# Depression in children

**Julian Charles,** Mandana Fazeli

CPD


## Background

Major depressive disorder (MDD) in children (5–12 years of age) is a confronting and serious psychiatric illness. MDD has significant ramifications for the psychosocial development of the child, yet it remains under-recognised and undertreated. General practice is where these children and their parents will first present.

## Objective

The aim of this article is to provide general practitioners (GPs) with a framework for considering MDD in a child and recommendations for treatment.

## Discussion

Children with MDD have the same core features as adolescents and adults, taking into account the child's capacities for cognition and language, and developmental stage. Earlier onset of illness is associated with poorer outcomes and greater psychiatric morbidity persisting into adulthood. MDD is more common than anticipated, and should be considered for any child presenting with depressive symptoms and/or impaired psychosocial functioning. Despite limited evidence, numerous interventions exist that will, ideally, significantly affect the child's developmental trajectory. GPs are in an important position to initiate these interventions.


Diagnosing major depressive disorder (MDD) in children (5–12 years of age) can be confronting. Important debates continue regarding the validity of psychiatric diagnoses, especially in children and adolescents.[1] Longitudinal research, however, has continually demonstrated that most adult disorders have their origins in childhood, and most childhood disorders have consequences that persist to adulthood.[2–4] There is evolving evidence to suggest MDD, as we currently understand it, can even exist in preschoolers.[5,6] Additionally, MDD that emerges in children aged 5–12 years can be severe and lead to poorer outcomes, compared with later onset MDD.[7–10]

Childhood MDD typically presents to primary care and is undertreated. Parents will often approach their general practitioner (GP) with concerns about their child's behaviour and/or with their child's complaints of somatic symptoms. It can be a challenging clinical scenario for GPs to recognise MDD in a child, and formulate the presenting problem in the broader system within which the child exists. GPs therefore need to have an understanding of how childhood MDD presents and how to assess and treat it, and have a network of professionals to whom children can be referred when necessary and appropriate.

## Childhood MDD: Risk factors and outcomes

Historically, society disregarded the notion that a child's mental health could be disturbed.[11] Prior to the 1970s, depression was typically viewed as an adult disorder because children were seen as too developmentally immature to have this disorder.[12] The American Psychiatric Association's *Diagnostic and statistical manual of mental disorders* (DSM) did not represent children until its third edition in 1980.[13] Since then, an established evidence base has demonstrated that children can meet DSM adult diagnostic criteria for MDD and that earlier onset of illness is associated with:[8,9,14]

- increased number and severity of depressive episodes
- increased medical and psychiatric comorbidity
- increased suicidality
- increased emergency department visits
- greater social, educational and quality-of-life impairment.

All of these associations have serious implications for prognosis and childhood development.

Childhood MDD is more common than generally realised, with studies suggesting its point prevalence is 1–2%.[15,16] These rates underestimate the number of children who do not meet DSM-5 diagnostic criteria for MDD, but who present to primary care with clinically significant depressive symptoms and functional impairment.[17] There is no marked gender difference when compared with adolescent-onset MDD. The prevalence increases to 4–5% with the onset of puberty,[6,7] largely accounted for by the increase in prevalence for girls, with the subsequent 2:1 female-to-male ratio.[12]

MDD is likely to be a final common pathway for complex, multifactorial aetiologies, including genetic, endocrine, biochemical, psychological, social and socioeconomic factors.[18,19] The diathesis-stress model[20] is a pragmatic way of integrating the various aetiology theories. This model implies that children have a pre-existing vulnerability through genetic, endocrine, biochemical or environmental factors, which then interacts with current psychological and social stressors. The vast majority of children presenting with MDD will have experienced longstanding psychosocial stressors, such as family or marital disharmony, divorce and separation, domestic violence, physical and sexual abuse, school difficulties (eg bullying, academic failure) or social isolation.[21,22] Chronic illness and disability are also important considerations (Table 1). Single risk factors associated with the onset of MDD are rare.[22] These children will also have had longstanding symptoms, comorbidity, and high levels of functional impairment before presentation and diagnosis,[21] which are important implications for a poorer prognosis.

## How does a depressive episode present in a child?

Depressive disorders in childhood, adolescence and adulthood are typically defined by the same underlying features: changes in mood, thinking and activity that are sufficient to cause impairment in personal and social functioning. In children, however, there are important differences, depending on their developmental stage, in determining how an episode of MDD will present. Children will also vary in their ability to describe their internal world because of their speech and language capacity, cognitive function, level of distress/disorder, and modelling opportunities (Table 2).

Children with depression typically find it hard to say positive things about themselves, and blame themselves for difficulties in their lives.[22] Children are less likely to talk about subjective feelings and more likely to present with somatic symptoms (eg headache, abdominal and musculoskeletal pain, fatigue).[21,23] Children present more with mood lability, irritability and temper tantrums rather than depressed mood.[24] They may also express more 'externalising' behaviours and be misdiagnosed with 'oppositional defiant disorder' and 'conduct disorder'.[22,24] Children may deny feeling sad, but acknowledge feeling 'down' or 'grumpy'.[22]

Younger children tend not to look depressed. Insomnia, weight loss, and increased or new onset of anxiety symptoms appear more common in younger children, whereas the neurovegetative symptoms of depression (more often seen in adolescents) such as hyperphagia, hypersomnia, weight gain and psychomotor retardation seem to increase with age.[21] Anhedonia and social withdrawal remain significant symptoms and it is suggested that the presence of anhedonia in a younger child is a sign of severe illness.[25]

**Table 1. Risk Factors for developing MDD in childhood**

| Social | | | Individual |
|---|---|---|---|
| **Family** | **Friends** | **High-risk group** | |
| Persistent family disagreement and/or parental discord<br>Single parent<br>Abuse/neglect; exposure to domestic violence<br>Lack of authorative parenting and parental monitoring<br>Psychiatric illness in parent(s) (especially depression, maternal postnatal depression, substance use)<br>Sudden events in family (death, serious illness, separation) | Absence of intimate relationship<br>Low number and infrequent contact with friends<br>Being bullied and/or bullying<br>Recent, severe personal disappointment with a close friend | Refugees and asylum seekers<br>Aboriginal and Torres Strait Islander peoples<br>Children in out-of-home care<br>People with sexual minority status<br>Homeless<br>'Offenders', particularly those in secure institutions<br>Victims of community disaster | Family history of psychiatric illness – genetic risk<br>Past history of major depressive disorder<br>Attention deficit hyperactivity disorder, disruptive disorders of childhood<br>Neurodevelopmental disorder/ autism spectrum disorder/learning disorder<br>Complex physical illness/disability<br>Cognitive style (self-devaluation and ruminative style)<br>Lower intelligence quotient (IQ) and educational aspiration |

**Table 2. MDD symptom presentation in children aged 5–12 years**

| MDD symptoms | How symptoms may present in a child |
|---|---|
| Depressed mood | Irritable, temper outburst, cranky, unhappy, miserable |
| Anhedonia/lack of interest | Loss of interest in pleasurable activities (eg does not want to see friends, do usual activities) |
| Somatic symptoms | Stomach ache, headache, musculoskeletal pain, fatigue |
| Sleep disturbance | Change in sleep |
| Appetite disturbance | Failure to meet expected weight gain, not getting hungry, eating too much |
| Concentration | Concentration difficulty |
| Motor | Moving and walking slowly, restlessness |
| Cognitions | Guilt, fear of bad things going to happen, being bad person, hating themselves, thinking no one loves them, negative comments about themselves |
| Suicidal ideation | Thoughts of death/talk about death/wanting to kill themselves |
| Behaviour | Anger, aggression, poor impulse control, separation anxiety |
| Function | Social withdrawal, impairment in relationships with family/friends, reduced activities, decline in academic performance |

Thoughts about suicide and death increase with age, but still occur in a significant proportion of children under 12 years of age.[21,24] Their conceptualisation of death and the language used around death and suicide will vary depending on the child's age. Self-injury also occurs in children under 12 years of age, with no marked gender difference in rate. The method of 'hitting self' is more frequent in younger children. This remains the most common method in older boys, whereas 'cutting' becomes more common with older girls.[26]

The severity of MDD – mild, moderate, severe – is based on the number of symptoms present (ie minimum to meet diagnosis versus majority symptoms present), distress generated by the intensity of the symptoms and subsequent psychosocial impairment.[27]

## The GP's assessment

Assessing a child who presents with symptoms of MDD takes time – the anathema of a busy GP. However, the majority of children with MDD are assessed and treated within the primary sector; only a small percentage are managed within a child psychiatric service. Therefore, in the majority of cases, it is the GP who needs to ensure they have a comprehensive understanding of the clinical scenario. Generating a formulation on the basis of your assessment is paramount, despite it inevitably being incomplete; a diagnosis and formulation is what informs management (Table 3).

Differential diagnoses of physical illnesses are important to consider. Limited evidence exists to guide pathology investigations in children with MDD. It would be prudent to consider physical examination and investigations for anaemia, thyroid dysfunction, vitamin deficiencies, viral (and post-viral) illnesses and diabetes (Box 1).

## Screening tools

Screening scales and structured interviews based on the DSM-5 framework are the methods commonly used to screen and assess depression in children.[28] Using these questionnaires can be helpful in detecting symptoms that are important but not part of the initial complaint. They are usually designed in short and long versions, and include separate forms for parents and/or teachers. The number of valid instruments for children under 12 years of age is limited.[28] Commonly, recommended questionnaires to use in primary care for assessing childhood MDD include:

- Preschool Feelings Checklist, including 16 'Yes' or 'No' questions, www2.tulane.edu/som/tecc/upload/Preschool-feelings-checklist.pdf
- Mood Feeling Questionnaire (MFQ) for children aged eight years and older, http://devepi.duhs.duke.edu/mfq.html
- Children's Depression Inventory 2 (CDI 2) for children aged seven years and older, www.pearsonclinical.com.au/products/view/448

## Treatment from a GP's perspective

GPs are ideally placed to engage with the child and their parents, and commence treatment – an enormous amount can be

**Box 1. Important considerations as part of a routine biopsychosocial assessment**

**The beginnings of a formulation**

- The child and a particular range of symptoms is usually presented by another. This unique scenario holds important information about the child's care system and how they are impacted.
- Who is this child and family, and why are they presenting now? Reasons can rarely be attributed solely to the child. What is happening in the home, school and broader system for this child/family?
- Ask parents their theory as to why their child is presenting like this.
- Treatment will remain inadequate unless precipitating and perpetuating factors are addressed.
- Ascertain knowledge of the child and their care system's strengths and protective factors. A helpful assumption is this child and their parent(s) are trying their best to manage.
- Consider all risk factors.

**Working with the family system**

- Establish trust, as sensitive issues need to be explored with the child and parent(s).
- Explore relationship difficulties within the family and screen for abuse or neglect – more common than anticipated.
- Is the child symptomatic of dysfunction in the family system?
- Is there parental mental illness? Evidence demonstrates children of parents with mental illness have increased risk for a broad range of mental health disorders[35] and children of mothers with depression are at an increased risk of developing MDD[36] – likely a combination of genetic and environmental risk factors.

**Exploring symptoms**

- Account for developmental issues in understanding the child's symptoms.
- Ask about thoughts of death and suicide even in younger children. The language of the questions will need to be adjusted when exploring this. For example, 'How do you feel about living?' 'Is it worthwhile living?' 'Do you have a future?'
- Ask open-ended questions about self-injury; explore various self-injury methods.
- Determine the functional impairment for this child.

**Comorbidity and differential diagnoses**

- Consider the lens you are looking through given extensive symptom overlap exists with other psychiatric disorders (a significant impediment of categorical diagnoses).
- Comorbidity is the rule – concurrent symptoms of anxiety and behavioural disturbance are present in almost all cases.[22] Consider ADHD, anxiety disorders (including separation anxiety) and learning disorders.[8]
- Consider cognitive, speech and language functioning – impairments in these areas are under-recognised and have tremendous impact on a child's educational and psychosocial trajectory.[37]
- Try to differentiate between an unhappy or sad and pervasively depressed child.
- Differential diagnoses may include sadness, persistent depressive disorder (dysthmia), anxiety disorders, and adjustment disorder with depressed mood. Although rare in this age group, bipolar depression needs to be considered, particularly in those with a family history of bipolar disorder or psychotic illness.
- Rule out medical conditions causing/contributing to MDD, using pathology investigations only as clinically indicated.
- Early consideration and proactive diagnosis of the psychogenic origins of physical symptoms.

achieved within general practice, and simple remedies are often all that is required.[29] The assessment process in itself is often the beginning of treatment. It is crucial that the philosophy guiding management views the whole child and their system, not just a particular pattern of signs and symptoms.[22]

## Suggested GP interventions

### Biological aspects

- Address sleep problems.
- Initiate behavioural activation and scheduling of pleasurable activities.
- Encourage exercise and healthy diet.

### Psychological aspects

- Provide psycho-education for the child, family or school regarding your formulation of the problem and diagnosis.
- Offer self-help approaches, such as educational leaflets, online resources, help lines, self-diagnosis tools, peer, social and family support groups, complementary therapies or religious and spiritual groups.[22]
- Treat whatever ensures engagement if there is comorbidity.
- Follow up – in addition to monitoring the trajectory/response to treatment, do not underestimate the 'containment' of anxiety for the child and family by offering follow-up. This communicates you are 'holding them in mind' and will be part of their journey through this challenging time.

**Table 3. Common approach to formulation – Factors to consider in a child presenting with MDD**

| | Predisposing | Precipitating | Perpetuating | Protective |
|---|---|---|---|---|
| **Biological** | Genetic (considering the gene-environment interaction)<br>Physical illness | Hormonal effect, puberty<br>Physical illness, medications | Impact of past episodes<br>Physical illness, medications | Absence of comorbidity |
| **Psychological** | Temperament<br>Cognitive style<br>Poor emotion regulation skills<br>Low perceived academic and social competence | Acute life event and its meaning for child | Impact of past episodes | Absence of comorbidity<br>Sense of humour<br>High to normal intelligence<br>Adaptive emotion regulation skills<br>Problem-focused coping style |
| **Social** | Familial adversity<br>Life events<br>Parental mental illness | Acute and chronic life events | Impact of past episodes<br>Continuing familial adversity<br>Poor peer relationships | Positive friendship networks<br>Close relationship with one or more family members<br>Socially valued<br>Personal achievements |

### Social aspects

- Coordinate care team or key stakeholders.
- Enhance child and their family's strengths or protective factors.
- Liaise with school.
- GPs may experience subtle pressure from parents to diagnose the problem 'within the child', prescribe medication or make a referral to a psychologist. Helping parents appreciate the multifactorial aetiologies for any child with MDD, and the importance of taking the time to develop this understanding in order to advance a comprehensive treatment approach with a greater chance of effecting change, may alleviate some of this pressure.
- Actively address modifiable risk factors – for example, bullying at school, abuse or neglect at home, parents with mental illness or substance use.
- Always consider the needs of the child at home when your patient is a parent with a mental illness or substance use disorder. Consider referral to services such as 'Children of Parents with a Mental Illness' (refer to 'Resources').

## Formal psychological interventions and referral

Ideally, a GP should feel supported at any point of uncertainty via primary or secondary consultation with a child psychiatrist or psychiatric service. Options for treatment will depend on services available – they remain limited in more remote areas.

An initial period (<4 weeks) of 'watchful waiting' is reasonable for those with mild illness and/or who do not want an intervention beyond what they can achieve with their GP.[22] Referral for psychological therapy should occur if there is no improvement after this time, or if moderate-to-severe illness is present. The most common formal psychological treatments in children include cognitive behavioural therapy (CBT; individual or group), interpersonal therapy (IPT), family therapy and individual psychodynamic psychotherapy.[22] No clear evidence exists for one therapy over another,[22] although CBT or IPT may offer slightly greater efficacy.[30]

Referral to a child psychiatrist or psychiatric service is suggested:

- in mild illness if there is minimal improvement with an adequate trial (two to three months) of non-pharmacological interventions
- in moderate-to-severe illness
- if high-risk suicidal ideation is present
- if the GP or parents are considering medication.

## Medication

Antidepressant medications can be considered in severe illness if symptoms do not improve with an adequate trial of psychological therapy (about six sessions),[22] or if symptoms are particularly disabling. Careful review of formulation/diagnosis and treatment thus far is recommended first. A discussion with the child and their parents should occur regarding the paucity of evidence for antidepressants in this age group;[22,31] a risk–benefit analysis, including the small risk of increased behavioural disturbance and suicidal ideation, should be discussed.[32] If an antidepressant is started, the child should be reviewed weekly for the first month to assess suicidal thoughts, behavioural changes and side effects.[22] It is recommended that medication only be prescribed by a child psychiatrist and alongside psychotherapy.[22] There is mixed evidence to suggest the combination of medication and psychotherapy may have superior efficacy to either alone.[33,34]

Evidence for the efficacy of antidepressants in children is lacking, and the majority of trials suggest minimal or no benefit over placebo, potentially doing more harm than benefit.[31] Fluoxetine is the only antidepressant with demonstrated efficacy over placebo in children.[31] No antidepressant, including fluoxetine,

is approved by the Therapeutic Goods Administration for use in patients under 18 years of age, but they can still be legally prescribed. In the UK, fluoxetine and sertraline, and in the US, fluoxetine and escitalopram, are licensed for the treatment of moderate-to-severe depression in children aged eight years and older. Fluoxetine is the first-line choice, commencing at 10 mg per day and titrating to 20 mg per day if required, and continued for six months post-remission to prevent relapse.[22] Sertraline, citalopram or escitalopram are considered if fluoxetine is ineffective or not tolerated.[22] Venlafaxine and paroxetine should be avoided in children because of significant adverse effects.[31]

## Key points

- MDD does occur in children aged 5–12 years.
- MDD has a negative impact on the child's psychological and social development, and its earlier onset is associated with increased risk of recurrence, psychiatric morbidity and impaired quality of life going into adulthood.
- Childhood MDD usually first presents in primary care, and children have often experienced severe and longstanding symptoms and considerable functional impairment prior to assessment and diagnosis.
- Understanding all risk factors for children developing MDD helps a GP to consider depression as a real possibility, and also address modifiable risks while promoting protective factors in children at high risk.
- Formulating the child's experience in a broad context is important to address the numerous factors likely to contribute to his or her presentation of MDD.
- Treatment involves psychosocial interventions aimed at the individual, family and systemic levels, with minimal evidence for the efficacy of antidepressant medication.
- It is essential for GPs to be able to recognise, assess and initiate management for childhood MDD in order to optimise the child's developmental trajectory and mental health.

## Resources

- National Institute for Health and Care Excellence – impressive and user-friendly, interactive guideline on depression in children and young people, www.nice.org.uk/guidance/cg28
- Raising Children Network – Australian parenting website, http://raisingchildren.net.au/search.aspx?q=depression
- Children of Parents with a Mental Illness, www.copmi.net.au
- TEDtalk by paediatrician on the consequences of adverse childhood experiences, www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime

### Authors

Julian Charles BSc (Hons), MBBS, RANZCP, CAP, Psychiatrist at University Hospital, Geelong, Barwon Health, Vic. charlesjulian@hotmail.com

Mandana Fazeli MBBS-MD, Psychiatric registrar at University Hospital, Geelong, Barwon Health, Vic

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### References

1. Rutter M. Research review: Child psychiatric diagnosis and classification: Concepts, findings, challenges and potential. J Child Psychol Psychiatry 2011;52(6):647–60.
2. Kovacs M, Feinberg TL, Crouse-Novak M, Paulauskas SL, Pollock M, Finkelstein R. Depressive disorders in childhood. II. A longitudinal study of the risk for a subsequent major depression. Arch Gen Psychiatry 1984;41(7):643–49.
3. Geller B, Zimerman B, Williams M, Bolhofner K, Craney JL. Adult psychosocial outcome of prepubertal major depressive disorder. J Am Acad Child Adolesc Psychiatry 2001;40(6):673–77.
4. Thapar A, Pine DS, Leckman JF, Scott M, Snowling MJ, Taylor EA, editors. Rutter's child and adolescent psychiatry. 6th edn. Milton, Old: Wiley-Blackwell, 2015; p. 5.
5. Luby J, Gaffrey MS, Tillman R, April LM, Belden AC. Trajectories of preschool disorders to full DSM depression at school age and early adolescence: Continuity of preschool depression. Am J Psychiatry 2014;171(7):768–76.
6. Costello EJ, Erkanli A, Angold A. Is there an epidemic of child or adolescent depression? J Child Psychol Psychiatry 2006;47(12):1263–71.
7. Costello EJ, Egger H, Angold A. 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. J Am Acad Child Adolesc Psychiatry 2005;44(10):972–86.
8. Korczak DJ, Goldstein BI. Childhood onset major depressive disorder: Course of illness and psychiatric comorbidity in a community sample. J Pediatr 2009;155(1):118–23.
9. Zisook S, Lesser I, Stewart JW, et al. Effect of age at onset on the course of major depressive disorder. Am J Psychiatry 2007;164(10):1539–46.
10. Altamura, AC, Dell'Osso B, Vismara S, Mundo E. May duration of untreated illness influence the long-term course of major depressive disorder? Eur Psychiatry 2008;23(2):92–96.
11. Aries P. Centuries of childhood: A social history of family life. New York: Vintage Books, 1962; p. 33–50.
12. Maughan B, Collishaw S, Stringaris A. Depression in childhood and adolescence. J Can Acad Child Adolesc Psychiatry 2013;22(1):35–40.
13. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 3rd edn. Washington DC: American Psychiatric Association, 1980.
14. Birmaher B, Ryan ND, Williamson DE, et al. Childhood and adolescent depression: A review of the past 10 years. Part I. J Am Acad Child Adolesc Psychiatry 1996:35(11):1427–39.
15. Lawrence D, Johnson S, Hafekost J, et al. The mental health of children and adolescents: Report on the second Australian child and adolescent survey of mental health and wellbeing. Part 2. Canberra: Department of Health, 2015. Available at www.health.gov.au/internet/main/publishing.nsf/content/mental-pubs-m-child2 [Accessed 20 June 2017].
16. Perou R, Bitsko RH, Blumberg SJ, et al. Mental health surveillance among children—United States, 2005–2011. Morbidity and Mortality Weekly Report. Atlanta: Centers for Disease Control and Prevention, 2013. Available at www.cdc.gov/mmwr/pdf/other/su6202.pdf [Accessed 20 June 2017].
17. Angold A, Costello EJ, Farmer EM, Burns BJ, Erkanli A. Impaired but undiagnosed. J Am Acad Child Adolesc Psychiatry 1999;38(2):129–37.
18. Rice F, Harold G, Thapar A. The genetic aetiology of childhood depression: A review. J Child Psychol Psychiatry 2002;43(1):65–79.
19. Zalsman G, Oquendo MA, Greenhill L, et al. Neurobiology of depression in children and adolescents. Child Adolesc Psychiatr Clin N Am 2006;15(4):843–68.
20. Hankin BL, Abela JRZ, editors. Depression from childhood through adolescence and adulthood. A developmental vulnerability and stress perspective. Thousand Oaks, CA: Sage Publications, 2005; p. 245–88.
21. Korczak DJ, Ofner M, LeBlanc J, Wong S, Feldman M, Parkin PC. Major depressive disorder among preadolescent Canadian children: Rare disorder or rarely detected? Acad Pediatr 2017;17(2):191–97.
22. National Institute for Health and Care Excellence. Depression in children and young people. London: NICE, 2005. Available at www.nice.org.uk/guidance/cg28 [Accessed 25 June 2017].
23. Baji I, Lopez-Duran NL, Kovacs M, et al. Age and sex analyses of somatic complaints and symptom presentation of childhood depression in a Hungarian clinical sample. J Clin Psychiatry 2009;70(10):1467–72.
24. Weiss B, Garber J. Developmental differences in the phenomenology of depression. Dev Psychopathol 2003;15(2):403–30.
25. Goodyer IM. Physical symptoms and depressive disorders in childhood and adolescence. J Psychosom Res 1996;41(5):405–08.

26. Barrocas AL, Hankin BL, Young JF, Abela JRZ. Rates of nonsuicidal self-injury in youth: Age, sex, and behavioural methods in a community sample. Pediatrics 2012;130(1):39–45.
27. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th edn. Washington DC: American Psychiatric Association, 2013; p. 188.
28. Klein DN, Dougherty LR, Olino TM. Toward guidelines for evidence-based assessment of depression in children and adolescents. J Clin Child Adolesc Psychol 2005;34(3):412–32.
29. Goodyer I, Dubicka B, Wilkinson P, et al. Selective serotonin reuptake inhibitors (SSRIs) and routine specialist care with and without cognitive behaviour therapy in adolescents with major depression: Randomised controlled trial. BMJ 2007;335(7611):142.
30. Zhou X, Hetrick SE, Cuijpers P, et al. Comparative efficacy and acceptability of psychotherapies for depression in children and adolescents: A systematic review and network meta-analysis. World Psychiatry 2015;14(2):207–22.
31. Cipriani A, Zhou X, Del Giovane C, et al. Comparative efficacy and tolerability of antidepressants for major depressive disorder in children and adolescents: A network meta-analysis. Lancet 2016;388(10047):881–90.
32. Li W, Li W, Wan Y, Ren J, Li T, Li C. Appraisal of the methodological quality and summary of the findings of systematic reviews on the relationship between SSRIs and suicidality. Shanghai Arch Psychiatry 2014;26(5):248–58.
33. Calati R, Pedrini L, Alighieri S, et al. Is cognitive behavioural therapy an effective complement to antidepressants in adolescents? A meta-analysis. Acta Neuropsychiatr 2011;23(6):263–71.
34. Cox GR, Callahan P, Churchill R, et al. Psychological therapies versus antidepressant medication, alone and in combination for depression in children and adolescents. Cochrane Database Syst Rev 2012;11:CD008324.
35. Smith M. Parental mental health: Disruptions to parenting and outcomes for children. Child Fam Soc Work 2004;9:3–11.
36. Weissman MM, Gammon GD, John K, et al. Children of depressed parents. Increased psychopathology and early onset of major depression. Arch Gen Psychiatry 1987;44(10):847–53.
37. Baker L, Cantwell DP. A prospective psychiatric follow-up of children with speech/language disorders. J Am Acad Child Adolesc Psychiatry 1987;26(4):546–53.

correspondence **afp@racgp.org.au**