

EDITORIAL

Psychogeriatrics and the neo-epidemiologists¹

Almost 25 years ago a WHO Expert Committee produced a 50-page report on *Mental Health Problems of Aging and the Aged*, aiming

to place the mental health problems of aging and the aged in their demographic... social and medical setting as a preliminary to discussing the possible means of protecting and promoting mental health and mitigating or curing mental illness in the aged (WHO, 1959).

While acknowledging the various issues raised by the well-established associations between senescence and mental ill-health, the tenor of the report was broadly optimistic. Referring to the expectations in Sweden that 'the expected increase in the proportion of invalids in old age may have been more than offset by social and medical progress', it concluded that:

although the aging of populations creates certain serious problems, there has been a tendency to magnify the dangers that are like to arise. The approach to the problems created by the increasing proportion of old people in many populations should be informed by the fact that such aging is a part of social progress.

A generation later, this verdict is difficult to reconcile with the widespread concern aroused by the lengthening human life-span. In retrospect, it is significant that the WHO report barely mentioned the epidemiological contribution to its subject-matter. Times have changed. The epidemiological perspective has now become indispensable not only for the psychiatrist concerned with the assessment and management of mental illness in the senium, but also for workers in several related disciplines.

The descriptive epidemiologists, drawing on the techniques of demography and medical geography, have mapped the contours of a disturbing situation, based on an estimated increase in the global population of from 3.97 to 6.25 billion over the final quarter of the twentieth century. During this period, a reduced mortality in the early and late stages of the life-cycle will result in the achievement of their potential longevity by a much higher proportion of people so that the histogram of life-spans will become increasingly Gaussian about a mode of 75–80 years, with a shortening tail in the early years.

The trend is already one of acute concern to industrialized countries and is clearly discernible in the developing world (Kramer, 1980). It confronts the medical epidemiologist with a challenge which can be approached in one of two ways, depending on whether the senescent population be defined as an age-limited aggregate which is different from and contrasted with chronologically younger groups, or as the residuum of a total population which has survived the hazards of middle age to enter the senium. The objectives of the investigator may, accordingly, tend towards the study either of disease or of decrement.

The clearest example of the former outlook is that of the recently founded sub-discipline of 'neuroepidemiology', with its special focus on the dementias (Mortimer & Schuman, 1981; Capildeo *et al.* 1983). After a long period of neglect these conditions have recently reanimated the attention of neurologists because of the threat they pose as 'an approaching epidemic' (Plum, 1979). Their particular target is the Alzheimer–senile form of dementias because it accounts for more than 50% of dementia over the age of 65. To Plum this is

an increasingly prevalent neurological disease... an epidemic that can be prevented only by the successful attention of science and especially neurobiology to solving the problems that manifest themselves predominantly in the aging brain... Alzheimer disease, like Parkinsonism, may turn out to be a specific neurochemical system

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degeneration, perhaps susceptible to at least temporary improvement with pharmacotherapy... fundamental neuroscience now shares responsibility to our future public health comparable to that shouldered by microbiology a half century ago.

The spectacularly successful elucidation of the pathogenesis of kuru by Gajdusek and his colleagues has encouraged the advancement of aetiological hypotheses in terms of neurochemistry, immunology, virology and genetics, but biologically-oriented neuroepidemiological research in this field is hampered by two clinical obstacles: first, dementia is a syndrome which results from several disease processes and, secondly, Alzheimer's disease remains a diagnosis by exclusion so that, as Gajdusek and his colleagues have pointed out (Masters *et al.* 1981):

Until criteria are established for diagnosis, it seems almost pointless to attempt an epidemiologic analysis... At this stage there does not even appear to be any reliable information on the accuracy of clinical diagnoses in a large enough series of patients with Alzheimer's Disease. Therefore, no estimate is available on the degree of case ascertainment that might be expected from population surveys.

In the present state of knowledge the development of longitudinal studies with case-controls designed to identify risk-factors represents perhaps the most promising approach to causation via epidemiology, but its potential must be severely limited until more diagnostic precision can be obtained (Sluss, 1980).

This observation may serve as a pointer to the need for an intensification of work in the important field of clinical epidemiology, especially in what Morris has called 'completing the clinical picture' (Morris, 1957). Some of this effort has been directed to the delineation of particular syndromes, which include the varieties of psycho-organic reactions, morbid preoccupations with the themes of decline and death, the psychiatric links with physical illness and the environmental strains of isolation. All these conditions, though not unknown among members of younger age-groups, present themselves more prominently by virtue of their efflorescence in the senium. One fundamental reason for expanding knowledge in this sphere is its significance for classification, a topic of particular concern to epidemiologists and one which is poorly developed in psychogeriatrics, as may be demonstrated by the differences between the schemata of the International Classification of Diseases (ICD-9) and the American Diagnostic and Statistical Manual (DSM-III). In addition, the prospects of clinical epidemiology have been extended by the study of the large captive populations of chronic psychiatric patients whose declining mortality-rate has enabled large-scale observations to be made on the later stages of the natural history of their disorders. Manfred Bleuler, for example, has pointed to the surprising improvement in his unique series of schizophrenics, suggesting that it may be associated with anoxic cerebral changes (Bleuler, 1978). Again, Ciompi has reported that patients with an earlier neurotic or depressive illness improve in their later years, a finding which appears to reflect primarily the influence of social or environmental factors (Ciompi, 1969).

Such factors also exercise a key role in the outcome of mental disorders arising in the senium. Although the 5-year prognosis of those conditions necessitating admission to hospital is poor (Whitehead & Hunt, 1982), the extra-mural milieu clearly plays a major role in both the patients' symptomatology and their capacity for adaptation.

So much for the institutionalized elderly. Community surveys, however, reveal a large extra-mural reservoir of all but the most severe degrees of mental disorders in old age (Magnussen *et al.* 1982). The key medical agent concerned with their care is the primary care physician, who may acknowledge the significance of psychosocial factors in the genesis of these conditions but all too often relies exclusively on medication in their management, so much so that the prescription of psychotropic drugs to the elderly has become one of the major aspects of another new sub-discipline, that of 'drug-epidemiology'. Population based figures show a seemingly universal picture. In a recent survey of the Canadian province of Saskatchewan, for example, the over-60s constitute some 16% of the population but receive 42% of all psychotropic drugs prescribed; more than half the people in this age-group were taking these drugs, twice the proportion for people of all ages (Saskatchewan Alcoholism Commission, 1981). In the United Kingdom the same trend affects the prescription of sedatives, hypnotics, neuroleptics and antidepressants, to which should be added the large array

of 'cerebral vasodilators and activators', all of them scientifically dubious but widely employed (Swift, 1981).

The most striking effect of this therapeutic fashion has been an iatrogenically induced epidemic of adverse pharmacological effects, some more incapacitating than the disorder being treated. From a biological standpoint the increased susceptibility of the elderly to the unwanted effects appears to be related to a change in the pharmacokinetics and an impairment in the homeostatic mechanisms in old age. From an epidemiological standpoint it represents a major hazard to be weighed against the possible advantages of medication.

In the ascertainment of mental illness in the population at large epidemiologists are able to draw on their traditional techniques, laying particular emphasis on such issues as sampling and standardized methods of assessment. In disorders of the senium, however, a particular problem arises from the need to study decline or decrement as well as disease, for while the study of decline has to do with psychobiological variation, epidemiology *per se* deals only with the pathological part of that variation. The remainder is normal variation, in part a physiological adaptive response to environment, in part a failure of homeostasis. In operational terms, therefore, as several workers have acknowledged, a dimensional rather than a categorical model of dysfunction becomes imperative in distinguishing between mental health and ill-health in the aged by means of the epidemiological method.

The methodological problems of this task have been analysed by Cooper & Schwarz (1982), who point out that 'mental health must...be defined in terms of psychological rather than of physiological functioning'. They stop short, however, of extending their discussion to the sphere of yet another new sub-discipline, that of 'psychosocial epidemiology'. Thus, while drawing attention to the 'shortage of accurate reliable measures' they make no mention of intelligence, though the borderlands between decrement and disease are sharply illuminated by recent developments in psychology. Here the a-theoretical psychometric mode of enquiry, based on statistical theory, has been superseded by modern cognitive psychology which favours a more active concern with functional mechanisms. According to this approach, whereas the fluid, and to some extent the crystallized, cognitive abilities developing in the early years represent a genetically regulated process of maturation, aging is not so much an orderly, uni-directional process of decline as a disorderly, multi-directional process resembling, in military terms, a rout rather than a retreat. The end-state of later years thus becomes dependent on the stability of the psychobiological systems underlying intellectual performance, which in turn is subject to a variety of environmental influences, including disease and dysfunction. In these circumstances psychometrics are less useful than the concept of intelligence developed by Welford as an extension of Bartlett's work on the analysis of skills in real-life situations, where performance is affected by not only bodily changes but also by such forces as motivation, social prestige and expectations, and the development of methods of coping with situations and problems.

This view leads naturally from the psychological to the social component of psychosocial epidemiology. Here the emphasis is on what, over and above the formal increase in failing faculties, has been called 'the real pathology of old age...pain, disablement, frustration, boredom, lack of purpose, and loss of identity and self-respect, all of which lead to dissatisfaction with the quality of life' (Tulloch & Moore, 1979). Most of these features have been confirmed by recent surveys of old people, and many of the problems are summarized in the so-called 'environmental docility' hypothesis, according to which: 'As the competence of the individual decreases, the proportion of behaviour attributable to environmental as compared with personal characteristics increases' (Amann, 1982). This is not, however, to demean the role of those personal attributes, among which the subject's sense of well-being emerges as the most important (Garritt *et al.* 1978). And it is via the concept of self-rated health status that the interests of social gerontologists and epidemiologists overlap most closely, as a number of studies on elderly populations have shown (Tissue, 1972). The evidence makes it clear that the subject's state of health, as assessed by medical examination, is related to the level of the percept but that this in turn is an essentially subjective response, related more to general health than to verifiable criteria of the physical and mental condition. Such findings

constitute the twin basis of Mark Abrams' (1978) conclusion, based on a detailed survey of a group of 1600 individuals over 65, that

any substantial progress in raising the life satisfaction of elderly people depends largely upon providing better and more extensive health services for them and upon providing them with equivalents of the support already available to many through proximity to good neighbours and friends.

Already, therefore, a variety of separate disciplines – demography, neuropsychiatry, genetics, psychology, sociology, pharmacology, gerontology – are all employing the epidemiological method to study the aetiology, clinical features and management of mental disorder in old age. It is to be hoped that their joint efforts will contribute to knowledge and to effective action.

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