



## UNDERSTANDING THE IMPORTANCE OF THE EARLY YEARS

### The extent of infant mental health disorders

*Mental health disorders during infancy are less well-recognised and researched than mental health disorders in childhood and adolescence. Early identification is important as the first three years of life are a formative period for rapid brain and behaviour development when infants are particularly sensitive to adverse experiences.<sup>1</sup> Infants and children with mental health disorders are vulnerable to experiencing adverse outcomes throughout their childhood and adulthood.*

### Infant mental health disorders:

- are challenging to diagnose
- are as prevalent as mental health disorders among older children and adolescents
- are more prevalent for children with maltreatment experiences
- often persist over time.

### What is infant mental health?

Infant research focuses on infants and young children from conception to age three.

In research with older children, adolescents and adults, definitions of mental health refer to an individual's ability to cope with the normal stresses of life, to contribute to their community and to experience an overall state of social and emotional wellbeing.<sup>2</sup> However, the definition of infant mental health is a little narrower. It refers to an infant's ability to:

- experience, express and manage emotions
- form close and secure relationships with parents and caregivers
- explore their environment and learn about the world.<sup>3</sup>

### What are infant mental health disorders?

In research with older children, adolescents and adults, mental illnesses or mental health disorders are defined as diagnosable health conditions such as depression and anxiety. They are generally characterised by a combination of abnormal thoughts, feelings, behaviours and relationships with others.<sup>2</sup>

As with mental health, mental disorders present differently in infancy. Features of mental health disorders in infancy can include:

- having trouble calming down after being upset, or in controlling moods and behaviour<sup>4</sup>
- challenges with separating from parents<sup>4</sup>
- persistent crying, irritability and problems with feeding and sleeping.<sup>5</sup>

## How are infant mental health disorders assessed?

Diagnosing infant mental health disorders is challenging. One challenge is differentiating between behaviours which occur as part of normal development and which may be short term in nature, such as persistent crying or separation anxiety, and behaviours which are early indicators of mental health disorders.

A second challenge is that diagnostic tools such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) and the International Classification of Diseases (ICD-10) are designed for older children and adults and may not assess infant symptoms well.<sup>1</sup> Assessment measures for infants such as the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC:0-5) are gaining recognition but are not yet as widely accepted as the DSM-5 and ICD-10.<sup>6</sup>

Some researchers assess infant mental health disorders by exploring the prevalence of behaviours indicative of future mental health diagnoses such as excessive crying. They use rating scales and symptom checklists such as the Child Behaviour Checklist (CBCL)<sup>7</sup> or the Strengths and Difficulties Questionnaire.<sup>8</sup> Other researchers apply standard tools such as the DSM-5 and the ICD-10 or the emerging DC:0-5 to diagnose rates of mental health disorders such as anxiety or depressive disorders.

## How many infants experience mental health disorders?

Relative to the research examining rates of child and adolescent mental health problems, research on the prevalence of mental health disorders in infants is much more limited.<sup>9</sup> Infant mental health disorders can often go unrecognised due to a lack of awareness of signs and symptoms, and difficulties in assessing and diagnosing young children.<sup>1</sup>

The diverse range of tools used to assess infant mental health problems leads to a large range in reported prevalence rates across studies. Nevertheless, studies suggest that overall, rates of mental health disorders in young children in the general population are comparable to rates among older children and adolescents<sup>10</sup> (between 10 and 20 per cent).<sup>11</sup>

Best estimates of mental health disorders among infants and young children have come from international research which has found prevalence rates of:

- between 16 and 18 per cent within a cohort of Danish children aged 18 months, including problems with emotions, behaviour and eating<sup>12</sup>
- around 7 per cent within a cohort of Norwegian children aged 4 years, including diagnoses of attention deficit disorder, conduct disorder, anxiety disorders and depressive disorders<sup>13</sup>
- 12 per cent within a cohort of German 5- and 6-year-old children.<sup>14</sup>

Most Australian research on mental health disorders has focused on prevalence rates among older children. Key findings are that:

- more than 13 per cent of children aged four to 11 years experienced a diagnosable mental health condition in the past 12 months including ADHD, anxiety disorders, conduct disorders and major depressive disorders<sup>15</sup>
- an estimated 23 per cent of Aboriginal children aged 4–10 years experienced psychological distress compared to 8 per cent of non-Aboriginal children the same age.<sup>16</sup>

## How does child maltreatment affect infant mental health problems?

Research has found that rates of mental health disorders are significantly higher among infants and young children with child maltreatment experiences. Studies examining mental health disorders among preschool children in out-of-home care (OOHC) have found:

- a prevalence rate of 65 per cent within a cohort of US children entering OOHC aged 0–3 years including diagnoses of adjustment disorders, language disorders, reactive attachment disorder and post-traumatic stress disorder<sup>17</sup>
- age at entry into OOHC and the number of placements were significantly associated with the number of mental health problems within a New South Wales cohort of children aged 0–6 years. There was an 18 per cent increased rate of mental health problems for each additional year of age at entry into care. There was a 15 per cent increased rate of mental health problems for each additional placement the child experienced<sup>18</sup>
- within a large sample of New South Wales children, those who experienced maltreatment in early childhood (before the age of 5 years) were at a heightened risk of experiencing mental health disorders in middle childhood. Ten per cent had a record of at least one mental health disorder diagnosis compared to three per cent of children with no child protection contact.<sup>19</sup>

## Do infant mental health disorders persist over time?

A range of evidence suggests that mental health disorders or mental health symptoms presenting during infancy persist over time.<sup>1, 10</sup>

Examples of relevant findings include that:

- in a sample of Victorian children, children classified as having moderate to severe regulatory problems at 12 months were more likely to experience clinically significant mental health problems at age 5 and 11 years and to have these symptoms persist over time<sup>5</sup>
- in a sample of Dutch children, excessive infant crying during the 13th week after birth doubled the risk of a child experiencing problem behaviours at age 5–6 including conduct problems, hyperactivity and mood problems<sup>20</sup>
- in a sample of UK children, problems experienced in infancy, including excessive crying and problems with sleeping and feeding, were associated with negative behavioural outcomes in early and middle childhood<sup>21</sup>
- infants with multiple moderate-to-severe regulatory problems experience substantially heightened odds of clinically significant mental health concerns during childhood, and these symptoms appear to worsen over time.<sup>5</sup>

## Conclusion

Infant mental health disorders affect large numbers of very young children. Given that features of mental health disorders in infancy often appear to persist and even worsen over time, there is value in intervening early, before more long term problems become entrenched. Given the heightened risk of problems among children who have experienced child maltreatment, a focus on supporting this group of infants ought to be a priority. Future summaries will examine causes of infant mental health disorders and review programs and supports shown to improve infant mental health outcomes.

### Seeking your feedback

This research summary addresses one of the topics within the Queensland Family and Child Commission's research agenda. The research agenda identifies opportunities to expand the evidence base and to improve services and outcomes around matters that are relevant to Queensland children, young people and families. We welcome your feedback on this research summary which can be provided via the QR code.



## References

- 1 Lyons-Ruth, K., Manly, J. T., Von Klitzing, K., Tamminen, T., Emde, R., Fitzgerald, H., Paul, C., Keren, M., Berg, A., Foley, M. & Watanabe, H. (2017). *The worldwide burden of infant mental and emotional disorder: Report of the Task Force of the World Association for Infant Mental Health*. <https://doi.org/10.1002/imhj.21674>
- 2 Australian Institute of Health and Welfare (2020). *Australia's children*. <https://www.aihw.gov.au/reports/children-youth/australias-children/contents/health/children-mental-illness>
- 3 Children's Health Queensland Hospital and Health Service (2021). *Perinatal and infant mental health*. <https://www.childrens.health.qld.gov.au/chq/our-services/mental-health-services/qcpimh/infant-perinatal-mental-health/>
- 4 Emerging Minds (2021). *What is infant mental health?* <https://emergingminds.com.au/our-work/what-is-child-mental-health/>
- 5 Cook, F., Giallo, R., Hiscock, H., Mensah, F., Sanchez, K. & Reilly, S. (2019). Infant regulation and child mental health concerns: A longitudinal study. *Pediatrics*, 143(3). <https://doi.org/10.1542/peds.2018-0977>
- 6 Zero to Three (2020). *DC:0-5 Manual and training*. <https://www.zerotothree.org/resources/2221-dc-0-5-manual-and-training>
- 7 Achenbach, T. M. (1991). *Manual for the child behaviour checklist/4-18 and 1991 profile*. Department of Psychiatry, University of Vermont, Burlington, VT.
- 8 Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of The American Academy of Child and Adolescent Psychiatry*, 40(11), 1337-1345.
- 9 Ontario Centre of Excellence for Child and Youth Mental Health (2014). *Supporting Ontario's youngest minds: Investing in the mental health of children under 6*. <https://www.cymh.ca/Modules/ResourceHub/?id=AF13E20F-F63B-40B8-A2E4-84C98FF479DF>
- 10 Von Klitzing, K., Dohnert, M., Kroll, M., & Grube, M. (2015). Mental disorders in early childhood. *Deutsches Arzteblatt International*, 112(21-22), 375-386. <https://doi.org/10.3238/arztebl.2015.0375>
- 11 World Health Organization (2003). *Caring for children and adolescents with mental disorders: Setting WHO directions*. Geneva, Switzerland: Author.
- 12 Skovgaard, A.M., Houmann, T., Christiansen, E., Landorph, S., Jørgensen, T., CCC 2000 Study Team, Olsen, E. M., Heering, K., Kaas-Nielsen, S., Samberg, V. & Lichtenberg, A. (2007). The prevalence of mental health problems in children 1 1/2 years of age? The Copenhagen Child Cohort 2000. *Journal of Child Psychology & Psychiatry*, 48(1), 62-70. <https://doi.org/10.1111/j.1469-7610.2006.01659.x>
- 13 Wichstrøm, L., Berg-Nielsen, T. S., Angold, A., Egger, H. L., Solheim, E. & Sveen, T. H. (2012). Prevalence of psychiatric disorders in preschoolers. *Journal of Child Psychology and Psychiatry* 53, 695-705.
- 14 Furniss, T., Beyer, T. & Guggenmos, J. (2006). Prevalence of behavioural and emotional problems among six-year-old preschool children: Baseline results of a prospective longitudinal study. *Social Psychiatry and Psychiatric Epidemiology* 41(5), 394-9. <https://doi.org/10.1007/s00127-006-0045-3>
- 15 Lawrence, D., Johnson, S., Hafekost, J., Boterhoven De Haan, K., Sawyer, M., Ainley, J., & Zubrick, S. R. (2015). *The mental health of children and adolescents. Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing*. <https://www.health.gov.au/resources/publications/the-mental-health-of-children-and-adolescents>
- 16 Twizeyemariya, A., Guy, S., Furber, G. & Segal, L. (2017). Risks for mental illness in Indigenous Australian children: A descriptive study demonstrating high levels of vulnerability. *The Milbank Quarterly*, 95, 319-357. <https://doi.org/10.1111/1468-0009.12263>
- 17 Reams, R. (1999). Children birth to three entering the state's custody. *Infant Mental Health Journal*, 20(2), 166-174.
- 18 Lok, L. & Tzioumi, D. (2015). Mental health needs of children in out-of-home care. *Journal of Paediatrics and Child Health*, 51, 7-8.
- 19 Green, M. J., Hindmarsh, G., Kariuki, M., Laurens, K. R., Neil, A. L., Katz, I., Chilvers, M., Harris, F. & Carr, V. J. (2019). Mental disorders in children known to child protection services during early childhood. *The Medical Journal of Australia*, 212(1), 22-28. <https://doi.org/10.5694/mja2.50392>
- 20 Smarius, L. J. C. A., Strieder, T. G. A., Loomans, E. M., Doreleijers, T. A. H., Vrijotte, T. G. M., Gemke, R. J. & van Eijsden, M. (2017). Excessive infant crying doubles the risk of mood and behavioural problems at age 5: Evidence for mediation by maternal characteristics. *European Child and Adolescent Psychiatry*, 26, 293-302. <https://doi.org/10.1007/s00787-016-0888-4>
- 21 Winsper, C. & Wolke, D. (2013). Infant and toddler crying, sleeping and feeding problems and trajectories of dysregulated behavior across childhood. *Journal of Abnormal Child Psychology*, 42(5), 831-843. <https://doi.org/10.1007/s10802-013-9813-1>