A review of Australian Government funding of parenting intervention research

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Abstract

Objectives: Parenting is central to children's optimal development and accounts for a substantial proportion of the variance in child outcomes, including up to 40% of child mental health. Parenting is also one of the most modifiable, proximal, and direct factors for preventing and treating a range of children's problems and enhancing wellbeing. To determine the effectiveness of new approaches to parenting intervention, and to evaluate how to optimise reach and uptake, sufficient funding must be allocated for high quality research.

Method: We reviewed funding awarded by the National Health and Medical Research Council (NHMRC) and Australian Research Council (ARC) for parenting intervention research during 2011-2020.

Results: Parenting intervention research received 0.25% of the NHMRC and ARC research budgets.

Conclusions: There is a substantial mismatch between the funding of parenting intervention research and the impact of improved parenting on short- and long-term child outcomes. To rectify this, it is critical that Australian Government funding schemes include parenting interventions as priority areas for funding.

Implications for public health: Changes in allocation of funding to parenting research will support the establishment of evidence for the effective development, implementation and dissemination of parenting interventions to maximise health outcomes for children and their families.

Key words: parenting, parenting interventions, research funding, child, parent

Parenting interventions play a central role in promoting and protecting the health, wellbeing and educational outcomes of children, adolescents and families, as well as preventing and treating difficulties when they occur. Parenting encompasses several different tasks, including meeting children's basic needs, providing emotional care, and guiding education and socialisation.[1] Difficulties in fulfilling these parenting roles can affect children's physical and mental health, and other life outcomes (e.g. educational attainment, employment), with ramifications across the lifespan (e.g.[2,3]). Mental illness, alcohol and drug abuse, crime and violence, childhood injury, obesity and chronic illness are all high burden-of-disease problems significantly impacted by parenting.[4,5] While genetic factors strongly contribute to children's physical, mental health and academic achievement,[6] a large twin study has found that the

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common environment shared by children and their siblings, accounts for between 20-40% of the variance in seven-year-old children's internalising and externalising problems (except for ADHD[7,8]). The common environment includes parenting, but also socio economic status, the street one lives in, and the school one attends, amongst other shared factors. Moreover, parenting can also be part of a child's unique environment, as not all children in any one family are treated the same. However, parenting is one of the most modifiable, proximal factors that can alter children's development across a range of areas including health, mental health, early language and literacy, and self-regulation, and can avert outcomes with life-long sequelae, such as out-of-home care placements.[9,10] Thus, high-quality research that determines what parenting interventions are effective is critical.

Parenting interventions are provided to parents alone or together with their child and include strategies, services and programs that provide support to parents/caregivers to enhance family functioning or child outcomes.[11] They may be delivered as the sole method of intervention or as part of a suite of approaches targeting the wider ecological system affecting the child.[12] For example, enhancing early childhood care and education or targeting poverty have both been found to positively impact child outcomes.[13] However, our focus here is specifically on examining parenting as the target for intervention, rather than a broad range of contributing influences or forms of intervention. There has been considerable research evaluating the efficacy and/or effectiveness of parenting interventions (e.g.[14]). They are widely applied within the health, education and child protection systems, with some evidence that they are as effective when transported to settings that differ culturally and/or in their service systems.[15] While the potential mechanisms of change are increasingly well documented (e.g.[16,17]), there is still limited knowledge about what works for whom, in which contexts, and what conditions, for ensuring maximum reach and uptake.

Parenting interventions provide one of the most cost-effective societal methods for promoting the wellbeing of individuals and their families because they impact a wide range of outcomes. Interventions have been shown to have greater benefits than the costs of implementing them.[18] Studies from Australia, the US, Canada and the UK show that for every $1 spent on parenting interventions, up to $30 is saved in other social service delivery costs by preventing adverse child outcomes.[19,20] This can be achieved if as little as 10% of parents receive access to parenting support and is based on documented effect sizes of 0.047 (out of home placements) to 0.118 (child abuse and neglect[20]). Further, a recent meta-analysis found parenting interventions had larger effects on child development and parenting in low- and middle-income countries.[21] Establishing the research evidence for parenting interventions in different contexts and populations is both an economic and a social imperative.

Australian research on parenting interventions

Australia is a world leader in parenting intervention research, with several internationally recognised and widely disseminated programs. A range of specialised researchers develop and translate the science of parenting and parenting interventions into improving child and family outcomes. The Parenting and Family Research Alliance (PAFRA) is a multidisciplinary group of researchers who aim to increase the reach of parenting interventions in Australia and internationally.

Australian Government research agencies are the primary source of funding for evaluations of 'what works' using an open, competitive application process and reflect health priorities for the nation. We therefore focus on grants allocated through the National Health and Medical Research Council (NHMRC) and the Australian Research Council (ARC) funding schemes. Over the last decade they have funded 2,000-3,000 grants each year, worth $1,300M to $1,800M annually. Grant funding falls into three broad types: "people" for scholarships and fellowships for individual researchers (which may include funds for conducting research); "projects" for specific studies; and "organisational" for programs of work including research workforce development (i.e. Centres of Research Excellence). We did not include funding sources that were solely targeting specified priority areas, were offered for only a portion of the 10-year review period, and/or had no centralised data on funding outcomes available. This included the recently established (2015) Medical Research Future Fund (MRFF) scheme, individual Government departments and philanthropic agencies.

This study aimed to examine NHMRC and ARC funding for parenting interventions during 2011–2020. We considered patterns across the decade, including the proportion of funding relative to the budget awarded for all research, the types of grants (people, projects, organisational), research with Aboriginal and Torres Strait Islander Australians, and funding distribution across seven outcome domains.

Method

Five data collection and coding steps were undertaken to identify parenting interventions awarded funding from the NHMRC and ARC (see Figure 1). We conducted descriptive analyses of the number of grants awarded, their dollar amounts, and the outcomes targeted for each step. At Step 1, we used public databases (ARC website, NHMRC helpdesk) to identify all research grants by the NHMRC and ARC for commencement between January 2011 and December 2020 (*n*=24,965 grants). At Step 2, we conducted keyword searches with all grants identified at step 1 using the grant titles and project summaries. We included grants at step 2 if they included the key words "parent", "mother", "father", "maternal", "paternal", "caregiver", "child and/or adolescent mental health", "child and/or adolescent health" or "family" (*n* = 5,819 grants). At Step 3, we manually coded grant titles and project summaries to indicate whether a parenting intervention was part of the grant activity (*n*=64 grants). We defined 'parenting interventions' as any program, education or course that aimed to change parents' or caregivers' actions, beliefs or cognitions towards their children. The first and second author independently coded the grants, with authors three to seven providing additional independent coding to resolve uncertainties. At Step 4, we contacted the grants' chief investigators (CIs) to confirm what percentage of their grant funding was allocated to researching a parenting intervention. Where CI confirmation was received (*n*=53/64 grants), only the proportion allocated to parenting interventions was included in analyses.

For two newly awarded organisational grants, the proportion of funding allocated to parenting interventions had not yet been determined. These were coded as having a zero-dollar value and not included in further analyses. Where confirmation was not

received (*n*=10/64 grants), 100% of the grant funding was included. At Step 5, we manually coded grant titles and project summaries to identify which outcomes the parenting intervention aimed to change and whether the research involved Indigenous Australian parents. Outcomes were categorised into seven areas identified by PAFRA as common targets for parenting interventions[11]: parental skills, knowledge and confidence; child and adolescent mental health; parental wellbeing and mental health; child and adolescent academic attainment; child and adolescent competencies; child and adolescent physical health; and prevention of child maltreatment.

Results

How much funding was awarded to parenting intervention grants?

From 2011–2020, the NHMRC and ARC awarded 24,965 grants, worth $15.8B. Of these, only 62 (0.25%) were for research involving parenting interventions. Only $36.4M (0.23%) of all funding awarded by NHMRC and ARC was related to parenting interventions (see Supplementary Table 1).

What types of parenting intervention grants were funded?

Of the 62 funded grants involving a parenting intervention, 17 were people grants (i.e. scholarships, fellowships), 39 were research projects, and six were organisational grants (i.e. programs, centres; see Table 1). For people and project grants, most CIs reported 100% of the grant was for activities pertaining to a parenting intervention. For 65% of people grants and 13% of project grants, between 10% and 60% was allocated to parenting intervention research. For organisational grants, CIs reported between 5% and 13% was allocated to parenting intervention research (the remainder allocated to other research areas), amounting to between $0.12M and $2.64M.

How much funding was awarded each year?

Parenting intervention grants were awarded across all ten years (Table 2). However, there was considerable variability from year to year in the number of fellowship/scholarship grants and a systematic decline in the number of new project-related grants across the decade. An average of 6.2 parenting intervention grants were awarded per year (range from 2 to 12), representing 0.25% of all grants awarded (range from 0.10% to 0.39%). The average annual amount awarded to parenting intervention research was $3.64M, representing 0.23% of all funding awarded (range of 0.02 to 0.65%). There were peaks in the number of parenting intervention grants awarded in 2011, 2012 and 2014 (See Figure 2 and 3 for People grants and Project grants). The exceptionally high amount awarded in 2012 was due to one project grant worth $5.2M, which accounted for nearly half the funding awarded to parenting intervention research from all sources. The year with the fewest grants and lowest amount awarded was 2020, with the amount awarded likely to be an underestimate.

What outcomes were funded?

In the title or summary of the 62 grants for parenting interventions, researchers referred to between one and five different outcomes, for a total 98 outcomes across the grants. Table 3 provides a summary of the number and value of the grants for each outcome. The most commonly identified (and funded) outcome was child health (*n*=23), followed by child mental health (*n*=20). The least commonly funded outcome was child maltreatment prevention (*n*=2). There were many grants targeting child competencies,

Figure 1: Data collection and analysis.

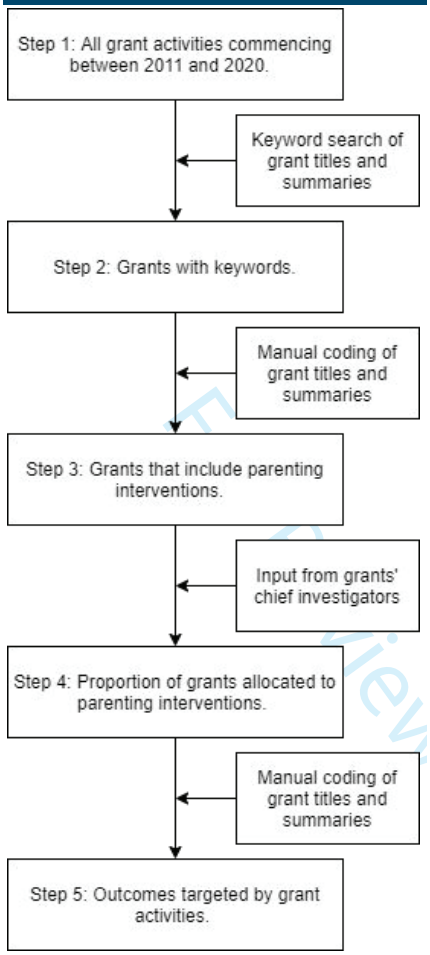


Table 1: Number and value (AUD$) of grants with a parenting intervention component, as a total and as a proportion of all parenting intervention grants.

	Number of grants		Value of grants		Value range		Mean value
	N	%	$M	%	Min ($M)	Max ($M)	$M
People	17	27.4	2.95	8.1	0.03	0.47	0.17
Projects	39	62.9	29.81	81.9	0.04	5.24	0.76
Organisations	6	9.7	3.64	10.0	0.12	2.64	0.61
Total	62	100	36.40	100	0.03	5.24	0.59

Note. $M = Million Australian Dollars. Amounts refer to grants' portions of funding allocated to parenting intervention research.

Table 2: Number and value of grants awarded to parenting interventions, total for all funded NHMRC/ARC research grants and proportion of parenting/total grants.

Year	Parenting intervention grants		Total ARC/NHMRC grants		Proportion of total grants for parenting interventions	
	N	$M	N	$M	% of total N	% of total $
2011	10	4.4	2,958	1,592.6	0.34	0.27
2012	12	10.6	3,107	1,618.0	0.39	0.65
2013	4	2.0	2,866	1,528.0	0.14	0.13
2014	10	6.9	2,642	1,843.9	0.38	0.38
2015	5	5.0	2,330	1,346.0	0.21	0.37
2016	5	1.7	2,354	1,425.8	0.25	0.12
2017	3	0.8	2,190	1,682.5	0.14	0.05
2018	3	1.4	2,221	1,466.3	0.14	0.10
2019	8	3.7	2,223	1,486.5	0.36	0.25
2020	2	0.4	2,074	1,832.3	0.10	0.02
Total	62	36.8	24,965	15,821.9	0.25	0.23

Note. $M = Million Australian Dollars. Amounts refer to grants' portions of funding allocated to parenting intervention research.

but the average grant amount was second to lowest. Grants for parenting, parent wellbeing and child academic outcomes had similar profiles regarding their average grant size and range. Finally, only two project grants and one organisational grant were awarded for research with Indigenous Australians amounting to 1.8% of the total parenting intervention grants (see Supplementary Table 1).

Discussion

Summarising data from a search of public records of awarded Australian NHMRC and ARC funding, we found that over the past ten years (2011–2020), $36.4M was allocated to grants that included parenting intervention research. This amounts to approximately 0.25% of the NHMRC and ARC research budget. To contextualise this finding, it is useful to consider the public health costs of the disorders prevented or treated by parenting interventions. Parenting interventions may offer the most wide-reaching method for preventing and treating child and adolescent mental disorders,[22] with concomitant improvements in parent mental health[23] and reductions in children's risk for mental illness in adulthood.[24] Mental and behavioural disorders are the fourth greatest 'area of disease' burden in Australia,[25] with three conditions ranking in the top ten from a specific disease: anxiety (4th); depression (7th); and suicide/self-harm (8th).[25] Globally, mental and behavioural disorders account for 7.4% of Disability Adjusted Life Years (DALYs), the number of years of healthy life lost through premature death or disability.[26,27] Parenting interventions, which can significantly contribute to reducing the burden of disease from these disorders, received less than 0.25% of the total research funding allocated by the NHMRC and ARC over the past decade. In contrast cancer, which is the leading area of disease burden in Australia accounting for 19% of total DALYS,[28,29] received 50 times greater funding at $179.5M per year.[30] This shows a substantial mismatch between the amount of funding allocated to parenting intervention research and the societal benefits that could accrue from improving the impact and reach of parenting interventions.

Some particular areas of parenting research received a relatively small proportion of funding. Only three grants in the 10 years were allocated to fund parenting intervention research with Indigenous Australians (1.8% of funding for parenting intervention grants). Although this funding gap has been somewhat identified by the NHMRC, and the MRFF (not reviewed in the current paper) has included a separate Indigenous Health Research Fund in 2018–19, it still appears that this is an area that requires further funding. To date, one grant for $1.68M has been allocated from MRFF with a focus on parenting in Indigenous families (titled "Enabling Dads and Improving Indigenous Adolescent Mental Health"). Given Indigenous people comprise about 3.3% of the Australian population and have 2.3 times the burden of disease and a 10-year lower life expectancy,[31] this appears to represent a significantly under-funded research area.

Analyses showed that the most funding was awarded to grants addressing child health (38% of grants; 50% of funding) and child mental health (33% of grants; 42% of funding) outcomes, with the smallest amount awarded to child maltreatment (3% of grants; 2% of funding). For child maltreatment, this equates to just 0.008% of all Australian Government research funding, which is concerning given the personal, social and economic impact of child maltreatment[32] and evidence that parenting interventions can prevent it.[33,34] Despite being identified as the leading preventable risk factor for mental illness and substance abuse,[35] childhood maltreatment continues to increase,[32] contributing to 2.2% of the disease burden in Australia[36] and between 20-30% of depression, anxiety, suicide and self-inflicted injuries.[37,38] A greater allocation of research funding is needed to determine how parenting interventions, or their combination with other systemic interventions, can more effectively reduce maltreatment and the adverse outcomes that result.

Figure 2: Number and value of grants awarded to fellowships and scholarships with a parenting intervention component (by year of grant commencement).

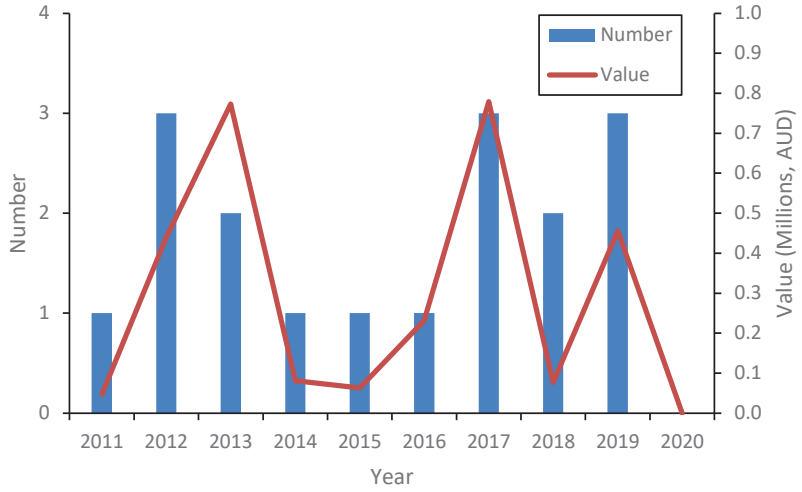
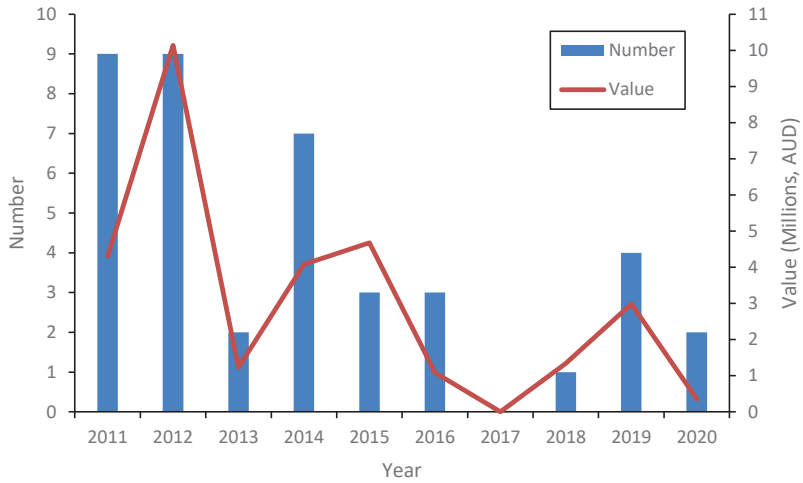


Figure 3: Number and value of grants awarded to projects with a parenting intervention component (by year of grant commencement).



We suggest three possible explanations for the low allocation of government funding to parenting intervention research. First, applications may lack quality and are therefore ranked lower in the grant evaluation process. However, as NHMRC and ARC do not publish data on unsuccessful applications, the relative success rate for parenting intervention applications is unknown.

Second, research on parenting interventions may not fit well into the funding priorities of NHMRC or ARC. Parenting intervention research is often about promoting wellbeing and health, so it may rank poorly in the NHMRC grant application process when compared to medical research addressing individual treatment for youth or adult mental disorders or life-threatening conditions. ARC funds basic and applied research and specifically excludes grants that treat a health condition. The gap between the two funding agencies needs closing so that parenting research is eligible for funding, even when projects do not focus on a disorder or are not classified as basic research. It was also difficult to identify parenting intervention funding using keywords and grant summaries, possibly as researchers have learned to downplay this aspect to attain successful grant funding. 'Parenting' is rarely included as a keyword or used in the summaries, despite being the primary target of parenting interventions. Instead, child health or child mental health is more likely to be the target for grant applications because these outcomes fit the funding criteria (especially NHMRC). Improving parenting is arguably a critical endpoint in and of itself, given it substantially impacts the wellbeing of parents as well as children. NHMRC and ARC funding criteria should be amended to recognise parenting as an important outcome; and parenting interventions as essential mechanisms for impacting child health, wellbeing, educational attainment and a range of other life outcomes.

A third possibility for the underfunding of parenting intervention research is that Australian Government funding bodies and grant reviewers do not consider parenting interventions a credible method for reducing child problems in the same way that medical treatment has been used with cancer or diabetes. Normal and abnormal child development is determined by a broad range of factors, including genetics, parenting and other social, political and contextual influences.[39] Parenting remains only one of these contributing factors – albeit one that extends to a range of child outcomes, but is the most modifiable factor.[1,10] Parenting interventions, however, may not be viewed by grant reviewers as effective for addressing problems despite evidence to the contrary. It may be more acceptable to seek medical causes for health and mental health problems rather than consider the contribution of parenting. Alternatively, it may be that as a society, there is reluctance to place the 'burden of responsibility' on parents even though they can be effective catalysts for change.

Table 3: Number and value of parenting intervention grants for each outcome, as a total and as a proportion of all parenting intervention grants from 2011-2020.

Outcome	Number of grants		Value of grants		Value range		Mean value
	N	%	$M	%	Min ($M)	Max ($M)	$M
Child health	23	38.3	18.2	50.0	0.05	2.64	0.73
Child mental health	20	33.3	15.3	42.0	0.05	5.24	0.69
Competencies	15	25.0	6.1	16.7	0.05	1.00	0.38
Parenting	14	23.3	9.4	25.9	0.05	2.64	0.59
Parent wellbeing	9	15.0	4.8	13.1	0.03	2.64	0.43
Academic achievement	5	8.3	3.9	10.6	0.04	2.64	0.64
Maltreatment prevention	2	3.3	0.5	1.5	0.17	0.36	0.27

Note. $M = Million Australian Dollars. Percentage totals exceed 100% as grants may list more than one outcome. Amounts refer to grants' portions of funding allocated to parenting intervention research.

Regardless of the reasons, to address the issues raised here, we recommend government funding schemes consider:

1. nomination of parenting research as a funding priority area for the NHMRC and ARC (which will then be reflected in research, fellowship and scholarship schemes);
2. the addition of a Field of Research (FOR) code for parenting interventions to track funding allocation and ensure the selection of appropriate reviewers.

Together these two changes will likely snowball a range of other changes including ongoing funder-led strategic analysis of the impact; increased awareness by grant reviewers about the role parenting interventions play in impacting a diverse range of child and family outcomes; and capacity building to increase the number and quality of parenting research applications that adequately link parenting interventions to reducing the burden of disease.

Limitations

This paper was written by parenting researchers whose work may benefit from changes to funding priorities. Our aim was not to feather our nests but to highlight that one of the major methods for promoting health and mental health, parenting interventions, may not be well understood in the grant allocation process and is not funded relative to its importance. Second, searches and coding were limited to the publicly accessible grant titles and summaries. It was not possible to access full proposals, so we sought to confirm our inclusion of grants by contacting the grant CIs. This enabled us to exclude any grants that had been incorrectly identified and the results give a high degree of confidence in our search process. Only two grants were 'excluded' at this step; both were eligible for inclusion but were newly awarded and had not yet determined how much funding would be allocated to parenting interventions. However, the extent to which our approach missed grants that would have been eligible but did not include any wording about parent/caregiver (or derivatives thereof) is unknown. Third, there may be some degree of variability associated with the results due to the potential for a mismatch between grants' funding values and actual spending, between the intended and actual grant activities, and between the estimated and actual proportions allocated to parenting interventions.

Conclusion

Research funding from Australia's two major funding bodies awarded for parenting intervention research is disproportionately low given the importance of parenting on a wide range of short-term and life-long outcomes. Those delivering public health services need evidence of what is effective, especially for underserved families (e.g. Indigenous, minority social or cultural backgrounds, or those at risk for child maltreatment), which can only come from rigorous, high-quality research. Parenting interventions provide a cost-effective way of impacting a diverse range of outcomes across

the physical and mental health spheres. Changing criteria to prioritise funding of research of parenting interventions and supporting grant reviewers to understand the benefits of these approaches is critical. Parenting researchers also need to do better at writing and mentoring proposals that highlight the costs that are accrued from failing to provide optimal parenting supports, and the benefits of prevention and early intervention. Without these changes, research on parenting interventions will continue to be under-funded, and their potential to reduce a wide range of public health problems will be unrealised.

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Conflicts of interest

S.H. is a co-author of the Tuning in to Kids parenting program. Proceeds from dissemination of the program provide funding for development and research of the program. Program authors and the University of Melbourne are distributed royalties from proceeds of manual sales.

F.D., D.H. and K.M.G. have no conflicts of interest to report.

M.S. is the founder and an author on various Triple P Positive Parenting Programs and a consultant to Triple P International. The Parenting and Family Support Centre is partly funded by royalties stemming from published resources of the Triple P – Positive Parenting Program, which is developed and owned by The University of Queensland (UQ). Royalties are also distributed to the Faculty of Health and Behavioural Sciences at UQ and contributory authors of published Triple P resources. Triple P International (TPI) Pty Ltd is a private company licensed by UniQuest Pty Ltd on behalf of UQ, to publish and disseminate Triple P worldwide. The authors of this manuscript have no share or ownership of TPI. TPI had no involvement in the study design, collection, analysis or interpretation of data, or writing of this manuscript. C.C. is employed at the Parenting and Family Support Centre. T.M., V.C., D.H., A.M., M.S., H.S. and K.T. are contributary authors and receive royalties from TPI. T.M., V.C. and M.S. have, or may in the future, receive consultancy fees from T.P.I..

M.Z-G. directs the Family Interaction Program, which is funded by the Queensland Department of Children, Youth Justice and Multicultural Affairs to provide Parent-Child Interaction Therapy and other parenting interventions and evaluates the effectiveness of these parenting programs for Queensland families.

S.D. and P.H. are the co developers of the Parents under Pressure (PuP) program, developed for complex families engaged in child protection services. The PuP program is owned and disseminated by Griffith University with a non-exclusive license granted to the University of Queensland. Proceeds from dissemination are distributed in accordance with Griffith University policy with five per cent of training fees paid to the University of Queensland.

M.B.H.Y. is founder of the Parenting Strategies Program, which comprises a suite of online parenting resources for the prevention and early intervention of child and adolescent mental health problems.

Many of the authors on this paper have applied for and/or received grants from NHMRC and ARC for their research.

Authors of this paper may benefit from publication of these findings because it may result in changes in funding for parenting intervention research.

References

1. Sanders MR, Turner KMT. The importance of parenting in influencing the lives of children. In: Sanders MR, Morawska A, editors. *Handbook of Parenting and Child Development Across the Lifespan*. Cham (CHE): Springer International Publishing; 2018. p. 3-26.
2. Pinquart M, Ebeling M. Parental educational expectations and academic achievement in children and adolescents—a meta-analysis. *Educ Psychol Rev*. 2020;32(2):463-80.
3. Vasquez AC, Patall EA, Fong CJ, Corrigan AS, Pine L. Parent autonomy support, academic achievement, and psychosocial functioning: A meta-analysis of research. *Educ Psychol Rev*. 2016;28(3):605-44.
4. United Nations Children's Fund Australia. *"Living in Limbo": The Views and Experiences of Young People in Australia at the Start of the COVID-19 Pandemic and National Response*. Sydney (AUST): UNICEF Aust; 2020.
5. Green P. Risks to children and young people during COVID-19 pandemic. *BMJ*. 2020(369):m1669.
6. Polderman TJC, Benyamin B, de Leeuw CA, Sullivan PF, van Bochoven A, Visscher PM, et al. Meta-analysis of the heritability of human traits based on fifty years of twin studies. *Nat Genet*. 2015;47(7):702-9.
7. Wesseldijk LW, Fedko IO, Bartels M, Nivard MG, van Beijsterveldt CE, Boomsma DI, et al. Psychopathology in 7-year-old children: Differences in maternal and paternal ratings and the genetic epidemiology. *Am J Med Genet B Neuropsychiatr Genet*. 2017;174(3):251-60.
8. Fedko IO, Wesseldijk LW, Nivard MG, Hottenga J-J, van Beijsterveldt CEM, Middeldorp CM, et al. Heritability of behavioral problems in 7-year olds based on shared and unique aspects of parental views. *Behav Genet*. 2017;47(2):152-63.
9. Collins WA, Maccoby EE, Steinberg L, Hetherington EM, Bornstein MH. Contemporary research on parenting: The case for nature and nurture. *Am Psychol*. 2000;55(2):218-32.
10. Sameroff A. A unified theory of development: A dialectic integration of nature and nurture. *Child Dev*. 2010;81(1):6-22.
11. Doyle FL, Morawska A, Higgins DJ, Havighurst SS, Mazzucchelli TG, Toumbourou J, et al. Policies are needed to increase the reach and impact of evidence-based parenting supports: A call for a population-based approach to supporting parents, children, and families. *Child Psychiatry Hum Dev*. 2022;1-14. doi: 10.1007/s10578-021-01309-0
12. Bronfenbrenner U. Toward an experimental ecology of human development. *Am Psychol*. 1977;32(7):513-31.
13. Heckman JJ. Schools, skills, and synapses. *Econ Inq*. 2008;46(3):289-324.
14. Barlow J, Coren E. The effectiveness of parenting programs: A review of Campbell Reviews. *Res Soc Work Pract*. 2017;28(1):99-102.
15. Gardner F, Montgomery P, Knerr W. Transporting evidence-based parenting programs for child problem behavior (age 3–10) between countries: Systematic review and meta-analysis. *J Clin Child Adolesc Psychol*. 2016;45(6):749-62.
16. Leijten P, Gardner F, Melendez-Torres GJ, van Aar J, Hutchings J, Schulz S, et al. Meta-analyses: Key parenting program components for disruptive child behavior. *J Am Acad Child Adolesc Psychiatry*. 2019;58(2):180-90.
17. Gardner F, Leijten P, Melendez-Torres GJ, Landau S, Harris V, Mann J, et al. The earlier the better? Individual participant data and traditional meta-analysis of age effects of parenting interventions. *Child Dev*. 2019;90(1):7-19.
18. Washington State Institute for Public Policy. *Benefit-cost Results*. Olympia (WA): WSIPP; 2020.
19. Sampaio F, Barendregt JJ, Feldman I, Lee YY, Sawyer MG, Dadds MR, et al. Population cost-effectiveness of the Triple P parenting programme for the treatment of conduct disorder: An economic modelling study. *Eur Child Adolesc Psychiatry*. 2018;27(7):933-44.
20. Washington State Institute for Public Policy. *Benefit-cost Results*. Olympia (WA): WSIPP; 2019.
21. Jeong J, Franchett EE, Ramos de Oliveira CV, Rehmani K, Yousafzai AK. Parenting interventions to promote early child development in the first three years of life: A global systematic review and meta-analysis. *PLoS Med*. 2021;18(5):e1003602.
22. Ryan R, O'Farrelly C, Ramchandani P. Parenting and child mental health. *London J Prim Care*. 2017;9(6):86-94.
23. Furlong M, McGilloway S, Bywater T, Hutchings J, Smith SM, Donnelly M. Behavioural and cognitive-behavioural group-based parenting programmes for early-onset conduct problems in children aged 3 to 12 years. *Cochrane Database Syst Rev*. 2012;(2):CD008225.
24. Wade C, Cann W, Matthews J. Introduction to special issue: Parenting interventions and the mental health of children and parents. *Adv Ment Health*. 2019;17(1):1-5.
25. Australian Institute of Health and Welfare. *Australian Burden of Disease Study: Impact and Causes of Illness and Death in Australia 2015*. Canberra (AUST): AIHW; 2019.
26. Erskine HE, Moffitt TE, Copeland WE, Costello EJ, Ferrari AJ, Patton G, et al. A heavy burden on young minds: The global burden of mental and substance use disorders in children and youth. *Psychol Med*. 2015;45(7):1551-63.
27. Murray CJL, Vos T, Lozano R, Naghavi M, Flaxman AD, Michaud C, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: A systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380(9859):2197-223.
28. Lozano R, Naghavi M, Foreman K, Lim S, Shibuya K, Aboyans V, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: A systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380(9859):2095-128.

29. Australian Institute of Health and Welfare. *Cancer in Australia 2019*. Canberra (AUST): AIHW; 2019.
30. National Health and Medical Research Council. *Research Funding Statistics and Data*. Canberra (AUST): NHMRC; 2020.
31. Australian Government Department of Health. *Indigenous Health Research Fund Initiative*. Canberra (AUST): Government of Australia; 2021.
32. Steering Committee for the Review of Government Service Provision. *Report on Government Services 2021*. Canberra (AUST): Productivity Commission; 2021.
33. Prinz RJ, Sanders MR, Shapiro CJ, Whitaker DJ, Lutzker JR. Population-based prevention of child maltreatment: The U.S. Triple P system population trial. *Prev Sci*. 2009;10(1):1-12.
34. Thomas R, Zimmer-Gembeck MJ. Accumulating evidence for parent-child interaction therapy in the prevention of child maltreatment. *Child Dev*. 2011;82(1):177-92.
35. Teicher MH, Samson JA. Annual research review: Enduring neurobiological effects of childhood abuse and neglect. *J Child Psychol Psychiatry*. 2016;57(3):241-66.
36. Australian Institute of Health and Welfare. *Australian Burden of Disease Study 2015: Interactive Data on Risk Factor Burden*. Canberra (AUST): AIHW; 2020.
37. Sahle BW, Reavley NJ, Li W, Morgan AJ, Yap MBH, Reupert A, et al. The association between adverse childhood experiences and common mental disorders and suicidality: An umbrella review of systematic reviews and meta-analyses. *Eur Child Adolesc Psychiatry*. 2021. doi: 10.1007/s00787-021-01745-2
38. Moore SE, Scott JG, Ferrari AJ, Mills R, Dunne MP, Erskine HE, et al. Burden attributable to child maltreatment in Australia. *Child Abuse Negl*. 2015;48:208-20.
39. Bronfenbrenner U. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge (MA): Harvard University Press; 1979.

Supporting Information

Additional supporting information may be found in the online version of this article:

Supplementary Table 1: Details of the grants awarded to scholarships and fellowships, projects and organisations pertaining to parenting interventions.