

Adults with learning disabilities and psychiatric problems

Mike Vanstraelen, Geraldine Holt and Nick Bouras

The co-occurrence of psychiatric illness with a learning disability has been well established, and people with learning disabilities are more likely to suffer from mental ill health (including behavioural disorders, personality disorders, autistic-spectrum disorders and attention-deficit hyperactivity disorder) (Deb *et al*, 2001*b*). The arrival of effective medical and psychosocial treatments for psychiatric disorders makes their diagnosis in those with learning disabilities all the more pressing.

In this chapter, we discuss the relationship between psychiatric problems and challenging behaviour, give an outline of aspects of assessment and diagnosis in those with learning disabilities and describe common psychiatric disorders, including schizophrenia, mood disorders, anxiety disorders, obsessive–compulsive disorder and eating disorders. Delirium and dementia are discussed in Chapters 9 and 15. The chapter concludes with an update on the planning and provision of psychiatric services.

Psychiatric problems *v.* challenging behaviour

Emerson (1995) describes challenging behaviour as a social construct defined by social impact, without any implication about the underlying processes (Emerson *et al*, 1999). Nevertheless, challenging behaviour is the most common reason for referral to a psychiatrist in those with learning disabilities (Day, 1985).

Two large-scale studies reported by Emerson *et al* (1999), both with methodological weaknesses, found no compelling correlation between psychiatric illness and challenging behaviour. They suggest that there are at least four types of relationship of clinical significance between challenging behaviour and psychiatric disorder:

- (1) family factors associated with the development of challenging behaviour appear to be similar to those associated with the development of conduct disorder;

- (2) challenging behaviours may represent the atypical presentation of an underlying psychiatric disorder; some forms of self-injurious behaviour may represent an obsessive–compulsive disorder (see below);
- (3) challenging behaviours may occur as secondary features of psychiatric disorders among those with severe learning disabilities;
- (4) psychiatric disorders may establish a motivational basis for the expression of challenging behaviours, maintained by operant behavioural processes.

Assessment and diagnosis

The principles of psychiatric assessment of those with learning disabilities are similar to those in general adult and child psychiatry. Particular attention, however, must be given to:

- the patient's level of understanding and ability to communicate;
- details from informants and direct observation by the clinician;
- the history of the presenting complaint over time;
- the patient's developmental history (Holland, 2000);
- physical disabilities (including sensory impairments) and medical history.

Assessment aims not only to detect the presence of mental health problems, but also to identify the features that make a person vulnerable to them. Any therapeutic interventions must take into account a number of factors, including the client's wishes, the diagnosis and these vulnerability factors. Only by addressing the last of these will the risk of relapse be reduced. They can be considered under three headings: psychological (for instance characteristic ways of thinking), biological (such as genetic predisposition or medication) and social (including environmental factors). Some of these vulnerability factors, such as brain damage, cannot be changed, but others, such as better control of epilepsy, can and should form part of the care plan. Recent guidelines on the assessment of mental health in those with learning disabilities, based on published evidence and the opinions of experts (Deb *et al*, 2001*b*), will help the clinician.

The introduction of operational criteria in ICD–10 (World Health Organization, 1992) and DSM–IV (American Psychiatric Association, 1994) and the use of structured and semi-structured interviews, such as the Psychiatric Assessment Schedule for Adults with Developmental Disability (PAS–ADD; Moss *et al*, 1993), have significantly increased the reliability of the diagnostic process in psychiatry. However, whether symptom definitions have the same validity in those with and without learning disabilities is more difficult to establish. The use of clinical judgement as an ultimate validity criterion is limited, possibly more so when applied to those with learning disabilities (Moss, 1999).

For those with moderate to severe learning disability, the *Diagnostic Criteria for Psychiatric Disorders for Use with Adults with Learning Disabilities/Mental Retardation* (DC-LD; Royal College of Psychiatrists, 2001) describes criteria for the diagnostic classification of mental health problems based on a consensus of current practice and opinion among psychiatrists working in learning disability. The aim is to complement the use of ICD-10 for those with milder or no learning disabilities.

Schizophrenia and schizotypal and delusional disorders

Schizophrenia

The estimated point prevalence of schizophrenia in people with learning disabilities is 3% (Fraser & Nolan, 1994), compared with 0.4% in the general population (Meltzer *et al*, 1995). The highest rates are reported in those with mild and borderline learning disability (Lund, 1985). Schizophrenia has an earlier onset in learning disability (35.4 years) than in the general population (43.8 years) (Meadows *et al*, 1991).

Presentation

In those with mild learning disabilities and good verbal skills, the presentation of schizophrenia is similar to that in individuals without learning disabilities. There is a tendency for those with learning disabilities to show less psychopathology, especially persecutory delusions and formal thought disorder (Meadows *et al*, 1991). Paranoid symptoms and catatonia are the hallmarks of schizophrenia in the group with more-severe learning disabilities (Eaton & Menolascino, 1982). Turner (1989) reported that disturbed and aggressive behaviour, bizarre rituals and 'hysterical' behaviours are frequent atypical symptoms.

In view of the limitations in identifying psychopathology in people with more-severe learning disabilities, the DC-LD suggests that the non-affective psychotic disorders should not be sub-classified to the extent of ICD-10 (Royal College of Psychiatrists, 2001). Increased rates of schizophrenia have been reported in adults with velo-cardo-facial syndrome (Murphy *et al*, 1999).

Treatment as a multi-professional modality

After a thorough assessment (including of risk) and diagnosis, deciding on the most appropriate place of treatment and the use of medication are important in the acute phase of the illness.

Evidence for the effectiveness of antipsychotic medication in people with these disorders and learning disabilities rests mainly on case reports and small series of patients in uncontrolled studies (Duggan & Brylewski, 1999). Nevertheless, antipsychotics are in widespread clinical use, mainly on the basis of the extrapolation of findings from

general adult psychiatry. Treatments should be tailored to the individual, and so take into account any co-existing medical conditions such as epilepsy, other drugs being taken and any other particular requirements.

Other interventions such as cognitive-behavioural therapy (Dickerson, 2000) do deserve attention in those with mild or borderline learning disability, but have seldom been formally researched in this population.

Staff training in the recognition of symptoms will help to detect early relapse. Assessment and management of expressed emotion in families (Anderson & Adams, 1996) and professional carers (Clarke, 1999) can also be beneficial. Respite care and rehabilitation for those with more-chronic illnesses, including the use of day services, should be part of a comprehensive long-term management plan.

The UK700 trial outcome study of those with a severe psychotic illness reported that those with borderline intellectual disability benefit from intensive as compared with standard case management (Tyrer *et al*, 1999). Research is being undertaken to establish if this is also the case for the whole spectrum of people with learning disabilities.

Schizoaffective disorder and atypical psychosis

The literature on schizoaffective disorder in learning disability is very sparse. Cycloid psychosis as a descriptive term has recently re-emerged with regard to atypical psychotic symptoms (ICD-10 acute polymorphic psychotic disorder without symptoms of schizophrenia) in those with Prader-Willi syndrome (Verhoeven *et al*, 1998).

Affective disorders

Mood disorders

People with learning disabilities can develop the full range of affective disorders. Impaired social functioning and intelligence influence the clinical presentation (Sovner & Hurley, 1983)

Depressive disorder

Reported estimates of the point prevalence of depression in those with and without learning disabilities vary between 2% and 3% (Bouras & Drummond, 1992; Collacott *et al*, 1992; Patel *et al*, 1993; Meltzer *et al*, 1995; Cooper, 1997). Adults with mild learning disabilities living in the community may experience depression at a higher rate than non-disabled persons (Prout & Schaefer, 1985). People with Down's syndrome are possibly more likely to be diagnosed as having a depressive disorder than those with learning disabilities due to other causes (Collacott *et al*, 1992).

Presentation

The clinical features of depression in adults with learning disabilities vary with the level of disability (Davis *et al*, 1997b). Those with mild learning disability show the same symptoms as their non-disabled peers, but with somewhat more prominence of loss of confidence and tearfulness (Marston *et al*, 1997).

In those with more-severe forms of learning disability, somatic symptoms and their behavioural correlates, such as changes in energy and activity levels, sleep and appetite changes, and social withdrawal (Laman & Reis 1987; Davis *et al*, 1997b; Clarke & Gomez, 1999; Evans *et al*, 1999; Matson *et al*, 1999), are suggestive of affective disorders. Regression to increased dependency, psychomotor agitation, increased irritability, worsening of already existing behavioural problems (Meins, 1995), aggressive (Reiss & Rojahn 1993) and self-injurious behaviours, reduced communication and social isolation (Sovner *et al*, 1993; Marston *et al*, 1997), catatonic features and visual hallucinations are more common in this group.

Suicidal thoughts and behaviours are thought to occur less frequently in those with depression and learning disability, but even in severe disability people are not unable to form such an intention (Walters, 1990; Patja *et al*, 2001).

High levels of depressed mood are associated with self- and informant-rated measures of poor social skills and low levels of social support in those with learning disabilities (Reiss & Benson, 1985; Laman & Reiss, 1987). Informant- and self-report ratings of self-concept are significantly negatively correlated with depression (Benson & Ivins, 1992). Social comparison is thought to be associated with self-esteem and depression in people with learning disabilities in the same way as it is for people without such disabilities (Dagnan & Sandhu, 1999).

Depression is also correlated with the frequency of negative automatic thoughts and feelings of hopelessness in people with mild learning disabilities (Nezu *et al*, 1995). As with schizophrenia, depression may be part of the psychiatric phenotype of genetic syndromes associated with learning disability, such as fragile X syndrome (Tranebjaerg & Orum, 1991; see Chapter 3).

Treatment as a multi-professional modality

For those with the most severe forms of depression and those with suicidal intent, hospital admission needs to be considered. The full range of bio-psychosocial treatments should be available for people with learning disabilities.

A small number of uncontrolled case and small-series studies suggest that antidepressants can be effective in those with a learning disability combined with depressive disorder (Howland, 1992; Jawed *et al*, 1993;

Sovner *et al*, 1993; Masi *et al*, 1997; Verhoeven *et al*, 2001), but may have considerable side-effects, including increased irritability and acting out (Aman *et al*, 1986).

The literature on the use of psychological therapies for depression in this population is limited (Gaedt, 1995; Lindsay *et al*, 1993; Lindauer *et al*, 1999). Hollins & Sinason (2000) and Davis *et al* (1997a) highlighted the lack of available psychological therapies, of trained therapists and of research into efficacy in this area.

Electroconvulsive therapy might be effective as an adjunct to treatment in the acute phase of the most severe acute and otherwise non-responsive episodes of depression in those with learning disabilities (Cutajar & Wilson, 1999).

Bipolar affective disorder

Deb & Hunter (1991) recorded cyclical changes in behaviour and mood in 4% of adults with learning disabilities, with and without epilepsy. The lifetime prevalence rate of manic-depressive (bipolar) disorder is 1% in those without a learning disability (Weissman *et al*, 1988).

Similarities to and differences from people without learning disabilities

Cyclical changes in affect and activity level can be observed in and reported by people with mild to even very severe learning disabilities and their carers. These suggest a diagnosis of manic-depressive disorder (Reid, 1972). A daily record of mood and activity level can be kept. The mania rating scale items of the DASH-II screening instrument for those with learning disabilities ('restless or agitated', 'decreased need for sleep', 'irritable', 'easily distracted', 'extremely happy or cheerful for no obvious reason', 'talks loudly and quickly') show good internal correlation and specificity with the mania DSM-IV diagnosis (Matson & Smiroldo, 1997). This confirms earlier descriptions by Reid (1972), Heaton-Ward (1977) and Hucker *et al* (1979). Hassan & Mooney (1979) described pressure of speech rather than flight of ideas, increased and decreased appetite, echolalia, crying and over-activity. Mixed affective states and rapid cycling forms (more than four episodes a year) of bipolar affective disorder might be more common in those with learning disabilities (Berney & Jones, 1988). In Down's syndrome, mania is very uncommon among women, whereas in the general population the male : female ratio is equal. Those with Down's syndrome also less frequently have a positive family history (Cooper & Collacott, 1993).

In the general population, rapid cycling forms are seen more commonly in women, but in those with learning disabilities, the gender ratio is equal (Vanstraelen & Tyrer, 1999).

Treatment as a multi-professional modality

In the acute phase of treatment, antipsychotics have been used with success (Vanstraelen & Tyrer, 1999). There is some evidence that lithium (Rivinus & Harmatz, 1979), sodium valproate and possibly carbamazepine are effective in the prophylaxis of rapid-cycling bipolar affective disorder in those with learning disabilities (Vanstraelen & Tyrer, 1999).

People with learning disabilities should have access to the full range of medical (Howland, 1992; Sovner *et al*, 1993; Masi *et al*, 1999; Clarke & Gomez, 1999), psychological (Lindsay *et al*, 1993) and social treatments for affective disorders.

Persistent mood disorders

There are few studies of dysthymia, which is probably underdiagnosed, in those with learning disabilities (Jancar & Gunaratne, 1994; Masi *et al*, 1999). Similarly, cyclothymia (persistent mood swings not meeting severity criteria for affective disorders) has as yet received little attention in this population.

Neurotic, stress-related and somatoform disorders

Anxiety disorder

Stavrakaki & Mintsoulis (1997) recorded that 27% of individuals with learning disabilities had anxiety disorders. Generalised anxiety disorder is thought to be at least as common as in the general adult population (Deb *et al*, 2001a).

Presentation

Gostason (1987) showed that those with mild learning disabilities have a higher degree of neuroticism than controls without learning disabilities and those with more-severe learning disabilities. Common symptoms are over-activity, panic attacks, agoraphobia, sexual dysfunction, mood changes, depersonalisation and derealisation, disruptive behaviours (including aggression and self-mutilation), somatic complaints, and sleep and appetite disturbance (Stavrakaki & Mintsoulis, 1997). In mild learning disability, symptoms of generalised anxiety disorder are similar to those in the general population, with increased 'brooding', somatic complaints and sleep disorder (Masi *et al*, 2000).

In more-severe learning disability, only the behavioural symptoms associated with anxiety can be reliably assessed, ruling out many core psychological symptoms of the disorder (Matson *et al*, 1997).

Comorbidity with other psychiatric illnesses such as depression (Stavrakaki & Mintsoulis, 1997) is common. High levels of anxiety are

thought to be part of the behavioural psychiatric phenotype in Williams syndrome (Stavrakaki & Mintsoulis, 1997).

Treatment as a multi-professional modality:

Treatment methods include pharmacotherapy, behavioural therapies, environmental adaptation and staff training. There is some evidence that anxiolytic drugs such as buspirone are effective in treating those with learning disabilities with anxiety (Ratey *et al*, 1989).

Obsessive–compulsive disorder

Compulsive behaviours have reported frequencies of between 3.5% in adults with mild to profound learning disabilities (Vitiello *et al*, 1989) and 40% in those individuals with severe to profound disabilities (Bodfish *et al*, 1995). Ordering compulsions are reported to be the most prevalent.

Presentation

The diagnostic criteria for obsessive–compulsive disorder in the general population include complex cognitive experiences such as the recognition that the thoughts or acts are under self-control. Such experiences may be impossible to identify or clarify in a person with learning disabilities.

Vitiello *et al* (1989) and Bodfish *et al* (1995) reported that compulsions were significantly associated with stereotypies and self-injurious behaviour. There are arguments for self-injurious behaviours (King, 1993), compulsions and stereotypies to be considered atypical presentations of obsessive–compulsive disorders. Both are thought to be mediated in part by the basal ganglia, they share part of their phenomenology (compulsions without obsessions have been reported in adults (Weissman *et al*, 1994)), and there is some evidence that compulsions, stereotypies and obsessive–compulsive disorder respond to drugs that cause serotonin reuptake inhibition. The nature of the relationship between such stereotyped movements or rituals and obsessive–compulsive disorders needs further clarification. The various diagnostic manuals rate them as separate disorders at present.

Obsessions and compulsions can arise in a number of disorders other than obsessive–compulsive disorder, such as depression and pervasive developmental disorder (Deb *et al*, 2001).

Obsessions and compulsions have also been associated with specific syndromes such as Prader–Willi syndrome (Dykens & Hodapp, 1999). Some specific stereotyped movements have been associated with disorders such as Rett syndrome (hand-wringing movements in front of the body) and Smith–Magenis syndrome

(body self-hugging, self-biting). These are included in the behavioural phenotypes of these disorders. Although obsessions and compulsions may need pharmacological treatment in individuals with Prader–Willi syndrome, the need for and effectiveness of serotonin reuptake inhibitors in the treatment of stereotyped movements in Rett syndrome and Smith–Magenis syndrome is less established.

Treatment as a multi-professional modality:

If the obsessions or compulsions are symptoms of another disorder, this latter should be the initial focus of treatment. As noted above, treatment with selective serotonin reuptake inhibitors may be beneficial in obsessive–compulsive disorder, as may various behavioural techniques. These are discussed in more depth in Chapters 10, 11 and 12.

Adjustment disorder and post-traumatic stress disorder

Children and adults with learning disability are vulnerable to emotional, physical and sexual abuse (Turk & Brown, 1993). The risk of post-traumatic stress disorder and adjustment disorder is therefore likely to be significantly increased.

Behavioural syndromes

Eating disorders

Gravestock (2000) suggested that 1–19% of adults with learning disabilities living in the community and 3–42% of those living in institutions have a diagnosable eating disorder, with higher rates in those with more-severe learning disabilities.

Presentation

Eating disorder research in those with learning disabilities has covered pica, rumination and regurgitation, psychogenic vomiting, food faddiness or refusal, psychogenic loss of appetite, binge eating disorders and anorexia nervosa. In individuals with learning disabilities living in the community, deviant eating behaviour is more likely to occur in those with a comorbid psychiatric disorder (Jawed *et al*, 1993) and to be associated with considerable physical and social comorbidity (Gravestock, 2000). However, the impact of diagnosable eating disorders on weight, physical and mental health and social functioning has not been adequately addressed. Appropriate diagnostic criteria, multimodal assessment and clinically effective treatment approaches need to be developed.

Planning and provision of psychiatric services

The publication of the Mansell Report (1993) on Services for People with Learning Disabilities and Challenging Behaviour or Mental Health Needs in the United Kingdom and the Royal College of Psychiatrists (1996/1997) Council Report 'Meeting the Mental Health Needs of People with Learning Disability' delivered the impetus and recommendation for the development of specialist mental health teams with expertise in both learning disability and mental health (Bouras & Holt, 2000). The White Paper *Valuing People: A New Strategy for Learning Disability for the 21st Century* (Department of Health, 2001) acknowledges this, but states that people with learning disabilities should be enabled to access general psychiatric services whenever possible.

However, generic psychiatric services often do not meet the needs of this client group, either in community settings or in hospitals (Bouras & Holt, 2001). This reflects a number of issues, including staff training (general psychiatric teams may feel that they do not have the necessary skills), resources (pressure on services, so that people with learning disabilities can be viewed as taking scarce resources from the general psychiatric population) and the vulnerability of those with learning disabilities (general psychiatric environments can be volatile and potentially violent).

The White Paper proposes clear protocols for collaboration between specialist learning disability services, specialist mental health services and generic mental health services. These will need to be agreed and in place if the assertion that the National Service Framework for Mental Health (Department of Health, 1999a) applies to all adults of working age (including those with learning disabilities) is to become a reality. The White Paper does not offer any clarification of the organisational and funding implications of achieving this.

If alternatives to in-patient treatment are to be sought whenever possible for people with learning disabilities and psychiatric disorders, the skills of staff supporting them in residential settings, whether family members or paid carers, will need to be increased. At present, many such people have no expertise in care of people with learning disabilities and psychiatric disorders. This is reflected in the difficulty of discharging people with learning disabilities and mental health needs from in-patient general psychiatric wards (Shepherd *et al*, 1997) and from specialist learning disability psychiatric beds (Watts *et al*, 2000) to suitable community placements.

For specialist services to be able to work with people in the community, the knowledge base of direct carers will need to be improved. Carers must feel confident in carrying through and monitoring interventions in collaboration with specialist services.

The White Paper proposes that if in-patient assessment and treatment are necessary, local services will have access to a specialist resource for those who cannot appropriately be admitted to general psychiatric services, even with specialist support. There is a scarcity of such resources at present within the NHS (Department of Health, 1999b), particularly for those requiring secure or medium-secure provision. This has led to a flourishing private industry, with people being placed sometimes at significant distances from families and friends. This makes monitoring of placement and reintegration into the local community more complicated. Financial resources are diverted from local services, making it more difficult for them to develop.

With the introduction of primary care trusts, it will be vital that the needs of those with learning disabilities and psychiatric disorders are recognised and provided for. The interface issues between the various services already highlighted will need to be clarified and resolved. This is a specialist area and primary care trusts will need appropriate advice in working within it.

References

- Aman, M. G., White, A. J., Vaithianathan, C., *et al* (1986) Preliminary study of imipramine in profoundly retarded residents. *Journal of Autism and Developmental Disorders*, **16**, 263–273.
- American Psychiatric Association (1994) *Diagnostic and Statistical Manual of Mental Disorders* (4th edn) (DSM-IV). Washington, DC: APA.
- Anderson, J. & Adams, C. (1996) Family interventions in schizophrenia: an effective but underused treatment. *BMJ*, **313**, 505–506.
- Benson, B. A. & Ivins, J. (1992) Anger, depression and self-concept in adults with mental retardation. *Journal of Intellectual Disability Research*, **36**, 169–175.
- Berney, T. & Jones, P. M. (1988) Manic-depressive disorder in mental handicap. *Australia and New Zealand Journal of Developmental Disabilities*, **14**, 219–225.
- Bodfish, J. W., Crawford, T. W., Powell, S. B., *et al* (1995) Compulsions in adults with mental retardation: prevalence, phenomenology and comorbidity with stereotypy and self-injury. *American Journal of Mental Retardation*, **100**, 183–192.
- Bouras, N. & Drummond, C. (1992) Behaviour and psychiatric disorders of people with mental handicaps living in the community. *Journal of Intellectual Disability Research*, **36**, 349–357.
- & Holt, G. (2000) The planning and provision of psychiatric services for people with mental retardation. In *New Oxford Textbook of Psychiatry* (eds M. G. Gelder, J. J. Lopez-Ibor & N. C. Andreasen), pp. 2007–2012. Oxford: Oxford University Press.
- & — (2001) Community mental health service for adults with learning disabilities. In *Textbook of Community Psychiatry* (eds G. Thornicroft & G. Smukler), pp. 397–407. Oxford: Oxford University Press.
- Clarke, D. (1999) Functional psychosis in people with mental retardation. In *Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation* (ed. N. Bouras), pp. 188–199. Cambridge: Cambridge University Press.
- & Gomez, G. A. (1999) Utility of modified DCR-10 criteria in the diagnosis of depression associated with intellectual disability. *Journal of Intellectual Disability Research*, **43**, 413–420.

- Collacott, R. A., Cooper, S. A. & McGrother, C. (1992) Differential rates of psychiatric disorders in adults with Down's syndrome compared with other mentally handicapped adults. *British Journal of Psychiatry*, **161**, 671–674.
- Cooper S. A. (1997) Psychiatry of elderly compared to younger adults with intellectual disability. *Journal of Applied Research in Intellectual Disability*, **10**, 303–311.
- & Collacott, R. J. (1993) Mania and Down's syndrome. *British Journal of Psychiatry*, **161**, 739–743.
- Cutajar, P. & Wilson, D. (1999) The use of ECT in intellectual disability. *Journal of Intellectual Disability Research*, **4**, 421–427.
- Dagnan, D. & Sandhu, S. (1999) Social comparison, self-esteem and depression in people with intellectual disability. *Journal of Intellectual Disability Research*, **43**, 372–379.
- Davis, J. P., Judd, F. K. & Herrman, H. (1997a) Depression in adults with intellectual disability. Part 1: A review. *Australian and New Zealand Journal of Psychiatry*, **31**, 243–251.
- , — & — (1997b) Depression in adults with intellectual disability. Part 2: A pilot study. *Australian and New Zealand Journal of Psychiatry*, **31**, 232–242.
- Day, K. (1985) Psychiatric disorder in the middle-aged and the elderly mentally handicapped. *British Journal of Psychiatry*, **147**, 660–667.
- Deb, S. & Hunter, D. (1991) Psychopathology of people with mental handicap and epilepsy. II: Psychiatric illness. *British Journal of Psychiatry*, **159**, 826–830.
- , Thomas, M. & Bright, C. (2001a) Mental disorder in adults who have a learning disability. 1: Prevalence of functional psychiatric illness among a 16–64 years old community-based population. *Journal of Intellectual Disability Research*, **5**, 495–505.
- , Matthews, T., Holt, G., *et al* (2001b) *Practice Guidelines for Assessment and Diagnosis of Mental Health Problems in Adults with Intellectual Disability*. Brighton: Pavilion Publishing.
- Department of Health (1999a) *Modern Standards and Service Models: Mental Health National Service Framework*. London: Stationery Office.
- (1999b) *Facing the Facts. Services for People with Learning Disabilities. A Policy Impact Study of Social Care and Health Services*. London: Stationery Office.
- (2001) *Valuing People: A New Strategy for Learning Disability for the 21st Century* (CM5086). London: Stationery Office.
- Dickerson, F. B. (2000) Cognitive behavioural psychotherapy for schizophrenia: a review of recent empirical studies. *Schizophrenia Research*, **43**, 71–90.
- Duggan, L. & Brylewski, J. (1999) Effectiveness of antipsychotic medication in people with intellectual disability and schizophrenia: a systematic review. *Journal of Intellectual Disability Research*, **43**, 94–104.
- Dykens, E. M. & Hodapp, R. M. (1999) Behavioural phenotypes towards new understandings of people with developmental disabilities. In *Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation* (ed. N. Bouras), pp. 96–108. Cambridge: Cambridge University Press.
- Eaton, L. F. & Menolascino, F. J. (1982) Psychiatric disorders in the mentally retarded: types, problems, and challenges. *American Journal of Psychiatry*, **139**, 1297–1303.
- Emerson, E. (1995) *Challenging Behaviour: Analysis and Intervention in People with Learning Difficulties*. Cambridge: Cambridge University Press.
- , Moss, S. & Kiernan, C. (1999) The relationship between challenging behaviour and psychiatric disorders in people with severe developmental disabilities. In *Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation* (ed. N. Bouras), pp. 38–48. Cambridge: Cambridge University Press.
- Evans, K. M., Cotton, M. M., Einfield, S. L., *et al* (1999) Assessment of depression in adults with severe or profound intellectual disability. *Journal of Intellectual Disability Research*, **24**, 147–160.

- Fraser, W. & Nolan, M. (1994) Psychiatric disorders in mental retardation. In *Mental Health in Mental Retardation: Recent Advances and Practices* (ed. N. Bouras), pp. 79–92. Cambridge: Cambridge University Press.
- Gaedt, C. (1995) Psychotherapeutic approaches in the treatment of mental illness and behaviour disorders in mentally retarded people: the significance of a psychoanalytical perspective. *Journal of Intellectual Disability Research*, **39**, 233–239.
- Gostason, R. (1987) Psychiatric illness among the mild mentally retarded. *Upsala Journal of Medical Sciences*, **92** (suppl. 44), 115–124.
- Gravestock, S. (2000) Eating disorders in adults with intellectual disability. *Journal of Intellectual Disability Research*, **44**, 625–637.
- Hassan, M. K. & Mooney, R. P. (1979) Three cases of manic depressive illness in mentally retarded adults. *American Journal of Psychiatry*, **136**, 1069–1071.
- Heaton-Ward, A. (1977) Psychosis in mental handicap (the Blake Marsh Lecture 1976). *British Journal of Psychiatry*, **130**, 525–533.
- Holland, A. J. (2000) Classification, diagnosis, psychiatric assessment and needs assessment. In *New Oxford Textbook of Psychiatry* (eds M. G. Gelder, J. J. Lopez-Ibor & N. C. Andreasen), pp. 1935–1939. Oxford: Oxford University Press.
- Hollins, S. A. & Sinason, V. (2000) Psychotherapy, learning disabilities and trauma: new perspectives. *British Journal of Psychiatry*, **176**, 32–36.
- Howland, R. H. (1992) Fluoxetine treatment of depression in mentally retarded adults. *Journal of Nervous & Mental Disease*, **180**, 202–205.
- Hucker, S. J., Day, K. E., George, S., et al (1979) Psychosis in mentally handicapped adults. In *Psychiatric Illness and Mental Handicap* (eds P. E. Snaithe), pp. 52–76. London: Gaskell.
- Jancar, J. & Gunaratne, I. J. (1994) Dysthymia and mental handicap. *British Journal of Psychiatry*, **164**, 691–693.
- Jawed, S. H., Krishnan, V. H., Prasher, V. P., et al (1993) Worsening of pica as a symptom of depressive illness in a person with severe mental handicap. *British Journal of Psychiatry*, **162**, 835–837.
- King, B. H. (1993) Self injury by people with mental retardation: a compulsive behaviour hypothesis. *American Journal on Mental Retardation*, **98**, 93–112.
- Laman, D. S. & Reiss, S. (1987) Social skill deficiencies associated with depressed mood of mentally retarded adults. *American Journal on Mental Deficiency*, **92**, 224–229.
- Lindauer, S. E., DeLeon, I. G. & Fisher, W. W. (1999) Decreasing signs of negative affect and correlated self-injury in an individual with mental retardation and mood disturbances. *Journal of Applied Behavioural Analysis*, **32**, 103–106.
- Lindsay, W. R., Howells, L. & Pitcaithly, D. (1993) Cognitive therapy for depression with individual with intellectual disabilities. *British Journal of Medical Psychology*, **66**, 135–141.
- Lund, J. (1985) The prevalence of psychiatric morbidity in mentally retarded adults. *Acta Psychiatrica Scandinavica*, **72**, 563–570.
- Mansell, J. L. (Chairman) (1993) *Services for People with Learning Disabilities and Challenging Behaviour or Mental Health Needs: Report of a Project Group*. London: HMSO.
- Marston, G. M., Perry, D. W. & Roy, A. (1997) Manifestations of depression in people with intellectual disability. *Journal of Intellectual Disability Research*, **41**, 476–480.
- Masi, G., Marcheschi, M. & Pfanner, P. (1997) Paroxetine in depressed adolescents with intellectual disability: an open label study. *Journal of Intellectual Disability Research*, **41**, 268–272.
- , Murri, M., Favilla, L., et al (1999) Dysthymic disorders in adolescents with intellectual disability. *Journal of Intellectual Disability Research*, **43**, 80–87.
- , Favilla, L. & Mucci, M. (2000) Generalised anxiety disorder in adolescents and young adults with mental retardation. *Psychiatry*, **63**, 54–64.

- Matson, J. L. & Smiroldo, B. B. (1997) Validity of the Mania Subscale of the Diagnostic Assessment for the Severely Handicapped – II (DASH-II). *Research in Developmental Disabilities*, **18**, 221–225.
- , Smiroldo, B. B., Hamilton, M., *et al* (1997) Do anxiety disorders exist in persons with severe and profound mental retardation? *Research in Developmental Disabilities*, **18**, 39–44.
- , Rush, K. S., Hamilton, M., *et al* (1999) Characteristics of depression as assessed by the Diagnostic Assessment for the Severely Handicapped – II (DASH-II). *Research in Developmental Disabilities*, **20**, 305–313.
- Meadows, G., Turner, T., Campbell, L., *et al* (1991) Assessing schizophrenia in adults with mental retardation: a comparative study. *British Journal of Psychiatry*, **158**, 103–105.
- Meins W. (1995) Symptoms of major depression in mentally retarded adults. *Journal of Intellectual Disability Research*, **39**, 41–45.
- Meltzer, H., Gill, B., Petticrew, M., *et al* (1995) *The Prevalence of Psychiatric Morbidity among Adults Living in Private Households: OPCS Survey of Psychiatric Morbidity in Great Britain. Report*. London: Stationery Office.
- Moss, S. C. (1999) Assessment: conceptual issues. In *Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation* (ed. N. Bouras), pp. 18–37. Cambridge: Cambridge University Press.
- , Patel, P., Prosser H., *et al* (1993) Psychiatric morbidity in older people with moderate and severe learning disability (mental retardation). Part I: Development and reliability of the patient interview (PAS-ADD). *British Journal of Psychiatry*, **163**, 471–480.
- Murphy, K. C., Jones, L. A. & Owen, M. J. (1999) High rates of schizophrenia in adults with velo cardio facial syndrome. *Archives of General Psychiatry*, **56**, 940–945.
- Nezu, C. M., Nezu, A. M., Rotherburg, J. L., *et al* (1995) Depression in adults with mild mental retardation: are cognitive variables involved? *Cognitive Therapy and Research*, **19**, 227–239.
- Patel P, Goldberg D. & Moss S. (1993) Psychiatric morbidity in older people with moderate and severe learning disability (mental retardation). Part II: The prevalence study. *British Journal of Psychiatry*, **163**, 481–491.
- Patja, K., Ivanainen, M., Raitasuo, S., *et al* (2001) Suicide mortality in mental retardation: a 35 year follow up study. *Acta Psychiatrica Scandinavica*, **103**, 307–311.
- Prout, H. T. & Schaefer, B. M. (1985) Self-reports of depression by community-based mildly mentally retarded adults. *American Journal of Mental Deficiency*, **90**, 220–222.
- Ratey, J. J., Sovner, R., Mikkelsen, E., *et al* (1989) Buspirone therapy for maladaptive behavior and anxiety in developmentally disabled persons. *Journal of Clinical Psychiatry*, **50**, 382–384.
- Reid, A. H. (1972) Psychosis in adult mental defectives. I: Manic depressive psychosis. *British Journal of Psychiatry*, **120**, 205–212.
- Reiss, S. & Benson, B. A. (1985) Psychosocial correlates of depression in mentally retarded adults. I: Minimal social support and stigmatization. *American Journal of Mental Deficiency*, **89**, 331–337.
- & Rojahn, J. (1993) Joint occurrence of depression and aggression in children and adults with mental retardation. *Journal of Intellectual Disability Research*, **37**, 287–294.
- Rivinus, T. M. & Harmatz, J. S. (1979) Diagnosis and lithium treatment of affective disorder in the retarded: five case studies. *American Journal of Psychiatry*, **136**, 551–554.
- Royal College of Psychiatrists (1996/1997) *Meeting the Mental Health Needs of People with Learning Disability* (Council Report CR56). London: Royal College of Psychiatrists.
- (2001) *DC-LD [Diagnostic Criteria for Psychiatric Disorders for Use with Adults with Learning Disabilities/Mental Retardation]* (Occasional Paper OP48). London: Gaskell.

- Shepherd, G., Beadsmoore, A., Moore, C., *et al* (1997) Relation between bed use, social deprivation, and overall bed availability in acute adult psychiatric units, and alternative residential options: a cross sectional survey, one day census data, and staff interviews. *British Medical Journal*, **314**, 262–266.
- Sovner, R., & Hurley, A. D. (1983) Do the mentally retarded suffer from affective illness? *Archives of General Psychiatry*, **40**, 61–67.
- , Fox, C. J., Lowry, M. J., *et al* (1993) Fluoxetine treatment of depression and associated self-injury in two adults with mental retardation. *Journal of Intellectual Disability Research*, **37**, 301–311.
- Stavarakaki, C. & Mintsoulis, G. (1997) Implications of clinical study of anxiety disorders in persons with mental retardation. *Psychiatric Annals*, **27**, 182–189.
- Tranebjaerg, L. & Orum, A. (1991) Major depressive disorder as a prominent but underestimated feature of fragile X syndrome. *Comprehensive Psychiatry*, **32**, 83–87.
- Turk, V. & Brown, H. (1993) The sexual abuse of adults with learning disabilities: results of a two year incidence survey. *Mental Handicap Research*, **6**, 193–216.
- Turner, T. H. (1989) Schizophrenia and mental handicap: a historical review, with implications for further research. *Psychological Medicine*, **19**, 301–314.
- Tyrer P, Hassiotis, A., Ukoumunne, O., *et al* (1999) UK 700 Group. Intensive case management for patients with borderline intelligence. *Lancet*, **354**, 999–1000.
- Vanstraelen, M. & Tyrer, S. P. (1999) Rapid cycling bipolar affective disorder in people with intellectual disability. A systematic review. *Journal of Intellectual Disability Research*, **43**, 349–359.
- Verhoeven, W. M., Curfs, L. M. & Tuinier, S. (1998) Prader–Willi syndrome and cycloid psychosis. *Journal of Intellectual Disability Research*, **42**, 455–462.
- , Veendrik-Meeke, M. J., Jacobs, G. A., *et al* (2001) Citalopram in mentally retarded patients with depression: a long-term clinical investigation. *European Psychiatry*, **16**, 104–108.
- Vitiello, B., Spreat, S. & Behar, D. (1989) Obsessive–compulsive disorder in mentally retarded patients. *Journal of Nervous and Mental Disease*, **177**, 232–236.
- Walters, R. M. (1990) Suicidal behaviour in severely mentally handicapped patients. *British Journal of Psychiatry*, **157**, 444–446.
- Watts, R. V., Richold, P. & Berney, T. P. (2000) Delay in the discharge of psychiatric in-patients with learning disabilities. *Psychiatric Bulletin*, **24**, 179–181.
- Weissman, M. M., Leaf, P. J., Tischler, G. L., *et al* (1988) Affective disorders in five United States communities. *Psychological Medicine*, **18**, 141–153.
- , Bland, R. C., Canino, G. J., *et al* (1994) The cross national epidemiology of obsessive–compulsive disorder. The cross national collaborative group. *Journal of Clinical Psychiatry*, **55** (suppl. 3), 5–10.
- World Health Organization (1992) *The ICD–10 Classification of Mental and Behavioural Disorders*. Geneva: WHO.