Abstracts

Psychiatric Epidemiology — John Bond

D. W. K. Kay, A. S. Henderson, R. Scott, J. Wilson, D. Rickwood and D. A. Grayson, 'Dementia and depression among the elderly living in the Hobart community: the effect of the diagnostic criteria on the prevalence rates'. *Psychological Medicine*, 15 (1985), 771–788.

With increasing longevity, much attention in recent years has focused on the prevalence of psychiatric illness in later life since the dementias in particular have been shown to increase in prevalence with age.[1] Over 20 studies of the prevalence of psychiatric illness in later life have been reviewed in recent papers,[2] and these have highlighted the varying criteria used by authors to define and measure a psychiatric 'case'. This article describes a survey of 274 non-institutionalised people aged 70 or over living in the Hobart community in Tasmania, Australia. The identification of 'cases' was undertaken using two assessment instruments administered to subjects in an interview with a member of the research team: a modified version of the Geriatric Mental State Schedule (GMSS)[3] and the Mini Mental State Examination (MMSE).[4] The article examines the prevalence of dementia and depression using different diagnostic criteria and makes comparisons with the cross-national study undertaken in New York and London.[5] The article also examines the relationship between formal diagnosis and rating scales and the overlap between depression and dementia.

In order to make reliable estimates of the prevalence of psychiatric illness among people aged 80 or over equal probability samples of people aged 70–79 and 80+ were drawn systematically from the electoral roll for the Hobart Metropolitan area. The response rate for subjects in scope was 80.2% for people aged 70–79 and 67.8% for people aged 80 or over. The lower response rate from the older age group was partly due to a higher refusal rate and partly due to more people in the older age group being admitted to an institution after the sample had been drawn.

All interviews were undertaken by one member of the research team, who had received training in social work but had no previous psychiatric experience. Intensive training for a period of two months

was given and all interviews were audiotaped. Each audiotape was examined by a psychiatrist (A.S.H.) against the interviewer's rating for that respondent. Inter-rater reliability is not reported but 'changes were made where appropriate and these were usually to lower the level of rated pathology' (p. 777).

In estimating prevalence five diagnostic systems were used for dementia:

(1) The cognitive impairment scale (MMSE).

(2) DSM-III dementia classified according to severity: mild, moderate or severe, using the Diagnostic and Statistical Manual of Mental Disorders.[6]

(3) Pervasive cognitive disturbance.[7]

(4) Rational Scale of Dementia.[8]

(5) A psychiatric rating of mild, moderate or severe dementia made by a psychiatrist (A.S.H.) from completed interview schedules or the audiotapes of interviews.

In estimating the prevalence of depression six diagnostic systems were used:

(1) A depression scale derived from the GMSS.[9]

(2) DSM-III major depression as defined by the Diagnostic and Statistical Manual of Mental Disorders.[10]

(3) Dysphoric mood using available items from the GMSS but not DSM-III dysthamic disorder as defined by the Diagnostic and Statistical Manual of Mental Disorders.[11]

(4) Pervasive depression.[12]

(5) Rational Scale of Depression.[13]

(6) A psychiatric rating of mild, moderate or severe depression made by a psychiatrist (A.S.H.) from completed interview schedules or the audiotapes of interviews.

Each of these diagnostic symptoms used similar but different criteria. For example the criteria for dementia in DSM-III includes: loss of intellectual abilities severe enough to interfere with social functioning; memory impairment; impaired abstract thinking or impaired judgement or other disturbance of higher cortical functions. In contrast, pervasive dementia includes: frequent lapses in recall; more than two errors on testing memory on six simple items; keeps forgetting important or recent events; forgets names of close friends or family; has forgotten way home from neighbourhood at least once in last month; several years out in age, birth, or present year. Given differences in diagnostic criteria it is perhaps not too surprising that estimates of the prevalence of dementia using data collected at the same interview were in the range 3.8–10.8% for mild dementia and 1.3–4.4% for moderate or severe dementia among people aged 70–79. For people aged 80 or over the

ranges were 16.4–17.2% for mild dementia and 5.2–12.1% for moderate or severe dementia. Estimates of the prevalence of depression among people aged 70–79 were in the range 12.7–16.5% for mild depression and 6.3–18.9% for moderate or severe depression. For people aged 80 or over the ranges were: 17.2–22.4% for mild depression and 14.8–25.9% for moderate or severe depression.

From these data the authors rightly conclude that more detailed specification of diagnostic and measurement criteria is desirable if we are to see any advance in our knowledge resulting from the comparative epidemiology of dementia and depression.

COMMENT

Like the US-UK Cross-National Geriatric Community Study[14] this study has advanced our knowledge and thinking about the epidemiology of psychiatric illness in later life. The study not only highlights the need for consensus about what constitutes a psychiatric illness but also the need to amend and monitor the performance of existing standardised methods of assessing the presence of a psychiatric illness. Until this work is undertaken it is essential that future studies of psychiatric illness in later life should include precise definition of diagnostic criteria related to specific assessment methods so that the interpretation of prevalence estimates, by not only psychiatrists but service planners, can take account of the limitations of the methods used. In addition, it will remain an important feature of all studies that inter-rater reliability be constantly monitored. From this point of view it was disappointing that this study did not report inter-rater reliability, especially since two observers, the interviewer and a psychiatrist, were involved.

This study further reinforces the ubiquity of psychiatric illness in later life. Although the prevalence of dementia in this community is not insignificant it is the prevalence of depression or low morale which merits comment. Significant proportions of older people exhibit symptoms of depression and many of these are probably social in origin. Further research should therefore also be directed at looking at the social aetiology as well as the prevalence and management of depression among older people living at home in the community.

George A. N. Preston, 'Dementia in elderly adults: prevalence and institutionalization'. *Journal of Gerontology*, **41** (1986), 261–267.

In contrast to Kay and his colleages Preston argues that the current state of the art in the estimation of the prevalence of dementia is

adequate for the prediction of prevalence in the future. However, the problem of diagnostic and measurement criteria remains and estimates are difficult to generalise to other populations because of the demographic composition of the populations studied. A number of the studies of prevalence are based on community populations only, while others are based on case registers or lack standardised assessment methods. From more than twenty studies reviewed[15] Preston selects six studies[16] which can be used to predict future prevalence of dementia in a defined population. This paper is concerned with estimating prevalence in the elderly population of Australia.

Selection of studies for this analysis considered the method of case finding, the population studied and the type of prevalence estimate. Only those studies in which all people at risk were potentially included from the relevant population were included. Thus studies based on case registers and general-practice consultations were excluded. The remaining studies involved interviews or the application of a standard instrument for diagnosing dementia. Only studies which enumerated the total elderly population including people in institutions were incorporated. Point-prevalence estimates were preferred but period-prevalence studies up to one year were also included. The studies selected were from England, Scotland, Denmark, Sweden, Japan and New Zealand. The oldest data were collected in 1947 and the most recent data in 1983.

In reporting prevalence data there has been little consensus about the use of age groups and there is little overlap between studies in the age groups used. Consequently it is not easy to make direct age-adjusted comparisons between studies although some attempts have been made.[17] Preston uses one study[18] to model the relationship between age and prevalence in order to estimate age-specific prevalences in the selected studies. Over the age range 75–90 the number of moderately or severely demented persons per 1,000 of population betwen ages a and $a+5$ years was found to correspond closely to the regression formula:

$$R(a) = \exp[0.12589(a-42.1008)].$$

This formula was applied to the results of the selected studies. The expected number of people with dementia in each age group was calculated for comparison with the observed number of cases in that age group. A total of 26 such comparisons were made, and in no case was the difference between the observed and the expected numbers greater than would have been expected by chance at the 5% level.

Having established the reliability of this formula, Preston applied it to the population estimates for the elderly population of Australia. The

calculations suggest that in 1981 some 6% of the Australian population aged 65 or over are likely to be moderately or severely demented. This figure corresponds closely with estimates made by international experts.[19] The increase to 7.5% in 2001 stems almost entirely from the increase in the elderly population without change in the age structure of that population. Since no definitive field studies have been conducted to establish the prevalence of dementia in Australia we are unable to make appropriate comparisons for Australia where the actual prevalence of dementia might be quite different from the other countries studied.

COMMENT

This approach is entirely pragmatic and should therefore be applauded since the person planning the service response to the so-called 'Rising Tide' these estimates and similar ones calculated for other specific elderly populations are available now. The mounting of a substantial prevalence study in Australia would mean a delay of perhaps ten years before new research-based estimates would be available to planners. On the other hand, the Tasmanian study, which currently lacks institutional prevalence data, might provide a basis for testing the model on an Australian data set.

Before we can stop doing further prevalence studies we would need to know how reliable the model is when applied to other countries. Although it has been tested on six studies from different parts of the world there are some notable omissions, namely from North America. In addition there are a number of studies published recently which would provide further validation for the model. The conclusion of most writers remains that studies of prevalence should continue to be used with caution. A valuable addition to the analysis presented here would be a meta-analysis of the various studies to determine the study effects on the aggregate estimate of prevalence.

A. J. D. McDonald, 'Do general practitioners "miss" depression in elderly patients?' *British Medical Journal*, **292** (1986), 1365–1367.

In Britain there have been few specific studies of the prevalence of psychiatric illness in later life. Those studies which provide estimates of prevalence have usually done so as a spin-off from the main research thrust. Many of our assumptions about prevalence are grounded in the seminal study of Kay and colleages undertaken in Newcastle upon

Tyne.[19] Our assumptions about the role general practitioners play in the detection and management of psychiatric illness also dates back to the early sixties.[20] These studies indicated that general practitioners are not aware of psychiatric disorder in their patients. This paper describes a study of the prevalence of depression in 235 elderly patients who attended general practice surgeries. The paper reports disagreement between the research assessment of depression and the general practitioner's assessment and focuses on issues of reliability.

Three practices and 12 doctors co-operated in the study. Up to three elderly patients were systematically sampled from each surgery session and doctors were asked to rate each subject as to the presence of depression (none, mild, moderate or severe). After each consultation a subject was interviewed and the depression scale of the Comprehensive Assessment and Referral Evaluation (C.A.R.E.) from the US–UK cross-national community study[21] was administered. The research workers who undertook the interviews were trained in the administration of C.A.R.E. and on one day in five reliability exercises were undertaken with the author, a psychiatrist. In addition, on two occasions an independent psychiatric assessment of 'cases' and 'non-cases' was undertaken.

An unweighted kappa of 0.71 is reported which indicates good inter-rater reliability. There was no disagreement outside the range ± 2 around the cut-point on the depression scale. The reliability of the depression scale against independent psychiatric assessment returned an unweighted kappa of 0.66. This result, based on only 18 subjects, highlights once again the need for consensus in the use of diagnostic and measurement criteria.

Using the depression scale at a cut-point 9/10 produced a prevalence rate for depression among general-practitioner consulters of 30.6%. The agreement rate between the depression scale and the general practitioner's assessment of depression was 71.2%. Excluding subjects with a 'marginal' depression scale score, only 11.1% of the disagreement between the general practitioner's assessment of depression and the depression scale was caused by 'missed' depression. However, there were low rates of referral and subsequent use of antidepressant drugs. These findings are contrary to our assumptions based on earlier studies and if replicated indicate the need to focus on the management of depression rather than attempting to improve the recognition of depression. However, the results of this study may not be typical given the nature of the three practices studied: two were training practices and all were in London.

COMMENT

This study was one of a number undertaken as part of the US–UK cross-national community study and in keeping with this project maintains a high methodological standard with the ongoing observance of problems surrounding reliability of assessment instruments. It provides a good model for future research. Assessment instruments like the depression scale used in this study should continually be reassessed to ensure that diagnostic and measurement criteria are consistent. For planning purposes current estimates of prevalence may be more than adequate, but as our research moves towards assessing the effects of treatments these same instruments may not be quite so reliable.

NOTES

1 Report of the Royal College of Physicians by the College Committee on Geriatrics: Organic mental impairment in the elderly. Implications for research, education and the provision of services. *Journal of the Royal College of Physicians of London*, **15** (1981), 141–167.
2 Kay, D. W. K. and Bergmann, K., 'Epidemiology of mental disorders among the aged in the community', in Birren, J. E. and Sloane, B. (eds), *Handbook of Mental Health and Ageing*, Prentice-Hall, Engelwood Cliffs, N.J., 1980; Henderson, S. A. and Kay, D. W. K., 'The epidemiology of mental disorders in the aged', in Kay, D. W. K. and Burrows, G. (eds), *Handbook of Studies in Psychiatry and Old Age*, Elsevier/North Holland, Amsterdam, 1984.
3 Copeland, J. R. M., Kelleher, M. J., Kellett, J. M., Gourlay, A. J., Gurland, B. J., Fleiss, J. L. and Sharpe, L., 'A semi-structured clinical interview for the assessment of diagnosis and mental state in the elderly: the Geriatric Mental State Schedule. I. Development and reliability. *Psychological Medicine*, **6** (1976), 439–449.
4 Folstein, M. F., Folstein, S. E., and McHugh, P. R., 'Mini-mental state. A practical method for grading the cognitive state of patients for the clinician', *Journal of Psychiatric Research*, **12** (1975), 189–198.
5 Gurland, B., Copeland, J., Kuriansky, J., Kelleher, M., Sharpe, L. and Dean, L. L., *The Mind and Mood of Aging*, Croom Helm, London, 1983.
6 American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, DSM-III*, 3rd edition, APA, Washington, D.C., 1980.
7 Gurland *et al.*, *op. cit.*
8 *Ibid.*
9 Copeland *et al.*, *op. cit.*
10 American Psychiatric Association, *op. cit.*
11 *Ibid.*
12 Gurland *et al.*, *op. cit.*
13 *Ibid.*
14 *Ibid.*
15 Kay, D. W. K. and Bergmann, K. *op. cit.*; Henderson, A. S. and Kay, D. W. K., *op. cit.*
16 Campbell, A. J., McCosh, L. M., Reinken, J. and Allan, B. C., 'Dementia in old age and the need for services', *Age and Ageing*, **12** (1983), 11–16; Essen-Möller,

E., 'Individual traits and morbidity in a Swedish rural population', *Acta Psychiatrica et Neurologica Scandinavica, Supplement, 100*; Kaneko, Z., 'Care in Japan', in Howells, J. G. (ed), *Modern Perspectives in the Psychiatry of Old Age*, Brunner/Mazel, New York; Kay, D. W. K., Beamish, P. and Roth, M., 'Old age mental disorders in Newcastle-upon-Tyne. Part 1. A study of prevalence', *British Journal of Psychiatry*, **110** (1964), 146–158; Nielsen, J., 'Geronto-psychiatric period-prevalence investigation in a geographically delimited population', *Acta Psychiatrica Scandinavica*, **38** (1962), 307–330; Primrose, E. J. R., *Psychological Illness: A Community Study*, Charles C. Thomas, Springfield, Il.

17 Report on the Royal College of Physicians by the College Committee on Geriatrics, *op. cit.*; Report of a World Health Organisation Scientific Group on Senile Dementia, *Dementia in Later Life: Research and Action*, Technical Report Series, **730**, World Health Organisation, Geneva, 1986.

18 Kay *et al.*, 1964, *op. cit.*

19 Report of the Royal College of Physicians by the College Committee on Geriatrics, *op. cit.*; Report of a World Health Organisation Scientific Group on Senile Dementia, *op. cit.*

20 Williamson, J., Stockoe, I. H., Gray, S., Fisher, M., Smith, A., McGhee, A. and Stephenson, E., 'Old people at home: Their unreported needs', *Lancet*, **i** (1964), 1117–1120; Harwin, B., 'Psychiatric morbidity among the physically impaired elderly in the community', in Wing, J. K. and Hafner, V. F. (eds). *Roots of Evaluation: The Epidemiological Basis for Planning Psychiatric Services*, Oxford University Press, Oxford, 1979.

21 Gurland, B. J. and Wilder, D. E., 'The CARE revisited: development of an efficient, systematic clinical assessment', *Journal of Gerontology*, **39** (1984), 129–137.

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Religion and Ageing

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Leo E. Missine and Judy Willeke-Kay, 'Reflections on the meaning of life in older age', *Journal of Religion and Aging*, **1** (1985), 43–56.

The authors ask the question, 'Where is the ageing person to find meaning in a culture that values work and youth so highly?'. They propose to use Frankl's theory (based on his concentration camp experience) to explore the issue. They argue that Frankl's principles, based on the view that human behaviour is related to the values in which a person believes and his/her search for meaning, are readily applicable to the needs and concerns of the elderly. Indeed, they suggest that the western world is a kind of concentration camp for many elderly people.

Having pointed out that Frankl found people often had an inner strength that enabled them to survive terrible situations, they go on to apply four fundamental principles of his theory to the behaviour of older people: