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Optimising the management of depression in children

Oros A, Cini E, Cutinha D. Optimising the management of depression in children.
Practitioner July/August 2020;264(1839):21-26

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SPECIAL REPORT

Optimising the management of depression in children

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What are the diagnostic criteria?

How should risk assessment be performed?

When should patients be referred?

OVERALL, 3.2% OF CHILDREN AGED 3-17 YEARS HAVE BEEN DIAGNOSED WITH depression, according to a US study.[1]

In a large meta-analysis prevalence of depression was twice as common in adolescents (5.7%) than children (2.8%).[2] The 2:1 female to male ratio of depression seen in adults[3] becomes apparent from the age of 12 years.[4]

Between 40 and 70% of young people presenting with a major depressive disorder may also have comorbid mental health conditions.[5] The most common are anxiety, attention deficit disorder (ADHD), substance misuse, obsessive compulsive disorder (OCD), autism spectrum disorder and eating disorders.[6,7] Three quarters of children aged 3-17 years with depression also have anxiety, and almost half have associated behaviour problems.[1]

Depression without mania or hypomania is referred to as unipolar depression.[7] In bipolar affective disorder depression is associated with mania or hypomania.[7] Mania is a marked elevation in mood and is associated with a number of other cognitive and biological features.[8] The symptoms of hypomania are similar to mania but are less intense and of a shorter duration (see box 1, right).

Many young people with bipolar disorder experience depression before the onset of mania. The presence of depression should always prompt a brief enquiry about possible manic or hypomanic symptoms, either currently, in the past, or a family history.[8]

A careful assessment of manic symptoms is essential because bipolar disorder tends to be more severe, is associated with more self-harm behaviours and increased suicide risk compared with unipolar depression.[8]

The prevalence of bipolar disorder in depressed adolescents is around 10%. It may be higher in children who have a family history of bipolar disorder or in those who have had manic symptoms while on »

Box 1

Symptoms of mania and hypomania[7]

Mania
Distinct period of abnormally and persistently elevated, expansive or irritable mood and abnormally and persistently increased activity or energy, lasting at least 4/7 consecutive days, present most of the days, nearly every day

During this period of mood disturbance, some of the following symptoms, representing a noticeable change from usual behaviour, have persisted to a significant degree:
- Inflated self-esteem or grandiosity
- Reduced need for sleep
- More talkative than usual or pressure to keep talking
- Flight of ideas or subjective experience that ideas are racing
- Distractibility, reported or observed
- Increase in goal-directed activity or psychomotor agitation
- Excessive involvement in activities that have a high potential for painful consequences

Hypomania
The symptoms of hypomania are similar to those of mania but are less intense, fewer in number and of a shorter duration

antidepressants.[3] In the UK bipolar disorder is rarely diagnosed in children under the age of 13.[9]

DIAGNOSIS

The ICD and DSM criteria for depression are listed in table 1, below. A young person may be clinically depressed without presenting with low mood. The clinician should ask about the presence or absence of particular symptoms as children and adolescents will rarely volunteer this information, even if their symptoms are severe. It is also useful to consider risk factors for depression during the assessment.

Risk factors

- Age
- Gender: females are at greater risk than males from puberty onwards
- Loss e.g. death, parental divorce, separation, end of a relationship, moving home/school
- Stress/pressure at home/school
- Relationship problems at home/school
- Bullying: face to face/online
- Financial or housing worries
- Physical or mental illness in the individual or parent
- Abuse: emotional, physical or sexual
- Confusion about sexuality/gender
- Ethnic/cultural factors
- Young carer
- Alcohol/drug problems
- Self-harm

The criteria for a diagnosis of depression are at least four (ICD-10)[10] or five (DSM-5)[7] symptoms that are present, most of the time, for most days for a minimum of two weeks. At least one must be a core symptom. These symptoms must be associated with significant distress and/or impairment of social or occupational functioning. Depending on the number, type and intensity of symptoms, episodes of depression can be classed as mild, moderate, or severe.

The presentation of depression in adolescents is similar to that in adults. However, adolescents are more likely to experience vegetative symptoms, such as appetite and weight change, insomnia and energy loss alongside low mood.[11] Loss of energy is a central symptom in adolescent depression and can lead to further depressive symptoms; it can be an early symptom of depression in young people.

Symptoms in primary school-aged children may be subtle and include mood fluctuations, increased irritability, tearfulness, frustration or temper tantrums. Somatic presentations e.g. abdominal pain or headaches, are more common in younger children, who may struggle to express emotions verbally.[6] Increased irritability is also a common symptom of depression in this age group and can be more marked in boys than girls. Delusions and suicide attempts are less prevalent in children than adolescents.[6]

The variation in symptoms of depression with age is outlined in table 2, below.

Differential diagnosis

The most common medical and psychiatric conditions and developmental changes in children and adolescents that may present in a similar way to depression are listed in table 3, opposite. The presence of one or more of these conditions does not necessarily exclude the possibility of coexisting depression.

Dysthymia, also known as persistent

Table 1

ICD-10[10] and DSM-5[7] criteria for depression

Core	Biological	Cognitive
● Depressed mood (sad, empty, irritable, hopeless, tearful)	● Decreased energy or fatigue	● Guilt, worthlessness
● Decreased interest or pleasure in all/most activities	● Change in sleep (increased or decreased)	● Reduced concentration/thinking/ decisiveness
● Decreased energy or fatigue	● Change in weight (increased or decreased)	● Recurrent thoughts of death or suicide may be associated with plans or attempts
Key: ICD and DSM ICD only DSM only	● Observable psychomotor agitation/retardation	● Reduced self-esteem and self-confidence
		● Bleak and negative views about the future

Symptoms
- Must have a minimum of 4 (ICD) or 5 (DSM)
- Are present for at least two weeks
- Are present most of the time during this period
- Cause significant distress and/or impairment of social/occupational/other functioning

Table 2

Variation in depression symptoms with age[3]

Prepubertal children
- Irritability (temper tantrums, non-compliance)
- Reactive affect
- Somatic complaints
- Frequently comorbid with anxiety, behaviour problems, and ADHD

Adolescents
- Irritability (grumpy, hostile, easily frustrated, angry outbursts)
- Reactive affect
- Hypersomnia
- Increased appetite and weight gain
- Somatic complaints
- Extreme sensitivity to rejection (e.g. falsely perceived put-down or criticism) resulting, for example, in difficulty maintaining relationships

Adults
- Anhedonia
- Lack of affective reactivity
- Psychomotor agitation or retardation
- Diurnal variation of mood (worse in the morning)
- Early morning waking

depressive disorder, is defined by a depressed mood experienced most of the day, for more days than not, for at least a year. The onset of dysthymia in childhood and adolescence may increase the risk of developing personality disorders and substance use disorders.[7] Personality is, however, continuing to develop in adolescence and into mid to late adulthood.[12]

Severe depression may also be associated with psychosis. Where this occurs, it can pose a diagnostic challenge as it may be difficult to differentiate between psychotic depression, a manic episode and psychosis.[7,13]

RISK ASSESSMENT

The risk of a potentially harmful incident and the potential degree of harm needs to be evaluated regularly as it can change quickly. Risk assessment forms a bridge between assessment and management. A thorough risk assessment will also be therapeutic and lower the pre-existing level of risk. In clinical consultations compassion, warmth, sensitivity and patience have been shown to be associated with better outcomes.[13] These factors are especially important during risk assessments.

Risk can be divided into four main areas, risk: to self, to others, from others, to property. The two most significant risks are those that an individual poses to him/herself from self-harm or suicide.

A safety plan should be included in a risk assessment. This should cover measures to reduce the level of risk, e.g. telling parents, ensuring medications or sharp objects are locked up, increased parental supervision, and referral to child and adolescent mental health services (CAMHS)/A&E. Asking about thoughts of suicide or self-harm does not lead to an increase in the likelihood of either occurring.[14]

Self-harm and suicide

Self-harm is common in children and adolescents,[15] and is on the increase.[16] Those who self-harm may be suffering from a range of conditions and may not necessarily be clinically depressed. In some cases, although the intention may be just to self-harm, there may be a risk of accidental death, e.g. by cutting deeper than intended.

There are many reasons for self-harm – communication to others of distress, relief, self-punishment, a desire to 'feel' (if numb), conversion of emotional to physical pain which may be experienced as more real or manageable.[17]

Where young people are self-harming the associated level of risk may depend on several factors: the method, the degree of physical harm/damage caused, e.g. the depth and location of cuts, frequency, duration, intention (relief of distress or self-punishment).

Fortunately, completed suicide is relatively rare in children and adolescents. For every 100 reported suicide attempts, there is one completed suicide.[3] The risk of suicide is significantly increased in young people who self-harm.[18] A recent study found that the incidence of suicide in adolescent boys was more than twice that among adolescent girls, whereas self-harm was much more common in girls than boys.[19]

All young people who have taken overdoses should be referred to A&E,[18] even if they have taken relatively small amounts of tablets (e.g. 6 paracetamol). This is protective in case of under-reporting the number of tablets that were actually taken, and should trigger pathways for an urgent CAMHS review, preferably in hospital, or soon after discharge. It also sends a message that all overdoses are dangerous.

NICE guidelines for self-harm recommend that all young people who present to A&E with self-harm or following an overdose should be admitted to a paediatric ward overnight.[20] This increases the likelihood of a CAMHS review occurring in hospital, and that this review will be useful. However, overnight admission is a recommendation, and for good reasons, not all young people presenting with self-harm will necessarily be admitted. Hospitals may often routinely make a social services referral following presentations of self-harm as self-harm may signal a range of wider difficulties or distress.

Plans and protective factors

It is important to differentiate between thoughts, intent and plans. Thoughts represent the lowest level of risk; intent, intermediate; and plans or completed acts, the highest. Thoughts about suicide are a symptom of depression. The associated risks may be low if the individual has no intention of acting on them and has made no plans to do so. Thoughts of suicide, associated with a stated lack of intent and no associated significant recent previous attempts or plans, is not an emergency.

The relationship between intent and any recent acts also needs to be assessed and is not always straightforward. A completed act such as inflicting superficial scratches is a lower risk than a stated intention to self-harm by severing an artery.

Protective factors reduce the level of risk and should be enquired about such as effective coping strategies, hope, good relationships with family/friends, or future plans for a holiday or attending an event.

Key questions for risk assessment of self-harm and suicide are listed in box 2, p24. Key questions following an overdose are listed in box 3, p24.

Safety plans

A parent or other responsible adult should always be informed if you feel that the individual is at significant risk. If you are unable to obtain consent for information sharing then breaching confidentiality is justified.

A minor episode of self-harm, e.g. superficial cutting, may not need to be shared with parents in the short term if it can be used to build a therapeutic alliance that may lead to engagement with a plan for treatment, e.g. referral to CAMHS.

Involving parents in safety plans can significantly help to reduce levels of risk by reducing access to potentially harmful objects and providing comfort and support.

However, if the parents are not caring or supportive, and the individual is at significant risk, then another responsible adult and/or social services may need to be informed.

In an emergency, a child or adolescent should not have to go to A&E on their own. An adult should wait with them until another responsible adult can come to collect them, or arrangements are made for them to be escorted to hospital.

STEPPED CARE MANAGEMENT

The key roles for GPs in helping children and adolescents with depression are »

Table 3

Differential diagnosis of depression in children and adolescents

Normal	Psychiatric condition	Medical condition
● Sadness	● Anxiety	● Side effects of medication e.g. methylphenidate, corticosteroids
● Adolescent mood changes	● Eating disorder	● Endocrine e.g. thyroid, diabetes
● Grief/bereavement	● Substance misuse e.g. cannabis, alcohol	● Haematological e.g. anaemia, cancer
● Premenstrual tension	● Dysthymia/bipolar disorder/psychosis	● Neurological e.g. headaches/ chronic pain/epilepsy
	● ADHD	● Infections/inflammatory e.g. pneumonia, TB, HIV

detection, risk assessment and early referral. NICE recommends that patients should be referred to CAMHS in the following situations:

- Active suicidal ideas or plans
- Referral is requested by the patient or their parent(s) or carer(s)
- Depression with 2 or more risk factors or significant family history of depression
- Diagnosis of moderate/severe depression, or mild depression that has not responded to treatment in primary care
- Unexplained self-neglect of at least a month's duration that could be harmful to physical health

In cases of overdose or strong and imminent suicidal intent patients should be referred to A&E.

NICE recommends that children and adolescents should be treated by CAMHS unless the episode of depression is mild and of less than 2-3 months' duration. For mild depression, watchful waiting is recommended, with a review of the individual's mental state usually after 2 weeks. The NICE stepped care approach is shown in table 4, below.

The psychological interventions recommended by NICE are outlined in box 4, opposite.

Pharmacological therapy

While GPs may be very confident and experienced in the prescription of antidepressants in adults, NICE recommends that antidepressants should not be initiated in general practice for young people with depression or anxiety without advice from CAMHS. Prescribing and monitoring medication should be carried out under shared care arrangements with CAMHS.

Propranolol should not be prescribed for coexisting anxiety as it is much less effective in helping with the associated underlying thoughts and emotions than antidepressants prescribed for anxiety.

Antidepressants should only be prescribed in combination with psychological treatments and not given for mild depression.

Fluoxetine is the first-line medication recommended by NICE.[18] It was the only antidepressant shown to be more effective than placebo in children and adolescents in a large meta-analysis.[22] Second-line medications include sertraline and citalopram.[18] Paroxetine, venlafaxine and tricyclic antidepressants are not recommended in this age group as they are associated with higher risks of suicide and are more dangerous in overdose.[18]

On initiation of antidepressant treatment, CAMHS should undertake regular reviews, preferably weekly for the first 4 weeks, to monitor mental state and

Box 2

Key questions for risk assessment of self-harm and suicide

1 Do you ever have any thoughts about harming yourself or ending your life?
2 IF YES: Have you done anything to act on these thoughts?
3 IF NO: Do you have any intention of acting on these thoughts?
4 IF YES: Have you made any plans about how you will do it?
5 IF YES: Are there any good things in your life that might make you think twice about doing this?
6 Have you found any ways of coping with these difficult thoughts so far? These may be helpful e.g. distraction through listening to music, talking to friends, or unhelpful e.g. alcohol/drugs, self-harm, running away

Box 3

Key questions following an overdose

1 What have you taken? (tablets, quantity, strength)
2 When?
3 Have you taken anything else? (e.g. tablets or liquids, watch for staggered overdoses)
4 Was it planned or did you do it without thinking? (impulsive, lower risk)
5 Where were you when you took it? (at home with other people, lower risk)
6 Did you take any recreational drugs or drink any alcohol before taking the tablets? (intoxication may increase the liklihood of impulsivity in the absence of planning)
7 What was your intention when you took the tablets? (sleep, suicide, unclear)
8 Did you tell anyone about it afterwards? (seeking help, lower risk)
9 Do you have any regrets about it? (mistake, low risk; didn't work, high risk)
10 Do you have any thoughts of doing something like this again? (persistent intent, high risk)

PATHOS questionnaire[21]
P - Have you had **P**roblems for longer than one month?
A - Were you **A**lone in the house at the time?
T - Did you plan the overdose for longer than **T**hree hours?
HO - Are you feeling **HO**peless about the future?
S - Were you feeling **S**ad for most of the time before the overdose?

Responses to each question are scored 0 or 1. If the score is 2 or more the individual is considered to be high risk

Table 4

NICE stepped care model for depression, adapted from NG134[18]

Focus	Action
Detection and referral	Risk profiling
Recognition	Identification in presenting children or young people
Mild depression (including dysthymia)	Watchful waiting Digital CBT, group CBT, group IPT or group NDST Individual CBT Attachment-based family therapy
Moderate to severe depression	**5-11 year olds** Family-based IPT Family therapy (attachment based/systemic) Psychodynamic psychotherapy Individual CBT ± fluoxetine **12-18 year olds** Individual CBT± fluoxetine IPT-A Family therapy (attachment based or systemic) Brief psychosocial intervention Psychodynamic psychotherapy ± fluoxetine
Depression unresponsive to treatment/recurrent depression/ psychotic depression	*Intensive psychological therapy ± fluoxetine, sertraline, citalopram, augmentation with an antipsychotic

CBT = cognitive behaviour therapy IPT = interpersonal therapy NDST = non-directive supportive therapy
Depression should be managed in CAMHS unless mild and brief. Mild depression that does not resolve in primary care within 3 months should be referred to CAMHS
*Recommended psychological treatments are individual CBT, family therapy, interpersonal therapy, or psychodynamic psychotherapy

response and any adverse effects.[18] This time period is the most important, as 40% of suicide attempts occur within this timeframe.[23] It is important to be vigilant for any increase in suicidal behaviour, self-harm or hostility.[18]

Young people are often discharged on antidepressants following completion of psychological treatment if they are doing well. It is important that CAMHS provides guidance for GPs on monitoring of antidepressants and how and when to stop prescribing. This guidance may be formalised in shared care arrangements.

To reduce the risk of relapse antidepressant therapy should usually only be stopped when an individual has been symptom-free for 6 months after the initial episode of depression, or two years if there have been several episodes. The dose should be reduced gradually. Suddenly stopping antidepressants can lead to discontinuation symptoms, e.g. restlessness, problems sleeping, unsteadiness, sweating, abdominal symptoms, altered sensations, altered feelings (irritability, anxiety or confusion).[24]

PROGNOSIS

Outcome is dependent on age of onset. Adolescent depression is associated with a 60-90% remission rate within one year, with 50-70% of remitted young adolescents suffering a relapse within five years.[25,26] Both childhood and adolescent-onset depression are likely to recur with a 40% probability of recurrence at two years and 70% by five years.[27]

A shorter length of illness is associated with a better prognosis. Female gender and parental separation or divorce are associated with a worse prognosis.[28] First-episode depression is associated with lower levels of impairment and suicide attempts in females.[4] There is no difference in the number of suicide attempts in males with a first episode or recurrent episodes of depression.[4] A longer period of illness is a predictor for continuation into adulthood.[28] However, childhood depression, unlike adolescent-onset depression, does not always lead to adulthood depression.[29]

CONCLUSION

Identifying and managing depression in children and adolescents can pose unique challenges. Young people may often find it difficult to talk about their thoughts and feelings. Depression can also be difficult to differentiate from normal mood »

Box 4

Key psychological therapies

	Description	Resources
Cognitive behaviour therapy (CBT)	Structured treatment exploring the relationship between thoughts, feelings, behaviour and physiology. Focus on present and future. Arguably the most well established talking treatment, for which there is considerable evidence, in a wide range of mental health conditions e.g. anxiety, OCD	www.babcp.com/ www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/cognitive-behavioural-therapy-(cbt)
Interpersonal psychotherapy (IPT)	Family and adolescent forms available. Structured treatment focused on mood disorders. Seeks to improve interpersonal deficits, grief, role transitions and role disputes	Myma M. Weissman. The guide to interpersonal psychotherapy: updated and expanded edition, paperback. Oxford University Press. New York, NY. 2017 https://interpersonalpsychotherapy.org
Systemic family therapy (SFT)	Well established therapy. SFT is one of several family therapy schools that vary in conceptual focus and techniques. Families are usually seen as the solution rather than the cause of problems. Considerable focus on individual strengths, language, communication, culture, and diversity in understanding how problems may be created, understood, maintained and resolved	www.aft.org.uk/view
Attachment based family therapy (ABFT)	Developed as a therapy to help with adolescent depression and suicidality. Based on the idea that disrupted attachment relationships prevent adolescents seeking comfort and reassurance during times of despair e.g. suicidal ideation. Therapy seeks to repair attachment ruptures which is believed to lead to reduction in depressive symptoms, isolation and increased potential for parents to provide comfort and support	Guy S. Diamond, Gary M. Diamond and Suzanne A. Levy Attachment-based family therapy for depressed adolescents. American Psychological Association. Washington, DC. 2014
Psychodynamic psychotherapy	A well established unstructured therapy that explores how past events and relationships, often from early childhood, can influence present and future difficulties. Considerable emphasis placed on emotion, attachment, unconscious motivation, dreams and fantasies and reflective analytic techniques	www.bpc.org.uk
Brief psychosocial intervention	This was an intervention in the IMPACT depression trial.[30] Key components included psychoeducation, promoting habits e.g. sleep, exercise, nutrition and activity scheduling. There were no cognitive or reflective analytic techniques	Goodyer IM, Reynolds S, Barrett B et al. *Lancet Psychiatry* 2017;4:109-11

key points

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In a large meta-analysis, the prevalence of depression was twice as common in adolescents (5.7%) than children (2.8%). The 2:1 female to male ratio of depression seen in adults becomes apparent from the age of 12 years. Between 40 and 70% of young people presenting with a major depressive disorder may also have comorbid mental health conditions. The most common are anxiety, attention deficit disorder, substance misuse, obsessive compulsive disorder, autism spectrum disorder and eating disorders. Three quarters of children aged 3-17 years with depression also have anxiety, and almost half have associated behaviour problems.

Depression in primary school-aged children can be subtle and may include mood fluctuations, increased irritability, tearfulness, frustration or temper tantrums. Somatic presentations, e.g. abdominal pain or headaches, are more common in younger children who may struggle to express emotions verbally. Depressed adolescents present in a similar way to adults. However, they are more likely to experience vegetative symptoms, such as appetite and weight change, insomnia and energy loss. Loss of energy is a central symptom in adolescent depression and can be an early symptom of depression. The presence of depression should always prompt a brief enquiry about possible symptoms of mania or hypomania, either currently, historically, or a family history.

Self-harm is common in children and adolescents, and rates are increasing. Self-harm may occur in a range of conditions and does not necessarily mean that a young person is clinically depressed. Fortunately, completed suicide is relatively rare in children and adolescents. All young people who have taken overdoses should be referred to accident & emergency (A&E), including those who report having taken a relatively small number of tablets.

When considering the risk of self-harm and suicide, it is necessary to differentiate between thoughts, intent and plans. Protective factors should be explored. If a young person is thought to be at significant risk, then a parent or other responsible adult should always be informed. Breaching confidentiality in this situation is justified if the young person does not consent to information sharing. In emergency situations, a young person should not be expected to go to A&E alone.

Depression should be treated by child and adolescent mental health services (CAMHS) unless the episode is mild and of < 2-3 months' duration. NICE recommends that antidepressants should not be initiated in general practice. CAMHS should only prescribe antidepressants for those with moderate to severe depression, and they should be given in combination with a psychological treatment. To reduce the risk of relapse, antidepressants should usually only be stopped after a symptom-free interval of 6 months following an initial episode of depression, or two years if there have been several episodes.

variations of adolescence. Furthermore, depression may present differently in children compared with adults; the presence of low mood is not essential for the diagnosis. Depression may frequently coexist with other mental health conditions, e.g. anxiety, which may mask its presence and/or alter its presentation. Depression is associated with significant risks of self-harm and suicide. This makes early identification and effective management essential.

Young people for whom depression is suspected should be referred to CAMHS. Specialist treatment provided can include a wide range of psychological interventions; these are usually combined with medication in moderate to severe cases. With appropriate evidence-based management remission rates for child and adolescent depression are high.

Competing interests: None

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Useful information

Royal College of Psychiatrists
Patient information leaflets
www.rcpsych.ac.uk

Link to who's who in CAMHS
www.rcpsych.ac.uk/healthadvice/parentsandyoungpeople/parentscarers/whoswhoincamhs.aspx

Safe spot
Free downloadable app to help improve coping skills
http://safespot.org.uk

Moodkit
App which includes a mood tracker as well as CBT-based techniques to help with managing depressive symptoms
www.thriveport.com/products/moodkit

Young Minds
Mental health charity for young people
https://youngminds.org.uk