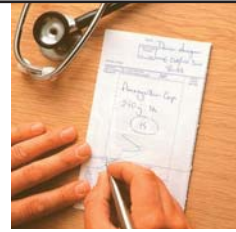




Common psychological disorders in childhood



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BACKGROUND

Children with anxiety, attention deficit hyperactivity, and disruptive behaviour disorders are frequently seen in general practice and often present with somatic complaints, comorbidity and complex family relationships.

OBJECTIVE

This article presents an approach to assessment including useful clinical questions, case diagnostic criteria and recommendations on psychometric tools for general practice.

DISCUSSION

Key management principles including psychological and pharmacological approaches are outlined, and a multidisciplinary approach incorporating specialist care is recommended.

Childhood psychological disorders are prevalent in the community^{1,2} and are associated with substantial difficulties in later life including anxiety disorders, relationship problems³ and increased risk of depression in adolescence and adulthood.⁴ Although these disorders often present initially in the general practice setting,⁵ many general practitioners have received little or no specific training in child psychiatry.⁶⁻⁹ Clearly, GPs have a key role to play in early recognition since they have an ongoing relationship with families, and children with psychological disorders are frequent attendees to primary care.¹⁰ Additionally, common initial complaints involve somatic symptoms such as headaches and abdominal pain rather than overt psychological illness,^{11,12} which need to be assessed by a GP in the first instance. The aim of this article is to provide an overview of common childhood psychological disorders, and key aspects of assessment, management and referral by GPs. For the purpose of this article we have focussed on children aged 5–12 years, and three common disorders are discussed:

- separation anxiety disorder and school refusal
- attention deficit hyperactivity disorder (ADHD), and
- conduct disorder.

While depression can emerge during childhood, a more definitive diagnosis frequently occurs in adolescence or adulthood,⁴ therefore childhood depression is not covered in this article.

Common childhood psychological disorders

Prevalence

Community samples in the USA have found prevalence rates of 4.6% for anxiety and 5.7% for behavioural disorders in children aged 9–10 years.¹ School refusal may occur in approximately 1–5% of school aged children.¹³ In Australia, community prevalence of 1.6, 0.2 and 0.6% for inattentive, hyperactive impulsive and combined type ADHD have been identified in children aged 5–11 years.¹⁴

In specialist paediatric settings, the number of psychosocial problems identified in young children has more than doubled over the past 2 decades, with substantial increases in attention and emotional problems and use of psychotropic medications.⁵ In paediatric practices, disorders have been identified in 16–18% of children as young as 5 years of age.^{15,16} It has been suggested that the rate of problems such as conduct disorder are even higher among children who are frequent attendees (ie. four or

more consultations a year) to primary care.¹⁰ Prevalence figures for psychological disorders in general practice are hard to find, however, an early study reported that almost a quarter of children aged between 7 and 12 years seen in general practice have psychological disorders.¹⁷

Recent studies on the management of childhood psychological disorders may provide clues as to the prevalence of these problems. For example, a United Kingdom study reports that on average a GP may have regular contact with 2–4 children receiving treatment for ADHD.¹⁸ One survey involving 150 GPs found that 85% were currently managing at least one child with ADHD although a further 13% suspected ADHD in children seen in their practice.⁶ In a cross sectional survey of 399 Australian GPs, over 90% saw more than five children per week and most diagnosed 1–5 cases of ADHD per year.¹⁹ Another recent study suggests that GPs identify an average of five childhood mental health problems within a 6 month period.²⁰

Overview

Table 1 outlines the defining features of common psychological disorders according to the widely used Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR).²¹ There are eight anxiety diagnoses outlined in the DSM-IV-TR, however, social phobia, panic disorder, agoraphobia, obsessive compulsive disorder and post-traumatic stress disorder are more common in adolescence or adulthood.²¹ Two of the most common anxiety disorders in children involve fear of separation from parents and refusal to attend school.²² While separation anxiety disorder may occur during the preschool years, the attention deficit and disruptive behaviour disorders are usually diagnosed in childhood or adolescence.²¹

There are three types of ADHD, however, most children tend to fall into the combined type²³ (Table 1). The disruptive behaviour disorders consist of oppositional defiant disorder (ODD) and conduct disorder (CD). Oppositional defiant disorder is frequently an antecedent to CD. All the symptoms of ODD

Table 1. Common childhood psychological disorders

Disorder	Defining features
Anxiety	
Separation anxiety	Developmentally inappropriate and excessive worry concerning separation from parent and home, school refusal, reluctance to be home alone, nightmares, and physical complaints
General anxiety	Excessive anxiety and worry, difficulty controlling the worry, restlessness, fatigue, difficulty concentrating, irritability, muscle tenseness, and sleep disturbance
Specific phobia	Excessive and unreasonable fear of objects or situations (eg. heights, animals, injections, loud noises), exposure to object/situation provokes anxiety response (eg. crying, clinging), and the object/situation is avoided or endured with intense anxiety
Attention deficit hyperactivity disorder	
ADD	Difficulty sustaining attention, often does not listen, avoids difficult tasks, easily distracted, disorganised and forgetful
AHD	Often fidgets, leaves seat in classroom, runs about or climbs in inappropriate situations, has difficulty playing quietly, has problems waiting turn and often interrupts others
ADHD	Combination of ADD and AHD symptoms
Disruptive behaviour disorders	
Oppositional defiant	Often loses temper, argues with adults, refusal to comply with adult rules, touchy and easily annoyed by others, often angry, spiteful or vindictive
Conduct disorder	Often bullies, initiates physical fights, physically cruel to people or animals, has stolen, forced sexual activity with others, deliberate fire setting or destruction of property, often lies, runs away, is truant

Note: DSM-IV-TR (APA, 2000) ADD=attention deficit hyperactivity disorder primarily inattentive type, AHD=attention deficit hyperactivity disorder primarily hyperactive type, ADHD=attention deficit hyperactivity disorder combined type. ADHD is referred to as hyperkinetic disorder under the ICD-10 classificatory system

are in CD, therefore children are diagnosed with CD if they meet all criteria.²¹

The DSM-IV-TR emphasises several diagnostic factors. For example, to receive a diagnosis of ADHD, symptoms must be maladaptive and inconsistent with the child's developmental level. This is important, as many symptoms of ADHD occur in younger children as part of normal development. Additionally, the symptoms of ADHD need to differ from the criteria for other disorders such as psychosis or pervasive developmental disorder (eg. autism).²¹

Comorbidity

Although each disorder has distinct core symptoms, there are many overlapping

symptoms and research has consistently found high comorbidity between the childhood disorders.^{24,25} In clinic samples of children with anxiety disorders, the majority are diagnosed with at least one other disorder including specific phobia, social phobia, generalised anxiety disorder and separation anxiety disorder.²⁶ Comorbidity among the behavioural and disruptive disorders is also common (eg. many children with ADHD have conduct problems in adolescence).²⁷

Parental psychopathology

Several problems appear to be common in families of children with an anxiety or a behavioural disorder including parental anxiety or depression, family stress, marital

Case history

Max, 7 years of age, has been reluctantly brought in by his father Ray who explains that he is having trouble managing Max's behaviour. Max is described as being restless, constantly on the go at home and noncompliant. He has always been an active child, good at sports and outdoor activities, but a challenge for his parents. His teacher has informed Ray that Max is becoming increasingly active in the classroom and cannot concentrate for very long, especially during desk based activities. The teacher has mentioned to Ray that she thinks Max might have ADHD.

A thorough GP assessment and observation of Max finds him to be quite fidgety and distracted but otherwise well. The GP asks Ray to complete the SDQ and informs Ray that he is not able to provide a diagnosis of ADHD, but he will refer Max to a paediatrician for further assessment. With Ray's permission, the GP would like to provide the paediatrician with a copy of the SDQ results. Both agree that Max is showing symptoms of ADHD. The GP informs Ray that the decision regarding medication for ADHD is best made by a specialist. The GP suggests that Ray be referred to the school psychologist for behaviour management strategies for home and in the classroom. Ray is also provided with written information on ADHD and an appointment is made with him and his wife to discuss ADHD.

A parent tip sheet on ADHD can be downloaded from the Australian Psychological Society website: www.aps.psychsociety.com.au.

conflict, and parenting problems.² Risk of parental psychopathology is high in children with mental health problems, particularly in those with multiple disorders. Parental depression and anxiety have been associated with a 2–3 times higher rate of reported disorders in children.¹⁵

Diagnoses

Separation anxiety disorder and school refusal

For clinical diagnoses of anxiety disorders, several symptoms outlined in *Table 1* need to be present for a minimum of 6 months and cause significant disturbance in the child's routine in at least two areas of functioning. Children with separation anxiety disorder need only to have had symptoms for a 4 week period. Anxiety, like other common childhood disorders, is best treated early as sufferers are at a higher risk of disorder in adulthood. For example, childhood anxiety in the form of social inhibition or avoidance may be a risk factor for depres-

sion.²⁸ Long term school refusal can affect academic achievement and the development of peer relationships.²⁹

School refusal differs from truancy. Parents of school refusers are usually aware of the child's absence from school and the child is compliant (eg. willing to do school work at home), whereas truants frequently conceal school absence from parents and do not stay at home.²⁴ Symptoms of school refusal may emerge after holiday or illness. For some children, attendance might be sporadic, whereas others may have been absent from school for weeks or months.³⁰ School refusers experience a range of anxiety symptoms such as excessive worries regarding school attendance, and physiological symptoms such as abdominal pain, nausea, diarrhoea and sore throat. The presence of physical symptoms means that an evaluation by a GP is important to rule out any underlying medical illness.²⁴

Presentation of anxiety disorders in general practice is most likely to be

in the form of somatic complaints. Gastrointestinal symptoms are particularly common in older children with separation anxiety disorder.²⁹ Parents may report changes in their child's mood (eg. withdrawal from normal activities) and increasing school absence.²⁴ Additionally, teachers may convey concerns to parents (eg. a decline in academic performance).

Some research has found that complaints of headaches and musculoskeletal pains appear to be associated with anxiety disorders (eg. separation anxiety disorder) in females, and disruptive behavioural disorders (eg. conduct disorder) in males.³¹ Although mood and anxiety disorders are more frequent among females than males,⁴ gender differences are less pronounced in young children. For example, the rate of school refusal is similar between males and females³⁰ and it is likely that this equal gender distribution of anxious children is reflected in general practice settings.

Attention deficit hyperactivity disorder

Most often, the diagnosis of ADHD is made by paediatricians and child psychiatrists.²³ Few GPs diagnose ADHD,¹⁹ preferring to refer children with suspected ADHD to specialists for assessment and, if necessary, pharmacological treatment. However, GPs play a significant role in educating parents about ADHD, collaborating and liaising with the child's school and making referrals for behaviour and family therapy.¹⁹ Any professional who does diagnose ADHD, needs to gather information not only from the child's parents or caregiver, but from external sources such as teachers.

General practitioners are perhaps more likely to see male children with ADHD as research consistently finds that it is more common among male children.¹⁴ Children with ADHD, particularly those who also have conduct disorder, are at risk of substance use disorders and drug related antisocial and illegal activity in adolescence.²⁷ Furthermore, ADHD symptoms (more inattention than hyperactivity) may persist into adulthood.³²

Conduct disorder

Children with disruptive disorders are particularly challenging for professionals due to frequent aggressive and destructive behaviour, especially among males. Presentation of conduct problems in female children is less well understood as research has tended to focus on male children.³³ A pattern of maladaptive behaviour (eg. irritability, noncompliance) from early childhood can usually be found in children with conduct disorder.³⁴ Furthermore, these children tend to experience rejection from most of their peers and seek out friendships with other rejected and aggressive children; truancy is common, often resulting in academic problems.

Children diagnosed with conduct disorder must have at least three symptoms (*Table 1*) for a period of 12 months. Several family factors appear to contribute to the onset of conduct disorder including parental conflict, and violence and neglect within the family.³⁴ Conduct disorder is more common in males, as is the subsequent diagnosis of antisocial personality disorder in adulthood.³⁵ Therefore it is most likely that male children will predominate in the general practice setting.

Clinical approach

Recognition

Recognition of psychological disorders in children by GPs is suboptimal.¹² This could be partly due to parents' reluctance to discuss behavioural or emotional concerns with GPs.¹⁵ The higher number of males with ADHD presenting to GPs means that females with ADHD may go unrecognised.³⁶ Recent research suggests that children with mood and anxiety disorders may be missed unless screening instruments are used.¹⁶

Initial presentations of psychological disorders in primary care is likely to be in the form of somatic complaints such as dizziness, back pain, abdominal pain, headaches,^{29,12,13} or sleep or eating problems.¹⁶ Recent research indicates that parents report a particular set of problems to GPs that may be indicative of an underlying psychological disorder in their child. For

Table 2. Preliminary assessment of mental health problems in children

With parents

- Define the problem(s) and obtain specifics, ie. when did they become concerned? Did any specific event happen in the family around this time? Has this problem occurred before? For how long? Are others (eg. teachers) aware of the problem?
- Obtain a brief developmental history (eg. early health/separation problems)
- What type of changes (eg. diet, sleeping) have they observed in their child?
- Ask parents to be as specific as possible (eg. change in mood, reluctance to go to school, learning difficulties)
- Ask parents to complete a brief screening instrument and explain that the purpose is to gather more information and to clarify what type of problem their child may be experiencing
- Enquire about supports and any services they are currently using and their effectiveness

With children

- Use play and drawing with younger children
- Ask children about how they are feeling and any worries that they may have
- Consider asking children to write a list of worries or wishes (some children may prefer to do this activity with a parent)
- Ask about how things are going at home and school (eg. do they cope okay with schoolwork? Do they have friends?)
- Consider a brief interview with child alone if parent-child conflict is obvious
- Ask children if they would complete a brief questionnaire and explain the purpose
- Observe the child and be mindful of any coordination problems or clumsiness when writing that may contribute to learning difficulties

example, parents tend to describe their children as being in poor health, low in energy and physically ill when under stress.¹⁰

A multidimensional approach whereby

information is gathered from a number of sources (eg. parents, teachers) is regarded as best practice (*Table 2*). Assessment and management of school refusal requires col-

Table 4. Useful questions for parents for preliminary identification of ADHD

- Does your child appear to have trouble listening to you?
- Does your child appear to have difficulty following through on tasks?
- Does your child interrupt you and have problems waiting his/her turn?
- Does he/she appear easily distracted or forgetful?
- Does he/she appear to be hyperactive or constantly on the go?
- Is he/she often fidgety or runs or climbs excessively?
- For all of the above, do you believe that your child shows these symptoms more than other children his/her age?
- Do these problems occur at home as well as at school and in other situations?

ment that can detect conduct disorder, ADHD and some anxiety disorders in children aged 4–16 years. The SDQ is completed by parents, teachers and by older children themselves within approximately 5 minutes. Although specificity and sensitivity is good (94.6% and 63.3% respectively), it is recommended that the SDQ only be used as a first stage of screening for general symptomatology and that a second stage screening procedure be conducted to confirm diagnosis of a disorder.⁴⁶ The SDQ can be downloaded from www.sdqinfo.com.

Another instrument that may be appropriate for use by GPs is the 35 item Paediatric Symptom Checklist (PSC).⁴⁷ The PSC was specifically developed for use in paediatric primary care with children aged 6–12 years. Like the SDQ, the PSC should only be used to identify children who would benefit from more intensive assessment and follow up.⁴⁷ Symptoms cover problems in the areas of anxiety, behaviour, attention and school. Parents rate symptoms and behaviours as occurring 'never', 'sometimes' or 'often' for their child. The PSC has demonstrated good reliability and validity in detecting mental health problems in children with a sensitivity of 91%.⁴⁸

Detailed tools

Many checklists have been developed in the past few decades for psychiatric assessment of anxiety³⁷ and behavioural and disruptive disorders.^{39,40} For example, the Conners' Rating Scales – Revised⁴¹ is widely used among psychologists and specialists for diagnosing ADHD. The Barkley Scales⁴² are brief and closely follow the DSM-IV-TR criteria for ADHD. Other instruments have been designed to tap into specific problems such as school refusal (eg. the School Refusal Assessment Scale).⁴³

Principles of management

A multidisciplinary approach is recommended in the diagnosis and treatment of childhood psychological disorders.²³ Psychologists frequently provide parent education in behaviour

laboration between the family physician, school staff, parents and a mental health professional. The same is needed for children with anxiety disorders³⁷ and ADHD.²³ Children with school refusal may be reluctant to identify factors that have led to or are maintaining their school refusal; therefore building up rapport with the young person is particularly important.³⁰ Useful questions for parents are listed in *Table 3–5*.

Screening tools

Time constraints on practice visits and competing health concerns are two major obstacles in the screening of child mental health problems.³⁸ Lack of knowledge and complexity of disorders also contributes to low detection rates.¹⁹ Administering a brief screening questionnaire may assist in the

detection of specific mental health problems in children.

Tools suitable for general practice

Gathering information from children themselves is important, especially as they tend to provide different information from parents.⁴⁴ A quick and effective method of assessing anxiety intensity is to administer a 'feelings' thermometer. This is a pictorial rating scale consisting of a straight line (ie. one end represents 0, the other 100) on which a child can indicate their current level of anxiety or fear.³⁷ Alternatively, the Child Functioning Scale is a brief six item 3-point scale with pictures that taps into feelings about relationships at home and school.⁴⁴

The Strengths and Difficulties Questionnaire (SDQ)⁴⁵ is a 25 item instru-

Case history

Michelle, 9 years of age, is brought in by her mother Louise who describes a 2 month history of escalating resistance to attend school. Michelle is a shy girl and has trouble making friends, but was previously well and settled at school. Problems emerged 2 months ago after a bout of gastroenteritis that kept her home for 3 days. She experiences marked anxiety and lower abdominal pain associated with being taken to school in the morning and on several occasions, arrangements were made for Michelle to go home at lunchtime. These symptoms appear to subside during the day and Michelle is happy and well at home. Louise has tried to return her daughter to school in the afternoon with no success.

Michelle's teacher had requested a medical assessment. A thorough GP assessment including physical examination and stool micro and culture has been unremarkable and the GP informs Louise that school refusal is a common occurrence after illness. The GP encourages Louise in her efforts to return her daughter to school and provides some advice on management suggesting that Louise try not to make home too comfortable a place for Michelle on days home from school. That is, she tries not to allow Michelle activities (eg. movies) that reinforce her desire to stay home. Louise is encouraged to liaise with Michelle's teacher to assist her with school attendance and a referral is made to the school psychologist for further assessment and behaviour management strategies.

management, teacher education, counselling for the child and strategies to assist with learning difficulties.²³ Paediatricians or child psychiatrists generally provide pharmacological treatment of ADHD. Childhood psychological disorders cannot be diagnosed in a 15 minute consultation,³² on questionnaire responses alone, or based on the report of a single observer.³⁶ However, obtaining a history of the problem – whether in relation to anxiety disorders, ADHD, or disruptive disorders – in addition to having the parent complete a brief questionnaire, is achievable in the general practice setting and can guide the best course of action.

Role of the GP

Very little research has been conducted on the management of childhood disorders in the primary care setting, although some attention has been given to the management of ADHD.⁴⁹ A recent survey involving 150 GPs revealed that the majority were comfortable with ongoing prescribing and physical monitoring of children with ADHD, but felt that specialists should initiate phar-

macological treatment and provide clinical monitoring of the child.⁶ The presence of additional disorders can complicate assessment and treatment.²⁵ Recent attention in the media to the suspected problems with overdiagnosis and overtreatment of ADHD may affect attitudes in primary care regarding use of stimulant medication and possibly increase anxiety regarding management.¹⁸ We advocate that GPs do not try and manage these cases alone, but liaise with, and refer to, specialists as needed.

General practitioners also have a key coordination role, given the numerous professionals that may be involved with managing children with ADHD.⁵⁰ Having a keen interest in child mental health and access to a good multidisciplinary team appear to be crucial factors in GPs' willingness to be the primary care provider for children with ADHD.⁵¹

Specialists and shared care

In the majority of cases, GPs need to liaise with specialist mental health services who have the expertise and time to deal with

complex childhood psychological disorders.¹⁹ Barriers to effective referrals include lack of awareness of services⁵² or of specific therapies available, long waiting periods,⁵³ and cost to the patient.⁵⁴ As with other areas of mental health care, the systems of care are a critical determinant of referral patterns and influence the type of service GPs can access for patients and their families.

A number of models of care currently exist including shared care,⁵⁰ employment of an onsite counsellor⁵³ and specialist clinics.⁵² The shared care model has been trialled in Western Australia and has led to improved management of children with ADHD.⁵⁰ This model involves establishment of a strong professional network of health and educational professionals through coordinated care meetings who work together to detect and manage children with ADHD. Assessment involves gathering information (eg. school reports, rating scales) from several sources and then referring to a specialist for confirmation of diagnosis. The GP sends detailed information to the specialist accepting of shared care and a trial of medication may then be arranged. If the diagnosis is confirmed, a multimodal treatment program commences and is reviewed a few weeks later with subsequent monthly reviews.

Implementation of shared care arrangements, whereby GPs can integrate with other health service providers, may increase GP confidence in the detection of mental health problems and facilitate appropriate referral to specialists. Another model that may also improve collaboration between GPs and mental health specialists involves employing a counsellor in a practice who has links with a child mental health team including child psychiatrists and psychologists.⁵³ This aim of this model is to encourage good communication between all three parties, provide training to staff at the practice and provide good continuity of care to families.

There is a continuum of GP involvement ranging from GPs referring a patient for management with little ongoing involvement to those more actively involved in the shared

care of patients. Recent commonwealth initiatives support a variety of shared care models that aim to improve accessibility to specialist care and also reduce the cost to patients. The allied health components of the Better Outcomes in Mental Health Care initiative⁵⁵ and the new Medicare Plus initiative both provide opportunities for GPs to better access specialist support.⁵⁶

Psychological interventions

There is growing evidence for specific and empirical psychological treatments of childhood mental health problems. For example, cognitive behavioural treatment (CBT) of anxiety in children with and without comorbid disorders leads to a clinically significant reduction in pretreatment diagnoses and symptoms.²⁶ Cognitive behavioural treatment of anxiety is effective in group or individual format and parental involvement enhances treatment effectiveness.³⁷ Child therapy and caregiver training is also effective in the treatment of school refusal,⁵⁷ and is recommended for parents of children with ADHD.²³ The treatment of school refusal may involve relaxation training to reduce physiological symptoms and cognitive work to identify and modify anxiety producing self talk so the child is mobilised toward coping with school attendance.³⁰

Pharmacological interventions

Psychotropic drugs may be effective in the treatment of childhood psychopathology but only together with psychological and educational interventions. The role of the GP should be to support the paediatrician and child psychiatrist in the prescription and regular monitoring of response, compliance and side effects.

The relatively short period of effectiveness of stimulant medication (4 hours) and their appetite suppression and mood disturbance side effects, has led to the development of long acting preparations of methylphenidate and amphetamine. A higher morning dose of long acting methylphenidate (54 mg) is more effective in children aged 5–16 years with ADHD

combined type, but a lower dose (36 mg) is more effective for the inattentive type of ADHD. Insomnia and appetite side effects are more likely with higher doses particularly in younger children.^{58,59}

Atomoxetine, a pre-synaptic inhibitor of the norepinephrine transporter, is a new alternative to stimulants. Randomised controlled trial evidence indicates that once daily use (1.2 mg/kg/day) is an effective treatment of hyperactivity and inattention throughout the day. Side effects may include decreased appetite, weight loss, somnolence, fatigue and perhaps subtle increases in pulse and blood pressure, but does not appear to exacerbate emotional disturbance.⁶⁰

There is good empirical evidence for the efficacy of stimulant medication such as dexamphetamine in reducing the distractibility and hyperactivity of ADHD.² Side effects such as anorexia, insomnia, irritability and emotional disturbance can be troublesome and prohibit use. Sometimes the addition of clonidine at night might counteract the insomnia and also have a positive, but not always persistent effect on ADHD symptoms. It is necessary to monitor for any hypotensive effects.

Some anxiety disorders such as separation anxiety and school refusal may respond to the anxiolytic effect of imipramine (10–25 mg at night), but the child should have no history of heart disease and a normal electrocardiogram because of the tendency for imipramine to prolong the P–R interval.²²

There is equivocal evidence that selective serotonin reuptake inhibitors (SSRIs) are effective in the treatment of depressive illness in young people.⁶¹ In the United Kingdom there is concern that SSRIs (apart from fluoxetine) might increase suicide risk. Therefore, only fluoxetine is authorised for use in young people attending primary care.⁶²

There is relatively weak evidence that SSRIs reduce anxiety in adolescents but they may be an effective treatment of obsessive compulsive disorder. Low dose neuroleptic drugs (haloperidol, risperidone) may be effective in the management of disruptive and aggressive behaviour in children with intellectual disability or autism.⁶³

Conclusion

General practitioners have a key role in detecting and managing common childhood psychological disorders and are uniquely placed to assess the mixed somatic/psychological manner in which patients present. Effective interventions are available to minimise the disruption of psychological disorders in children and the subsequent disability and disadvantage that can ensue. Through better understanding of the specific diagnoses, implementation of brief screening tools, and understanding of the treatment options available, a multidisciplinary approach will most benefit the child. As in many other areas of primary mental health care, further training for GPs and research into the management of childhood psychological disorders is a public health priority.

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References

1. Costello JE, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. *Arch Gen Psychiatry* 2003;60:837–844.
2. Tonge B. Common child and adolescent psychiatric problems and their management in the community. In: Keks NA, Burrows GD, eds. *Med J Aust Practice Essentials: Mental Health*. Sydney: Australasian Medical Publishing Company Limited 1998;63–70.
3. Flakierska-Praquin N, Lindstrom M, Gillberg C. School phobia with separation anxiety disorder: a comparative 20–29 year follow up study of 35 school refusers. *Compr Psychiatry* 1997;38:17–22.
4. Roza SJ, Hofstra MB, Ende J, Verhulst FC. Stable prediction of mood and anxiety disorders based on behavioral and emotional problems in childhood, adolescence and young adulthood. *Am J Psychiatry* 2003;160:2116–2121.
5. Kelleher KJ, McInerney TK, Gardner WP, Childs GE, Wasserman RC. Increasing identification of psychosocial problems: 1979–1996. *Pediatrics* 2003;105:1313–1321.
6. Ball C. Attention deficit hyperactivity disorder and the use of methylphenidate. A survey of general practitioners. *Psychiatr Bull* 2001;25:301–304.
7. Lian WB, Ho SKY, Yeo CL, Ho LY. General practitioners' knowledge on childhood developmental and behavioural disorders. *Singapore Med J* 2003;44:397–403.

8. Montoliu L, Crawford T. Prescribing practices of general practitioners for children with mental health problems. *Child and Adolescent Mental Health* 2002;7:128-130.
9. Weeramanthri T, Keane F. What do inner city general practitioners want from a child and adolescent mental health service? *Psychiatr Bull* 2000;24:258-260.
10. Garralda ME, Bowman FM, Mandalia S. Children with psychiatric disorders who are frequent attenders to primary care. *Eur Child Adolesc Psychiatry* 1999;8:34-44.
11. Garralda E, Bailey D. Psychosomatic aspects of children's consultations in primary care. *Eur Arch Psychiatry Neurol Sci* 1987;236:319-322.
12. Garralda E. Child and adolescent psychiatry in general practice. *Aust NZ J Psychiatry* 2001;35:308-314.
13. Burke AE, Silverman WK. The prescriptive treatment of school refusal. *Clin Psychol Rev* 1987;7:353-362.
14. Gomez R, Harvey J, Quick C, Scharer I, Harris G. DSM-IV AD/HD: confirmatory factor models, prevalence, and gender and age differences based on parent and teacher ratings of Australian primary school children. *J Child Psychol Psychiatry* 1999;40:265-274.
15. Briggs-Gowan MJ, McCue Horwitz S, Schwab-Stone ME, Leventhal JM, Leaf P J. Mental health in pediatric settings: distribution of disorders and factors related to service use. *J Am Acad Child Adolesc Psychiatry* 2000;39:841-849.
16. Wren FJ, Scholle SH, Heo J, Comer DM. Pediatric mood and anxiety syndromes in primary care: who gets identified? *Int J Psychiatry Med* 2003;33:1-16.
17. Garralda ME, Bailey D. Children with psychiatric disorders in primary care. *J Child Psychol Psychiatry* 1986;27:611-624.
18. Thapar A, Thapar A. Is primary care ready to take on Attention deficit hyperactivity disorder? *BMC Fam Pract* 2002;3:7.
19. Shaw KA, Mitchell GK, Wagner IJ, Eastwood HL. Attitudes and practices of general practitioners in the diagnosis and management of attention deficit/hyperactivity disorder. *J Paediatr Child Health* 2002;38:481-486.
20. Luk ES, Brann P, Sutherland S, Mildred H, Birlson P. Training general practitioners in the assessment of childhood mental health professionals. *Clinical Child Psychology and Psychiatry* 2002;7:571-579.
21. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th edn. Washington, DC: American Psychiatric Association Press, 2000.
22. King NJ, Ollendick TH, Tonge BJ. *School Refusal: assessment and treatment*. Boston: Allyn & Bacon, 1995.
23. Australian Psychological Society Working Group. *Attention deficit hyperactivity disorder in children. A guide to best practice for psychologists*. The Australian Psychological Society Ltd, 1997.
24. Fremont WP. School refusal in children and adolescents. *Am Fam Physician* 2003;68:1555-1560.
25. Waxmonsky J. Assessment and treatment of attention deficit hyperactivity disorder in children with comorbid psychiatric illness. *Curr Opin Pediatr* 2003;15:476-482.
26. Kendall PC, Brady EU, Verduin TL. Comorbidity in childhood anxiety disorders and treatment outcome. *J Am Acad Child Adolesc Psychiatry* 2001;40:787-794.
27. Barkley RA, Fischer M, Smallish L, Fletcher K. Young adult follow up of hyperactive children: antisocial activities and drug use. *J Child Psychol Psychiatry* 2004;45:195-211.
28. Parker G, Wilhelm K, Mitchell P, Austin M-P, Roussos J, Gladstone G. The influence of anxiety as a risk to early onset depression. *J Affect Disord* 1999;52:11-17.
29. Bernstein GA, Massie ED, Thuras PD, Perwien AR, Borchardt CM, Crosby RD. Somatic symptoms in anxious depressed school refusers. *J Am Acad Child Adolesc Psychiatry* 1997;36:661-668.
30. Heyne D, King NJ, Tonge BJ, Cooper H. School refusal. *Epidemiology and management*. *Paediatric Drugs* 2001;3:719-732.
31. Egger HL, Costello EJ, Erkanli A, Angold A. Somatic complaints and psychopathology in children and adolescents: stomach aches, musculoskeletal pains and headaches. *J Am Acad Child Adolesc Psychiatry* 1999;38:852-860.
32. Goldman LS, Genel M, Bezman RJ, Slanetz PJ. Diagnosis and treatment of attention deficit hyperactivity disorder in children and adolescents. *JAMA* 1998;279:1100-1107.
33. Kann RT, Hanna FJ. Disruptive behaviour disorders in children and adolescents: How do girls differ from boys? *J Couns Dev* 2000;78:267-274.
34. Holmes SE, Slaughter JR, Kashani J. Risk factors in childhood that lead to the development of conduct disorder and antisocial personality disorder. *Child Psychiatry Hum Dev* 2001;31:183-193.
35. Barry L, Fleming MF, Manwell LB, Copeland LA. Conduct disorder and antisocial personality in adult primary care patients. *J Fam Pract* 1997;45:151-158.
36. Luk ESL. Four pertinent issues in treatment. *Aust NZ J Psychiatry* 2002;36:479-481.
37. Velting ON, Setzer NJ, Albano AM. Update on and advances in assessment and cognitive-behavioural treatment of anxiety disorders in children and adolescents. *Prof Psychol Res Pr* 2004;35:42-54.
38. Gardner W, Kelleher KJ, Pajer KA. Multidimensional adaptive testing for mental health problems in primary care. *Med Care* 2002;40:812-823.
39. Collett BR, Ohan JL, Myers KM. Ten year review of rating scales: V: Scales assessing attention deficit hyperactivity disorder. *J Am Acad Child Adolesc Psychiatry* 2003;42:1015-1037.
40. Collett BR, Ohan JL, Myers KM. Ten year review of rating scales. V: scales assessing externalising behaviours. *J Am Academy Child Adolesc Psychiatry* 2003b;42:1143-1170.
41. Conners C. *Conners' Rating Scales Revised Technical Manual*. North Tonawanda, NY: Multi-Health Systems, 1997.
42. Barkley RA. *Attention deficit hyperactivity disorder. A handbook for diagnosis and treatment*. Guilford Press: New York, 1990.
43. Kearney CA. Identifying the function of school refusal behaviour: a revision of the School Refusal Assessment Scale. *Journal of Psychopathology and Behavioral Assessment* 2002;24:235-245.
44. Wildman BG, Kinsman AM, Smucker WD. Use of child reports of daily functioning to facilitate identification of psychosocial problems in children. *Arch Fam Med* 2000;9:612-616.
45. Goodman R. The strengths and difficulties questionnaire: a research note. *J Child Psychol Psychiatry* 1997;38:581-586.
46. Goodman R, Ford T, Simmons H, Gatward R, Meltzer H. Using the strengths and difficulties questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *Br J Psychiatry* 2000;177:534-539.
47. Murphy JM, Jellinek M. Screening for psychosocial dysfunction in economically disadvantaged and minority group children: Further validation of the Pediatric Symptom Checklist. *Am J Orthopsychiatry* 1998;58:450-456.
48. Navon M, Nelson D, Pagano M, Murphy M. Use of the pediatric symptom checklist in strategies to improve preventive behavioral health care. *Psychiatric Services* 2001;52:800-804.
49. Duggan CM, Mitchell G, Nikles CJ, Glasziou PP, Del Mar CB, Clavarino A. Managing ADHD in general practice. N of 1 trials can help! *Aust Fam Physician* 2000;29:1205-1209.
50. Pedlow K. Incorporating the management of ADHD into your practice. Can it be done? *Aust Fam Physician* 2000;29:1210-1214.
51. Shaw K, Wagner I, Eastwood H, Mitchell G. A qualitative study of Australian GPs' attitudes and practices in the diagnosis and management of attention deficit hyperactivity disorder (ADHD). *Fam Pract* 2003;20:129-134.
52. Emmerson B, Frost A, Powell J, Ward W, Barnes M, Frank R. Evaluating a GP consultative psychiatric service in an Australian metropolitan hospital district. *Australasian Psychiatry* 2003;11:195-198.
53. McNicholas F. Attitudes of general practitioners to child psychiatry services. *Irish Journal of Psychiatric Medicine* 1997;14:43-46.
54. Pryor AMR, Knowles A. The relationship between general practitioners' characteristics and the extent to which they refer clients to psychologists. *Aust Psychol* 2001;36:227-231.
55. Hickie I B, Pirkis JE, Blashki GA, Groom GL, Davenport TA. General practitioners response to depression and anxiety in the Australian community: a preliminary analysis. *Med J Aust* 2004; 181:515-520.
56. Littlefield L, Martin P, Stokes DL. MedicarePlus: a major step forward in health reform. *INPSYCH* 2004;7-9.
57. Heyne D, King NJ, Tonge BJ, Rollings S, Young D, Pritchard M, Ollendick TH. Evaluation of child therapy and caregiver training in the treat-

ment of school refusal. *J Am Acad Child Adolesc Psychiatry* 2002;41:687-695.

58. Spencer TJ. ADHD treatment across the life cycle. *J Clin Psychiatry* 2004;65:22-26.
59. Stein MA, Sarampote CS, Waldman ID, et al. A dose response study of OROS methylphenidate in children with attention deficit hyperactivity disorder. *Paediatrics* 2003;112:399-400.
60. Michelson D, Allen AJ, Busner J, et al. Once daily atomoxetine treatment for children and adolescents with attention deficit hyperactivity disorder: a randomised, placebo controlled study. *Am J Psychiatry* 2002;159:1896-190.
61. Whittington CJ, Kendall T, Fonagy P, Cottrell D, Cotgrove A, Boddington E. Selective serotonin reuptake inhibitors in childhood depression: systematic review of published versus unpublished data. *Lancet* 2004;363:1341-1345.
62. MHRA. Interim Report of the Committee on Safety of Medicines' Expert Working Group on selective serotonin reuptake inhibitors, 2003. Available at: www.mca.gov.uk/ourwork/monitorsafequalmed/safetymessages/ssriewginterimreportfinal.pdf.
63. Findling RL, Aman MG, Eerdekens M, Derivan A, Lyons B. Long term, open label study of risperidone in children with severe disruptive behaviors and below average IQ. *Am J Psychiatry* 2004;161:677-684.