are either designed to reduce crime or that may reduce crime as a secondary outcome.

These diverse types can be grouped under two broad categories.[i] One category is intended to instruct or train students in order to change their behaviour, knowledge, skills, attitudes or beliefs.

The second category is designed to change the school or classroom environment to directly reinforce positive behaviour. For example, these interventions can focus on co-ordinating discipline strategies across the school, and re-organisation of grades or classes to provide targeted behavioural support to difficult students.

There is clear evidence that both types of activity reduce crime and achieve a broad range of other outcomes.

Training interventions

The first type of intervention focuses on teaching children or young people social or cognitive skills that can help them manage their own behaviour and interaction with others.

Several meta-analyses have found that training interventions in schools reduce aggression and/or delinquency. Meta-analyses have demonstrated the effectiveness of many subtypes of training, including:

- Cognitive Behavior Modification[ii]
- Social Skill interventions[iii]
- Self-control instruction using cognitive-behavioral and behavioural methods[iv]
- Social Information Processing interventions[v]

- Violence prevention programmes[vi]
- Training programmes generally.[vii]

However, generic counselling and social work approaches without a specific skill training component have not been found to be effective. One meta-analysis found that they may in fact lead to worse outcomes, although this was on the basis of only three studies.[viii]

In New Zealand, the Advisory Group on Conduct Problems recommended implementation of one example of this approach for 8-12 year olds, the Good Behaviour Game, as a way to increase students' self-control.[ix]

The size of the effect of this type of intervention on aggression and delinquency is summarised in the appendix. Many of the studies have focused on aggression generally, rather than crime specifically.

The main review study looking specifically at offending found an effect size on crime equivalent to reducing the incidence of crime activity among a group of students from 50% to 33%, or from 20% to 9%.[x]

Environmental interventions

The second type of intervention focuses on changing a school's environment, such as by establishing disciplinary mechanisms in a school that lead to clear and consistent management of problem behaviour by all teachers.

In New Zealand, the Advisory Group on Conduct Problems recommended further implementation of one example of this approach for 8-12 year olds, School Wide Behaviour Support.[xi]

Two meta-analyses have found this type of intervention reduces aggression and/or delinquency.[xii] See the appendix for details.

The main review that examined crime outcomes specifically found an effect size on crime equivalent to reducing the proportion of

schoolchildren who offend from 50% to 40%, or from 20% to 14%, depending on the underlying risk level of the students in question.[xiii]

Schools in which students report that the school rules are clearly stated, fair and consistently enforced have lower rates of problem behaviour.[xiv]

There is some evidence that various schooling policies can affect crime rates. For example, a policy of holding students back a year (retention) can increase offending, as can allowing truancy to go unchecked.[xv] There is also evidence that success in improving educational achievement reduces subsequent offending.[xvi]

New Zealand evidence

New Zealand schools are implementing an evidence-based programme of behavioural interventions called Positive Behaviour for Learning (PB4L). Aspects of this system have already been evaluated.

PB4L School-Wide

PB4L School-Wide is a framework that helps schools build a positive school-wide culture of shared values and behaviour expectations that support learning. A report by the New Zealand Council for Educational Research found that School-Wide has contributed to positive changes in school culture and a decrease in major behaviour incidents.[xvii]

Incredible Years Teacher

The Incredible Years Teacher programme is also delivered under PB4L. It provides teachers of 3-8 year olds with behaviour management strategies that help create a positive learning environment. A report by the New Zealand Council for Educational Research found that behaviour plans developed with and supported by Incredible Years Teacher, underpinned reported improvements in students' engagement in learning.[xviii]

WHAT MAKES SCHOOL-BASED BEHAVIOUR MANAGEMENT EFFECTIVE?

Different types of intervention attempt to activate different causal pathways.

For example, some social skills programmes focus on the social information processing model of behaviour. This model relies on the fact that aggressive children can have difficulty interpreting social cues. Aggressive children often misinterpret the intent of others as hostile in neutral or ambiguous social situations.[xix] The intervention seeks to improve children's ability to interpret social cues appropriately.

Behavioural programmes operate based on a procedure known as 'operant conditioning' – retraining children to associate desirable behaviour with positive consequences. Cognitive-behavioural programmes, in contrast, are based on social learning theory, which emphasises the importance of internal beliefs and attitudes in contributing to behaviour.

Whole-of-school programmes can operate via a deterrence mechanism, whereby teachers and peers adopt a code of behaviour that leads to a higher certainty of punishment for any given infraction.

Whole-of-school programmes can also operate via changing social norms and encouraging informal social control by peers. A 'whole school approach' has a wider focus on creating a positive climate that is inclusive and supports students to learn.

According to the 'Bullying Prevention and Response' guide, for example, whole-of-school interventions establish positive social values that are important to the school community. Effective whole-of-school approaches address different aspects of school life including:

- creating a climate where diversity is respected
- developing opportunities for students to:
  - build their knowledge and skills in relating to others within the curriculum and wider school activities, including the safe and responsible use of digital technology
  - practice those skills through activities such as role plays
- providing high levels of social support and opportunities for social civic learning
- offering professional learning opportunities for staff.

WHEN IS SCHOOL-BASED BEHAVIOUR MANAGEMENT MOST EFFECTIVE?

Skills training vs environmental intervention

Two meta-analysis have found environmental approaches focusing on improving school discipline tend to have a slightly higher effect than skills training approaches,[xx] although the table in the appendix shows that comparing effect sizes between different meta-analyses can lead to the opposite conclusion.

In any case, the two approaches are complementary and researchers have suggested implementing both approaches together.[xxi]

Instructional vs practical training

Among training interventions, the evidence is much stronger for approaches that involve practical, interactive learning techniques such as role-playing, rehearsal and so on – for example, getting children to practice responding to aggressive cues in a neutral way.[xxii]

Approaches that focus only on providing information to students using traditional techniques such as lectures, workbooks and class discussion are not effective at reducing problem behaviours.[xxiii]

Behavioural vs cognitive-behavioural approaches

Training programmes can be characterised as behavioural or cognitive-behavioural in approach.

Behavioural interventions focus directly on changing behaviours by rewarding desired behaviour and punishing undesired behaviour. In contrast, cognitive-behavioural interventions

also focus on coaching and rehearsing thinking skills related to behaviour. Programmes often combine behavioural and cognitive-behavioural elements together.

There is evidence that both types of approach can be effective, but not enough information to conclude whether behavioural or cognitive-behavioural approaches are more effective.[xxiv]

Programme design and targeting

Meta-analyses have found that skills training programmes are more effective if delivered frequently,[xxv] targeted at children from low socioeconomic areas,[xxvi] and targeted at students at higher risk for aggressive behaviour.[xxvii]

There is inconsistent evidence about whether programmes are more effective for younger (primary-aged) or older (secondary-aged) children.

Three of the meta-analyses found larger effects for older children, with the largest effects found among those in high school.[xxviii] However, two other meta-analysis found that programmes have larger effects for younger children.[xxix]

Universal vs targeted provision

School-based interventions can be provided either to a whole classroom (primary prevention), or to a smaller group of at-risk students (secondary/indicated prevention). There is evidence that both approaches are effective.

There is, however, inconsistent evidence about whether universal approaches are more effective,[xxx] targeted approaches are more effective,[xxxi] or if they both have the same effect.[xxxii]

Delivery by police officers

In some cases, skills training programmes are delivered in schools by uniformed police officers.

The National Policing Improvement Agency in the UK recently conducted a systematic search of the international evidence about policing interventions in schools. This review concluded there is insufficient robust evidence to support a full review of their effectiveness at reducing crime in general.[xxxiii]

However, the evidence summarised above suggests that police-delivered programmes will be effective where they follow the general principles of effective school-based prevention, particularly in adopting a practical, non-didactic approach with strong behavioural or cognitive-behavioural elements.

Māori students

In the PB4L programme, the Ministry of Education has adapted international evidence-based practices to suit the local context, with particular emphasis on Māori students.

An evaluation of the PB4L programme has reported that an important success factor in a PB4L programme in a particular school is having someone in the leadership team who can represent the interests of Māori students. The same evaluation reported that most PB4L coaches (80%) agreed or strongly agreed that PB4L school-wide approaches work well for Māori students.[xxxiv]

WHAT OTHER EFFECTS DOES SCHOOL-BASED BEHAVIOUR MANAGEMENT HAVE?

Academic performance

Few if any school-based behavioural interventions are designed primarily to reduce crime. Nearly all are designed to support the primary mission of schools – educational achievement.

There is clear international evidence that social skills training improves academic performance.[xxxv]

Bullying

There is a high degree of overlap between programmes designed to reduce problem behaviour generally and those designed to reduce bullying specifically. There is evidence that anti-bullying programmes can reduce bullying.[xxxvi]

Bullies and victims of bullying are more likely to become offenders later in life, so it may well be that reducing bullying will reduce later offending.[xxxvii] However, this proposition does not appear to have been tested directly.

For more information about what schools can do to prevent bullying, see the bullying-free NZ website. On this website there is an evidence-based guide developed by the Bullying Prevention Advisory Group.

Truancy

There is also overlap between programmes designed to reduce problem behaviour generally and those designed to reduce truancy specifically. There is evidence that behavioural interventions can reduce truancy and improve school attendance.[xxxviii] This may indirectly reduce offending and victimisation because truancy is associated with crime.[xxxix]

Social and emotional skills and general behaviour

There is clear international evidence that social skills training improves social and emotional skills, general behaviour and attitudes.[xl]

Mental health and substance use

There is clear international evidence that social skills training improves mental health, reduces depressive symptoms and reduces drug use.[xli]

CURRENT INVESTMENT IN NEW ZEALAND

There are two main types of school-based behaviour management in New Zealand. Some services are provided by the education sector, others are provided by police.

Education services

PB4L is delivered by the Ministry of Education in partnership with a range of organisations and groups, including Resource Teachers: Learning and Behaviour (RTLBs), non-government organisations, and universities.

PB4L has been adopted by many schools, but there is still scope to expand to further schools – particularly secondary schools.

PB4L is intended to complement individually focused services where schools are either to refer to - the approximate 900 Resource Teachers: Learning and Behaviour (RTLB); Ministry of Education Specialist behaviour service (about 150 FTE practitioners, 3800 students per year), or the Ministry of Education Intensive Wraparound Service (the 330 students with the most challenging behaviour).

The Ministry specialist services are generally provided by psychologists and Special Education Advisors with a practice framework based on functional behavioural analysis. The students provided services are both those with challenging behaviour associated with conduct difficulties and those with behavioural difficulties associated with neuro-developmental or other impairments. The practice model is based on meta-analyses of what is effective.[xlii]

Police services

Police have a well-developed strategy for partnering with schools, described in detail at their schools portal

(www.police.govt.nz/advice/personal-and-community-advice/school-portal).

The shared goals, principles and values of New Zealand Police in partnership with schools is to ensure all New Zealand children and young people live and learn free from harm from crime and crashes.

Several types of police officer are closely involved with schools. For example:

- School Community Officers are experienced uniformed police officers who specialise in supporting schools and their communities.

- Lead Police Contacts can be any sworn police officer who is specifically assigned to that school, with the aim of sharing information and building a relationship with a school to support planning to address jointly identified goals.

- Youth Aid officers assist schools with individual young people under 17 who offend, or are at risk of offending, or who may be in need of care and protection.

The Police-school operating model provides for a graduated response. Police:

- have a relationship and share information with *all* schools

- support crime and road safety programmes in *most* schools

- train and monitor school traffic safety teams in *many* schools

- provide school-wide interventions in *few* schools.

Whilst Police historically delivered programmes in partnership with teachers, over the last few years there has been a change to schools owning their own programmes, and Police supporting them. This may still mean some Police delivery, but also much more emphasis on other forms of support such as parent and staff meetings, assistance with policy, looking at ethos/environment, community consultation and

collaboration etc. There is also an emphasis on providing opportunities for student-led action.

Police have turned their former programmes into a range of online resources, provided on the school Portal, which schools can copy, edit and merge to construct their own unique programmes.

At a local level, Police are often involved in the PB4L programme with particular schools.

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 *or* local evidence that intervention tends to reduce crime
Strong	Robust international *and* local evidence that intervention tends to reduce crime

According to the standard criteria for all evidence briefs[1], the appropriate evidence rating for school-based behaviour management is Promising. This rating excludes generic counselling and social work approaches, which do not enjoy the same support in the evidence.

According to our standard interpretation, this means that:

- there is robust international or local evidence that interventions tend to reduce crime
- interventions may well reduce crime if implemented well; and
- further evaluation is desirable to confirm interventions are reducing crime and to support the fine-tuning of its design.

Evidence-based strategies to manage problem behaviour are being implemented in NZ schools and show early signs of success. Further evaluation to examine the impact of PB4L on crime outcomes could improve the evidence

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[1] Available at www.justice.govt.nz/justice-sector/what-works-to-reduce-crime/

rating for behaviour management in schools to Strong.

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FIND OUT MORE

Go to the website

www.justice.govt.nz/justice-sector/what-works-to-reduce-crime/

Email

whatworks@justice.govt.nz

Recommended reading

Barnes, T., Smith, S. & Miller, M. (2014). School-based cognitive-behavioural interventions in the treatment of aggression in the United States: A meta-analysis. *Aggression and Violent Behavior*, 19(4).

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[ii] Robinson et al 1999, Lavenberg 2007, Barnes et al 2014
[iii] Quinn et al 1999, Losel and Beelmann 2007
[iv] Wilson et al 2001, Gottfredson et al 2002
[v] Wilson and Lipsey 2006a,b
[vi] Derzon 2006, Mytton et al 2009, although see Park-Higgerson et al 2008
[vii] Wilson and Lipsey 2007
[viii] Gottfredson et al 2002
[ix] AGCP 2011
[x] Derzon 2006
[xi] AGCP 2011
[xii] Wilson et al 2001, Gottfredson et al 2002
[xiii] Gottfredson et al 2002
[xiv] Cook et al 2010
[xv] Cook et al 2010
[xvi] Najaka et al 2001
[xvii] Boyd & Felgate 2015
[xviii] Wylie & Felgate 2015
[xix] Wilson and Lipsey 2006a
[xx] Wilson et al 2001, Gottfredson et al 2002
[xxi] Wilson et al 2001
[xxii] Gottfredson et al 2002
[xxiii] Gottfredson et al 2002
[xxiv] Gottfredson et al 2002, Wilson et al 2007, Losel and Beelmann 2007
[xxv] Lipsey and Wilson 2006a, Losel and Beelmann 2007
[xxvi] Lipsey and Wilson 2006a, Wilson et al 2007
[xxvii] Wilson et al 2007
[xxviii] Wilson et al 2001, Garrard and Lipsey 2007, Losel and Beelmann 2007
[xxix] Wilson and Lipsey 2005, Wilson and Lipsey 2007
[xxx] Ang and Hughes 2001, Gottfredson et al 2002, Barnes et al 2014
[xxxi] Wilson et al 2001, Wilson and Lipsey 2005, Losel and Beelmann 2007
[xxxii] Wilson and Lipsey 2006a, 2006b
[xxxiii] Petrosino et al 2011, see also Na and Gottfreson 2011
[xxxiv] Boyd and Felgate 2015
[xxxv] Payton et al 2008, Durlak et al 2011
[xxxvi] Ferguson et al 2007, Vreeman and Carroll 2007, Ttofi et al 2008, Farrington and Ttofi 2009, but also see Smith et al 2004 and Merrell et al 2008
[xxxvii] Farrington et al 2012
[xxxviii] Wilson et al 2001, Klima et al 2009, Wilson et al 2011, Maynard et al 2012
[xxxix] Cook et al 2010
[xl] Wilson et al 2001, Gansle 2005, Derzon 2006, Garrard and Lipsey 2007, Payton et al 2008, Durlak et al 2011, Bowman-Perrot et al 2016
[xli] Durlak and Wells 1997, Tobler et al 2000, Wilson et al 2001, Greenberg et al 2001, Soole et al 2005, Horowitz and Garber 2006, Faggiano et al 2008, Durlak et al 2011
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SUMMARY OF EFFECT SIZES FROM META-ANALYSES

Intervention type	Meta-analysis[2]	Outcome	Reported average effect size	Number of estimates meta-analysis based on	Percentage point reduction in offending/other outcome	Number needed to treat
Violence prevention	Derzon 2006	Crime	d=0.442*	11	0.10	10
School/discipline management interventions	Gottfredson et al 2002	Crime	d=0.27*	5	0.07	15
Reorganisation of grades or classes	Gottfredson et al 2002	Crime	d=0.24*	2	0.06	16
Classroom or instructional management	Gottfredson et al 2002	Crime	d=0.18*	5	0.05	21
Social skills training	Losel and Beelmann 2007	Crime	d=0.18*	11	0.05	21
Violence prevention	Derzon 2006	Crime (violence)	d=0.162*	5	0.04	23
Violence prevention	Alford and Derzon 2011	Crime	d=0.08(NS)	6	0.02	45
Self-control or social competency instruction using CBT or behavioural instructional methods	Gottfredson et al 2002	Crime	d=0.08(NS)	8	0.02	45
Self-control or social competency instruction without CBT or behavioural instructional methods	Gottfredson et al 2002	Crime	d=0.02(NS)	12	0.01	112
Cognitive-behavioural, behavioural modelling or behaviour modification	Gottfredson et al 2002	Crime	d=-0.01(NS)	2	0.00	-347 (harm-causing)
Counselling, social work and other therapeutic interventions	Gottfredson et al 2002	Crime	d=-0.37*	3	-0.09	-12 (harm-causing
School-based cognitive behavioural interventions	Robinson et al 1999	Aggressive behaviour	d=0.64(NS)	16	0.13	8
Violence prevention programmes	Mytton et al 2009	Aggressive behaviour	d=0.41*	34	0.09	11
School-based Cognitive Behavioural Interventions	Barnes et al 2014	Aggressive behaviour	d=0.23*	65	0.06	17
Targeted social information processing interventions	Wilson and Lipsey 2006b	Aggressive behaviour	d=0.26*	47	0.06	15

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[2] As there is a high degree of overlap between the Wilson et al 2001 and Gottfredson et al 2002 meta-analyses, only the latter results are shown

Intervention type	Meta-analysis[2]	Outcome	Reported average effect size	Number of estimates meta-analysis based on	Percentage point reduction in offending/other outcome	Number needed to treat
Anti-aggression/disruptive behaviour programmes	Wilson and Lipsey 2007	Aggressive behaviour	d=0.21*	77	0.05	19
Universal social information processing interventions	Wilson and Lipsey 2006a	Aggressive behaviour	d=0.21*	73	0.05	19
Aggressive behaviour	Park-Higgerson et al 2008	Aggressive behaviour	d=0.15*	26	0.04	25
Social Skills training	Quinn et al 1999	Aggressive behaviour	d=0.129(NR)	20	0.03	29

* Statistically significant at a 95% threshold

NS=Not significant at a 95% threshold

NR=Significance not reported

d= Cohen's d or equivalent (standardised mean difference)

OR=Odds ratio

ln(OR)=log odds ratio

r=Pearson correlation coefficient

Φ=phi coefficient (variant of correlation coefficient)