

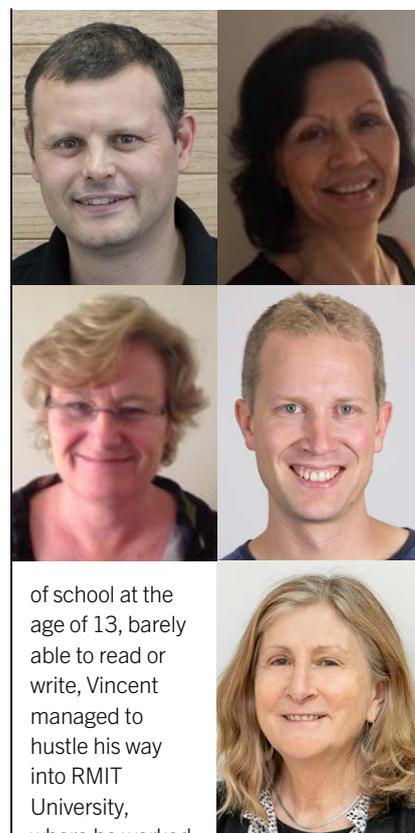
Understanding links between reading difficulties, self-esteem, and child mental health

Mark Boyes, Suze Leitão, Mary Claessen, Nicholas Badcock and Mandy Nayton are members of a highly collaborative team of researchers spanning Curtin University, University of Western Australia, Macquarie University, and Dyslexia-SPELD Foundation, Perth. In this article they provide an update on some of their research into child mental health issues associated with reading difficulties, reporting on themes emerging from careful qualitative research, an analysis of clinical casefiles, and providing a heads-up about a promising small-group intervention program to support the mental health of children with reading difficulties.

Reading difficulties are the most common learning difficulty in Australia. Approximately 10% of children have significant and severe reading difficulties, representing between two and four children in a typical Australian primary school classroom. Reading difficulties can severely impact children's lives; indeed, the notion that children who struggle with reading experience poor self-esteem is widely reported, and is a generally accepted position held by many in the community, including teachers and educators, counsellors, educational psychologists, clinical service providers, as well as family members.

Given the significance placed on reading within our school system and in so much of our day-to-day lives, the expectation that children who struggle with reading are also likely to experience poor self-esteem makes intuitive sense. Consistent with this, many adults report that having a reading difficulty had a devastating impact on their self-esteem as they navigated their way, painfully and fearfully, through school.

A compelling example of this was outlined in a recent edition of *Australian Story*, featuring the highly awarded Australian portrait artist, Vincent Fantauzzo (Australian Broadcasting Commission, 2019). In the program Vincent described school as "a place I associate with hiding, or shame, or low self-confidence. I honestly felt like I must be stupid". He also described his feelings of anxiety, and the lengths he would go to in order to avoid detection, "I hid it from my mum. I hid it from my brother and sister. You become the funny kid in class or the naughty kid. I would prefer to be kicked out of class than stand up and read a book out loud". After dropping out



of school at the age of 13, barely able to read or write, Vincent managed to hustle his way into RMIT University, where he worked tirelessly, and has since achieved very significant success as a portrait artist. However, it took many years for Vincent to come to terms with his reading difficulties, and to feel accepted for who he is.

Vincent's school experiences are not unique. Many children, adolescents and adults report feeling a sense of shame and frustration about their reading difficulties, and also report poor self-esteem. This is by no means always the case, however, and many children with reading difficulties remain confident, resilient, and optimistic about their academic and employment choices.

Understanding why some children with reading difficulties struggle with self-esteem issues, while others do not, is an important line of inquiry.

The scientific literature confirms that some children with reading difficulties are at elevated risk of experiencing emotional difficulties, including poor self-esteem (particularly academic-related self-esteem – see McArthur et al., 2020), as well as symptoms of both anxiety and depression (Francis et al., 2019). However, exactly *why* reading difficulties are associated with poor child mental health outcomes is unclear. Clarifying this relationship is important for two reasons. Firstly, it may allow the early identification of children who are particularly likely to struggle emotionally, as well as those who may be resilient to emotional problems. Secondly, understanding this association may highlight potential risk factors and resilience-promoting factors that can be targeted in mental health programs.

Our research team initially published a ‘roadmap’ paper (Boyes et al., 2016) that outlined a program of research that we believed could provide a solid foundation for systematically investigating why children with reading difficulties may be vulnerable to emotional problems. The aim was to identify factors that might indicate particular vulnerability (or resilience) and provide a foundation for the development of interventions promoting mental health among children who struggle with reading. We also called for more collaboration between researchers and clinical service providers (see Box 1 for an outline of the specific research suggestions).

In this article we provide a brief update on the mental health research that our research team has been conducting in collaboration with the Dyslexia-SPELD Foundation (DSF) since that roadmap paper

was published. For our research, we adopt a socio-ecological perspective (Bronfenbrenner, 1979). That is, we view children as being at the centre of a network of interacting influences, including relationships with family and friends, the contextual environment (e.g. school and community influences), as well as cultural and societal factors (including policy and political influences). Importantly, resources in one area are argued to buffer against difficulties in another.

Interviews with children with reading difficulties, parents, and educators

In order to better understand the experience of living with reading difficulties, we first conducted semi-structured interviews with children and their parents (Leitão et al., 2017), and a group of educators (teachers and tutors) who work with children with reading difficulties (Claessen et al., 2020). We analysed the interview data thematically (Braun and Clarke, 2006). A number of common themes were identified in the interviews with children, their parents, and educators.

All participants mentioned the impact of reading difficulties on children’s mental health. Children reported a range of emotional challenges, such as feelings of sadness, disappointment and frustration, particularly when comparing themselves to their peers and reflecting on their difficulties in carrying out academic tasks. Parents talked about the challenges in supporting their children’s mental health, particularly their children’s lack of confidence, an unwillingness to try new things, and

an established pattern of academic failure. Educators reflected on their observations of the links between reading difficulties, low self-esteem, and poor self-confidence in the education setting. Educators also identified the transition to high school as being particularly difficult for children who struggle with reading. Within the school setting, bullying, victimisation and difficulties with peer relationships, as well as poor connection with school and difficulties in teacher relationships, were highlighted as factors putting children at risk for mental health problems.

Understanding why some children with reading difficulties struggle with self-esteem issues, while others do not, is an important line of inquiry.

The process of receiving a diagnosis of a reading difficulty was identified as important by children, parents, and educators. Receiving a diagnosis was important for children, as it often provided an explanation for the challenges they experienced with reading and learning, and enabled them to focus on their strengths as well as their weaknesses. Parents and educators reflected on their perceptions of how children responded to a diagnosis, providing examples of reactions that were both positive (e.g. children obtaining a sense of resolution or relief, and an acknowledgement that they are not ‘dumb’) and negative (e.g. children feeling shame and that they are different to other children, or that something is wrong with them). Parents also reported using the process of diagnosis, and the specific nature of their child’s difficulties with reading, to help with identifying areas of relative strength to build self-worth and self-esteem.

Both children and educators described the important role of parents in providing academic and emotional support. Consistent with this, parents reflected on having to adopt roles such as ‘tutor’, ‘fighter’, ‘counsellor’ and ‘advocate’ for their child, roles that took them beyond the traditional notion of being a parent. Children indicated that having a teacher with a knowledge and understanding of reading difficulties was important, and parents indicated that teachers could be both inhibitors and facilitators to the development and education of children with reading difficulties.

Summary of research suggestions

- Carry out in-depth interviews with children, parents, educators, and clinicians to identify potential risk and resilience-promoting factors identified by stakeholders
- Collaborate with clinical service providers to use detailed clinical records to identify factors associated with mental health among children with reading difficulties
- Evaluate the effectiveness of mental health promotion programs for children who struggle with reading
- Include brief measures of mental health when implementing reading interventions, to test if improvements in reading are associated with improvements in mental health

Box 1. Summary of research suggestions (Boyes et al., 2016)

Summary of risk and resilience-promoting factors

Risk Factors	Resilience-promoting Factors
<ul style="list-style-type: none"> • Low self-esteem • Academic failure • Shame, stigma and feeling 'different' • Experiences of being bullied • Peer relationship problems • Teacher training (early literacy) • Unsupportive teachers and school staff • Transition to high school • Financial cost and lack of resources • Lack of government recognition (and associated funding/resources) 	<ul style="list-style-type: none"> • Early diagnosis • Identifying any child strengths • Positive general self-concept or perception • Strong relationship with parents • Strong relationships with friends/peers • Strong and supportive teacher relationships • Supportive school environment • Connection with school

Box 2. Summary of risk and resilience-promoting factors identified in the child, parent, and educator interviews (Leitão et al. 2017; Claessen et al. 2020).

Parents also reflected on a range of broader themes, including a need for recognition of the issues surrounding access to (and the cost of) the extra support they sought for their child (e.g. assessment, tutoring, and speech pathology services), the importance of teacher training in the areas of reading development and early literacy, and the lack of government resources and financial support for children with reading difficulties.

Taken together, the findings from the interviews with children, parents, and educators identified a variety of risk and resilience-promoting factors associated with child mental health (see Box 2). Importantly, these factors span a range of levels. Perhaps unsurprisingly, children tended to focus on individual, family, and school-related experiences, whereas parents and educators were better able to contextualise reading difficulties within broader societal and cultural contexts.

Analysis of clinical casefiles

While the interviews with children, parents, and educators provided us with rich and detailed data, the small number of people interviewed means that we need to be cautious in generalising these findings too broadly. To complement these interviews, we conducted an analysis of data extracted from Dyslexia SPELD Foundation (DSF) casefiles (Boyes et al. 2020a).

DSF conducts over 1500 assessments each year, and the majority of parents give consent for this data to be used in research and evaluation. A casefile is created for

each child and, along with results from assessments of literacy and reading-related achievement, casefiles also include parent-reported information on behavioural, social, and emotional development. This provided a unique opportunity to draw on these detailed clinical records to identify factors associated with mental health among children with reading difficulties. We collated the 1235 casefiles of school-aged children who had received a dyslexia diagnosis from DSF in 2014 and 2015 and then randomly selected a subset of 450 casefiles for data extraction. Consistent with previous studies, we noted significant rates of low self-esteem, as well as behavioural and emotional problems. Low self-esteem and behavioural difficulties were reported for around 25% of children, while rates of emotional difficulties were reported for around 10% of the children. This pattern of findings likely reflects the fact that behavioural problems are

observable and tend to create difficulties in the classroom and at home, in contrast with emotional difficulties which are often hidden. Importantly, it should be highlighted that not all children experienced low self-esteem, behavioural, or emotional issues; indeed the majority of children had not experienced any of these. This reminds us of the importance of understanding, and identifying, which children with reading difficulties may struggle with self-esteem, as well as behavioural and emotional problems.

In terms of potential risk and resilience-promoting factors, in our analysis of the DSF casefiles we identified four factors that appeared to be important in identifying children who had experienced emotional and behavioural problems: (1) low self-esteem, (2) experiencing peer problems and being bullied, (3) difficulties with regulating emotion, and (4) social skills difficulties. Of note, these findings are broadly consistent with the factors identified as being important by the children, parents, and educators we had interviewed previously, and we believe that they might be good intervention targets for programs aiming to promote mental health among children with reading difficulties.

Mental health programs for struggling readers: the 'Clever Kids' program

DSF has identified increased demand for psychosocial support, with growing expectation that it be



Children attending *Clever Kids*.

offered in addition to targeted reading intervention. However, there are few mental health programs developed specifically to be accessible for children with reading difficulties. One exception is *Success and Dyslexia*, a coping program, which has a particular focus on children with reading and other learning difficulties (Firth and Frydenberg, 2011). However, this program is implemented school wide, with the learning difficulties coping program nested within a broader whole-school program. Whole-school programs can be difficult to implement, as they need a concerted effort by school administration and staff. DSF have therefore adapted the *Success and Dyslexia* program and developed *Clever Kids*, a nine-week mental health program that is delivered by DSF psychologists in small groups (approximately 10 children) outside of school hours. The small group structure also gives participants an opportunity to meet other children similarly struggling with reading.

... parents reflected on having to adopt roles such as 'tutor,' 'fighter,' 'counsellor' and 'advocate' for their child, roles that took them beyond the traditional notion of being a parent.

Clever Kids focuses on the development of coping and emotion regulation skills, resilience and self-esteem (factors identified as being linked with mental health outcomes in our previous studies), as well as problem-solving skills, perseverance, and help-seeking behaviour. In addition, it includes a combination of explicit instruction, modelling, role-playing, and ongoing revision of concepts being taught (see Appendix for an outline of the program structure). The activities have been designed to be accessible for children with reading difficulties, and parents are kept informed of content so they can support their children in practicing skills taught in the program.

We have recently completed a small randomised-controlled trial of *Clever Kids* (Boyes et al., 2020b, manuscript under review). Our findings showed attending *Clever Kids* improved children's coping skills and there were also promising improvements in self-esteem and reductions in emotional problems. The program also appears to

be acceptable to children with dyslexia and their families.

What have we learned, and where to next?

Our interviews with children, parents, educators, as well as our exploration of DSF case files, highlight that although rates of emotional difficulties are indeed higher among struggling readers, many children with reading difficulties are very resilient. Our research has identified a number of risk and resilience-promoting factors (summarised in Box 2) that can help us better understand why some children with reading difficulties may struggle emotionally, while others may not. Together, our findings point to the need to support children with reading difficulties at multiple levels – taking into consideration the unique experiences of each child, as well as the important role of family, peers, teachers and schools, government, and broader society in understanding the emotional impacts of reading difficulties.

Children and parents both highlighted the positive influence of educators who understood (and believed in) reading difficulties, as well as the protective nature of high quality relationships with teachers and schools on emotional wellbeing.

Regarding mental health promotion, our preliminary trial of the *Clever Kids* program has identified promising improvements in self-esteem and some reduction in emotional problems among struggling readers. In addition, the children enjoyed the program, particularly the social (and normalising) aspects of meeting other children who also struggle with reading. However, this was only a small pilot study; we have recently received funding to conduct a larger trial of *Clever Kids*, which we hope will confirm the program is having a positive effect.

The final recommendation in our 'roadmap' paper on reading difficulties and mental health (Boyes et al., 2016) was to include brief measures of emotional health before and after implementing reading interventions, to test if any improvements in reading

correlate with improvements in child self-esteem and mental health. We have not yet investigated this, but we believe it remains an important question, and is an area in which clinical service providers and researchers could collaborate very fruitfully.

Conclusions

We hope our research identifies aspects of classroom practice that teachers can reflect on to better support children with reading difficulties. Children and parents both highlighted the positive influence of educators who understood (and believed in) reading difficulties, as well as the protective nature of high-quality relationships with teachers and schools on emotional wellbeing. This understanding and acceptance is an important foundation for supporting children with reading difficulties in educational settings. To develop this foundation, there is a need for schools and teachers to be provided with high quality evidence-informed information and support (DSF Literacy and Clinical Services, 2019). We believe that together parents, teachers, schools, clinical service providers, and researchers play a crucial role in supporting children with reading difficulties, and that it is through advocating together, to amplify our voices, that we can best support the children with whom we work.

References

- Australian Broadcast Corporation (2019). ABC News In-depth, Australian Story: Vincent Fantauzzo: Drawing a life in paintings.
- Boyes, M.E., Leitão, S., Claessen, M., Badcock, N.A. & Nayton, M. (2016). Why are reading difficulties associated with mental health problems? *Dyslexia*, 22, 263-266.
- Boyes, M.E., Leitão, S., Claessen, M., Badcock, N.A. & Nayton, M. (2020a). Correlates of externalising and internalising problems in children with dyslexia: An analysis of data from clinical casefiles. *Australian Psychologist*, 55, 62-72.
- Boyes, M.E., Leitão, S., Dzidic, P., Claessen, M., Badcock, N. & Nayton, M. (2020b). Piloting 'Clever Kids': A randomised-controlled trial assessing feasibility, efficacy, and acceptability of a socioemotional wellbeing program for children with dyslexia. PsyArXiv (manuscript submitted).
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments*

by nature and design. Harvard University Press.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

Claessen, M., Dzidiz, P., Boyes, M., Badcock, N. Nayton, M. & Leitão, S. (2020). Educators' perceptions of the impact of reading difficulties for young people. *Australian Journal of Learning Difficulties*, 25, 51-64.

DSF Literacy and Clinical Services (2019). *Understanding Learning Difficulties – A Practical Guide (Revised Edition)*. DSF Literacy and Clinical Services.

Firth, N. & Frydenberg, E. (2011). *Success and dyslexia: Sessions for coping in the upper primary years*. Australian Council of Educational Research.

Francis, D.A., Caruna, N., Hudson, J.L. & McArthur, G.M. (2019). The association between poor reading and internalising problems: A systematic review and meta-analysis. *Clinical Psychology Review*, 67, 45-60.

Leitão, S., Dzidic, P., Claessen, M., Gordon, J., Howard, K., Nayton, M. & Boyes, M. (2017). Exploring the impact of living with dyslexia: The perspectives of children and their parents. *International Journal of Speech-Language Pathology*, 19, 322-344.

McArthur, G.M., Filardi, N., Francis, D.A., Boyes, M.E. & Badcock, N.S. (2020). Self-concept in poor readers: A systematic review and meta-analysis. *PeerJ*, 8, p. e8772. <https://doi.org/10.7717/peerj.8772>

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Conflicts of Interest

Mandy Nayton is the Chief Executive Officer of the Dyslexia-SPELD Foundation. Suze Leitão is a board member of the Dyslexia-SPELD Foundation. Mark Boyes and Mary Claessen are members of the Dyslexia-SPELD Foundation.

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Appendix

Outline of the *Clever Kids* program

Week	Topic	Content of the session
1	Introduction to the program and identifying personal strengths	Establishes that everyone in the group has reading difficulties, and that the group provides an opportunity to talk to other children likely to have experienced similar difficulties. Emphasises that although individuals with dyslexia may face challenges, they have many strengths as well. Students reflect on personal strengths and accomplishments
2	What do reading difficulties mean to me?	Discusses what reading difficulties are and provides students with opportunities to share how this impacts them. Highlights that students can be successful despite their learning difficulties.
3	How do you cope?	Introduces concepts of coping and emotion regulation. Explores different ways of coping and managing emotions and highlights that different strategies are useful in different situations. Discuss how to make helpful choices about coping with difficulties and managing emotions.
4	What are your goals?	Introduces SMART (specific, measurable, achievable, relevant, and time limited) goals and highlights how helpful coping and emotion regulation strategies are important in pursuing goals (particularly in planning and responding to problems as they arise).
5	Problem solving and managing negative emotions	Re-emphasises information from sessions 3 and 4 and applies it specifically to stress (and bodily manifestations of stress). Outlines fight, flight, freeze responses, and teaches specific stress regulation strategies (e.g. breathing exercises).
6	Choosing powerful thoughts	Introduces links between thoughts, feelings, and behaviour. Discusses how to identify and challenge unhelpful thoughts and self-beliefs. Provides an opportunity to apply positive thinking strategies to situations students identify as difficult.
7	Why be assertive?	Discusses differences between being assertive, aggressive, and passive (and potential outcomes of these). Highlights how to respond to difficulties by assertively trying to improve the situation, rather than acting aggressively towards others or withdrawing from the situation.
8	Assertiveness skills	Students have the opportunity to practice assertive verbal and non-verbal behaviour, including making assertive requests and using assertive body language.
9	Revision and integration	Reviews the concepts, skills, and strategies that have been covered in the program. Provides an opportunity for students to reflect on the progress they have made over the course of the program. Celebrates the successful completion of the program.

Box 3. Outline of the nine-week *Clever Kids* program (Boyes et al., 2020b)