

# Trends & issues

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**Foreword** | *The idea has been gathering momentum for 50 years or more that institutions of care such as families or schools are more important in preventing crime than institutions of regulation such as the police. However, there are big gaps in our knowledge about how well civil-society initiatives work, including the effectiveness of family-support services that are often available in socially disadvantaged communities. This paper addresses this knowledge gap through an analysis of data from the child longitudinal database constructed through the Pathways to Prevention Project, a 10 year developmental crime-prevention initiative that operated until 2011 as a partnership between Mission Australia, Education Queensland and Griffith University.*

*A matched groups design and multilevel modelling is used to show that relatively low levels of family support were strongly associated with improvements in teacher-rated classroom behaviour, especially for children of parents who initially reported low levels of parenting efficacy. Low-intensity family support also improved children's social relationships and capacity for self-regulation. These results underline the potential of family support in disadvantaged areas to prevent youth offending in an economic manner.*

Adam Tomison  
Director

## Preventing the onset of youth offending: The impact of the Pathways to Prevention Project on child behaviour and wellbeing

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Across the world, children and young people living in economically deprived areas become entangled in the child protection or juvenile justice systems at much higher rates than their counterparts in more affluent communities (Allard, Chrzanowski & Stewart 2012; Shonkoff & Phillips 2000). Indeed, crime and other social and health problems are increasingly geographically concentrated (ASIB 2011; Vinson 2007).

Geographical social exclusion is a product of economic and social change that manifests in the daily lives of children and parents as a struggle to bridge the gap between what it takes to meet basic human needs like a safe and nurturing environment for children, and the financial, social and emotional resources that families are actually able to command. In these areas *the developmental system*—the web of institutions, relationships and primary care settings that shape and are shaped by children, young people and parents—simply does not work very well (Lerner & Overton 2008). Bridging the significant gap between needs and resources to reduce youth offending, or more generally to improve children's lives, necessitates a focus on the whole developmental system, on institutions and social arrangements, not just on the deficiencies of individuals (Homel 2005).

This paper reports some results from one such attempt to strengthen the developmental system in a disadvantaged area—the *Pathways to Prevention Project*. Specifically, the paper addresses the question of whether a holistic form of family support, similar in many respects to services regularly delivered in communities across Australia, can improve child wellbeing and behaviour, potentially reducing the likelihood of involvement in youth offending.



These results add to those in previous publications (eg Branch, Homel & Freiberg 2012; Elias et al. 2006; Freiberg et al. 2005; Freiberg, Homel & Lamb 2007; Homel et al. 2006a, 2006b).

## Family support and its benefits for children

Family support services are among the most common ways that local caring institutions attempt to reinforce the primary care activities of families under pressure. These services are designed to strengthen family relationships and healthy child development through the provision of information, and emotional and instrumental support. Family support incorporates a wide range of service categories that can include counselling and mediation, education and skills development, crisis care and material relief, home-visiting and practical in-home assistance, advocacy, referral to facilitate access to specialised professional services, parent groups, playgroups and in some cases school-based programs like after-school care or breakfast clubs. The work of family support agencies, therefore, can encompass intensive programs tailored to individual family needs, as well as more generic forms. These services are, of course, additional to universal health, social security, preschool and school services, and nearly all aim in one way or another to compensate for deficiencies in these services and to 'open doors' to advocate on behalf of children and parents and to improve aspects of local conditions that teachers and community workers know from direct experience are inimical to positive child development.

Given how often they are used, it is surprising that little is known about the effects of generic family support on children or their carers. Most of the scientific literature reports the impact of specially designed and carefully controlled programs in which family support is one component, often in a very specific and 'programmed' form, such as parent training or family skills development. Meta-analyses of these studies do provide strong evidence of benefits into the adolescent years (Manning, Homel & Smith 2010), but the evidence for effects on adult

criminality remain quite unclear, especially for approaches for which family support is a significant component (Dekovic et al. 2011).

The very limited literature on the effects of comprehensive community-based family support services, as opposed to the carefully designed randomised controlled trials more commonly reported in the literature, suggests that only a minority have any measurable effects on parents or children, with almost no evidence for effects beyond five years (Layzar et al. 2001). Unfortunately, it is extremely difficult to identify points of weakness in these services and make recommendations for reform, since the vast bulk of what community agencies and schools routinely do remains, especially from a preventive perspective, unexamined, unmeasured and unevaluated.

Putting the problem in a nutshell—despite an important body of 'practice wisdom' (Scerra 2010), from a scientific perspective that relies on quantitative measurement, meta-evaluations, or at least a few well-designed quasi-experiments, the effects of the commonly delivered forms of family support are largely unknown. This is especially the case for long-term effects on children, beyond five years. One consequence of this unfortunate lacuna in the literature is that nobody knows the crime prevention impact of the most common form of early prevention in Australian disadvantaged communities, family support.

## The Pathways to Prevention Project: Developmental prevention from the ground up

Decades of research have documented the link between socioeconomic advantage and child wellbeing. Stressful, chaotic and conflictual home and neighbourhood environments have negative consequences for children's cognitive, social, emotional and behavioural development (Obradovic et al. 2012). Much research suggests that poverty and adversity, including child abuse, are linked to antisocial behaviour, educational underachievement and impaired social-emotional development through such processes as poor parenting

practices (Dearing, McCartney & Taylor 2006), school disengagement (Klika, Herrenkohl & Lee 2012), neighbourhood socioeconomic context (Wikström & Loeber 2000) and antisocial peers (Hemphill et al. 2009). Offending rates are higher in disadvantaged communities both because they are characterised by these kinds of criminogenic conditions and because system responses (like school suspensions) often have the effect of intensifying surveillance and control, exacerbating crime problems by increasing social exclusion (Homel, Lincoln & Herd 1999). The goal of *developmental or early prevention* is to break the cycle of offending and iatrogenic system responses by mobilising institutions of care such as families, preschools, schools and community agencies to utilise the best evidence to head off crime or other problems before they emerge or become entrenched (Homel 2005).

The Pathways to Prevention Project operated in a highly disadvantaged area of Brisbane between 2002 and 2011 as a research-practice partnership involving families, seven local primary schools and national community agency Mission Australia. The Pathways area had a youth crime rate in the late 1990s more than eight times higher than the Brisbane average (Homel et al. 2006a).

The Pathways Project was designed to address the gap in knowledge about how to make commonly used family support and child services more effective in the short and long term, and more generally how to make the developmental system more responsive to the needs of disadvantaged children (Freiberg et al. 2005; Freiberg, Homel & Branch 2010). Influential in its early design was evidence emerging from longitudinal research pointing particularly to *low achievement, poor parental child-rearing behaviour, child impulsivity and poverty* as critical risk factors that should be addressed through multimodal approaches involving children, schools, families and the community (Farrington 2003). In developmental system terms, these risk factors highlight the frequently fractured relations between schools and families in socially disadvantaged areas, and

the corrosive effects of poverty and social exclusion on the capacity of parents and carers to parent effectively (Freiberg, Homel & Lamb 2007). Bluntly put, families are stressed and children are damaged because the developmental system is broken.

The Mission Australia team invested much in the building of trust through community relationships, and constructed and evaluated a holistic suite of program activities that were available to all families on a completely voluntary basis. These activities, which were often situated in schools and involved teachers, were based on community-generated data on needs, maximised engagement with the most hard to reach families, employed a mixture of professional staff and community workers without formal qualifications who had a high degree of credibility with their ethnic communities (First Nations, Pacific Islands or Vietnamese) and were tailored to the needs of each child or family by being strength-based and highly flexible in terms of type of service, duration and intensity. With the exception of programs delivered by specialist staff directly to children attending preschool in Phase 1 of the project (2002–03), decisions about what programs to implement and the manner of implementation were not made by researchers but by the Mission Australia Service Manager and by school principals; although usually after extended discussion with researchers about goals and the research evidence.

Thus, the Project incorporated a range of program activities, from facilitated playgroups to intensive family support, that represented a broad cross-section of services typically found in socially disadvantaged communities in Australia. The programs were, however, perhaps more than usually ‘research influenced.’

The Pathways Project (or Service, as it was termed by the Mission Australia team) was very successful in reaching out to families, especially those with a high level of need. Between 25 percent and 30 percent of all families with children enrolled at one of the seven primary schools participated in the service in any given year, with a total of 1,077 distinct families participating between

January 2002 and 30 June 2011. A total of 1,467 children from these families (30% of all enrolled children) participated over the 10 years (nearly always with a parent) — 16 percent First Nations, 26 percent Vietnamese, 15 percent Pacific Islanders, 16 percent other ethnicities and 27 percent ‘Anglo-Celtic’ Australian. The mean number of contacts per family was 61; the mean period of total involvement was 76 weeks and on average, 3.5 service types were accessed, most commonly carer/individual support, advocacy and playgroups. These high levels of involvement, often over many months or years, underline both the extent of need in the area and the success of the Pathways team in building trust and offering resources that families really valued.

Previous analyses showed that the combination of family support and child involvement in enriched preschool programs improved behaviour by the end of preschool (Homel et al. 2006a, 2006b). However, family support on its own, without the preschool component, also had large benefits, as did participation in the preschool program on its own. In this paper, we begin with this finding and focus on the effects of family support *during the primary school years*. One reason for this focus is the fact (described in more detail later in this paper) that many of the best-behaved children moved to other schools after preschool and did not participate in testing or the survey in Grade 7. Thus, the pool of children remaining in the participating schools at Grade 1 represented a more challenging group for the Pathways service than the original preschool cohort.

The key research question therefore is:

What effect did participation in any form of Pathways family support between Grade 1 (age 5) and Grade 7 (age 12) have on child behaviour and wellbeing at Grade 7?

A related question is:

What levels of participation were related to the greatest improvements in child outcomes?

Previous analyses have also shown that parent efficacy was often improved by participation in Pathways activities (Freiberg,

Homel & Branch 2014; Freiberg, Homel & Lamb 2007). These analyses used the Parent Empowerment and Efficacy Measure (PEEM) that was developed specifically for the project. Consistent with patterns of service usage, parents with a low sense of efficacy tended to benefit most from family support. Consequently, we were interested in exploring whether a parent’s ‘initial’ PEEM score (the earliest score we could locate in the database) could moderate the effects of Pathways on children’s behaviour or wellbeing. Specifically, the following question was addressed:

Do the children of parents with low efficacy scores improve more in behaviour or wellbeing than the children of higher efficacy parents, for a given level of Pathways involvement?

## Measures and analysis strategies: The Pathways child longitudinal database

The Pathways database is a repository of data constructed around 4,858 unique children; each assigned their Education Department Identification Code. These children all attended one of the seven participating primary schools in the years 2002–11. Data for each child were linked by a Family Code to participation and outcomes data for their parents or carers (if they used the Pathways Service) and to data on their siblings, if available. Data sets that contributed to the database included:

- Queensland Department of Education central records (eg National Assessment Program—Literacy and Numeracy (NAPLAN) scores);
- teacher child ratings (eg classroom behaviour);
- school achievement tests and records (including suspensions);
- surveys of parents (including PEEM); researcher-collected child test and survey scores (eg measures of child wellbeing from *Clowning Around*—an interactive computer game); and
- information from the Mission Australia Pathways participation database.

The database therefore does not have a

traditional structure based on a commencing cohort that was followed up regularly with high retention rates. There are gaps and missing values at certain times for some variables, depending on the timing of data collections, fluctuations in funding, the availability of children or parents for tests or surveys and the completeness or accuracy of administrative records. For 353 of the 609 children who were in the 2002–03 preschool cohort, almost continuous annual data are available up to the transition to high school. For the majority of children, a range of variables are recorded annually (or more often) or have some measures repeated over time, with the most complete longitudinal data being available for classroom behaviour, suspensions, attendance, achievement tests (NAPLAN or equivalent) and (from 2008) the dimensions of child wellbeing from *Clowning Around*.

### Key measures

*Clowning Around* is an interactive computer game developed for the Pathways Project that children play individually (but simultaneously in class groups) that yields scores on 55 items. These items were designed to measure:

- educational wellbeing (attachment to school);
- emotional wellbeing (self-esteem, positive identity, sense of wellbeing and positive outlook);
- social wellbeing (quality of interpersonal relationships, responsible decision making, and problem solving and self-regulation); and
- protective factors (reliable supervision, attachment to caring adults, sense of safety, opportunities for participation in community life).

The psychometric properties of the scale have been assessed using a Brisbane

sample of 3,461 children aged five to 13 years attending state or private primary schools in low, medium and high socioeconomic bands (as measured by the Australian Bureau of Statistics' Socio-Economic Index for Areas). Principal factor analyses identified a clear general wellbeing factor as well as three correlated sub-factors:

- enjoys supportive positive social relationships;
- attachment to school (school as a source of positive affect); and
- capacity to self-regulate (deal with negative emotions).

Internal and test-retest reliabilities of the general factor and sub-factors were all high, and tests of convergent and concurrent validity were satisfactory (Freiberg, Homel & Branch forthcoming).

**Figure 1** Classroom behaviour (mean RBRI) – Preschool to Grade 7



## The Rowe Behaviour Rating Inventory (RBRI)

The RBRI is a validated teacher checklist used to assess the level of children's difficult behaviour (Rowe & Rowe 1995). The 12 item version was completed each year by each child's class teacher.

PEEM is a new self-report measure of:

- parent confidence to handle the tasks of parenthood; and
- parent connectedness to social and formal support networks.

The scale was administered on entry to the Pathways Service, repeated after six months participation and has also been used with many non-Pathways parents with children at one of the participating schools. PEEM has been validated using a sample of 866 Brisbane parents of primary aged children from all socioeconomic groups (Freiberg, Homel & Branch 2014).

*Child report of adversity* was derived from a survey in Grade 7 of the children who were in preschool in 2002 or 2003, the first two years of the Project. The question was 'Up to the age you are now, how many bad things have happened in your life?' with responses *none, one, two or three, or more than three*.

*Cultural/ linguistic background* was categorised as—First Nations (Aboriginal or Torres Strait Islander), Anglo-Celtic, Pacific Islander, Vietnamese, Other.

*Participation in the Pathways Service:* Families and children 3–12 years participated in a range of Pathways activities with contact initiated at any age. Dimensions of participation that can be derived from contact records include:

- child's age at first family contact;
- type of involvement (eg play therapy, counselling, playgroups);
- number and types of contacts;
- duration, with start-stop-start patterns able to be identified; and

- the order in which the services were accessed.

In this paper, a simple measure is employed based on *the number of contacts*, excluding child recreational activities and playgroup involvement by the carer for the benefit of younger siblings when the 'target child' was older than Grade 1. Contact categories varied but were mostly *no Pathways contact, light* (1–5), *moderate* (6–22) and *high* (23+).

## Analysis using matched pairs

Because involvement by carers in the Pathways Service was voluntary and motivated by need, Pathways children naturally tended to score worse on most measures compared with non-Pathways children from the same school, grade and class. Evaluation of the effects of the service on children therefore necessitates the careful selection of matched control groups from the database records of non-Pathways children.

For this paper, the matching process aimed to create a control group of children whose carers did not receive any form of Pathways family support between the start of preschool and Grade 7, and who were equivalent at the beginning of preschool in their RBRI scores with a sample of children whose carers did receive some form of Pathways support between starting preschool and Grade 7 (RBRI scores were selected for matching because *Clowning Around* was only fully implemented in 2008.) A total of 280 children were identified who had attended one of the participating schools since preschool, had participated in the Grade 7 child survey and had fairly complete RBRI scores between preschool and Grade 7. From this sample, 123 'family support children' were matched one-on-one ('precision matched') with 123 'non-family support children' on:

- their RBRI score at the beginning of preschool;
- gender;
- cultural background; and
- adversity score.

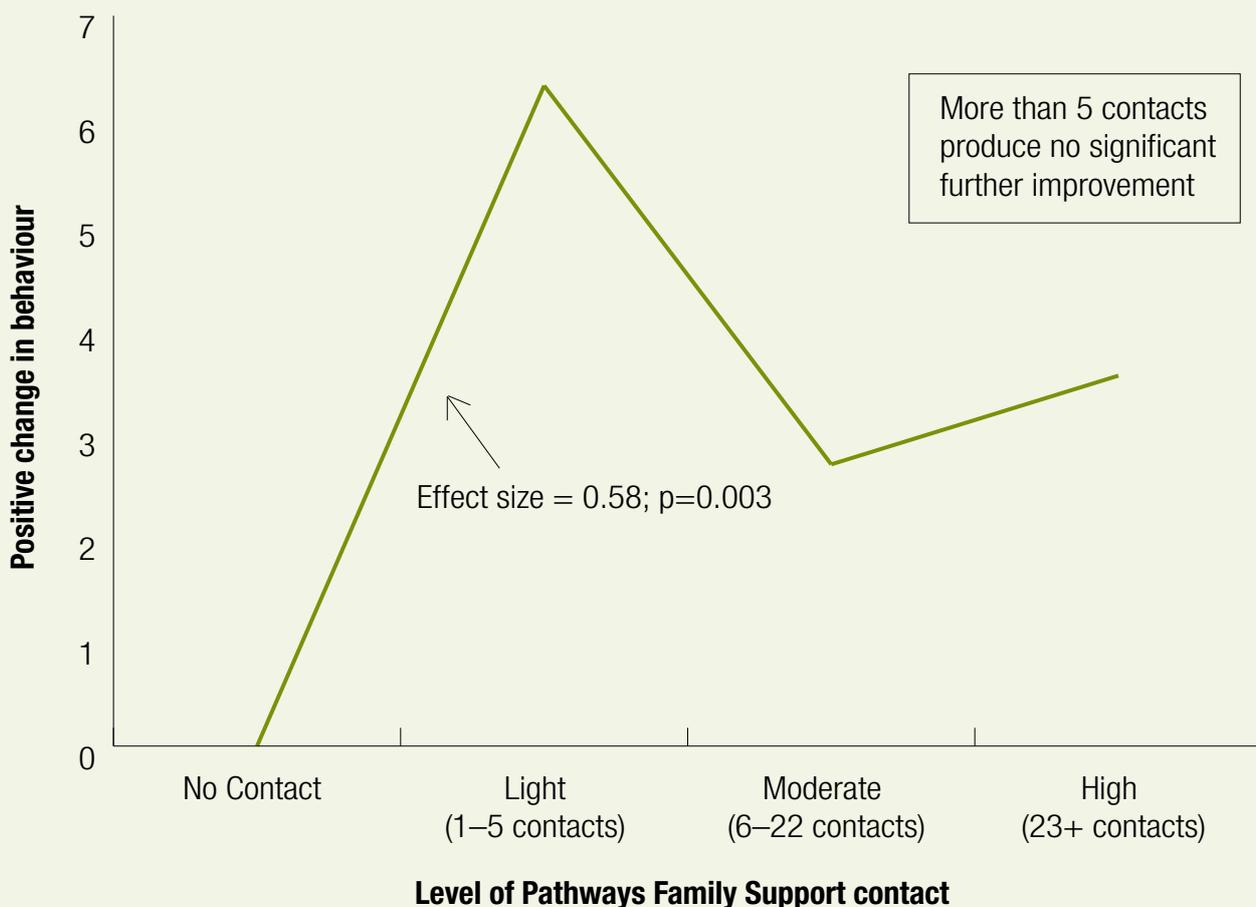
## Statistical modelling

The general approach was maximum likelihood estimation of univariate or multivariate multilevel regression models, with matched pairs as a Level 2 random effects factor. Independent variables included level of Pathways participation and the child's gender, cultural background and level of adversity. The dependent variables were the changes in RBRI scores between Grades 1 and 7, and changes in *Clowning Around* scores (general factor and sub-factors) between Grade 5 and 7, or equivalent analyses using initial score as a covariate. Analyses were conducted using Stata SE12, drawing on the MLWin module.

## Results

Because of matching, the two groups—family support and controls—did not differ significantly on their gender composition, cultural background, or level of reported adversity. Nor did they differ significantly on the proportion (about two-thirds) who had been involved in one of the preschool enrichment programs. Girls comprised slightly more than half (54.5%) of the total sample of 246; one in 20 (4.9%) were First Nations (fewer than in the full database), one in five were Pacific Islanders (20.3%) and nearly one-third (30.5%) were Vietnamese. Adversity was fairly evenly distributed, with 28.5 percent reporting 'no bad things in their life so far' and 20.9 percent reporting 'more than three bad things'. As expected, wellbeing as measured by *Clowning Around* declined as reported adverse events increased ( $r=-0.45$ ), with an especially sharp drop among those children reporting more than three bad things in their lives.

**Figure 2** Improvement in behaviour (Grade 1 to Grade 7) by level of Pathways contact relative to an effect of 0 for no contact (control) group



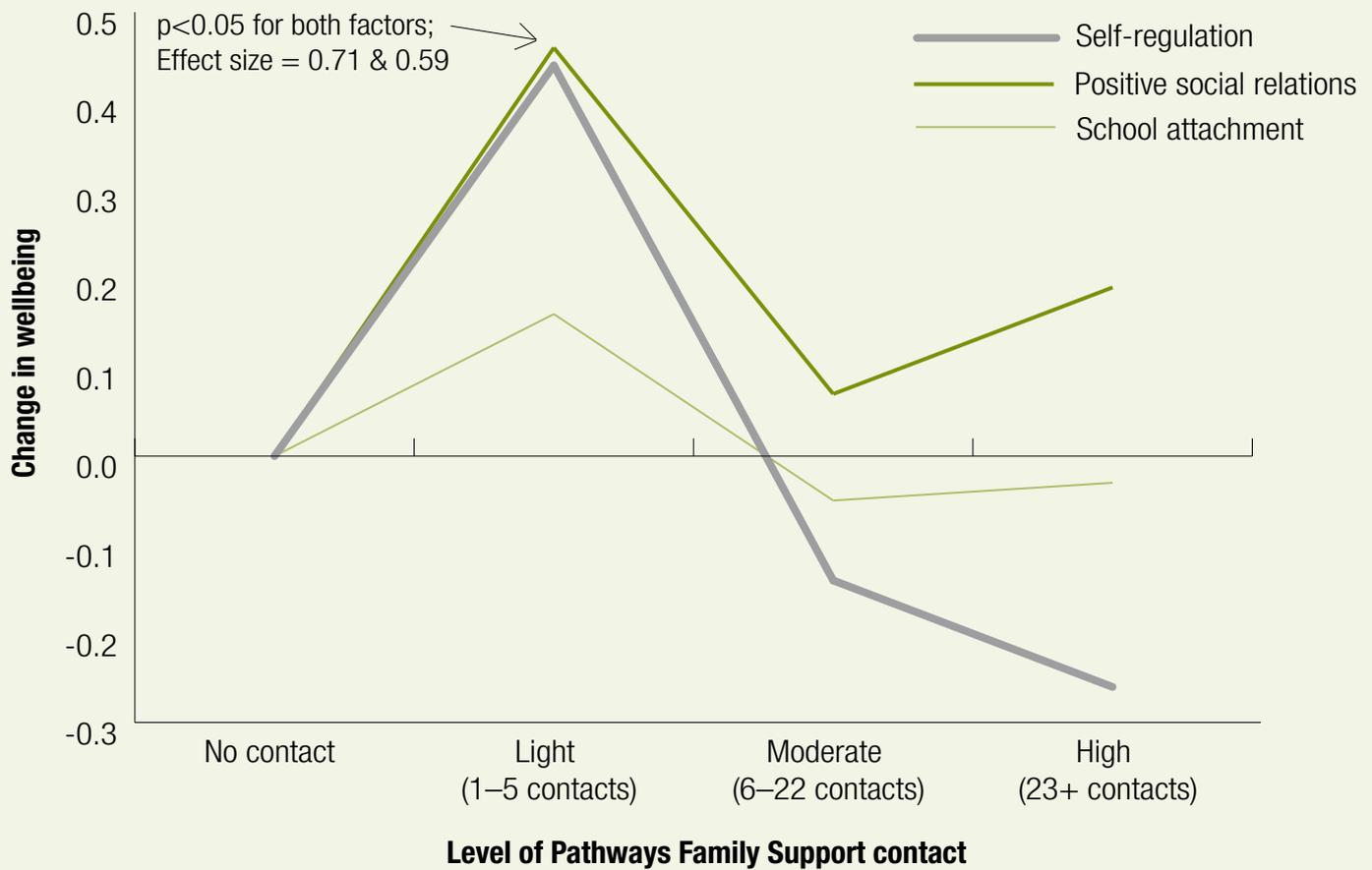
As noted earlier, many of the better-behaved children were lost to the database after preschool. The pattern of RBRI scores from the beginning of preschool to Grade 7 for this matched subsample of the cohort is shown in Figure 1. By contrast with the full preschool cohort, by the end of preschool the family support and control groups had ceased to be equivalent on RBRI. However, by Grade 7 the two groups once again did not differ significantly due to the steady deterioration in behaviour in the control group and the improvement in the family support group by Grade 5. The key question is whether this improvement in the family support group can be attributed to

the Pathways Service during the primary school years.

The behaviour change regression models utilising various measures of participation and subscales of RBRI (not described in this paper) all showed that Vietnamese children improved in their behaviour more than other groups; the sharpest contrast being with First Nations children whose behaviours declined most (the mean difference in change scores between these two groups was a large 0.69 of a standard deviation). Neither the child’s gender nor adversity score predicted behaviour change, controlling for other factors.

The most powerful predictor of improved behaviour was in fact parental participation in family support, with an effect size (mean change as a fraction of change score standard deviation) of 0.38 ( $p=0.005$ ). Investigation of the effect of number of contacts showed that there was most change in the light contact group (1–5 contacts) compared with the control group (effect size=0.58;  $p=0.003$ ). More frequent contacts were also associated with improved behaviour, but the sizes of the effects (around 0.20) fell short of statistical significance (see Figure 2).

**Figure 3** Improvement in child wellbeing by level of Pathways contact relative to an effect of 0 for no contact (control) group



Multivariate models were fitted to assess the effects of participation in family support simultaneously on the three dimensions of child wellbeing in Grade 7, controlling for Grade 5 scores as covariates in addition to adversity, gender and cultural background. Girls recorded higher wellbeing scores than boys, although the gender difference only reached statistical significance for capacity for self-regulation (effect size=0.34;  $p=0.030$ ). Reported adversity remained after controls as a powerful predictor of all dimensions of wellbeing.

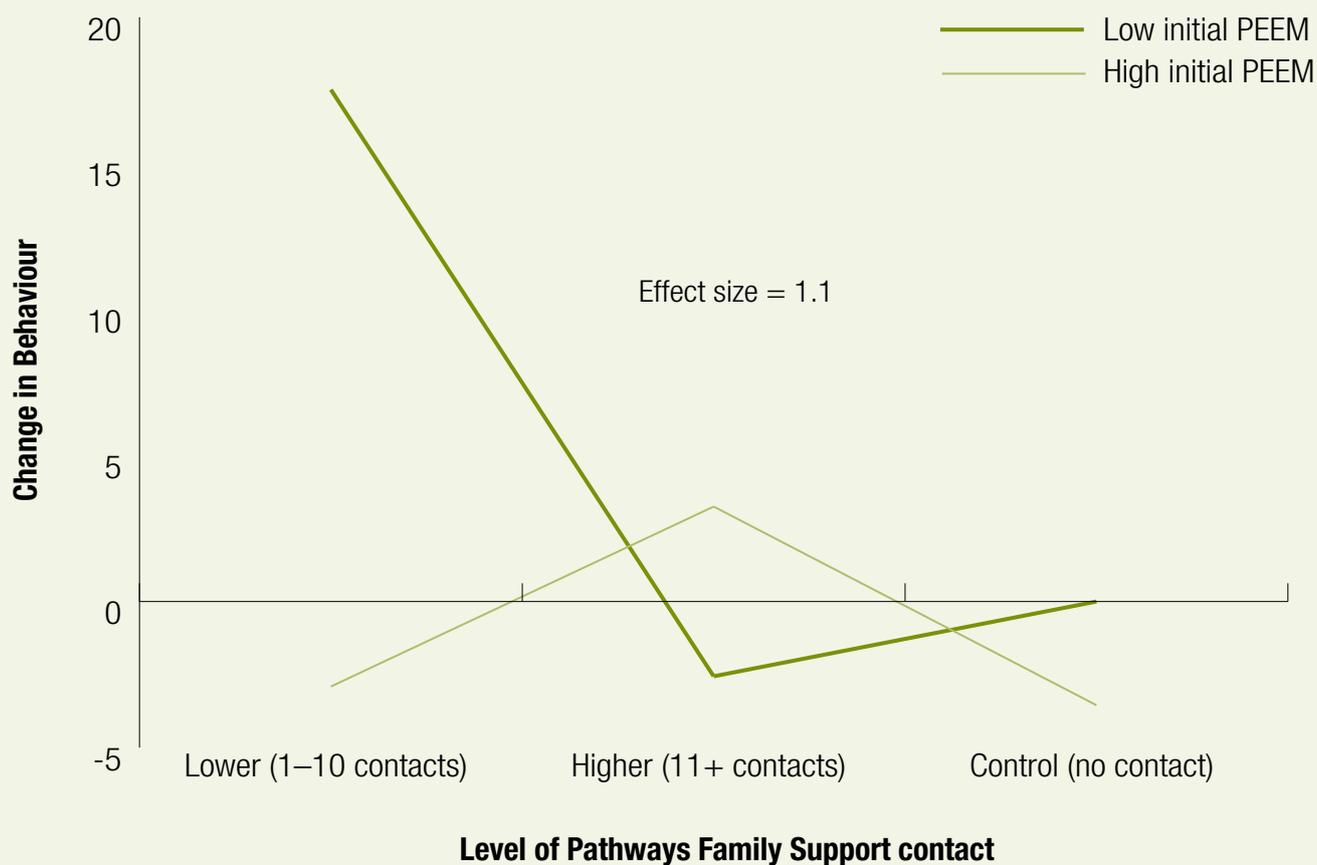
Once again, light involvement in family support (1–5 contacts) was more strongly associated with higher wellbeing than more frequent involvement, but the relationship was only significant for the first and third dimensions (enjoys supportive positive social relationships and capacity for self-regulation; see Figure 3).

Finally, the effects of parental efficacy as a moderator were explored for both behaviour and wellbeing. To simplify analyses, the parent’s initial PEEM score was

dichotomised as low and high, as was level of involvement in family support (low: 1–10 contacts; high: 11+ contacts). No significant interaction effects were found for wellbeing, but a strong effect was found for behaviour ( $p=0.016$ ; see Figure 4).

Figure 4 shows that behaviour only improved for families who had low levels of participation and where parents had initially low efficacy (which was improved by participation). The size of this effect was large (1.1 standard deviations).

**Figure 4** Improvement in child behaviour by level of Pathways contact and initial level of parent efficacy



## Conclusion

In this paper, a new resource for developmental crime prevention, the Pathways longitudinal child database, has been explored. This database provides the highest-quality data currently available in Australia on patterns of involvement in family support and effects on child and parent behaviour and wellbeing. Because the database includes information on all children enrolled in seven primary schools over a 10 year period, it is possible to create matched control groups for defined groups of children whose parents or carers participated in some aspects of the suite of Pathways family support services (in all, 30% of all enrolled children).

A total of 123 matched pairs of children were selected from the database to facilitate assessment of the effects of family support on child behaviour and wellbeing in the primary school years. Despite several caveats discussed below, the results support the contention that the holistic forms of family support exemplified in the Pathways to Prevention Project can have major beneficial effects on parents and

children, and that these effects can be achieved for some families cost-effectively with relatively low levels of involvement (up to 10 contacts, usually over a period of 2 to 3 months).

The reductions in poor classroom behaviour observed in Figure 1 for the family support group between Grade 1 and Grade 5 do appear to be at least partly attributable to the beneficial effects of family support on parents, with the strongest effects being found for parents who recorded initially low levels of efficacy who had relatively light involvement with the Pathways Service. Similarly, low levels of contact were associated with improvements both in children’s social relationships and capacities for self-regulation. These findings are important, for many reasons.

One reason is quite practical—schools in Australia are increasingly resorting to strict disciplinary methods, particularly suspensions and expulsions, in dealing with difficult student behaviour (Michail 2011). The limited evidence on the effects of these practices suggests that they can increase the risks of subsequent antisocial

behaviour rather than achieving the intended deterrent impact (Hemphill et al. 2009). There is no doubt about the seriousness of the challenge of hard-to-manage student behaviours. Teacher-rated aggressive behaviour in primary-age children, especially when it is at ‘chronic’ levels, has been found to be associated with the development of conduct disorder and juvenile and adult offending (Schaeffer et al. 2003). This suggests that effective methods for improving difficult classroom behaviours could have significant crime prevention benefits.

School disciplinary policies rarely acknowledge the central role of family circumstances in contributing to a child’s challenging behaviour. This paper presents evidence that quite substantial improvements in such behaviours might be achieved by supporting parents to deal with the challenges of poverty, family violence, being a single parent or recent immigrant and so on. Schools are of course not equipped to undertake this kind of work, which is why Pathways-style partnerships between schools, community agencies and families are of such value. Adopting such an ecological or whole-of-community approach

could strengthen the developmental system locally, revolutionise schools' disciplinary practices and make a useful contribution to the prevention of youth offending.

The finding that family support improved children's social relationships and capacities for self-regulation (or the management of negative emotions) further strengthens the argument that family support should have a more central place in youth crime prevention. As Beelman and Lösel (2006) observe, a lack of social competencies is a common characteristic of aggressive and delinquent children and adolescents. The social relationships scale in *Clowning Around* captures a child's sense of trusting and being trusted by parents and teachers, and generally feeling positive about her life and relationships. While child social skills training, especially through cognitive behavioural approaches, has increasing evidence for its effectiveness, our findings suggest that improving parent efficacy and supporting families more broadly should be a complementary strategy to child-focused methods. Indeed, in the broader field of child development there is a growing call for approaches that strengthen 'the resources and capabilities of adults who care for them rather than continuing to focus primarily on the provision of child-focused enrichment...' (Shonkoff & Fisher in press).

Our findings on the effects of family support on a child's self-regulatory capacities are equally important for youth crime prevention, especially since this dimension of *Clowning Around* includes items related to offending, getting angry and getting into fights. Reducing impulsivity and promoting self-regulation are central objectives of many early prevention initiatives (Deković et al. 2011; Farrington 2003), but so far the evidence that family support can be an effective strategy has been quite limited. The fact that we found that effects on child behaviour were most pronounced for low-efficacy parents underscores the need for experimentation with strategies that empower the most vulnerable families.

The finding that the strongest effects on child outcomes were achieved through lower levels of Pathways involvement

suggests that prevention strategies based on family support need not be excessively prolonged or expensive, especially since families in the 1–10 contacts range comprised about half the family support sample. This adds to the already strong evidence on the cost-effectiveness of early prevention strategies (Manning, Homel & Smith 2011). However, this finding should not be over-emphasised at this point in the program of research on the effects of the Pathways Project.

First, although not reported in detail in this paper, there were some positive (but non-significant) effects of more extended contact. These effects need to be explored further using larger samples. Secondly, and more importantly, at this stage we have not incorporated in the modelling a measure of *parent adversity* (as opposed to child reports of 'bad things in their life') that was recorded for all Pathways clients, usually early in their involvement in the Service. Our hypothesis is that if we matched Pathways parents at a given level of involvement (low, moderate or high) on their level of adversity, high levels of contact may well emerge as critical to positive outcomes for the most vulnerable families. This will be explored in later papers.

Finally, it is necessary more generally to caution that although the language of cause and effect has been used in this paper, the most that can be concluded in reality is that some promising statistical relationships have been identified. The exigencies of data collection in the frequently unpredictable environment of schools and families in a socially disadvantaged community limited the range of information that could be collected or recorded. This means that matching has been carried out using fewer variables than scientific purity would dictate. However, even if dozens of variables to create matched samples were available, the standard of evidence would still fall short of that which can be produced through randomised designs.

The Pathways database has enormous strengths, including facilitating the exploration of the effects of a highly dynamic and complex suite of preventively

oriented family support activities. The findings of current and forthcoming analyses of the Pathways database contribute to prevention science by stimulating innovation in a field that is currently over-reliant on a limited number of evidence-based programs that are hard to replicate in a wide context (Shonkoff & Fisher in press) and by providing reliable pointers to promising new prevention strategies that can be tested through carefully designed small-scale experiments. The current findings highlight the value of adopting policies that promote collective action to support vulnerable young people and demonstrate that family support can be a key part of this holistic approach. However, such policies will only achieve results on a large scale if they build capacity and strengthen connections across multiple developmental domains, including communities and schools, as well as families.

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