

# The neglect of somatoform disorders by old age psychiatry: some explanations and suggestions for future research

Chanaka Wijeratne<sup>1,2\*</sup>, Henry Brodaty<sup>2</sup> and Ian Hickie<sup>2</sup>

<sup>1</sup>*Consultant in Old Age Psychiatry, St George Hospital, NSW, Australia*

<sup>2</sup>*School of Psychiatry, University of NSW, Australia*

## SUMMARY

**Aim** The somatoform disorders have long been ignored by old age psychiatry. The main aim of this paper is to identify and examine possible reasons for this neglect.

**Method** A selective review of the general literature on somatoform disorders.

**Results** Significant conceptual, diagnostic and classificatory problems have impeded the consideration of somatoform disorders in older people. There is a perception that somatoform disorders are infrequent and have not been validated as independent clinical disorders. However, we present evidence that the more broadly defined somatoform disorders are common in all age groups in primary care and meet criteria for the determination of clinical validity. General difficulties in the assessment of psychiatric disorders in primary care, the setting in which somatoform disorders are most common, are compounded by a lack of support from old age psychiatry services. Effective psychological therapies may not be readily available to sufferers.

**Conclusion** There is a need for change in the conceptualisation and nosology of the somatoform disorders. The formulation of age appropriate diagnostic criteria and presentations is a prerequisite for determining the clinical validity of these disorders in older people. This can be followed by study of their frequency, associated risk factors and treatment. A system of education that enhances the management of these disorders within primary care and old age psychiatry services is needed. Copyright © 2003 John Wiley & Sons, Ltd.

KEY WORDS — somatoform; old age; neuroses; primary care

## INTRODUCTION

Over the last decade, somatoform disorders, in particular syndromes of chronic fatigue, have received renewed attention within psychiatry and relevant consumer groups (Ustun and Sartorius, 1995; Hickie *et al.*, 1998; Wessely *et al.*, 1999). Such disorders are common in primary care and general hospital settings (Hickie *et al.*, 2000). Rather than being confined to non-western countries, their impact is seen equally in all cultures (Ustun and Sartorius, 1995; Ono *et al.*, 1999). They result in significant physical and occupational disability, and represent a major economic burden (Bass *et al.*, 2001).

Old age psychiatry has continued to ignore these disorders. The stereotype of the elder who is preoccupied with bodily functions—which has been based on a combination of received wisdom (Kraepelin, 1913), highly selective clinical impression (Pitt, 1982), and limited research on hypochondriacal symptoms in late life depression (Brown *et al.*, 1984)—has not been subjected to systematic evaluation.

We propose several reasons, both general and specific to late life, for the neglect of somatoform disorders by old age psychiatry. These include: (i) conceptual, diagnostic and classificatory problems, the application of which are especially difficult within special populations such as the elderly; (ii) the perception that somatoform disorders are infrequent and of little consequence; (iii) the perception that somatoform disorders have not been validated as independent clinical disorders; (iv) general difficulties in

\*Correspondence to: Dr C. Wijeratne, St George Hospital, Department of Aged Care, 3 Chapel Street, Kogarah, NSW 2217, Australia. E-mail: wijeratnec@sesahs.nsw.gov.au

the assessment of psychiatric disorders in primary care, the setting in which somatoform disorders are most common, compounded by a lack of support from old age psychiatry services; and (v) barriers to the provision of adequate management.

This paper is a selective review of the relevant literature of somatoform disorders; somatic presentations of psychological disorders, such as anxiety and depression, are excluded from specific consideration. Whilst many of these issues have been covered elsewhere, it seems important to present them to a gerontology audience who may not otherwise view these disorders as a focus of interest. Whilst the main aim of the paper is to examine those factors which appear to have impeded the study of somatoform disorders in older people, it is necessary to consider some general issues.

### THEORETICAL MODEL

The theoretical basis of the somatoform disorders is reductionism, that is the Cartesian separation of mind and body (Lipowski, 1986). Thus, the key step in the diagnosis of a somatoform disorder is the *exclusion* of a medical cause. This central requirement is associated with significant conceptual and practical difficulties.

To exclude a somatic symptom on the basis of underlying physical illness or injury, a doctor must be consulted for that symptom and a definite diagnosis then made, or abnormalities on examination or investigation detected. Such a method of ascertainment is dependent on access to medical care, health consultation behaviour, and adequate medical assessment and diagnosis, a complex set of variables which may not be as objective as supposed. Indeed, this process has been described as among the tallest and most complex conceptual edifices ever erected in medicine (Jablensky, 1999).

Whilst the reductionistic model suggests that a biological vulnerability leads to the development of disease in a linear and unidirectional manner, the search for a single medical cause is often futile (Mayou, 1999). For instance, up to three-quarters of new somatic symptoms presented by ambulatory patients may remain idiopathic in origin after prolonged and costly physical investigation (Kroenke and Mangelsdorff, 1989).

The distinction between medically unexplained and explained symptoms may be spurious. It may be an artefact of timing such that if medical consultation is made in the early stage of an illness, pathology may be less obvious (Lipowski, 1988). A patient may complain of symptoms which are diagnostically

ambiguous or representative of a disorder whose status remains uncertain. It may also be influenced by the availability of, and access to, diagnostic facilities. (Kisely *et al.*, 1997).

The process of physical investigation, which may be more extensive in older people, may well maintain or exacerbate somatic distress (Barsky *et al.*, 1991). Conversely, the presence of abnormal findings in the patient with a somatic symptom may not be adequate evidence of medical causality. Pathology may be incidental, or false positives may arise from medical tests. Similarly, a clear temporal association between symptom presentation and identified pathology can be difficult to make.

Somatic symptoms in older people may be especially prone to inappropriate medical diagnoses (Henderson, 1999). In particular, the tendency to multiple medical morbidity and medication use in the elderly may be used to explain non-specific somatic symptoms, although the precision of such a 'diagnostic match' may be doubtful. The clinician and patient may incorrectly attribute somatic symptoms to the process of ageing. The use of laboratory 'normal ranges' which typically have been determined for non-elderly populations may also influence the rate of medically explained symptoms (Fairweather and Campbell, 1991).

In many cases, medical explanations may only be partial. For instance, a symptom in someone who smokes nicotine and uses alcohol will be deemed to be evidence of medical aetiology, but may also reflect the complications of behaviour attributable to psychological distress (Lindesay, 1991).

The practical difficulty of the medically explained/unexplained symptom dichotomy is reflected by DSM-IV diagnostic criteria for pain disorder (World Health Organisation, 1992). These emphasise the psychological accentuation of pain, a clinical judgement which is difficult given the subjective nature of pain and because few chronic pain patients have no organ pathology (Reid and Wessely, 1999).

Finally, the notion of separating mind and body, which is encouraged by reductionism, would not be familiar to the old age psychiatrist practising in non-western cultures without this distinction (Fabrega, 1991; Sharpe *et al.*, 1995; Lee *et al.*, 2000).

The numerous conceptual and practical difficulties in the identification of medically unexplained symptoms have resulted in an increasing recognition of the need for an alternate formulation. *Although in no way overcoming the problem of medically unexplained symptoms*, this other paradigm has advocated an inclusive conceptual model, which allows for the

study of medical and psychological comorbidity (Mayou *et al.*, 1995; Jablensky, 1999). Both the World Health Organisation and the World Psychiatric Association have proposed neurasthenia syndromes which do not require somatic symptoms to be medically unexplained (World Health Organisation, 1992; World Psychiatric Association, 1999).

#### FREQUENCY OF SOMATOFORM DISORDERS

The influential US Epidemiologic Catchment Area (ECA) study found a rate of 0.1% for DSM-III somatisation disorder in both younger adults and in those 65 years and older (Regier *et al.*, 1988). The low prevalence rate of somatisation disorder was due to the DSM-III definition of somatisation disorder as a lifetime illness beginning before the age of 30 years, and requiring the presence of 14 medically unexplained symptoms in females and 12 in males. The former criterion may also have underestimated prevalence in older people because of impaired recall. Although the DSM-IV version of somatisation disorder requires fewer symptoms, pseudoneurological and sexual symptoms uncommon in routine clinical practice continue to be emphasized.

In contrast, abridged versions of somatisation disorder (six symptoms in females and four in males) have yielded case rates of around 20% in primary care settings, including significant associations with psychopathology, disability and health care utilisation (Gureje *et al.*, 1997; Escobar *et al.*, 1998).

Another reason for the apparently low prevalence of somatoform disorders is the failure of DSM-IV in particular to highlight syndromes encountered more commonly in clinical practice, such as syndromes of chronic fatigue. ICD-10 neurasthenia is defined by at least three months of fatigue and associated neurocognitive, sleep and somatic symptoms (World Health Organisation, 1992). An overall rate of 5.4% has been reported by the WHO multicentre study (Ustun and Sartorius, 1995), with no evidence for the western perception that it was more likely to be diagnosed by non-western doctors. Other studies which have included older people over the age of 65 years have reported rates for persistent fatigue of 24 to 37% across the adult age span, and 25 to 30% in people aged 60 years and over (Hickie *et al.*, 1996; Hickie *et al.*, 2001).

Yet fatigue syndromes have been relegated to a residual category, undifferentiated somatoform disorder, by DSM-IV (American Psychiatric Association, 1994). The same argument could be made for other common 'functional somatic presentations' such as irritable bowel syndrome and fibromyalgia. Whilst

such syndromes may be highly correlated with each other (Wessely *et al.*, 1999), further study is impeded by the absence of an appropriate diagnostic category.

In summary, the use of diagnostic categories with high case thresholds and uncommon symptoms have led to low rates of somatoform disorders. This is likely to result in patients with the commoner, less restrictively defined somatoform disorders not receiving adequate diagnosis and management.

There remains a paucity of studies which have examined the rate of somatoform disorders across the life span. We were only able to find three community or household studies and three primary care studies which reported the rates of at least one relevant disorder across the adult age span and included people 65 years and over (Wijeratne and Hickie, 2001). Studies were all cross-sectional, so that it was unclear whether the differences reported were truly due to age or cohort-related.

Future study designs should be longitudinal, include a significant proportion of people 75 years and over, and examine issues of comorbidity with both medical and other psychological disorders. The importance of such studies is in determining whether vulnerability to somatoform disorders varies across the life cycle, not least for comparison with other neurotic— affective and anxiety—disorders, the prevalence of which appear to decline with age (Flint, 1994; Henderson, 1994; Krasucki *et al.*, 1998; Jorm, 2000).

#### CLINICAL VALIDITY

##### *The validity of a separate somatic dimension*

The dominant model which has sought to explain symptom experience in non-psychotic patients has excluded a specific somatic symptom dimension. Using latent trait analysis of General Health Questionnaire (GHQ) data from general practice patients (Goldberg *et al.*, 1987; Goldberg and Bridges, 1991), Goldberg proposed that somatic symptoms could be subsumed under two correlated symptom dimensions, anxiety and depression, which were deemed adequate to explain all variance in symptom reporting (Goldberg, 1996).

Subsequent community studies have used Goldberg's anxiety and depression scales to determine that the above two-factor solution was adequate to explain symptom endorsement in general population studies of mixed age (Christensen *et al.*, 1999) and elderly Australians (Mackinnon *et al.*, 1994).

It has been argued that the failure to find a separate somatic dimension was the result of using measures

such as the GHQ, which had not been specifically designed to measure somatic symptoms (Koschera *et al.*, 1999). Further, the use of predefined anxiety and depression scales would seem to have biased the results of the replication studies.

Using rating scales explicitly developed to measure fatigue, factor analysis has shown that a hypothetical underlying somatic (fatigue) factor may be differentiated from a general psychological (anxiety/depression) factor in both community (Kirk *et al.*, 1999) and primary care samples (Koschera *et al.*, 1999).

#### *The validity of somatoform disorders*

Traditional psychiatric paradigm has viewed somatoform disorders like fatigue as being subsumed by psychological disorders. This has been not least on the basis of studies which have reported high rates of psychological comorbidity, ranging from 37 to 79%, in fatigue disorders, and strong correlations between fatigue and psychological symptom scores, ranging from 0.51 to 0.64 (David *et al.*, 1990; Pawlikowska *et al.*, 1994; Euba *et al.*, 1996; Hickie *et al.*, 1996; Hickie *et al.*, 2001).

Yet such associations are by no means unique within psychiatry. For instance, circumscribed boundaries within anxiety disorders and between anxiety and depressive disorders do not exist, given the high rates of lifetime comorbidity, common genetic vulnerability and common treatment factors inherent to these disorders (Andrews, 1996). Discrete psychiatric syndromes have proved to be so elusive that it has been argued that one distinct possibility is that the discrete clusters of psychiatric symptoms that we attempt to delineate actually do not exist (Kendell, 1989).

The clinical validation of the somatoform disorders has been hindered by the current classification of a disparate group of disorders, which has confused the issue of what is the most appropriate syndrome for further study. The somatoform disorders grouping in DSM-IV is based on clinical utility—the need to exclude occult medical conditions—rather than any assumption of shared aetiology (American Psychiatric Association, 1994).

It comprises three main sub-types. First, disorders characterised by dissociation (conversion disorder), which remain within the cluster of dissociative disorders in ICD-10. Second, disorders characterised by anxious preoccupation about health and physical appearance (hypochondriasis and body dysmorphic disorder), which may share more characteristics with the anxiety disorders (Phillips *et al.*, 1993; Salkovskis, 1995; Barsky, 1999). Third, disorders charac-

terised by unpleasant somatic sensations (somatisation disorder and pain disorder). Certainly the somatoform disorders need to be rationalised, with perhaps the simplest solution being to limit future classifications to the third group of disorders.

This collective heterogeneity is mirrored in the heterogeneity of individual disorders. For instance, pain disorder encompasses such divergent syndromes as headache, facial pain and abdominal pain. Again, the result of this heterogeneity is that the establishment of clinical validity is confounded.

Recent studies of younger adults have compared the syndrome of fatigue with psychological disorders to establish whether an independent form of somatoform disorders does exist. These studies have centred on standard validators of clinical syndromes (Kendell, 1989).

One, specific genetic risk for fatigue has been reported in younger (Gillespie *et al.*, 2000) and older subjects (Hickie *et al.*, 1999a). Two, fatigue syndromes appear to be longitudinally stable (Van Der Linden *et al.*, 1999; Hickie *et al.*, 1999b). Three, fatigue has been associated with distinct clinical risk factors. For instance, a prospective study of patients with viral illness reported that those who developed fatigue were characterised by physical deconditioning, whereas new cases of major depression were associated with premorbid psychological vulnerability and adverse social conditions (White *et al.*, 1998; White *et al.*, 2001). Four, fatigue syndromes tend to be characterized by a different pattern of treatment response, with antidepressants reported to produce little if any benefits (Vercoulen *et al.*, 1996; Hickie *et al.*, 2000).

The weight of this evidence would suggest that although there is considerable comorbidity, as is the case with other psychiatric disorders, fatigue syndromes may also exist independently of psychological disorders.

#### *Establishing clinical validity in older people*

The starting point for determining clinical validity in older people remains the accurate clinical description of a relevant syndrome, although a seminal difficulty remains the lack of an adequate marker or gold standard which may underpin such a disorder. The distinct possibility that somatoform disorders present differently in older people has significant implications for their measurement and validation in this age group.

Certain 'pseudoneurological' symptoms listed within criteria for DSM-IV somatization disorder, such as deafness, blindness and diplopia, are more likely to be endorsed by older people. As a result, such biased

symptoms seem unsuitable for use in this age group (Henderson, 1999). Non-specific symptoms such as weakness and aches, which are more likely to be attributed to age by older people, may also be unsuitable for use (Leventhal and Prohaska, 1986). A formal evaluation of age appropriate symptom criteria would include the use of somatic items appropriate for both age and medical comorbidity, which may be determined by structural equation modelling of data obtained from community samples (Grayson *et al.*, 2000).

Whilst some sufferers may present repeatedly to medical services, it is worth examining whether diagnostic criteria based solely on the *medical presentation* of somatic complaints are appropriate for use in the elderly. One, older people may have difficulty distinguishing symptoms against the background noise of somatic sensations from multiple medical morbidity (Leventhal and Prohaska, 1986). Two, as already discussed, non-specific symptoms may simply not be presented to medical care by older people (Leventhal and Prohaska, 1986). Three, certain groups of elderly, such as socially isolated men, have been shown to avoid primary medical consultation in general (Jacomb *et al.*, 1997). There may be a greater tendency for older people to use homemade therapies and non-prescription formulations, to seek lay rather than medical advice about illness, and to use passive coping strategies such as rest when confronted with somatic symptoms (Leventhal and Prohaska, 1986; Haug *et al.*, 1998).

As a result, somatoform disorders may present with varying behavioural constructs in older people. Illness presentation with disability rather than complaints is also observed in other psychiatric disorders. For instance, avoidance of fear provoking situations may be adopted by anxiety disorder sufferers.

All these possibilities need to be investigated so that conventional phenomena are not simply adapted to the elderly. The importance of determining the clinical correlates of somatoform disorders by age was demonstrated by a study of chronic pain clinic attenders, in which pain in younger people was associated with preceding injury, compensation and impulsivity, whereas pain in later life was associated with multiple medical illness and neuroticism (Wijeratne *et al.*, 2001).

#### ASSESSMENT BY PRIMARY CARE AND OLD AGE PSYCHIATRY SERVICES

Whilst somatoform disorders are most likely to be seen in primary care, the failure of referral of patients with a range of neurotic disorders from primary care to old age psychiatry services may reflect non-recognition rather than non-existence (Lindesay, 1995).

Barriers to the recognition and treatment of any psychiatric disorder at this level of health care include practitioner factors, related to inadequate undergraduate and postgraduate education, time and financial pressures; and patient factors, such as low mental health literacy and stigma (Brodaty *et al.*, 1982; Hickie, 1999).

Of primary care patients with a psychiatric disorder, those who were older or had a predominantly somatic presentation were less likely to be recognized as such (Hickie *et al.*, 2001). Reasons which may account for this include the masking effect of comorbid medical illness, or the practitioner's belief that mental distress is apposite to old age.

In general, clinicians tend to limit themselves to diagnoses on the basis of traditional psychiatric hierarchies and to overlook 'minor' disorders (Wittchen, 1995). Even within adult psychiatry, expertise within the somatoform disorders tends to be limited to consultation-liaison specialists. Specifically in older people, practitioners have the added 'distraction' of screening for cognitive impairment. Importantly, the major systems of disease classification have not adapted diagnostic criteria for somatoform disorders, which have been based on presentations in specialist settings, to primary care (Hickie, 1999).

Another consideration in improving the detection of somatic presentations is the use of screening questionnaires. Although there will be some confounding of symptoms by medical illness, the rationale of screening is that any positive responses should be followed up by psychiatric examination. Screening needs to occur within a system of education which teaches practitioners specifically about the diagnosis and management of somatoform and psychological disorders (Hickie *et al.*, 2002). Effective treatments or at least treatment guidelines must also be available if such presentations are to be a focus of screening. A final requirement of screening is that primary care services must have access to specialist mental health practitioners expert in the treatment of the disorder of interest.

The reality is that somatoform disorders do not fit neatly into the structure of old age psychiatry services. Where they exist, psychogeriatric services tend to be overburdened and must prioritise their services. A typical service will predominantly care for patients with cognitive, affective, behavioural and psychotic disorders, the treatment of which have all received recent impetus from the availability of novel medications. Such a service imperative, albeit not an explicit one, may well influence referral patterns from primary care.

Thus there is a need to improve the management of somatoform disorders at both an individual practitioner and a broader systemic level (Hickie *et al.*, 2000). Such strategies would include a medical education agenda which emphasises the importance of psychological and behavioural management. From a public health perspective, there is a need for financial incentives and practical resources, such as patient care manuals, to support primary care practitioners. A co-ordinated program of education and research within old age psychiatry, and improved liaison between old age and primary care psychiatry is needed.

### EFFECTIVE TREATMENTS

There are several difficulties in providing comprehensive and effective management for the somatoform disorders. The poor quality and provision of health care for patients with neither overt physical disease nor severe mental illness seem the result of the mind-body dichotomy, and the misconception that such patients are the 'worried well' (Mayou and Sharpe, 1997). Conventional strategies such as reassurance about the absence of serious disease may not be beneficial (Lucock *et al.*, 1997); referral to a psychiatrist is seldom popular.

Somatoform disorders are disadvantaged by the absence of specific pharmacotherapy. There is wide variation in the efficacy of antidepressants for individual disorders. Antidepressants are ineffective in syndromes of chronic fatigue (Vercoulen *et al.*, 1996; Hickie *et al.*, 2000). There is relatively more evidence for the use of antidepressants in fibromyalgia and chronic pain (O'Malley *et al.*, 1999). However, these results have been obtained in specialist clinic settings and may not generalise to primary care (Hickie, 1999).

Cognitive behaviour therapy (CBT), effective in syndromes such as fatigue (Sharpe *et al.*, 1996; Deale *et al.*, 1997; Deale *et al.*, 2001), is not a part of the routine training of general practitioners and is time consuming. Further, CBT has tended to be underused and therefore not well evaluated by old age psychiatry (Woods, 1995). Critically, these CBT trials have been conducted in academic institutions by highly skilled therapists, and their applicability to other settings has yet to be proven (Deale *et al.*, 1998).

Similarly, graded exercise therapy (GET) has also been reported to be efficacious for fatigue (Fulcher and White, 1997; Wearden *et al.*, 1998). The routine use of these two therapies in primary and even routine specialist care would require a substantial investment in training, infrastructure and on-going financial and educational support.

We could locate no studies which examined the treatment of somatoform disorders in older people, whether by psychological or pharmacological means. In fact a number of treatment trials specifically excluded people aged 60 or 65 years and over (Warwick *et al.*, 1996; Clark *et al.*, 1998; Hickie *et al.*, 2000).

Treatment trials in older people cannot proceed before validation studies. The most appropriate target of any future treatment trials may be behaviour and graded exercise therapy, which are provided in a pragmatic manner within existing services. Given the wide impact of this group of disorders, a mix of validated outcome measures would need to be used (Whiting *et al.*, 2001). Such measures may include functioning in the following areas of psychological, physical (including activity and disability), quality of life, physiological and health care utilisation.

### SUMMARY

This paper has highlighted the importance of somatoform disorders, the broader forms of which present commonly in primary care. Syndromes such as persistent fatigue may be present in around 25% of older primary care attenders. These disorders have been significantly impeded by a set of conceptual and diagnostic criteria which are not applied to other psychiatric disorders, and which are particularly problematic in older people who tend to have a higher rate of medical illness.

Despite a resurgence in interest in these disorders over the past decade, old age psychiatry has continued to ignore them, not least because of the very significant practical difficulties in determining that a symptom is medically unexplained—that is distinguishing somatoform disorders from physical illness. Other difficulties in diagnostic criteria, initial assessment and patient management, including the absence of effective pharmacotherapy, are all impediments to the somatoform disorders receiving adequate consideration by practitioners in primary care and old age psychiatry.

The neglect of somatoform disorders by old age psychiatry cannot continue, given its need to be as broad and as inclusive a sub-specialty as possible, and as older people account for up to 25% of primary care attendances (Commonwealth Department of Health and Family Services, 1996). There is a need for review of relevant theoretical and diagnostic issues, which will allow for the study of the frequency, clinical correlates and clinical validity of the somatoform disorders in older people.

## REFERENCES

- American Psychiatric Association. 1994. *Diagnostic and Statistical Manual of Mental Disorders*, 4th edn. American Psychiatric Association: Washington, DC.
- Andrews G. 1996. Comorbidity and the general neurotic syndrome. *Br J Psychiatry* **168**(Suppl. 30): 76–84.
- Barsky A. 1999. Hypochondriasis. In *Somatoform Disorders: A Worldwide Perspective*, Ono Y, Janca A, Asai M, Sartorius N (eds). Springer-Verlag: Tokyo; 73–79.
- Barsky A, Wyshak G, Klerman G. 1991. The relationship between hypochondriasis and medical illness. *Arch Intern Med* **151**: 84–88.
- Bass C, Peveler R, House A. 2001. Somatoform disorders: severe psychiatric illnesses neglected by psychiatrists. *Br J Psychiatry* **179**: 11–14.
- Brodsky H, Andrews G, Kehoe L. 1982. Psychiatric illness in general practice I: why is it missed? *Aust Fam Physician* **2**: 625–627; 629–631.
- Brown R, Sweeney J, Loutsch E, et al. 1984. Involutional melancholia revisited. *Am J Psychiatry* **141**: 24–28.
- Christensen H, Jorm A, Mackinnon A, et al. 1999. Age differences in depression and anxiety symptoms: a structural equation modelling analysis of data from a general population sample. *Psychological Med* **29**: 325–339.
- Clark D, Salkovskis P, Hackman A, et al. 1998. Two psychological treatments for hypochondriasis. A randomised controlled trial. *Br J Psychiatry* **173**: 218–225.
- Commonwealth Department of Health and Family Services, General Practice Branch. 1996. *General Practice in Australia: 1996*. Commonwealth of Australia: Canberra.
- David A, Pelosi A, McDonald E. 1990. Tired, weak, or in need of a rest: fatigue among general practice attenders. *Br Med J* **301**: 1199–1202.
- Deale A, Chalder T, Marks I, Wessely S. 1997. Cognitive behaviour therapy for chronic fatigue syndrome: a randomized controlled trial. *Am J Psychiatry* **154**: 408–414.
- Deale A, Chalder T, Wessely S. 1998. Commentary on: randomised, double-blind, placebo-controlled trial of fluoxetine and graded exercise for chronic fatigue syndrome. *Br J Psychiatry* **172**: 491–492.
- Deale A, Husain K, Chalder T, Wessely S. 2001. Long-term outcome of cognitive behaviour therapy versus relaxation therapy for chronic fatigue syndrome: a 5-year follow-up study. *Am J Psychiatry* **158**: 2038–2042.
- Escobar J, Gara M, Cohen Silver R, et al. 1998. Somatisation disorder in primary care. *Br J Psychiatry* **173**: 262–266.
- Euba R, Chalder T, Deale A, Wessely S. 1996. A comparison of the characteristics of chronic fatigue syndrome in primary and tertiary care. *Br J Psychiatry* **168**: 121–126.
- Fabrega H. 1991. Somatization in historical and cultural perspective. In *Current Concepts of Somatization: Research and Clinical Perspectives*, Kirmayer L, Robbins J (eds). American Psychiatric Press, Inc.: Washington, DC; 181–200.
- Fairweather D, Campbell A. 1991. Diagnostic accuracy: the effects of multiple aetiology and degradation of information in old age. *J Royal Coll Physicians London* **25**: 105–110.
- Flint A. 1994. Epidemiology and comorbidity of anxiety disorders in the elderly. *Am J Psychiatry* **151**: 640–649.
- Fulcher K, White P. 1997. Randomised controlled trial of graded exercise in patients with chronic fatigue syndrome. *Br Med J* **314**: 1647–1652.
- Gillespie N, Zhu G, Heath A, et al. 2000. The genetic aetiology of somatic distress. *Psycholog Med* **30**: 1051–1061.
- Goldberg D. 1996. A dimensional model for common mental disorders. *Br J Psychiatry* **168**(Suppl. 30): 44–49.
- Goldberg D, Bridges K. 1991. Minor psychiatric disorders and neurasthenia in general practice. In *Problems of Psychiatry in General Practice*, Gastpar M, Kielholz P (eds). Hogrefe and Huber: Toronto; 79–88.
- Goldberg D, Bridges K, Duncan-Jones P, Grayson D. 1987. Dimensions of neuroses seen in primary-care settings. *Psycholog Med* **17**: 461–470.
- Grayson D, Mackinnon A, Jorm A, et al. 2000. Item bias in the Center for Epidemiologic Studies Depression Scale: effects of physical disorders and disability in an elderly community sample. *J Gerontology: Psychological Sci* **55B**: P273–P282.
- Gureje O, Simon G, Ustun T, Goldberg D. 1997. Somatization in cross-cultural perspective: a World Health Organisation study in primary care. *Am J Psychiatry* **154**: 989–995.
- Haug M, Musil C, Warner C, Morris D. 1998. Interpreting bodily changes as illness: a longitudinal study of older adults. *Social Sci Med* **46**: 1553–1567.
- Henderson A. 1994. Does ageing protect against depression? *Soc Psychiatry Psychiatr Epidemiol* **29**: 108–109.
- Henderson A. 1999. Somatization in the elderly. In *Somatoform Disorders: A Worldwide Perspective*, Ono Y, Janca A, Asai M, Sartorius N (eds). Springer-Verlag: Tokyo; 57–64.
- Hickie I. 1999. Primary care psychiatry is not specialist psychiatry in general practice. *Med J Aust* **170**: 171–173.
- Hickie I, Davenport T, Hadzi-Pavlovic D, et al. 2001. Development of a simple screening tool for common mental disorders in general practice. *Med J Aust* **175**: S10–S17.
- Hickie I, Davenport T, Ricci C. 2002. Screening for depression in general practice and related medical settings. *Med J Aust* **177**: S111–S116.
- Hickie I, Davenport T, Scott E, et al. 2001. Unmet need for recognition of common mental disorders in Australian general practice. *Med J Aust* **175**(Suppl.): S18–S24.
- Hickie I, Hooker A, Hadzi-Pavlovic D, et al. 1996. Fatigue in selected primary care settings: sociodemographic and illness correlates. *Med J Aust* **164**: 585–588.
- Hickie I, Kirk K, Martin N. 1999a. Unique genetic and environmental determinants of prolonged fatigue: a twin study. *Psycholog Med* **29**: 259–268.
- Hickie I, Koschera A, Hadzi-Pavlovic, et al. 1999b. The temporal stability and co-morbidity of prolonged fatigue: a longitudinal study in primary care. *Psycholog Med* **29**: 855–861.
- Hickie I, Pols R, Koschera A, Davenport T. 2000. Why are somatoform disorders so poorly recognised and treated? In *Unmet Need in Psychiatry: Problems, Resources, Responses*, Andrews G, Henderson S (eds). Cambridge University Press: Cambridge; 309–323.
- Hickie I, Scott E, Davenport T. 1998. Somatic distress: developing more integrated concepts. *Curr Opin Psychiatry* **11**: 153–158.
- Hickie I, Wilson A, Wright J, et al. 2000. A randomized, double-blind, placebo-controlled trial of moclobemide in patients with chronic fatigue syndrome. *J Clin Psychiatry* **61**: 643–648.
- Jablensky A. 1999. The concept of somatoform disorders: a comment on the mind-body problem in psychiatry. In *Somatoform Disorders: A Worldwide Perspective*, Ono Y, Janca A, Asai M, Sartorius N (eds). Springer-Verlag: Tokyo; 3–10.
- Jacomb P, Jorm A, Korten A, Rodgers B, Henderson S, Christensen H. 1997. GP attendance by elderly Australians: evidence for unmet need in elderly men. *Med J Aust* **166**: 123–126.
- Jorm A. 2000. Does old age reduce the risk of anxiety and depression? A review of epidemiological studies across the adult lifespan. *Psycholog Med* **30**: 11–22.

- Kendell R. 1989. Clinical validity. *Psycholog Med* **19**: 45–55.
- Kirk K, Hickie I, Martin N. 1999. Fatigue as related to anxiety and depression in a community-based sample: a factor analysis approach. *Soc Psychiatry Psychiatric Epidemiol* **34**: 85–90.
- Kisely S, Goldberg D, Simon G. 1997. A comparison between somatic symptoms with and without clear organic cause: results of an international study. *Psycholog Med* **27**: 1011–1019.
- Koschera A, Hickie I, Hadzi-Pavlovic D, et al. 1999. Prolonged fatigue, anxiety and depression: exploring relationships in a primary care sample. *Aust NZ J Psychiatry* **33**: 545–552.
- Kraepelin E. 1913. *Lectures on Clinical Psychiatry*. William Wood and Co: New York.
- Krasucki C, Howard R, Mann A. 1998. The relationship between anxiety disorders and age. *Int J Geriatr Psychiatry* **13**: 79–99.
- Kroenke K, Mangelsdorff D. 1989. Common symptoms in ambulatory care: incidence, evaluation, therapy and outcome. *Am J Med* **86**: 262–266.
- Lee S, Yu H, Wing Y, et al. 2000. Psychiatric morbidity and illness experience of primary care patients with chronic fatigue in Hong Kong. *Am J Psychiatry* **157**: 380–384.
- Leventhal E, Prohaska T. 1986. Age, symptom interpretation, and health behaviour. *J Am Geriatr Soc* **34**: 185–191.
- Lindesay J. 1991. Phobic disorders in the elderly. *Br J Psychiatry* **159**: 531–541.
- Lindesay J. 1995. Introduction: the concept of neurosis. In *Neurotic Disorders in the Elderly*, Lindesay J (ed.). Oxford University Press Inc: New York; 1–11.
- Lipowski Z. 1986. Psychosomatic medicine: past and present. Part I. Historical background. *Can J Psychiatry* **31**: 2–7.
- Lipowski Z. 1988. Somatization: the concept and its clinical applications. *Am J Psychiatry* **145**: 1358–1368.
- Luccock M, Morley S, White C, Peake M. 1997. Responses of consecutive patients to reassurance after gastroscopy: results of self-administered questionnaire survey. *Br Med J* **315**: 572–575.
- Mackinnon A, Christensen H, Jorm A, et al. 1994. A latent trait analysis of an inventory designed to detect symptoms of anxiety and depression using an elderly community sample. *Psycholog Med* **24**: 977–986.
- Mayou R. 1999. European concepts. In *Somatiform Disorders: A Worldwide Perspective*. Springer-Verlag: Tokyo; 26–37.
- Mayou R, Bass C, Sharpe M. 1995. Overview of epidemiology, classification, and aetiology. In *Treatment of Functional Somatic Symptoms*, Mayou R, Bass C, Sharpe M (eds). Oxford University Press Inc.: New York; 42–65.
- Mayou R, Sharpe M. 1997. Treating medically unexplained physical symptoms. Effective treatments are available. *Br Med J* **315**: 561–562.
- O'Malley P, Jackson J, Santoro J, et al. 1999. Antidepressant therapy for unexplained symptoms and symptom syndromes. *J Fam Practice* **48**: 980–990.
- Ono Y, Araki N, Mitani M, Yoshimura K. 1999. Help-seeking behaviour across different age and culture groups. In *Somatiform Disorders: A Worldwide Perspective*, Ono Y, Janca A, Asai M, Sartorius N (eds). Springer-Verlag: Tokyo; 132–140.
- Pawlikowska T, Chalder T, Hirsch S, et al. 1994. Population based study of fatigue and psychological distress. *Br Med J* **308**: 763–766.
- Phillips K, McElroy S, Keck P, et al. 1993. Body dysmorphic disorder: 30 cases of imagined ugliness. *Am J Psychiatry* **150**: 302–308.
- Pitt B. 1982. *Psychogeriatrics: An Introduction to the Psychiatry of Old Age*. Churchill Livingstone: Edinburgh.
- Regier D, Boyd J, Burke J, et al. 1988. One-month prevalence of mental disorders in the United States. Based on five epidemiologic catchment area sites. *Arch Gen Psychiatry* **45**: 977–986.
- Reid S, Wessely S. 1999. Chronic fatigue syndrome and fibromyalgia: approaches to management. *Curr Opin Psychiatry* **12**: 727–732.
- Salkovskis P. 1995. Cognitive factors in depression, obsessive-compulsive disorder and hypochondriasis. *Curr Opin Psychiatry* **8**: 80–84.
- Sharpe M, Hawton K, Simkin S. 1996. Cognitive behaviour therapy for the chronic fatigue syndrome: a randomised controlled trial. *Br Med J* **312**: 22–26.
- Sharpe M, Mayou R, Sharpe M. 1995. *Concepts, Theories and Terminology: Treatment of Functional Somatic Symptoms*, Mayou R, Bass C, Sharpe M (eds). Oxford University Press: Oxford; 3–16.
- Ustun T, Sartorius N. 1995. *Mental Illness in General Health Care: An International Study*. John Wiley & Sons: Chichester.
- Van Der Linden G, Chalder T, Hickie I, et al. 1999. Fatigue and psychiatric disorder: different or the same? *Psycholog Medicine* **29**: 863–868.
- Vercoulen J, Swannink C, Zitman F. 1996. Randomised double-blind, placebo-controlled trial of fluoxetine in chronic fatigue syndrome. *Lancet* **347**: 858–861.
- Warwick H, Clark D, Cobb A, Salkovskis P. 1996. A controlled trial of cognitive-behavioural treatment of hypochondriasis. *Br J Psychiatry* **169**: 189–195.
- Wearden A, Morriss R, Mullis R, et al. 1998. Randomised, double-blind, placebo-controlled treatment trial of fluoxetine and a graded exercise programme for chronic fatigue syndrome. *Br J Psychiatry* **172**: 485–90.
- Wessely S, Nimnuan C, Sharpe M. 1999. Functional somatic syndromes: one or many? *Lancet* **354**: 936–939.
- White P, Thomas J, Amess J, et al. 1998. Incidence, risk and prognosis of acute and chronic fatigue syndromes and psychiatric disorders after glandular fever. *Br J Psychiatry* **173**: 475–481.
- White P, Thomas J, Kangro H, et al. 2001. Predictions and associations of fatigue syndromes and mood disorders that occur after infectious mononucleosis. *Lancet* **358**: 1946–1954.
- Whiting P, Bagnall A, Sowden A, et al. 2001. Interventions for the treatment and management of chronic fatigue syndrome: a systematic review. *J Am Med Assoc* **286**: 1360–1368.
- Wijeratne C, Hickie I. 2001. Somatic distress syndromes in later life: the need for paradigm change. *Psycholog Med* **31**: 571–576.
- Wijeratne C, Shome S, Hickie I, Koschera A. 2001. An age based comparison of chronic pain clinic patients. *Int J Geriatr Psychiatry* **16**: 477–483.
- Wittchen H-U. 1995. Comorbidity of mood disorders—diagnosis and treatment. *Depression* **3**: 131–133.
- Woods R. 1995. Psychological treatments. I: behavioural and cognitive approaches. In *Neurotic Disorders in the Elderly*, Lindesay J (ed.). Oxford University Press: New York; 97–113.
- World Health Organisation. 1992. *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines*. World Health Organisation: Geneva.
- World Psychiatric Association. 1999. *Draft Consensus Statement on the Syndrome of Neurasthenia*. World Psychiatric Association: Geneva.