

Tackling teenage turmoil: primary care recognition and management of mental ill health during adolescence

Lionel Jacobson, Richard Churchill^a, Chris Donovan^b,
Elena Garralda^c, Jeanne Fay and Members of the
Adolescent Working Party, RCGP

Jacobson L, Churchill R, Donovan C, Garralda E, Fay J and Members of the Adolescent Working Party, RCGP. Tackling teenage turmoil: primary care recognition and management of mental ill health during adolescence. *Family Practice* 2002; **19**: 401–409.

This paper examines how primary care can improve for teenagers who are experiencing mental or emotional turmoil. This is an important health issue because at least 15% of teenagers experience mental health problems at any one time, there are indications that this proportion is rising, and there is evidence that suicide rates are rising in young people. The paper discusses how troubled teenagers can be identified, cared for and managed by primary care providers within the UK, although some of the information presented is from other countries. It identifies inter-relationships with other health behaviours and risk factors. The GP's role in assessing a troubled teenager is discussed, as well as a consideration of individual and contextual issues to frame a 'triple' diagnosis, i.e. a diagnosis simultaneously in biomedical, individual and contextual terms. A review of present knowledge of management is presented. The paper concludes that there are several deficiencies at present, namely a lack of identification of teenage distress, a lack of training for GPs in teenage health, a lack of a research base, a lack of resources and finally a lack of information provided by any teenagers who have experienced turmoil and could give useful insights into their experience.

Keywords. Adolescence, diagnosis, mental health, primary care.

Introduction

Many primary care professionals appear to find it difficult to provide good quality primary care for their teenage patients.^{1–3} One particular problem is the care of teenagers experiencing mental or emotional turmoil. This paper will discuss possibilities for provision of better services for troubled teenagers. Furthermore, it is intended to highlight unanswered questions, to stimulate awareness, to provide direction for future research and to encourage provision of appropriate training, resources and services.

The period of life between 10 and 19 years of age is one of rapid biological, psychological and social transition,⁴ associated with a need for independence, autonomy, identity formation and peer acceptance. During this period, there is increasing morbidity in all aspects of health, together with rising levels of sexual activity, drug and alcohol use.^{1–3} There are also high levels of emotional distress and turmoil, with some 15% of adolescents suffering from mental health problems or psychiatric problems at any one time.^{5–9} Further, compared with childhood, there are increasing rates of depression with more suicides and parasuicides among younger people.^{8–10}

Health professionals need to be able to recognize, manage and follow-up mental health problems in young people, and to be able to distinguish the normal self-limiting emotional reactions of teenagers from disorders that are likely to have significant impact on their immediate or long-term future. This paper is aimed at a primary care readership and will focus largely on common presentations of distress and diagnosing those with serious pathology. It will focus on the role of the GP

Received 30 March 2001; Revised 6 September 2001; Accepted 11 March 2002.

Department of General Practice, University of Wales College of Medicine, Llanedeyrn Health Centre, Llanedeyrn, Cardiff CF23 9PN, ^aDepartment of General Practice, University of Nottingham Medical School, Nottingham, ^bRoyal College of General Practitioners, London and ^cImperial College Medical School, London UK. Correspondence to Lionel Jacobsen; E-mail: jacobson@cf.ac.uk

and the primary health care team because primary care is often the first port of call for teenagers with any health problems, even though teenagers attend for health care relatively infrequently compared with some other age groups.¹⁻³

The scale of the problem

Recently, the Mental Health Foundation survey found that one in five British children have mental ill health;¹¹ the media and associated books for lay people and professionals have tended to quote this figure.¹² In 1995, OPCS data showed that 7% of males and 19% of females aged 16–19 years living at home had a neurotic disorder; ~9% had alcohol dependency and 7% drug dependency.¹³ Rates of most disorders increase with age throughout adolescence and are significantly higher amongst females.^{13,14} In the USA, Whitaker *et al.* looked at the prevalence of selected psychiatric disorders and reported an overall 18% prevalence of disorders in a secondary school population.¹⁵

Rates of mental illness amongst general practice attenders are higher still. A west London study involving 11 GPs demonstrated a psychological component in >26% of consultations with patients aged under 18 years.¹⁶ About a quarter of consecutive schoolchildren attending general practice have associated psychiatric disorders, mainly emotional problems.¹⁷ More recently, it is reported that 38% of 136 adolescents aged 13–16 years who attended one inner London practice had suffered a psychiatric disorder in the previous year, mostly of a depressive nature.¹⁸ However, a Scottish study of 15 year olds reported high levels of morbidity in this particular age group, but no obvious increase in consultation rate for those with mental health problems.¹⁹

There are high rates of psychiatric morbidity in a teenage population at any one time, but it is important to distinguish symptoms from disorder. Symptoms are more prevalent than disorder,⁹ and it is important to recognize that emotions are labile in this age group. Despite the difficulties inherent in determining the true prevalence of psychological morbidity, rates for many disorders do appear to be rising.^{1-3,8} Research is needed to determine whether this is due to increasing recognition or increasing prevalence.

The scope of the problem

The specific aspect of adolescent mental health, which has captured most public attention, has been the rise in suicide rates amongst young men. In 1995, the rate of suicide and undetermined verdicts amongst 15- to 19-year-old males was 8.63/100 000, double the rate in 1971. The equivalent rate amongst females is 2.98. The lifetime prevalence of self-harm in the community is

7–14% in older adolescents, but 20–45% have experienced suicidal thoughts at some time. These are worrying trends, and may indicate that there are high levels of severe psychopathology at the more extreme end of the spectrum.²⁰

At the less severe end of the spectrum in terms of life risk, Whitaker *et al.* reported that common diagnoses amongst teenagers were dysthymic disorder (4.9%), major depression (4.0%), generalized anxiety (3.7%), obsessive–compulsive disorder (1.9%), bulimia (2.6%), panic disorder (0.6%) and anorexia nervosa (0.2%).¹⁵ In 1998, Kramer and Garralda reported that 12% of general practice attenders had major depression, 11% had dysthymia or other depression, 3% had overanxious disorder and 6% had disruptive (externalizing) disorder.¹⁸ Many disorders occur in combination.

Some conditions affecting adults start during adolescence; for example, 50% of patients with obsessive–compulsive disorder reported that their symptoms began by the age of 15 years,²¹ and similar data have been reported for panic disorder²² and for anti-social disorders.²³ Poor mental health requiring hospital treatment during adolescence has been linked with suicidality, and with adult mental health problems.²⁴⁻²⁹ In addition, children and adolescents with a diagnosis of depression have been shown to be significantly more at risk of depression and hospitalization in later life.³⁰

Within the primary care arena, it has been found that adult rates of mental disorder were more than double amongst those who had a psychiatric problem as a teenager. These data emerge from a study involving follow-up of a cohort of continuously registered young people from early adolescence to adulthood.³¹ Whilst these studies provide good evidence of an association between adolescent and adult mental ill health, further research is required to determine whether early diagnosis and management will reduce later risks in adulthood.

Inter-relationship of mental health with other health behaviours

Adolescence is a period of exploration and experimentation, but teenagers with mental health problems have been shown to indulge in higher levels of 'risk-taking behaviour'. For example, cigarette smoking has been associated with higher rates of teenage depression and anxiety. It is suggested that this is consistent with smoking as self-medication for the condition,³² and this would tie in with adult behaviour patterns where, for example, many young mothers turn to tobacco as something to do while trapped, lonely and isolated.³³

The prevalence of substance misuse has increased in most developed countries since 1990.³⁴ Depression, suicidal ideation, conduct disorder, attention deficit

disorder, post-traumatic disorder, anxiety and schizophreniform illness are all more common in drug-using adolescents.^{35,36} This link has also been observed among adolescents attending primary care.¹⁸ The substances themselves are associated with injury and violence as well as adverse mental health.³⁷ There is the question of whether the mental health problem came before the substance misuse or vice versa, and of whether this is an association or some part of a causal link,³⁸ but clearly the conditions co-exist.

There is convincing evidence that depression and substance misuse are common risk factors for suicide. A study involving 'psychological autopsies' of completed teenage suicides found the combination of mood disorder and substance misuse to be far more common in suicide victims (81%) compared with controls (29%).³⁹ Likewise, there appears to be an association between mental ill health and risky sexual health behaviour.^{40,41} A recent report has noted that taking an overdose is associated with termination of pregnancy in young women; there is no apparent causative link in either direction, but risk factors for both are similar.⁴²

In view of these associations, it is important for primary health care professionals who encounter teenagers with mental health problems to consider other health risks and behaviours. Conversely, an assessment of mental health could usefully be undertaken in teenagers presenting with associated risk-taking behaviours. Further research could help to quantify the level of risk for differing associations in primary care.

Risk factors for adolescent mental health disorders

A number of factors have been shown to be associated with an increased risk of mental ill health during adolescence. These include living 'in care', parental disharmony and divorce, physical and sexual abuse, bullying, family history of mental disorder, relationship problems, lower socio-economic class and poor educational attainment.

Adolescents living 'in care' have significantly higher levels of psychiatric disorder compared with those living with their families.⁴³ In this Oxfordshire study, 67% of 13- to 17-year-old adolescents living in the care system had a psychiatric disorder, compared with 15% in a control group; depression and anxiety were both very common.

Approximately 50% of secondary school children report being a victim of bullying,⁴⁴ and 25% of year 10 pupils report fear of going to school as a result of bullying.⁴⁵ Bullying may be a way of presenting mental distress, and those in trouble for bullying may have distress.⁴⁶ Two recent studies from Finland and Australia have confirmed that bullying in schools is associated

with mental ill health, apparent among the bullies and bullied alike.^{47,48}

Further psychosocial issues associated with both adverse mental health and substance misuse include dysfunctional families, school problems and socio-economic disadvantage.^{49,50} These patients may be less inclined to seek help in light of an 'inverse care law' described for adolescents.¹ Indeed, there may be very high rates of mental health problems in the most disadvantaged adolescents such as runaways and homeless people.⁵¹⁻⁵³

Children of depressed parents have been shown to have higher rates of depression than expected,⁵⁴ and so it is important to consider the family history when assessing a teenager in turmoil. Whilst the association may be genetic, it might also indicate learned behaviours and dysfunctional coping mechanisms.

Although GPs are still often considered to be 'family doctors', it is uncertain whether they have sufficient contextual and background information about individuals to be able proactively to identify teenagers 'at risk' of mental disorder. A useful research area would be to evaluate whether improved primary care information provision about family and educational risk factors could improve early detection and management.

How do adolescent mental health disorders present in general practice?

There is evidence that schoolchildren and adolescents who are frequent general practice attenders are more likely to have a mental health problem,^{18,55,56} although only a small proportion actually present explicitly with symptoms of psychological disorder;¹⁹ many teenagers with significant mental health problems either never report distress to primary health care professionals, or are not recognized as having mental ill health. For example, conduct disorders at home or in an educational environment may be dismissed as part of normal adolescence, although they could point to a diagnosis of depression.⁵⁷ However, the impact of such morbidity on future emotional, psychological and social development should not be discounted.

When teenagers do present with overt signs of mental disorder, it may be in the context of a crisis (e.g. as self-harm or an overdose), when domestic or educational circumstances have deteriorated sufficiently to the point of requiring outside help. Paradoxically, it may be in such extreme situations that GPs feel least able to provide effective intervention.

Since, like many adults, teenagers perceive GPs to be more concerned with physical than emotional illness, they may legitimize their distress by presenting with physical symptoms such as headaches, fatigue or sore throats.⁵⁶ Such symptoms are widely prevalent amongst

the teenage population, making it difficult to identify those with a deeper need.⁵⁸ Other problems, such as sleep disturbance, may be directly symptomatic of a psychological disorder, but may be overlooked if such a possibility is not considered.

In 1989, Hill noted that the following symptoms could indicate a depressive pattern: affected sleep pattern, separation anxiety, antisocial behaviour, a falling off of school performance, apathy and boredom, hallucinations, running away from home and hypochondriacal symptoms.⁵ Some of these symptoms may involve the teenager recognizing potential 'illness', but some symptoms are more usually noted by other interested parties, usually parents.

Parental presentations may be direct or indirect. Direct presentations include conduct disorder noted by the parent, worries about mood swings, concerns about drug abuse or eating disorders; indirect presentations may include the above but usually occur because an interested party (often the school) has asked the parent to attend the surgery with the teenager.

There have been no formal studies examining the presentations of teenagers with mental health problems in primary care, or the extent to which such presentation may be influenced by teenage or parental beliefs. More research is needed in this area.

Recognizing pathological turmoil in the consultation

It is apparent that a majority of young people with mental health problems remain unrecognized and untreated.⁵⁹ A community study reported that only one of 28 teenage girls suffering from major depressive disorder, as detected by direct interview, had been identified previously.⁶⁰ Therefore, an aim of primary care might be to improve the mental health of adolescents by better recognition of morbidity, accepting that many teenagers pass through periods of behaviour which is not pathological.^{1,3,7,8}

A diagnosis of depression is still associated with stigma,⁶¹ and assigning a diagnosis of depression to a teenager may be hampered by a reluctance to stigmatize the teenager with the diagnosis, particularly if there is no perceived therapeutic benefit in doing so. There may be an inherent hope that this is a transient adolescent phase which will resolve spontaneously. This denial of the diagnosis and fear of stigmatization may come from the doctor, the parent or the teenager themselves. The stigma can be attached to both the diagnosis of depression and the involvement of secondary psychiatric services, or to the need for antidepressant medication.

Harrington gave some practical advice on how to conduct an assessment of a troubled teenager, which included interviewing the teenager alone, but also trying to get a good collateral history.⁶² He also advocated

the use of structured questionnaires because he viewed unstructured interviews as unreliable. However, most such tools have been developed for use in secondary care, and their value in the general practice setting is debatable. Finally, he suggested an assessment of other aspects including educational and social issues.

McCabe has suggested the acronym 'HEADSS' to act as a prompt to enquire about mental functioning. In this method, the clinician can enquire about Home, Education, Activities, Drugs, Sex and Suicide (the last topic should only be raised if the preceding five topics have suggested a risk).⁶ More direct screen questioning techniques about mental health problems have been advocated successfully within special teaching packages and experimental procedures.⁶³

A recent trend within primary care is to provide specific screening clinics for teenagers within general practice, and several reports have indicated favourable uptake and high levels of morbidity which may be amenable to management and health improvement;^{8,64,65} this model can also apply to identification of mental ill health.⁶⁶ However, some studies point to lower uptake in deprived areas, indicating the continued presence of the 'inverse care law'.^{1,67} There is clearly scope for continuing investigation into this potentially useful addition to the primary care service.

The main point is to consider in what way primary care can better recognize turmoil before a crisis occurs. The suggestions by Harrington and McCabe, for instance, may warrant rather more assessment, as well as a delineation of whether the process is one of illness recognition or of 'management' of psychosocial issues. Gledhill J, Kramer T, Iliffe S and Garralda M (unpublished data) have demonstrated the feasibility of adapting complex treatment techniques for adolescent depression for use by GPs. The generalizability of these techniques across different practices needs to be tested.

Ill or psychosocial problem?

Once a GP has recognized a potential mental health problem, there is a need to categorize it. McWhinney has provided medicine in general, and primary care in particular, with the notion of a triple stage diagnosis, i.e. the clinician must consider the problem in biomedical, individual (psychological) and contextual (social) terms.⁶⁸ This appears even more necessary within the assessment of a teenager in turmoil.

Some presentations can be clearly ascribed. For instance, psychosocial issues may be indicated by (hopefully temporary) problems with school, friends, relationships or other clearly delineated issues. An indication of more serious mental ill health may include signs of depression or features that follow on for some time after these 'temporary' problems should have resolved. There will always be grey areas, and clinicians should be aware

of overlap, as well as their own feelings in relation to the severity of the individual presentation.

This is even more so in the areas of potential 'newer' diagnoses such as attention deficit and hyperactivity disorder (ADHD), conduct disorder or eating disorder, or even seasonal affective disorder (SAD), which is now known to affect adolescents.⁶⁹ The primary care clinician must use some element of judgement as to whether there may be psychosocial pressures which do not amount to 'illness', or whether the possibility of such illness exists. For instance, there is some benefit for a child or adolescent to be diagnosed as having ADHD, whether or not this is associated with conduct disorder, not only because this may afford more 'understanding' of the troubled teenager, but also because it might open the way for treatment options.

Not enough is known within the primary care situation or otherwise about when psychosocial risks or diagnoses inevitably progress to biomedical diagnoses, or the prognosis of either. This needs more research, although there may be methodological problems associated with an objective consideration of whether a presentation is of an illness or a psychosocial problem. Consistent training in the use of psychiatric diagnoses and the differentiation between these and psychosocial stressors is required. This is complicated by not knowing the implications and potential stigma of attributing a psychiatric diagnosis.

Management

The management of any condition in general practice starts before a diagnosis is even reached. Consultation skills such as empathy and active listening have a therapeutic effect, irrespective of the nature of the problem.⁶⁸ Where adverse circumstances and sustained negative attitudes have contributed to the development of a psychological disturbance, the value of attention, caring interest and a positive approach should not be understated.

The danger of an increasingly reductionist and medicalized approach to general practice is that such simple, time-honoured interventions can be neglected. Although the same applies to adult consultations, the challenge is greater in relation to teenagers who may have developed negative views of the adult population, and require greater input before a trusting relationship is developed.^{1,2} Paradoxically, although teenagers may require more time in the consultation for this purpose, they actually receive less.⁷⁰

Psychological problems requiring active treatment in adults are usually managed with drugs, psychological treatments or a combination of both. In relation to depressive disorders, there is evidence that adults strongly favour psychological approaches because of the misguided belief that antidepressants are addictive.⁶¹ The belief that doctors are likely to prescribe such treatment

in this context may inhibit help-seeking behaviour and also reduce compliance.

Specific psychological therapies, such as cognitive therapy, have been shown to be equally effective as antidepressants for depression in adults, although more commonly used non-directive counselling has not been evaluated fully.⁷¹ Problem-solving approaches have also been suggested, and some recent evidence suggests they are helpful with adults.⁷²

In relation to psychological therapies for teenage depression, Harrington and colleagues recently have reported the results of systematic reviews which suggest that, as in adults, cognitive therapy is more effective than general supportive therapy for defined conditions, whilst commonly used family therapy is no more effective.^{73,74} Interpersonal therapy is also showing promising effects,⁷⁵ and the latest evidence suggests that GPs can use interventions based on cognitive and interpersonal principles for management of adolescent depression (Gledhill J, Kramer T, Iliffe S and Garralda M, unpublished data).

Teenagers and adolescents with psychological disorders requiring active treatment may also be treated with drug treatments. In relation to depression, the evidence indicates that tricyclic antidepressants are less effective than in adults.⁷⁶ As a result, teenagers are less likely to be prescribed such treatment, although there may also be an inherent reluctance on the part of GPs to use such an approach, reflecting possible concerns about suicide attempts in teenagers. Newer selective serotonin re-uptake inhibitors appear to be better tolerated and possibly as a result are more effective,⁷⁷ although there have been no trials in the primary care setting to confirm this, and they are not all licensed for use in patients under 16 years of age.

There is a role for preventive management. Crome recently has reported on potential benefits of social skills training.⁷⁸ Grynch and Fincham,⁷⁹ and Beardslee et al.⁸⁰ provide interventions which could be used in primary care to act as management options for families with potential dysfunction, in the form of divorce, or in families with affective disorder. These preventive management options are complex and time-consuming however, and more thought needs to be given to how they could be extended realistically and efficaciously to a primary care setting.

In practice, the importance of a particular treatment modality depends not only on its effectiveness but also on its availability. Adolescent psychological services vary widely in their availability and responsiveness.⁸¹ Further, even when counsellors and psychologists are present in general practice, they are usually only experienced in dealing with adults.

Clearly, some teenagers may have serious pathology; one management option is to consider a referral to secondary care or other services. GPs in many areas are only too aware of the difficulty of accessing Child and Adolescent Mental Health Services (CAMHS), and it is imperative that more referral resources are made

available; several recent reports have drawn attention to the need for more service provision.^{81,82}

As in adults, the benefits of treatment depend on uptake which, in turn, relates to preferences and understanding. As far as we are aware, there has been little research into teenagers' understanding of psychological disorders and treatment. This is an important area in terms of recognizing their concerns and potential barriers to presentation, accessing help and accepting treatment.

There are also many unanswered questions in the form of relevant follow-up. There is no evidence available on how often GPs should follow-up adolescents with mental ill health, or the relevance of appointments made but not kept. This lack of knowledge also pertains to the follow-up of teenagers who have self-harmed.

Clearly there needs to be ongoing research in primary care on how best to manage teenagers in turmoil. As has been aptly pointed out: "Improving the mental health of children and adolescents should be an endpoint in itself and not merely a means of improving adult functioning, though it would achieve this."⁸³

Training needs

Most UK GPs receive poor training in adolescent medical care, and some have little awareness of the health needs of teenagers beyond the more publicized areas of drug use and teenage pregnancy.⁸⁴ This is true of other areas of the world, although in Australia and the USA doctors providing primary care have indicated a need for more training on teenage health.^{85–88}

There have been recent reports indicating that GPs can be encouraged to think of teenage health needs more appropriately. Bernard and colleagues have demonstrated better recognition of depression.⁶³ Recent Australian work has demonstrated the benefits of a training programme for educating Australian GPs on the health of adolescents, with improved knowledge and self-reported skills, although it is noteworthy that the standardized patients involved in the programme did not report any improvements.⁸⁹

The most important health risk is of suicide, and the greatest risk factor for adolescent suicide is a previous attempt, with >40% of completed suicides preceded by a previous attempt.⁹⁰ Many adult suicide victims see their GP before their death, and it has been suggested that doctors with more enhanced skills may have a role to play in preventing more suicides,⁹¹ although this link can never really be proved.⁸

However, many teenagers report problems establishing rapport with their GPs. Many reports indicate that teenagers do not see GP services as sensitive to their needs; these reports do not distinguish between teenagers with or without mental ill health, but indicate a

need for services to be more sensitive to teenagers and their health needs.^{7,92–97}

The main finding of UK primary care-based research is that teenagers wish for primary care staff to be affable, pleasant, approachable, accessible and non-judgemental.^{7,92–97} Further, they wish primary care providers to regard teenagers and their health as of greater importance than that afforded hitherto.⁸⁴ This should continue to be the subject of future research relating to teenagers within primary care.

Conclusions

The aim of this paper has been to highlight the issue of teenage turmoil, and we note several gaps in our present approach, although it is imperative that there is no 'overmedicalization' of the transition from childhood to adulthood. Nonetheless, a major gap at present is of *awareness*, and suggests that the notion of teenage turmoil indicating potential mental ill health should be made more of a priority for recognition and management by primary care. This may in turn lead to a second gap, namely that there is a need for more *training* for primary care professionals to meet the psychological health needs of their teenage patients.

A third gap is one of *research*. This paper may contain a great number of referenced papers, reports and articles, but there are still deficiencies in our knowledge base and these would benefit from more research and evaluation. Fourthly, there is a need for more *resources* and *services* to be made available within primary care and other strands of care provision, to allow better services for teenagers in general and troubled teenagers in particular.

We have emphasized several areas where these four gaps may be filled, and we will not list all of these again. However, a recurring theme is that all clinicians need sensitivity in relation to their health care for teenagers who experience turmoil, and that we should try to provide a more patient-centred service for teenagers in general. Further, we perhaps should try to re-assimilate the principles of 'family medicine' and attempt to involve the family and school more in our strategies for prevention, detection and treatment. We contend that these form the highest priorities for the future research agenda.

It is worth noting that there are unlikely to be imminent changes in the teenage perception of primary care, and there are unlikely to be any dramatic alterations in primary care provision. The nature of primary care itself is changing, and doctors feel themselves to be under threat from an ever-expanding list of demands on their time. This is why one purpose of this paper is not to suggest revolution in terms of primary care provision, but rather to help to foster an evolution to better awareness

of the teenage health agenda. This changed awareness of the inter-relationship between teenagers and primary care will need to involve the wider society as well as primary care.

This leads on to a final gap in our conception of teenage turmoil. Perhaps what is missing most is the *voice of the young patient* who experiences mental ill health. There have been several cogent works by authors who have experienced depression themselves and written lucid accounts of their experiences.^{98,99} No such accounts exist from young people themselves, and it is to our detriment that we have not, as yet, sought such an account from those who have experienced pathological teenage turmoil.

References

- Jacobson L, Wilkinson C. A review of teenage health: time for a new direction. *Br J Gen Pract* 1994; **44**: 420–424.
- Macfarlane A, MacPherson A. Primary health care and adolescence (editorial). *Br Med J* 1995; **311**: 825–826.
- Walker Z, Townsend J. The role of general practice in promoting teenage health: a review of the literature. *Fam Pract* 1999; **16**: 164–172.
- Crockett L, Petersen A. Adolescent development: health risks and opportunities for health promotion. In Millstein S, Petersen A, Nightingale E (eds). *Promoting the Health of Adolescents: New Directions for the Twenty-first Century*. New York: Oxford University Press, 1993: 13–37.
- Hill P. *Adolescent Psychiatry*. London: Churchill Livingstone, 1989.
- McCabe R. Psychiatric disturbance. *Practitioner* 1992; **236**: 1150–1154.
- Jacobson L, Pill R. Critical consumers: teenagers in primary care. *Health Soc Care Community* 1997; **5**: 59–62.
- Walker Z, Townsend J. Promoting adolescent mental health in primary care: a review of the literature. *J Adolesc* 1998; **21**: 621–634.
- Roberts R, Attkisson C, Rosenblatt A. Prevalence of psychopathology among children and adolescents. *Am J Psychiatry* 1998; **155**: 715–725.
- Appleby L, Amos T, Doye U, Tomenson B, Woodman M. General practitioners and young suicides. A preventive role for primary care. *Br J Psychiatry* 1996; **168**: 330–333.
- Mental Health Foundation. *The Big Picture: Promoting Children and Young People's Mental Health*. London: Mental Health Foundation, 1999.
- Graham P, Hughes C. *So Young, So Sad, So Listen*. London: Royal College of Psychiatrists, 1995.
- Meltzer H, Gill B, Pettigrew M, Hinds K. *OPCS Surveys of Psychiatric Morbidity. The Prevalence of Psychiatric Morbidity in Great Britain*. London: Her Majesty's Stationery Office, 1995.
- Harrington R. Affective disorders. In Rutter M, Taylor E, Hersov L (eds). *Child and Adolescent Psychiatry: Modern Approaches*, 3rd edn. Oxford: Blackwell Scientific, 1994: 330–350.
- Whitaker A, Johnson J, Shaffer D *et al*. Uncommon troubles in young people: prevalence estimates of selected psychiatric disorders in a nonreferred adolescent population. *Arch Gen Psychiatry* 1990; **47**: 487–496.
- Bailey V, Graham P, Boniface D. How much child psychiatry does a GP do? *J R Coll Gen Pract* 1978; **28**: 621–626.
- Garralda M, Bailey D. Children with psychiatric disorders in primary care. *J Child Psychol Psychiatry* 1986; **27**: 611–624.
- Kramer T, Garralda M. Psychiatric disorders in adolescents in primary care. *Br J Psychiatry* 1998; **173**: 508–513.
- Potts Y, Gillies M, Wood S. Lack of mental well-being in 15 year olds: an undisclosed iceberg? *Fam Pract* 2001; **18**: 95–100.
- Shaffer, D, Piacentini, J. Suicide and attempted suicide. In Rutter M, Taylor E, Hersov L (eds). *Child and Adolescent Psychiatry: Modern Approaches*, 3rd edn. London: Blackwell, 1994: 407–424.
- Rapoport J. Childhood obsessive compulsive disorder. *J Child Psychol Psychiatry* 1986; **27**: 289–300.
- von Korff M, Eaton W, Keyl P. The epidemiology of panic disorder: results from 3 community surveys. *Am J Epidemiol* 1985; **122**: 970–981.
- Earls F. Oppositional-defiant and conduct disorders. In Rutter M, Taylor E, Hersov L (eds). *Child and Adolescent Psychiatry: Modern Approaches*, 3rd edn. London: Blackwell, 1994: 308–329.
- Schoenbach V, Kaplan B, Wagner E, Grimson R, Miller F. Prevalence of self reported depressive symptoms in young adolescents. *Am J Publ Health* 1983; **73**: 1281–1287.
- Kandel D, Davies M. Adult sequelae of adolescent depressive symptomatology in adolescents. *Arch Gen Psychiatry* 1986; **43**: 255–265.
- Kazdin A. Developmental psychopathology: current research, issues and directions. *Am Psychol* 1989; **44**: 180–187.
- Brent D, Kolko D, Allan M, Brown R. Suicidality in affectively disordered adolescent inpatients. *J Am Acad Child Adolesc Psychiatry* 1990; **29**: 586–593.
- Rao U, Weissman M, Hammond W. Childhood depression and risk of suicide: a preliminary report of a longitudinal study. *J Am Acad Child Adolesc Psychiatry* 1993; **32**: 21–27.
- Harrington R, Brendenkamp D, Groothues C, Rutter M, Fudge H, Pickles A. Adult outcomes of childhood and adolescent depression: links with suicidal behaviours. *J Child Psychol Psychiatry* 1994; **35**: 1309–1319.
- Harrington R, Fudge H, Rutter M, Pickles A, Hill J. Adult outcomes of childhood and adolescent depression: I. Psychiatric status. *Arch Gen Psychiatry* 1990; **47**: 465–473.
- Smeeton N, Wilkinson G, Skuse D, Fry J. A longitudinal study of general practitioner consultations for psychiatric disorders in adolescence. *Psychol Med* 1992; **22**: 709–715.
- Patton G, Hibbert M, Rosier M, Carlin J, Caust J, Bowes G. Is smoking associated with anxiety and depression in teenagers? *Am J Publ Health* 1996; **86**: 225–230.
- Graham H. *Smoking Among Working Class Mothers. Final Report*. Coventry: Department of Applied Social Studies, University of Warwick, 1992.
- Bauman A, Phongsavan P. Epidemiology of substance use in adolescence: prevalence, trends and policy implications. *Drug Alcohol Depend* 1999; **55**: 187–207.
- Hovens B, Cantwell D, Kiriakos R. Psychiatric comorbidity in hospitalised adolescent substance misusers. *J Am Acad Child Adolesc Psychiatry* 1994; **33**: 476–483.
- Zeitlin H. Psychiatric comorbidity with substance misuse in children and teenagers. *Drug Alcohol Depend* 1999; **55**: 225–234.
- Sells C, Blum R. Current trends in adolescent health. In DiClemente R, Hansen W, Ponton L (eds). *Handbook of Adolescent Health Risk Behavior*. New York: Plenum, 1996: 5–29.
- Swadi S. Individual risk factors for adolescent substance use. *Drug Alcohol Depend* 1999; **55**: 209–224.
- Shafii M, Steltz Lenarsky J, McCue-Derrick A, Beckner C, Whittinghill J. Comorbidity of mental disorders in the post-mortem diagnosis of completed suicide in children and adolescents. *J Affect Disord* 1988; **15**: 227–233.
- Bennett D, Bauman A. Adolescent mental health and risky sexual behaviour. *Br Med J* 2000; **321**: 251–252.
- Ramrakha S, Caspi A, Dickson N, Moffitt T, Paul C. Psychiatric disorders and risky sex in young adulthood: a cross sectional study in a birth cohort. *Br Med J* 2000; **321**: 263–266.
- Houston H, Jacobson L. Overdose and termination of pregnancy: an important association? *Br J Gen Pract* 1996; **46**: 737–738.

- 43 McCann J, James A, Wilson S, Dunn G. Prevalence of psychiatric disorders in young people in the care system. *Br Med J* 1996; **313**: 1529–1530.
- 44 Smith P. The silent nightmare: bullying and victimisation in school peer groups. *The Psychologist* 1991; **4**: 243–248.
- 45 Balding J. *Young People in 1995*. Exeter: Schools Health Education Unit, University of Exeter, 1996.
- 46 Salmon G, James A, Smith D. Bullying in schools: self-reported anxiety, depression, and self esteem in secondary school children. *Br Med J* 1998; **317**: 924–925.
- 47 Forero R, McLellan L, Rissel C, Bauman A. Bullying behaviour and psychosocial health among school students in New South Wales, Australia: cross sectional survey. *Br Med J* 1999; **319**: 344–348.
- 48 Kaltia-Heino R, Rimpela M, Marttunen M, Rimpela A, Rantanen P. Bullying, depression, and suicidal ideation in Finnish adolescents: school survey. *Br Med J* 1999; **319**: 348–351.
- 49 Roberts H. Children, inequalities, and health. *Br Med J* 1997; **314**: 1122–1125.
- 50 Resnick M, Bearman P, Blum R *et al*. Protecting adolescents from harm: findings from the National Longitudinal Study on Adolescent Health. *J Am Med Assoc* 1997; **278**: 823–865.
- 51 Sherman D. The neglected health care needs of street youth. *Publ Health Rep* 1992; **107**: 443–440.
- 52 Booth R, Zhang Y. Severe aggression and related conduct problems among runaway and homeless adolescents. *Psychiatr Serv* 1996; **47**: 74–80.
- 53 Tressider J, Macaskill P, Bennett D, Nutbeam D. Health risks and behaviour of out-of-school 16 year olds. *Aust NZ J Publ Health* 1997; **21**: 168–174.
- 54 Radke-Yarrow M, Nottelmann E, Martinez P, Fox M, Belmont B. Young children of affectively ill parents: a longitudinal study of psychosocial development. *J Am Acad Child Adolesc Psychiatry* 1992; **31**: 78–77.
- 55 Bowman F, Garralda M. Psychiatric morbidity among children who are frequent attenders in general practice. *Br J Gen Pract* 1993; **43**: 6–9.
- 56 Kramer T, Iliffe S, Murray E, Waterman S. Which adolescents attend the GP? *Br J Gen Pract* 1997; **47**: 327.
- 57 Pedersen S. Assessing and treating the depressed child. *Practitioner* 2000; **244**: 252–257.
- 58 Royal College of General Practitioners, Office of Population Censuses and Surveys, Department of Health. *Morbidity Statistics from General Practice: 4th National Study, 1991–1992*. London: HMSO, 1995.
- 59 Williams R. Psychiatric morbidity in children and adolescents: a suitable cause for concern. *Br J Gen Pract* 1993; **43**: 3–4.
- 60 Goodyer I, Cooper P. A community study of depression in adolescent girls. II: the clinical features of identified disorder. *Br J Psychiatry* 1993; **163**: 374–380.
- 61 Priest R, Vize C, Roberts A, Roberts M, Tylee A. Lay people's attitudes to treatment of depression: results of opinion poll for Defeat Depression Campaign just before its launch. *Br Med J* 1996; **313**: 858–859.
- 62 Harrington R. Depressive disorders in adolescence. *Arch Dis Child* 1995; **72**: 193–195.
- 63 Bernard P, Garralda E, Hughes T, Tylee A. Evaluation of a teaching package in adolescent psychiatry for general practitioners. *Educ Gen Pract* 1999; **10**: 21–28.
- 64 Donovan C, McCarthy S. Is there a place for adolescent screening in general practice? *Health Trends* 1988; **20**: 64–66.
- 65 Campbell A, Edgar S. Teenage screening in a general practice setting. *Health Visitor* 1993; **66**: 365–366.
- 66 Westman A, Garralda M. Mental health promotion for young adolescents in primary care: a feasibility study. *Br J Gen Pract* 1996; **46**: 317.
- 67 Cowap N. GPs need to be more proactive in providing health care to teenagers. *Br Med J* 1996; **313**: 941.
- 68 McWhinney I. *A Textbook of Family Medicine*. Oxford: Oxford University Press, 1996.
- 69 Rosenthal N, Carpenter C, James S, Barry B, Rogers S, Wehr T. Seasonal affective disorder in children and adolescents. *Am J Psychiatry* 1986; **143**: 356–358.
- 70 Jacobson L, Wilkinson C, Owen P. Is the potential of teenage consultations being missed?: a study of consultation times in primary care. *Fam Pract* 1994; **11**: 296–299.
- 71 Churchill R, Dewey M, Grettton V, Duggan C, Chilvers C, Lee A. Should general practitioners refer patients with major depression to counsellors? A review of current published evidence. *Br J Gen Pract* 1999; **49**: 738–743.
- 72 Mynors-Wallis L, Gath D, Day A, Baker F. Randomised controlled trial of problem solving treatment, antidepressant medication, and combined treatment for major depression in primary care. *Br Med J* 2000; **320**: 26–30.
- 73 Harrington R, Whittaker J, Shoebridge P, Campbell F. Systematic review of efficacy of cognitive behaviour therapies in childhood and adolescent depressive disorder. *Br Med J* 1998; **316**: 1559–1563.
- 74 Harrington R, Whittaker J, Shoebridge P. Psychological treatment of depression in children and adolescents. *Br J Psychiatry* 1998; **173**: 291–298.
- 75 Fombonne E. Interpersonal therapy for adolescent depression. *Child Psychol Psychiatry Rev* 1998; **3**: 169–175.
- 76 Hazell P, O'Connell D, Heatcote D, Robertson J, Henry D. Efficacy of tricyclic drugs in treating child and adolescent depression: a meta-analysis. *Br Med J* 1995; **310**: 897–901.
- 77 Carrey J, Wiggins D, Milin R. Pharmacological treatment of psychiatric disorders in children and adolescents. *Drugs* 1996; **51**: 750–759.
- 78 Crome I. Treatment interventions—looking towards the millenium. *Drug Alcohol Depend* 1999; **55**: 247–263.
- 79 Grynych J, Fincham F. Interventions for children of divorce: towards greater integration of research and action. *Psychol Bull* 1992; **111**: 434–454.
- 80 Beardslee W, Salt P, Porterfield K *et al*. Comparison of preventive interventions for families with parental affective disorder. *J Am Acad Child Adolesc Psychiatry* 1993; **32**: 254–263.
- 81 Audit Commission. *Children in Mind*. London: The Audit Commission, 1999.
- 82 Yamey G. Mental health services are failing children and adolescents. *Br Med J* 1999; **319**: 872.
- 83 Black D. Mental health services for children. *Br Med J* 1992; **305**: 971–972.
- 84 Jacobson L, Richardson G, Parry-Langdon N, Donovan C. How do teenagers and primary care providers view each other? An overview of key themes. *British Journal of General Practice* 2001; **51**: 811–816.
- 85 Blum R, Bearinger L. Knowledge and attitudes of health professionals toward adolescent health care. *J Adolesc Health* 1990; **11**: 289–294.
- 86 Fleming G, O'Connor K, Sanders J. Paediatricians' views of access to health services for adolescents. *J Adolesc Health* 1994; **15**: 473–478.
- 87 Veit F, Sancil L, Young D, Bowes G. Adolescent health care: perspectives of Victorian general practitioners. *Med J Aust* 1995; **163**: 16–18.
- 88 Veit F, Sancil L, Young D, Bowes G. Barriers to effective health care for adolescents. *Med J Aust* 1996; **163**: 131–133.
- 89 Sancil L, Coffey C, Veit F *et al*. Evaluation of an educational intervention for general practitioners in adolescent health care: randomised controlled trial. *Br Med J* 2000; **320**: 224–229.
- 90 Slap G, Vorters D, Khalid N, Margulies S, Forke C. Adolescent suicide attempters: do physicians recognise them? *J Adolesc Health* 1992; **13**: 286–292.
- 91 Matthews K, Milne S, Achcroft G. Role of doctors in the prevention of suicide: the final consultation. *Br J Gen Pract* 1994; **44**: 345–348.
- 92 Bewley B, Higgs R, Jones A. Adolescent patients in an inner London general practice: their attitudes to illness and health care. *J R Coll Gen Pract* 1984; **34**: 543–546.
- 93 Epstein R, Rice P, Wallace P. Teenagers' health concerns: implications for primary health care professionals. *J R Coll Gen Pract* 1989; **39**: 247–249.
- 94 Kari J, Donovan C, Li J, Taylor B. Adolescents' attitudes to general practice in North London. *Br J Gen Pract* 1997; **47**: 349.

- ⁹⁵ Donovan C, Mellanby A, Jacobson L, Taylor B, Tripp J, Members of the Adolescent Working Party, RCGP. Teenagers' views on the GP consultation and their provision of contraception. *Br J Gen Pract* 1997; **47**: 715–718.
- ⁹⁶ Jones R, Finlay F, Simpson N, Kreitman T. How can adolescents' health needs and concerns best be met? *Br J Gen Pract* 1997; **47**: 631–634.
- ⁹⁷ Jacobson L, Kinnersley P. Teenagers in primary care—continuing the new direction (editorial). *Br J Gen Pract* 2000; **50**: 947–948.
- ⁹⁸ Plath S. *The Bell Jar*. London: Faber and Faber, 1967.
- ⁹⁹ Styron W. *Darkness Visible: A Memoir of Madness*. New York: Vintage, 1992.