

**RECOGNITION AND KNOWLEDGE OF
DEMENTIA AND DEPRESSION IN THE ELDERLY
BY GENERAL PRACTITIONERS**

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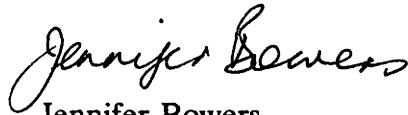


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Except where otherwise acknowledged in the text, the data and analyses in this thesis represent my original research.

A handwritten signature in cursive script that reads "Jennifer Bowers". The signature is fluid and elegant, with the first letters of each word being capitalized and prominent.

Jennifer Bowers
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ABSTRACT

General practitioners are in a unique position to detect, diagnose and treat mental illness in their practices. The aims of the study were to determine how well one sample of general practitioners detect dementia and depression in their elderly patients; and to ascertain the level of knowledge these general practitioners have of dementia and depression.

Eleven general practitioners were recruited through the Royal Australian College of General Practitioners and each general practitioner requested 10 consecutive patients over 70 years to be interviewed. Three indices for both depression and dementia were used to obtain levels of probable psychiatric disorder in the 101 participating patients. Socio-demographic information and the level of assistance needed with activities of daily living were also obtained.

The initial 11 general practitioners, and subsequently a further 25 general practitioners, were interviewed to ascertain the symptoms and signs they look for when diagnosing dementia and depression, the treatment or mode of action taken, and the types of services most frequently recommended.

General practitioners' ratings of dementia were correlated with the other

cognitive measures. The general practitioners missed 17 of the 28 cases of probable dementia identified by the Mini-Mental State Examination and 12 of the 15 patients identified as depressed by a standardised interview and algorithm. It was thought that the general practitioners' poor detection of depression might be related to a limited knowledge of depressive symptomatology and their reliance on the patients raising of depression as a problem.

Data from the interviews with 36 general practitioners revealed that they also had a limited knowledge of the symptoms and signs of dementia. Twenty one of the general practitioners did not report that Alzheimer's disease is the most common dementing disorder in general practice. This is contrary to a recent Australian neuropathological study of the causes of dementia.

The present study has identified under-recognition of dementia and depression and certain deficiencies in general practitioners' reported knowledge about these conditions. The findings indicate a need for further training in common psychiatric disorders of the elderly, not only for undergraduates, but for experienced general practitioners who treat a high proportion of the elderly population.

ERRATA AND ADDENDA

Page 4, line 18 -Insert in references "Australian Bureau of Statistics, 1988;"

Page 6, line 21 -Insert "17% of expenditure is on medical benefits"

Page 22, line 11 -Omit "and the threat" and replace with "are threatened with"

Page 29, line 5 -Change "has" to "have"

Page 35, line 21 -Change "pscyhiatric" to "psychiatric"

Page 37, line 21 -Omit "whilst consulting with a general practitioner who was less accurate in his/her" and insert "during consultations with general practitioners who had been identified as less accurate in their"

Page 46, line 5 -Insert "'" after "practitioners"

Page 46, line 7 -Omit "treatment was well after the onset of symptoms, the prognosis was the worst" and insert "depressed patients who received treatment well after the onset of symptoms had the worst prognosis"

Page 47, line 2 -Change "are" to "were"

Page 47, last line -Insert "general practitioners'" after "related to"

Page 48, line 5 -Insert "to" after "position"

Page 49, line 2 -Omit "They" and insert "Elderly people"

Page 49, lines 13,14-Insert after "recovery", "(prognosis for dementia and depression outlined in Chapter 2)" and insert after "return", "(length of consultations and interest in psychogeriatrics is discussed in subsequent chapters)."

Page 51, line 14 -Change "do not proceed to the first filter" to "who do not proceed through the first filter"

Page 71, line 8 -Insert after "...instrument.", "(Limitations of screening instruments are discussed in Chapters 6 and 11.)"

Page 77, line 14 -Insert "a" after "approach"

Page 78, line 14 -Insert after "patients; the", "elicitation and"

Page 90, last line -Insert after "consultations", "purely"

Page 105, line 14 -Insert after "service provision", "(total number of services per patient)"

Page 122 -Insert "Footnote: The prevalence of a disorder can affect the sensitivity and specificity of its detection and can be used to correct hit-rates for the GHQ."

Page 125 -Insert "Footnote: The information for this section is based solely on the information from the participating general practitioners. Oxazepam was prescribed as an antidepressant by one of the general practitioners even though it is an anxiolytic."

Page 136, line 21 -Omit "Using" and insert "Based on"

Page 137, lines 7,8-Omit "do", insert "may" and insert after "practitioner", "(Henderson, 1984)".

Page 162, para 1,
Section 9.4.2 -Omit "weas", insert "was"

Page 174, line 9 -Insert after "...field." "This finding poses an important question."

Page 177, para 3,
line 13 -Omit "first" and "second" and replace with "second" and "third"

Pagee 181, line 4 -Omit "showed were rare in the elderly"
and insert "found made up only 11% of their elderly
cases."

Pagee 185, line 1 -Insert new paragraph after
"...purposes."

"To examine the general practitioners' implicit diagnosis more accurately and thoroughly, subsequent diagnostic tests and management procedures could be more fully documented and analysed. This would involve at least two factors which may present further limitations or prove impracticable. First, the identity of the patient with suspected dementia would have to be provided to the general practitioner. This additional component would have to be included in the design of the methods, especially for ethical reasons. Second, the continued co-operation of the general practitioners would have to be sought to compare subsequent procedures with the initial diagnosis and the results derived from screening instruments."

Pagee 188 -Insert after 8th reference

"Australian Bureau of Statistics (1988),
Projections of the Populations of Australia,
States and Territories 1987 to 2031, Catalogue No.
3222.0, Canberra."

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CHAPTER 1

INTRODUCTION

1.1 The major issues

General practitioners are central to mental health care and services for the community at large and, in particular, for the aged population. It should be of specific interest to general practitioners, geriatricians, psychiatrists, health care professionals, policy makers and families to have information on:

- the mental health of elderly people who consult general practitioners;
- whether general practitioners recognise problems, especially mental health problems, in the elderly, and, if not, why not;
- how they treat and manage problems if they have been identified; and
- how much general practitioners know about the mental health problems of the elderly.

Despite the substantial body of information which has accumulated on psychiatric conditions in general practice settings since the early 1960s (for example, Kessel, 1960; Shepherd, 1980; and the numerous publications of Goldberg and his

colleagues (cited below)), Burvill (1988) suggests that fundamental issues cannot be addressed satisfactorily with the current level of knowledge, but they are "eminently susceptible to investigation" (Shepherd, 1980).

1.2 Purpose of the study

What then are the fundamental issues and priorities for research in the area of mental health in general practice? Priorities for research on mental health in primary care settings were sought from a multi-disciplinary group of experts who were attending a conference on mental illness in primary care (Wilkinson & Williams, 1985). One of the three areas elicited was the elderly who are mentally ill; and the three priority subjects were the effectiveness of treatment; the mental health problems encountered in primary care; and training general practitioners in psychiatric skills. The aims of this thesis are focused on these priorities. The first objective is to contribute to existing information on how well Australian general practitioners detect dementia and depression, the two most common psychiatric disturbances in the elderly. The second objective is to assess the level of general practitioners' knowledge about dementia and depression in elderly patients.

This investigation is designed to clarify the conflicting data presently available on general practitioners' detection of dementia and depression in elderly patients. In order to do this, the investigation aims to:

- examine the accuracy of general practitioners' detection of dementia and depression (Aim 1); and
- compare the results with earlier overseas studies (Aim 2).

Training for medical students and general practitioners cannot be modified or developed until the gaps in their knowledge have been determined. The first step was, therefore, to ascertain how well they were informed about dementia and depression. Thus, the study aimed to assess:

- general practitioners' knowledge of dementia, especially in light of (i) the burgeoning aged population; and (ii) the current publicity and public awareness of dementia and related disorders (Attwood (Time), 1989; Ferry (New Scientist), 1988; Beaumont (Ita), 1989; Australian Dr Weekly, 1988) (Aim 3); and
- general practitioners' knowledge of depression, especially in light of (i) the burgeoning aged population; and (ii) the evidence suggesting that elderly people with medical problems are at high risk of developing depression (Aim 4).

Before exploring the theoretical basis to the above aims, the remainder of this chapter sets the background scene relating to the ageing population with particular emphasis on predictions for social and demographic change in Australia.

1.3 Demographic and social changes

The ageing population has emerged as one of the most pressing and debated public policy issues of the 1990s. The issues involved will continue to be canvassed during the coming decade as they will affect the fabric of our society well into the next century. Cavalier (1988) accurately describes the underlying reasons for this debate:

"Medical science and modern technology have transformed the demographic picture. Aging is more than a statistic, however, and more than a problem for the public finances. It is among the most acute of human dilemmas, confronting the years when health and mental vigour inevitably decline."
(Cavalier, 1988)

1.3.1 Demography

The aged population of Australia is not only increasing in number but also in relative proportions. In 1986, 10.5% of the population was aged 65 years or over. The proportion of the population aged 65 years and over is projected to increase to 11.4% in 1991, 11.9% in 2001, 13.0% in 2011 and 18.9% by 2031. During this time the aged population will have increased from 1.7 million in 1986 to over 5 million in 2031. It is predicted that there will be two phases of ageing in Australia; up to the year 2001 the population over 70 years, the 'old' old, will increase more rapidly, and between 2006 and 2021 the rate of increase will accelerate and the numbers of people aged 60 to 69 years, the 'young' old, will increase more rapidly than the 'old' old (Kendig & McCallum, 1986; Hugo & Rudd, 1988).

A reduction in mortality for both males and females will continue to contribute to the ageing population: males can expect to live another 17 years after they reach 65 by the year 2021 compared with 14 years during 1980-82; and females can expect to live another 22 years after they reach 65 by 2021 compared with 18 years during 1980-82.

Another factor contributing to the ageing population is the ratio of aged people relative to the working-age population, which is due in part to a decrease

in the birth rate. This ratio is expected to increase up to 2001 and to increase more rapidly from 2011 to 2021 (Kendig & McCallum, 1986; Hugo & Rudd, 1988).

1.3.2 Socio-economic factors

There are many economic, social and political implications relating to the changing age structure of our society. Some of the changes which will occur with the ageing population are:

- the continued predominance of females in the aged population. Of the people over 60 years at the last census (2.346 million), 56% were women and of the people over 85 years, 73% were women;
- the numbers of aged migrants, especially those from non-English speaking countries, will double by the year 2001 (Kendig & McCallum, 1986); and
- an improvement in educational and financial independence for both men and women due to increased employment opportunities.

In a paper which examined the key economic aspects of the long term care of elderly people, Philips (1988) foreshadowed some of the chief impacts:

- more people will be in receipt of an age pension or superannuation;
- as people are living longer they are more likely to require assistance with home care and daily living tasks;

- use of community care services is likely to increase, especially with increasing Government funded home care services;
- total government outlays on the aged population are anticipated to increase by 131% between 1981 and 2001.
- as the 'old' old population is increasing rapidly this century, the numbers cared for in nursing homes and hostels are expected to increase; and
- costs of health care are expected to increase due to the ageing population and number of services provided.

These last few factors allude to the impact of a rapidly ageing population on health care in broad terms. But more specifically, they indicate that the responsibilities and practising time of general practitioners will, in the future, be focused to a much greater degree than ever before on the health and social problems of the elderly.

The provision and cost of medical and pharmaceutical benefits for the elderly provide a clear indication of the high level of services which have been provided by physicians in the past and will continue to be provided, to an even greater degree, in the future. Forty eight percent of expenditure by the Commonwealth Government on pharmaceutical benefits is for people over 65 years and 17% on medical benefits (Economic Planning Advisory Council, 1988). Further, in 1985-86, the average number of services per person per year processed

by Medicare¹ for all patients was about 7 (or 8 when those over 64 years are included); 9 for females and 6 for males. Females over 64 years received the highest number of services; they ranged from 13 (65-74 years) to 15 (over 75 years). Males over 64 years received an average of 10 and 12 services for these respective age groups (Health Insurance Commission, 1985-86). The number of services received by elderly people is almost double that of the general population. The level of services provided can be expected to increase especially within the 'old' old population over the coming years.

The cost of the services can also be expected to increase. The average value of Medicare benefit to all patients (including the elderly) was \$161.31 in 1985-86. The average value of benefit for elderly people is substantially more and ranged from \$228.27 for elderly males (65-74 years) to \$291.61 for elderly females (over 75 years) (Health Insurance Commission, 1985-86).

The implications of the "demographic shift are profound for those who will practise medicine in the 21st century" (Henderson & Rosenman, 1989, p. 218) and there is no doubt that general practitioners will be treating more elderly people and at an ever increasing cost.

1.3.3 Living arrangements

How much responsibility does the general practitioner have to take for the health of their elderly patients in relation to social factors such as living conditions and community assistance? Nearly all elderly people live in a private dwelling:

¹Medicare is the Australian Government's health insurance scheme which provides basic health care cover to all Australians.

89% of people over 70 years live in a private dwelling, about 6% reside in nursing homes and 3% in hostels. Of those who live in their own homes, 62% live with someone, a spouse or a close relative, and 38% live alone (Australian Bureau of Statistics Census, 1986). In a survey of *Older People at Home* it was found that the level of home care and assistance provided by agencies increases with age and degree of physical disability and is more likely to be for people who live alone. For people who do not live alone, spouses (and other members of the household or family) provide the majority of assistance. About 50% of people over 75 years have a need for assistance with domestic or other household tasks. On the other hand, the remaining 50% have no such apparent need. Almost 50% of people participate in a social or community group at least monthly (Australian Council on the Ageing (ACOTA), 1985).

According to a survey of health, welfare and family support for the elderly, the majority of elderly people, whether they live with someone or live alone, live in close proximity to children (Gibson, 1983). This suggests that community care primarily by spouses and children is available to most of the surveyed elderly people in a time of crisis. Families provide much of the support for the elderly residing at home but this is sometimes supplemented with other community services. There are, however, a minority who are physically disabled and vulnerable due to little or no family support. In fact only 7% of the elderly people surveyed made use of the three main community services: housekeeping, meals on wheels and home nursing (Gibson, 1983).

Thus it can be concluded of the aged population over 70 years that the majority: live in a private home with someone close; have family residing nearby

who provide the majority of assistance; do not depend heavily on services provided by agencies; and are not socially isolated. General practitioners, therefore, may need to intervene in relation to these aspects of welfare of the elderly in a small minority of cases.

1.3.4 Physical health

It is frequently suggested that the greater the degree of physical morbidity, the more likely it is that a person will consult a doctor (Lurie, 1987). Thus it is of relevance to this study briefly to describe, in general terms, the level of physical health in the aged population.

The majority of people over 60 years who live in the community consider themselves to be healthy and are "relatively unaffected by sickness and disability" (p. 64) and only about 10% were found to be in poor health (Gibson, 1983). About one third of the people who were surveyed to determine their needs and resources had problems with eyesight, hearing, their feet or mobility. These authors also found little evidence for age related decline in physical health.

In some respects it is perhaps of more interest to note that elderly people perceived 'good health' to be related to independence and a sound mental state rather than their physical health *per se*. They also felt that general practitioners were only required for "reassurance and information about illnesses and treatments" (Saltman *et al*, 1989).

1.4 Outline of thesis

The next three chapters review the literature encompassing all aspects of

the thesis. Chapter 2 briefly sets the epidemiological scene for mental disorders in the aged population over the coming years. Chapter 3 considers the reasons why patients, not only the aged, do or do not consult a general practitioner. It also examines the factors which influence the detection of mental illness. Chapter 4 focuses more particularly on the elderly and reviews the literature on general practitioners' recognition of dementia and depression in depth. This chapter also highlights some of the issues which may affect recognition of mental illness in the elderly. Finally, it draws together the theoretical framework outlined in the first four chapters and links them in a practical sense to the research plan.

Chapter 5 describes the methods used to examine Aims 1 and 2. Chapters 6 and 7 analyse and discuss the findings of this component of the study on recognition. Chapter 8 presents the methods used to examine Aims 3 and 4. Chapters 9 and 10 analyse and discuss the findings of the second part of the study on knowledge and relate the findings to the first component on detection.

The concluding eleventh Chapter draws together the two components of the study, summarises the principal findings and the limitations, sets the findings within the broader public health framework and suggests extensions and directions for further work.

CHAPTER 2

MENTAL HEALTH OF THE ELDERLY

2.1 Epidemiology and description of mental disorders in the elderly

Organic brain syndromes, affective disorders, anxiety disorders, hypochondriasis, suicide and paranoid state (delusional disorder) are the main psychiatric illnesses observed in elderly people, the first two being the most conspicuous (reviewed by Henderson & Rosenman, 1989). With the ageing of the population, these two disorders will implicitly increase in prevalence and, therefore, they will be the focus of this thesis.

Epidemiological studies based on community surveys provide most of the data regarding the occurrence of these disorders and they have recently been reviewed by Henderson (1990a) and Jorm & Henderson (1990). Some of their findings on the prevalence of dementia and depression are summarised below.

2.2 Dementia

Dementia is not a specific disorder but a group of symptoms or a syndrome. Alzheimer's disease, multiple infarcts, Parkinson's disease, alcohol abuse and depression are some of the disorders which can be associated with dementia (Jorm, 1987). The three conditions which account for most cases of

dementia are Alzheimer's disease, which is the most common, vascular dementia and a combination of both of these. The following clinical description of dementia is taken from the Diagnostic Criteria and Guidelines of the Draft ICD-10 on Mental and Behavioural Disorders (May 1990) (p. 31).

"Dementia is a syndrome due to disease of the brain, usually of a chronic or progressive nature, in which there is impairment of multiple higher cortical functions, including memory, thinking, orientation, comprehension, calculation, learning capacity, language and judgement. Consciousness is not clouded. The cognitive impairments are commonly accompanied, and occasionally preceded, by deterioration in emotional control, social behaviour, or motivation."

2.2.1 Prevalence of dementia

A statistical integration of data from 22 studies giving age-specific data on the prevalence of dementia, found that:

- the actual prevalence rates differed greatly from study to study;
- prevalence consistently increased exponentially with age; and
- the prevalence rate of dementia was found to double with every 5.1 years of age (Jorm & Korten, 1988).

Jorm & Korten (1988) used a "baseline model" of prevalence and applied it to age-specific population projections which gives the percentage increase in dementia cases over a base year. The method was applied to recent population projects resulting in the projected increases in dementia cases to the year 2031 (Figure 2.1). The percentage increase in either the total population or the aged

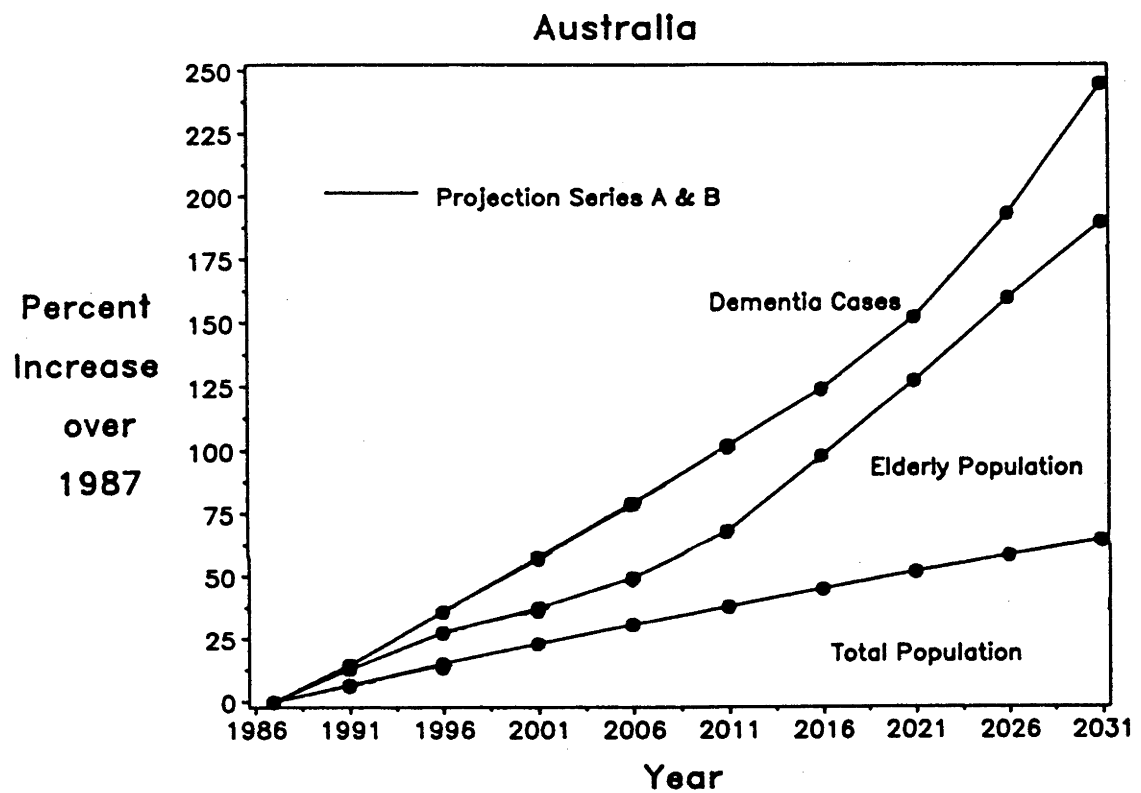


FIGURE 2.1: Projected increases in dementia cases, elderly population and total population for Australia, 1987-2031 (reproduced from Jorm & Henderson, 1990).

population will not be as great as the increase in the percentage of cases of dementia. For example, the increase in the total Australian population between 1987 and 2031 is expected to be 65%, the aged population's increase is expected to be 190%, compared with an increase of 245% for the cases of dementia. This marked difference in the percentage increases is due to the concomitant increase in the 'old' old age group, where the prevalence of dementia is highest and is increasing at an even faster rate than the total population or the 'young' old (Hugo & Rudd, 1988; Jorm & Henderson, 1990).

The prevalence of specific dementing diseases, the most common being Alzheimer's disease and multi-infarct dementia, can be estimated with a high level of confidence only by autopsy. In a neuropathological survey of 60 dementia cases in Perth, 73% had changes characteristic of Alzheimer's disease; 45% had neuropathological signs of Alzheimer's disease alone and 28% had Alzheimer's disease as well as other brain pathology (Ojeda *et al*, 1986). This prevalence concurs closely with estimates obtained by Henderson & Jorm (1986) when they summarised neuropathological studies from Europe and concluded that about 70% of patients had Alzheimer's disease or Alzheimer's disease mixed with other dementing disorders. They also concluded that 17% had multi-infarct dementia and the remaining 10% were found to have other related disorders.

The study by Kay *et al* (1985) provides an estimate of 8% as the prevalence of dementia in Hobart, an Australian city, for a sample of community residing, elderly people over 70 years. The authors compared this with similar studies in New York and London and noted that the London prevalence rates were half that of New York and Hobart. The prevalence of dementia, particularly

mild dementia, has also been estimated by Mowry & Burvill (1988) using a random sample of people over 70 years residing in the community in Perth, another Australian city. Their estimates, using the same diagnostic and severity criteria as the Hobart study, were very close to the results of that study. Moreover, they found that prevalence of mild dementia varied greatly depending on the criteria used.

When the prevalence of dementia in general practice settings is examined, considerable variation is also observed. This is due to the methods employed: some studies recruited patients from registers and others from actual consulters. It could be anticipated that the prevalence of dementia amongst patients recruited from a register would be equivalent to that observed in the general population and that it could be higher in consulters. The prevalence observed in comparable studies does not entirely support this idea. Rates observed ranged from about 10% (O'Connor *et al*, 1988) to about 20% (Williamson *et al*, 1964; Parsons, 1965) to over 30% (Mant *et al*, 1988) where patients were selected from registers. Waxman & Carner (1984) who studied consulters observed a low prevalence of about 7%. Although not addressed in the paper by Mant *et al*, it is suggested that this prevalence is not a true reflection of an elderly community sample or even a sample of 'consulters' as 78% of the patients resided in hostels or nursing homes where there are high proportions of demented residents (Snowdon, 1986; Snowdon & MacIntosh, 1989). In summary, some studies indicate that the prevalence of dementia amongst consulters is similar to community prevalence rates but other studies suggest that the rate amongst consulters is considerably higher.

2.2.2 Alzheimer's disease

Terminology such as "senile dementia of the Alzheimer type" and "atrophic brain syndrome" (Comfort, 1980) have been replaced in recent years by *Alzheimer's disease*.

"It is a slowly progressive disorder with an insidious onset. Usually the first signs are impairment of recent memory and of the ability to process information. As the disease progresses, the individual's thinking becomes increasingly limited and the ability to retain information deteriorates further. This leads to impaired performance in daily living, such as shopping or the handling of money, holding a conversation, cooking or dressing and behaving in an appropriate manner. Parietal involvement is indicated by difficulty in the use of words (dysphasia), leading to the use of clumsy circumlocutions; or of simple motor acts, such as dressing (dyspraxia). Frontal damage shows as impaired ability to behave appropriately, leading to tactlessness, disinhibition and loss of finer feelings and self-awareness, particularly in company, together with impairment of initiative and planning." (Henderson, 1984)

Certain diagnosis of Alzheimer's disease whilst the patient is alive is impossible and can only be made following the examination of neuropathological changes found at autopsy (McKhann *et al*, 1984).

2.2.3 Vascular dementia

Vascular (including multi-infarct²) dementia was formerly termed "arteriosclerotic dementia" or "cerebral atherosclerosis" (Comfort, 1980, p. 41).

²Multi-infarct dementia is only a subset of vascular dementia. Since 1974, it has become apparent that vascular disease can cause dementia in several different ways, not just through multiple infarction.

It was, however, concluded by Hachinski *et al* in 1974 that infarcts or strokes rather than arteriosclerosis were the cause of dementia.

"The patient usually has a history of hypertension and previous small strokes. With accumulated damage, the picture appears of impaired memory and cognition, pseudobulbar palsy with dysarthria and dysphasia, emotional incontinence ... and a characteristic gait..." (Henderson, 1984)

The progress of multi-infarct dementia is classically described as episodic or stepwise which is in contrast to the steady deterioration observed in Alzheimer's disease.

The prevalence of both Alzheimer's disease and multi-infarct dementia increases with age and so the likelihood of both disorders occurring together also increases.

The definitive clinical description of and diagnostic criteria for dementia of the Alzheimer type and multi-infarct dementia used in this thesis are from the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders* (3rd Edition-Revised (DSM-III-R), 1987).

2.3 Depression

The clinical description and diagnostic criteria for a Major Depressive Episode used in the thesis are also from the APA's DSM-III-R criteria (1987). There are nine possible criteria for depression. To be diagnosed as having a Major Depressive Episode, five symptoms must have been present during the same two-week period and one of the symptoms must be depressed mood or loss of interest or pleasure in activities. The other criteria are weight change;

changed sleeping patterns; restlessness or agitation other than as a subjective complaint, but which has been noticed by other people; loss of energy; feelings of worthlessness or excessive guilt; reduced ability to concentrate and recurrent thoughts of death or suicide.

To be diagnosed as having dysthymia or symptomatic depression, at least two of the above criteria, as well as depressed mood, must have been present for two years or more.

2.3.1 Prevalence of depression

As Blazer and Williams (1980) point out "depression is one of the most important psychiatric disorders of late life, but the true prevalence of depressive symptoms in the community is unknown." There is evidence to suggest that the prevalence ranges from 5% to as high as 44% in the elderly (Blazer & Williams, 1980; Blazer, 1982). In the Australian Health Survey of 1983, about 9% of people over 65 years experienced nerves, tension or depression during the two weeks prior to the survey. Blazer & Williams' (1980) observed a slightly higher prevalence in a study of almost 1,000 elderly people residing in the community. The authors confirmed previous findings of a high level of depressive symptoms (that is, the elderly individuals displayed depressive symptomatology but not high enough to be "operationally defined in DSM-III") in about 15% of their sample. However, major depression, defined by DSM-III, had a prevalence of only about 2%. In addition, other recent research indicates that depressive disorders in the elderly are probably not as common as in younger age groups (Swartz & Blazer, 1986; Copeland *et al*, 1987; Hendrie & Crossett, 1990; Feinson, 1989). These

authors cite evidence similar to that obtained by Blazer & Williams (1980), which suggests that about only 3% were categorised as having a DSM-III 'major depressive episode' but that a much greater proportion suffered from dysphoria, depressive symptoms and a mixed depression-anxiety syndrome which was not severe enough to warrant a DSM-III diagnosis.

Contrary to the above findings, a considerably higher prevalence of major depression was observed in one Australian community sample of elderly people. The prevalence of major depression was found to be about 10% and the rate for dysphoric mood was also comparatively higher, at 19% (Kay *et al*, 1985).

Similar results to the Australian study were obtained in a study of the prevalence of chronic mild depression in elderly Finns with a prevalence of 21% for dysthymic disorder (Kivela & Pakkala, 1989). They also found more elderly women with dysthymia than men, especially in those over 70 years. Widowhood was much more common in this group of women and may contribute to the increase in dysthymic disorders in elderly females.

As a result of this conflicting evidence on the prevalence of depression, Snowdon (1990), in a recent editorial, challenged the findings of low prevalence of major depression in old age. He stated that "Dementia, disability, physical illness, bereavements, and loss of independence and security, are all much more common in old age" and that suicide reaches a peak. "It just does not make sense (especially if clinical experience is taken into account) to suggest that depressive disorders do not also increase with age." He warned that some findings, which have been derived from the "widely-quoted and influential Epidemiologic

Catchment Area (E.C.A.) study"³, may jeopardise the recognition of treatable depression by recently graduated physicians as they will not be aware that it is a common disorder in the elderly. Snowden concluded by suggesting the E.C.A. data be reanalysed, especially those relating to physical illness or cognitive impairment because they may be masking depression.

The prevalence of depressive symptoms increases in elderly people who suffer a bereavement and "The presenting symptoms and the underlying dynamics are frequently difficult to disentangle" (Blazer, 1982, p. 164). In addition, the prevalence of major depression has been found to increase with age in the elderly residing in the community (Kay *et al*, 1985). In the U.S.A., fewer elderly people with depression seek help or are given a referral for psychiatric care and mental health facilities are used half as much by the elderly when compared with the general population (Hendrie & Crossett, 1990; Feinson, 1989; Jorm & Henderson, 1989).

There is little information available on the prevalence of depression in the *elderly consulting* patient in primary care settings. In *consulting* samples of patients of all ages, there is considerable variation in the prevalence which ranges from 14% to over 30%. Blacker & Clare (1988) propose that depression, much of it mild, is the most common psychiatric disorder encountered by general practitioners and that 5% of consulting patients suffer from major depressive disorder. Most studies carried out in a general practice setting suggest that the

³The use of the Diagnostic Interview Schedule (DIS) probe flow chart in the ECA studies disregards depressive symptoms associated with physical illness and may, therefore, falsely reduce the prevalence of diagnosable depression, particularly in older persons.

prevalence is higher than 5%. An indication of prevalence can be obtained from the studies which examined general practitioners' recognition of depression. However, the sample sizes of these studies are small when compared to the large scale community prevalence studies (such as, Copeland *et al*, 1987). Waxman & Carner (1984), using Zung's Self-Rating Depression Scale⁴, observed a prevalence of 17%. Macdonald (1986) found a high prevalence of 31% using the depression scale from the Comprehensive Assessment and Referral Evaluation (CARE) schedule. Pond *et al* (1990) obtained a prevalence of 14% for depression using the Geriatric Depression Scale (GDS). As a high proportion of patients in this study were from residential care where it is recognised that depression is commonplace (Snowdon, 1986; Snowdon & Donnelly, 1986; Snowdon & MacIntosh, 1989), it might have been expected to find a higher prevalence.

Due to the conflicting evidence and opinions on the prevalence of depression in the elderly, not only in *community* studies but also studies based on *consulters*, the prevalence is not easily determined. The conflict in the evidence appears to be related to the degree to which the elderly present with a depressive syndrome (ranging from major depressive disorder to dysthymia) as well as whether or not the elderly are more depressed than younger people. Further, the question arises whether the *same* diagnostic criteria used for younger people should be applied to the elderly. In summary, the Australian studies suggest that a minimum prevalence for major depression in the *community* may be about 10% and for depression amongst *consulters* may be 14% or more.

⁴The Zung SRDS, CARE and GDS do not *diagnose* depression. The prevalence relating to each scale are, therefore, estimates based on the various cut-points on the respective scales.

2.3.2 Management of depression

The treatment and management of depression have recently been extensively reviewed (for example, Johnson & Wilson, 1989; Williams, 1989). Management of depression can be by pharmacological and non-pharmacological treatments or a combination of both (Johnson & Wilson, 1989). Diagnostic assessment must be made to ascertain the type and severity of depression, especially to determine if suicidal risk is involved, and identify problems relating to social functioning. This will assist in the decision on the form of treatment (Johnson & Wilson, 1989). The prognosis for elderly people with depression is dependent upon the initial severity of the depression, the physical health of the patient and whether there have been severe life events (Murphy, 1983; Williams, 1989). Elderly men who have a severe physical and/or mental illness, and the threat of institutionalisation are more at risk of suicide than women (Williams, 1989). In a prospective study of 92 elderly depressed in- and out-patients, Murphy (1983) confirmed previous findings that the prognosis for depression in the elderly is poor compared to younger patients. All forms of treatment were available to this group of patients but with disappointing results. Elderly people are less likely to recover from a major depression than younger patients and are more likely to experience further episodes (Blacker & Clare, 1987).

2.4 Dementia and depression

Overlapping symptomatology can make it difficult for general practitioners to decide whether a patient suffers from depression with cognitive impairment, dementia with depressive symptoms, or coexisting dementia and depression

(Rubin *et al*, 1988). However, the distinction between the two is critical in clinical practice because Alzheimer's disease and vascular dementia are progressive⁵ and irreversible with no specific treatment but depression is, at least potentially, reversible.

Reports of the prevalence of depression coexisting with Alzheimer's disease have varied markedly from almost zero to over 50% (Rovner *et al*, 1989). Further research on the co-occurrence of depressive and cognitive symptoms is warranted in light of the scarcity of information (reviewed by Henderson, 1990).

In addition, there appears to be very little consensus in this area due to differing sampling methods, diagnostic criteria and various antidepressant strategies (Reynolds *et al*, 1988). However, one point is certain: "a mistaken diagnosis of dementia in such a case may lead a patient with a treatable illness to be inappropriately consigned to nursing home care. Hence, it is best to err on the side of over-diagnosing depression in the elderly." (Henderson & Rosenman, 1989, p. 224)

2.5 Anxiety disorders

Although anxiety disorders are not specifically examined in this thesis, they are briefly mentioned here because "Major depressive illness frequently presents with anxiety as its principal manifestation" and anxiety is frequently observed in elderly patients (Henderson & Rosenman, 1989). Many elderly people are continually highly anxious (Blazer, 1982) especially in new situations. Hendrie &

⁵The progression of vascular dementia can be slowed by anti-platelet reduction (for example, aspirin) (Kellett, 1988; Stirling *et al*, 1989).

Crossett (1990) point out that when elderly patients present with both anxiety and depression, it is the anxiety which appears to be the more disabling and, therefore, the condition which is treated. In fact, it is the depression which should be treated initially not the anxiety (Henderson & Rosenman, 1989; Watts, 1982).

2.6 Summary

The majority of elderly people over 70 years of age do not have dementia or depression or any other psychiatric disorder. Nevertheless, with the ageing population there will be more 'old' old people which implies that there will be an exponential increase in physically frail elderly people with dementia or a combination of dementia and depression. Based on current evidence, it is more difficult to make similar predictions on the prevalence of depression. Nevertheless, dementia and depression are, and will probably continue to be, the major mental health problems in the elderly. Dementia and depression, within the general practice setting, therefore, will be the focus of this thesis. The ensuing chapter examines the general practitioners' role in mental health care.

CHAPTER 3

ROLE OF GENERAL PRACTITIONERS IN MENTAL HEALTH CARE

3.1 General practitioners

General practitioners are the first point of contact for patients; they manage common problems by assessing, treating or counselling patients; they provide or co-ordinate further health care; and they maintain contact with the patient (Petersdorf, 1975; Andersen *et al*, 1986).

General practitioners are thus considered to be the linchpin to mental health care and services (Anonymous, BMJ, 1964). Psychological and emotional problems consume a considerable proportion of their time and effort. They, therefore, require a broad knowledge of psychiatric conditions in order to effectively deal with all aspects of mental health in primary care. For example, familiarity with normal and abnormal psychological conditions from the young to the elderly is essential if general practitioners are to treat mental health conditions effectively (Adams *et al*, 1978).

British researchers initiated research into psychiatric disorders in primary care over three decades ago (for example, Kessel, 1960; Shepherd *et al*, 1966). The results of research into the detection of psychiatric disorders indicate that

many cases do not present to or remain undetected by general practitioners (Shepherd *et al*, 1966; Brody, 1980; Goldberg & Huxley, 1980; Dunn, 1985). Similarly, in Australia there have been a few investigations of general practitioners' detection of psychological disorders in their patients (Chancellor *et al*, 1977; Brodaty *et al*, 1982).

There have been fewer studies on the detection by general practitioners of mental disorders in elderly patients and the most frequently cited studies have all been carried out in the United Kingdom (Williamson *et al*, 1964; Parsons, 1965; Macdonald, 1986). The only known study undertaken specifically on the aged population in Australia was by Mant (1988) and Pond (1990) and their colleagues.

These studies on elderly people will be explored in depth in the next Chapter. This Chapter deals primarily with a review of general practice studies in respect of the younger adult.

3.2 Conceptual model of primary care

From the research on samples of the general population, it has become evident that:

- psychiatrists and other mental health professionals are consulted by a small, atypical segment of the general population; and
- the majority of people with mental disorders consult their general practitioners.

The National Health Service (NHS) in the United Kingdom has a number of similarities, but is far from being the same as the health care system in Australia.

For example, the concept of general practitioners being the gate-keeper to specialist care is the same but the funding mechanism is very different. In the U.S.A., general or family practitioners, for the most part, are not the gate-keeper to specialist care, which can be obtained without referral. This appears to be changing and the gatekeeper concept is being tested in the hope that health care can be provided more cost-effectively (Eisenberg, 1985).

In the U.K., the majority of people are registered with a general practitioner who represents "a common channel through which individuals may obtain medical advice and care; [and] his records offer a potentially unique opportunity" for research (Dunn, 1985). The health care system in the United Kingdom has distinct advantages for research as the denominator is known thereby allowing a methodical and more precise investigation to be undertaken on patients registered with a general practice. The work of Goldberg & Huxley (1980) is an example of research undertaken within the health care system of the United Kingdom. They devised a model which conceptualises the '*selection processes*' for psychologically disordered individuals who must pass through a range of *filters* in order to obtain different *levels* of care. This model provides the theoretical framework for the present study. Goldberg & Huxley (1980) illustrated their model with a Venn diagram, which has been modified for the purposes of this thesis (Figure 3.1). The present study deals directly with only part of the framework, that is, 'Level 1' and 'Levels 2 and 3', and the concomitant first and second filters. Level 1 represents psychological morbidity in the general community; Level 2 represents psychological morbidity among patients attending general practitioners regardless of whether or not the general practitioner has

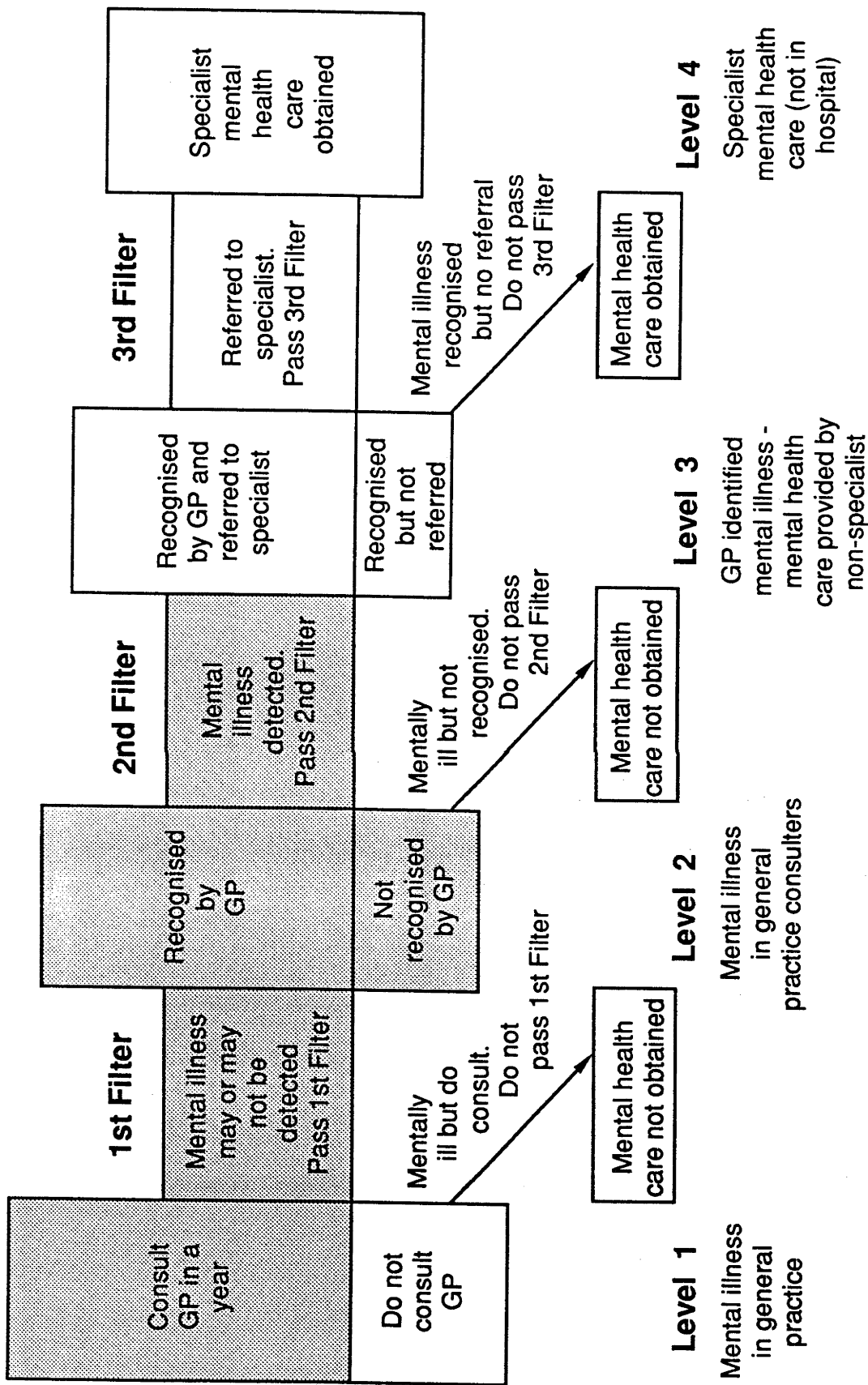


FIGURE 3 . 1 : Pathway to mental health care: diagrammatic representation of a conceptual model of "selection processes" for the detection of mental illness in general practice (adapted from Goldberg & Huxley (1980)). The steps which are the focus of this study are indicated by shading. Specialist mental health care could be obtained from neurologists, geriatricians or psychiatrists for example.

detected the disorder; and Level 3 represents patients who are assessed by general practitioners to have a psychological disorder or 'conspicuous psychiatric morbidity', a phrase coined by Kessel in 1960.

The present study is primarily focused on the 'first filter', that is, the consulting population who has psychological disorders which may or may not be recognised by their general practitioners and the subsequent second level which consists of the consulting population with 'conspicuous psychiatric morbidity' and 'hidden psychiatric morbidity' (Goldberg & Blackwell, 1970).

3.3 Non-consulters and the decision to consult

In focusing on the so called 'first filter' and subsequent Level 2, it must be recognised that there are people with psychological disorders who do not present at their general practice (Level 1). Factors determining whether medical help is sought may include the lack of a general practitioner in close proximity combined with inadequate transport; lack of assistance or interest by the general practitioner in the past; a perceived deficiency in or lack of knowledge of services; an unwillingness or an inability to face or accept symptoms; perhaps an unwillingness to burden others; or there may be financial disincentives. Elderly people in particular may attribute their symptoms to their age, or an appointment with a general practitioner may be too difficult or too exhausting (Henderson & Rosenman, 1989) (discussed further in Section 4.1).

As the severity of symptoms (either physical or mental) increases, the likelihood of a consultation increases. Factors associated with self-referral to general practitioners were examined by Ingham and Miller (1982) who concluded

that symptom severity was the main determinant of a person seeking a consultation. In addition they showed that, if the patient thought that there was a physical cause of her/his problem, s/he were more likely to consult than if s/he thought it was a psychological cause.

People visit general practitioners primarily because they are experiencing symptoms which relate to a physical disorder. However, evidence has been gradually built up to suggest that a significant proportion of such patients have co-existing psychological symptoms (Burvill, 1988). Somatic presentation of psychiatric illness in primary care settings is the single most common reason why psychiatric disorders remain undetected in general practice (Goldberg & Bridges, 1985).

Shepherd and his colleagues (1966) found that "in the majority of cases of minor psychiatric disorder the main burden of medical care rests on the general practitioner." (p. 163) They also stressed that the "implications for the medical care of mentally disturbed patients" delineate into two distinct categories: "indications for referral to a psychiatric specialist, and the function of the general practitioner in relation to those psychiatric conditions which he must treat himself." (p. 172-3).

If a general practitioner has been alerted to a 'hidden' psychiatric disorder, patients were more likely to recover quickly (Johnstone & Goldberg, 1976). Over 1,000 consecutive consulters at a general practitioner's surgery in Yorkshire were screened using the General Health Questionnaire (GHQ). Thirty two percent were found to have a 'conspicuous' psychiatric disorder and 11% were 'hidden'. Those with a 'hidden' disorder were split into two groups: treated and control.

As a result of the case identification, treatment was shown to be "beneficial and immediate". The duration of the disturbance was significantly shorter in the treated group.

There will always be a group of people in the community who choose not to consult a general practitioner for a range of reasons. But as mental or physical symptoms worsen, the likelihood of a person consulting a general practitioner increases. However, psychological disorders may be masked by physical symptoms. This may be particularly so in the elderly with their higher level of physical morbidity. General practitioners must, therefore, be alert to the symptoms and signs of psychological disorders.

3.4 Detection of psychological disorders in general practice

"Detection", defined by The Oxford Dictionary, is to "discover the existence or presence of" and "recognition" is "to acknowledge the existence of or discover the nature of". Since the definitions are synonymous, detection and recognition will be used interchangeably throughout the thesis. This section reviews a selection of the evidence which shows that general practitioners frequently miss a significant proportion of patients with psychiatric disorders and vary greatly in their recognition rates when compared against the data obtained with case-finding instruments. As Sanson-Fisher & Hennrikus (1988) point out "The general practitioner... is in an advantageous position to detect disturbance, and there are a number of potential benefits of accurate detection... [but] there is evidence to suggest that the first component of treatment, that is, detection, is not adequately carried out." Goldberg and his colleagues (Marks *et al*, 1979; Goldberg &

Huxley, 1980) have proposed that there are two components to under-recognition or misclassification. The first is the degree to which general practitioners' assessment or diagnosis agrees with patients' self-assessment such as the GHQ, or with an independent psychiatric assessment. The second component is a bias which is a general practitioner's consistent tendency to make, or avoid making, a diagnosis. Bias relates to the general practitioners' personality, attitudes and experience, and accuracy of diagnosis is influenced by how a consultation is conducted. This component, and possible reasons for it, are discussed below in Section 4.5.

Sanson-Fisher & Hennrikus (1988) have compared the results of studies into the detection of psychological disturbances in primary care and found a large variation in rates of psychological disorders. The proportion of patients with a psychological disturbance (scored on a case-finding instrument) correctly identified by the general practitioners (sensitivity) ranged from 27% to 74%. In other words, some detect disorders accurately but in the majority of cases there is significant disagreement with instruments. Marks *et al* (1979), in a large and much cited study carried out in Manchester on the determinants of the ability of general practitioners to recognise psychiatric disorders, compared doctors' ratings of 'conspicuous morbidity' with patients' responses to the GHQ. The sensitivity was 54% which meant that the general practitioners missed almost half of the possible cases.

Shepherd and his colleagues (1966) found a nine-fold variation in the recognition of psychological morbidity by 14 general practitioners in London. Having analysed data on the characteristics of general practitioners and their

practices, they concluded that the difference was primarily due to variation in the ability of general practitioners to recognise psychiatric symptoms and not to differences between practices in the prevalence of disorders.

Skuse & Williams (1984) screened 272 patients for psychiatric disorder through one general practitioner in a London practice. In this particular study, the general practitioner's rating was compared with the GHQ and an independent psychiatric assessment. The general practitioner identified only 51% of the psychiatric morbidity in his practice.

The results obtained by Sireling *et al* (1985) with 36 participating general practitioners were of the same order, as major depression was more often missed than detected. This study compared three groups of patients: two in whom depressive symptoms had been recognised and treated with antidepressants or other treatments by the general practitioners; and the third comprised missed cases. The general practitioners prescribed antidepressants for eight cases and nine others received another treatment. Twenty four cases of major depressive disorder were missed. It is also important to note that about a quarter of the patients treated by the general practitioners did not meet diagnostic criteria for depression and that, even though the majority did satisfy the criteria, the cases were considered to be mild compared with cases treated by psychiatrists.

Borus *et al* (1988), in a study of primary health care providers' recognition and diagnosis of psychiatric disorders in Boston, compared assessments by the providers of the emotional state of their patients with mental health professionals' assessments of the same patient using a structured clinical interview. The primary care providers did not recognise 64% of their patients with a psychiatric disorder

and were unable to identify the specific mental disorder in the majority of cases.

Defining 'recognition' and how often a 'mental diagnosis' should be made is difficult in a general practice setting. This point was demonstrated by Jencks (1985) when he analysed data obtained in an American survey of 45,000 patients' visits to primary care physicians in office practice. This survey of visits, rather than patients, found that a high proportion of visits recorded treatment (either psychotropic drugs or psychotherapy) without a diagnosis of a mental disorder; the patients tended to be older, established patients who saw the physician for a short time and were more likely to have a follow-up visit. Jencks (1985), however, was unable to clarify whether treatment without a diagnosis resulted from an inadequate diagnostic system or inadequate physician knowledge and skills. It may be that general practitioners consider psychiatric symptoms are combined with certain somatic disorders or that there are limitations to the psychiatric classificatory systems currently in use in primary care (discussed in detail in Section 3.3.5 below).

In perhaps the first of the Australian studies into general practitioners' identification and management of emotional disorders, 15 general practitioners' opinions on the nature of problems underlying a consultation were sought (Chancellor *et al*, 1977). The problem could have been physical, emotional or social and the management planned could have been counselling and/or the prescription of psychotropic drugs. The general practitioners' opinions were compared with the patients' scores on the GHQ-30. The general practitioners identified 60 of the 225 people assessed as emotionally disturbed by the GHQ (27% sensitivity). The GHQ identified young women to be more psychologically

disturbed and elderly people to be less psychologically disturbed. In contrast, the general practitioners assessed elderly women to be more disturbed than young women (Chancellor *et al*, 1977).

In an extension of the above study and using the same sample of general practitioners, 13 general practices were surveyed to determine why general practitioners miss psychiatric disorders in many of their patients (Brodaty *et al*, 1982). Two hundred and fifteen patients were categorised as either having a psychiatric disorder or not by the general practitioner and by a psychiatrist, and this was compared with the GHQ score. The general practitioner missed about half the patients with significant psychological symptoms. The observing psychiatrist did not differ greatly from the general practitioners and did not identify many more cases. The patient or general practitioner attributes, and psychological attitude scores, did not determine accuracy, but inadequate information being obtained from the patient by the general practitioner did. The authors suggested that if the observing psychiatrist had conducted the consultation, the detection rate would have improved because that was how the GHQ was validated. Thus, they imply that the general practitioners were not obtaining adequate information from the patient and the patient was not forthcoming with the necessary information.

More recently, Hennrikus *et al* (unpublished) compared 56 general practitioners' ratings of psychiatric disorders in about 1700 patients. Their results were similar to the above studies as the general practitioners did not identify about one quarter of the patients who scored 11 or more on the GHQ-30. These authors also observed considerable variation in levels of accuracy and suggested

that attitudes of general practitioners to the treatment of psychiatric disorders and doctor patient communication influenced accuracy.

As concluded by Sanson-Fisher & Hennrikus (1988), "it is clear that GPs do not detect psychological disturbance in a large proportion of their patients whose scores on a screening questionnaire are in the probable case range" (p. 248) and that there is great variability in the accuracy of general practitioners. The critical question then, is: *Why do general practitioners miss such a high proportion of psychological disturbances?*

3.5 Factors which influence recognition

There are more possible reasons for poor recognition rates of psychiatric disorders in general practice other than those mentioned above. First, knowledge of or interest in psychiatric disorders by general practitioners may be minimal; second, short consultations or financial constraints prevent them from giving sufficient time to patients; third, the manner and attitude of the general practitioner towards a psychologically disturbed patient can influence whether or not the disturbance is raised by the patient or detected by the general practitioner; and, fourth, general practitioners may have reservations regarding the efficacy of the range of treatments available, and therefore overlook psychological disturbances. (These factors are discussed in relation to elderly patients in Section 4.5 below). Recognition could also be influenced by a combination of two or more of these reasons.

Information from families and friends assists in the recognition of psychological disturbances. It is widely acknowledged that family members and

friends, rather than patients, provide reliable and accurate information, especially in relation to cognitive impairment, for example (O'Connor *et al*, 1990). However, there is little reported evidence in the literature of informants being a formally accepted source of reliable information in the general practice setting and thus a valuable aid to accurate recognition of psychological illness.

Wilmink and his colleagues (1989) in a recent investigation in the Netherlands, examined general practitioners' characteristics in relation to their assessment of psychiatric illness. A sample of 25 general practitioners was divided by the researchers into three groups: clinical orientation, intermediate, and family medicine orientation. Then a sample of 2237 patients, who were consecutive consulters on ten days over four weeks, was divided into subgroups according to their GHQ score, general practitioner rating and whether they were 'old patients' (with a previous mental health problem) or 'new patients' (without a problem). They found that general practitioners under-identified psychiatric disorders in 'new' and over-identified them in 'old' patients and that there were no differences in the general practitioners' assessment behaviour between the three categories.

In an important study aimed at finding how patients communicate psychological distress and the ability of general practitioners to recognise verbal, vocal, postural and body movement cues given by the patient to their distress, Davenport and his colleagues (1987) found that some patients with psychiatric disorders exhibited fewer cues whilst consulting with a general practitioner who was less accurate in his/her detection of psychiatric disorders than the others in the study. This indicates that such a general practitioner *suppresses the expression of verbal and vocal cues*. The more able general practitioner actively facilitates the

expression of verbal and vocal cues. The conclusion drawn from this study is that many psychiatric illnesses that were 'hidden' from general practitioners and hospital-based doctors might be detected if patients were interviewed in a different way.

Patients are, to some extent, aware of general practitioners' communication shortcomings. About 100 consecutive patients from 31 general practices in Adelaide, South Australia, were questioned about dissatisfaction with aspects of care provided by general practitioners (Steven & Douglas, 1988). Patients were satisfied with the time they spend with their doctor but they were concerned about feeling rushed during the consultation and being "discouraged from asking questions".

As Davenport and his colleagues (1987) found and Tanner (1976) has explored in some depth, messages transmitted without words are an important aspect of doctor-patient communication. Non-verbal communication can be performed both vocally ('mmm') or non-vocally which encompasses a range of different modes of communication. Verbal communication encompasses a range of behaviours. Tanner (1976) suggested that there are three main behaviours: doctor-centred (which includes directing, clarifying, doubting, justifying self and terminating); patient-centred (which includes offering, exploring, accepting patient ideas, using silence); and negative behaviour (for example, rejecting patient offers, evading patient questions, not listening, confused noise). Tanner (1976) has also examined non-verbal communication in general practice in some detail. He lists and discusses a range of factors which are non-verbal and which may affect communication during a consultation. These factors include clothing,

the configuration of surgery furniture, time, facial expressions, body posture, eye contact and hand gestures.

Clothes: He asks the question: "The white coat of the hospital doctor for example may identify the doctor for the patients and other staff, but is this to facilitate or inhibit communication?" (p. 166)

Position of furniture: The doctor should arrange chairs and desk so that he is accessible to the patient and the patient feels at ease.

Time: "Patients generally accept that if they go to see a doctor they will have to wait whether or not an appointment has been made. No other profession uses time so effectively as a weapon as the medical profession." (p. 169) The non-verbal message conveyed by waiting is that the doctor is busy and does not have a lot of time to spend with a patient.

Facial expression and body postures: Head and facial expressions have been found to convey information about affect (for example, anger or pleasure) and body postures express the degree of affect (that is, how angry or how much pleasure).

Eye contact and hand gestures have both been shown to be important instruments of communication (Tanner, 1976). These two forms of communication have been suggested by Goldberg and his colleagues to be highly important in the detection of mental illness in general practice.

Many of these points have been affirmed by Goldberg (1990) who cites recent work which suggests that general practitioners who identify true cases correctly make more eye contact with their patients, interrupt the patients less and make more "facilitative noises". He also cites evidence that general practitioners

who accurately detect a psychological disorder, manage the case better.

Marks and his colleagues (1979) (cited above), also examined characteristics of the general practitioners and patients to endeavour to determine the reason for the variation in the detection rate. They concluded that the general practitioner's accuracy in the detection of psychiatric illness depended on three factors: "the way in which the doctor interviews his patients, his personality, and his academic ability." In relating the general practitioner's accuracy in detection of psychiatric disorders to his/her attitude, 'interest and concern' correlated positively with accuracy, but 'conservatism' correlated negatively. The manner in which the general practitioner interviewed patients was found to be important.

In an innovative study undertaken in Edinburgh, Walton (1966) investigated the influence of general practitioners' personality factors on psychological aspects of general practice. He found that there were two types of doctor: those who were 'psychologically oriented' and those who were 'somatically oriented'. He observed that there was a difference between the two groups and that 'psychologically oriented' doctors were more reflective and interested in abstract ideas than the 'somatically oriented'.

As Goldberg & Huxley (1980) state, patients who present with physical symptoms will not be forthcoming about their mental condition until the general practitioner makes a pointed enquiry. Perhaps that is one reason why females are more likely than males to have their disturbances detected (Redman *et al*, 1991)⁶,

⁶Redman *et al* (1991) found no statistically significant difference between the level of psychiatric disturbance in male and female patients using the GHQ-30.

as are middle-aged rather than young or elderly patients (Chancellor *et al*, 1977). It is not only the general practitioner, therefore, who can influence the assessment of psychiatric illness but also the patient.

Goldberg (1990) concludes a review of reasons for misdiagnosis by listing three skills which he thinks will improve general practitioners' recognition rate:

"first, how to interview in such a way that emotional distress associated with presenting symptoms will be elicited; second, how to assess the severity of distress and the need for various types of intervention; and third, how to counsel patients with psychosocial distress."

In order to improve general practitioners' recognition of psychological disorders, it is apparent that it is these three skills which must be emphasised in curricula for students and in courses for trained general practitioners. Gask *et al* (1987, 1988) evaluated such courses and found that these skills improved significantly. Rutz *et al* (1989) pointed out that evaluation is difficult but that they succeeded in improving diagnostic and treatment skills; decreasing inpatient care and sick leave; and having a beneficial effect on the prevention of suicides. They also found that the general practitioners appreciated the educational program.

On the other hand, an American training course which was designed to enable primary care physicians to assume a comprehensive and active psychiatric role with patients was found to be unsuccessful (Jones *et al*, 1988). On evaluation, they found that a high proportion of the participants did not recognise, diagnose or treat the majority of patients with serious psychopathology.

Perhaps the most sensible and successful approach to training of general practitioners is to "encourage physicians to do more than they now do, but not

foster unrealistic expectations that can only lead to frustration and disappointment for patient, doctor, and teacher." (Feldman, 1978).

3.6 Defining a 'case'

"The concept of a case ... is a man-made construct, imposed by setting a threshold on what is a continuum of symptom severity" (Henderson, 1988, p. 125). In other words, psychiatric disorders lie on a continuum from normality to severe disorders and a 'case' is selected by an arbitrary cutoff on the continuum. The general practitioner has not only to determine where *illness* and *distress* lie on the continuum but determine where the respective treatment thresholds lie. Thresholds used in primary care settings may be inappropriate and different to those used in other settings. Differing concepts of psychiatric caseness by general practitioners may also contribute to the under-recognition of psychiatric disturbances in consulters. As Sanson-Fisher & Hennrikus (1988) point out, the general practitioner may have a different idea of what comprises psychiatric disorders especially when compared with standardised questionnaires.

A classification system has been designed by Goldberg (1982) to assist general practitioners 'label' the 'distress' of their patients in order to devise a plan of management for them. The 'labels' or classifications range from major syndromes to distress syndromes: (i) major psychiatric illnesses, for example, schizophrenia and psychotic depression, which should be 'labelled'; (ii) psychological distress not requiring specific intervention, that is, distress considered to be at a 'subclinical' level where a 'label' should be avoided but problems should be aired; and (iii) psychological distress requiring intervention where 'labelling'

and specific interventions may be required. Goldberg considers this latter group to be large and the most important group. They generally have a depressive illness and benefit from antidepressant medication or social and psychological intervention. As Goldberg points out, patients describe a range of physical illnesses and stressful life events which make it much more unlikely that a patient's distress will be recognised by the general practitioner.

3.7 Classification and screening questionnaires

The variability in recognition of psychiatric morbidity in elderly people and low diagnostic agreement between general practitioners discussed above indicate that the systems of classification for psychiatric disorders may be inadequate for use in general practice (Clare, 1983; Jenkins *et al*, 1988; Henderson, 1988).

Jenkins and her colleagues (1988) suggest that the current systems of classification hinder general practitioners in their diagnosis of psychiatric disorders. Further, in a recent Australian study of general practitioners recognition and management of psychiatric illness, the general practitioners said that they found traditional psychiatric systems of classification unhelpful (McNamara & Lewin, 1989). These difficulties may arise because fully developed illnesses are rare and the "frequency with which patients present symptoms and signs which do not fit established hospital diagnostic patterns conspire to force the general practitioner to bypass diagnosis, preferring to temporize and move directly from symptoms, signs and investigations to treatment" (Jenkins *et al*, 1988, p. 41).

In order to overcome these problems of diagnosis it is necessary to have a "systematic method for determining, firstly, the likely presence of a psychiatric

disorder, and secondly, what diagnosis can be made." (Henderson, 1988, p.22) The tools used to facilitate this approach are questionnaires (or instruments) and standardised interviews. Screening instruments, such as the well-established GHQ (Goldberg, 1972) have enabled general practitioners to detect previously unsuspected psychiatric disorders (for example, Johnston & Goldberg, 1976).

As Goldberg & Huxley (1980) point out, the simplest and least expensive method of measuring the accuracy of physicians' diagnoses is to compare their assessment of a patient with the patient's reported symptom levels on a screening questionnaire. The aim of screening "is to identify patients so that they can be treated rather than simply counted". A very valid point has been made by Cooper (1989) regarding the actual administration of an instrument. He feels that if such screening instruments are administered by nurses or receptionists routinely, there is a risk of distressing or alienating patients.

Jenkins and her colleagues (1988, p. 43) suggest that "a more comprehensive system of classification", (than, for example, DSM-III) which is tailored to the multidimensional requirements of primary care is necessary. To this end, they have devised a quadraxial classification schema for primary care which encompasses psychological, social, personality and physical axes. "Without a commonly accepted diagnostic language in general practice, it is impossible to communicate about patients, to establish reliable standards of care, to evaluate advances in treatment or to practice development of primary care health services." (Jenkins *et al*, 1988, p. 41)

3.8 Treatment and referral

There are two important factors at the 'conspicuous psychiatric morbidity' level (Level 3) which impinge on this study. The first is the treatment provided by the general practitioner and the second is the outcome for patients with a mental illness.

3.8.1 Why treat mental disorders?

Shepherd and his colleagues (1966) found that "no treatment recorded", sedatives and reassurance were the most common treatments (p. 153) and that the type of treatment was related to the age and sex of the patient. Hence, the rather critical conclusion that "Treatment of minor psychiatric disorders in general practice is often haphazard and inadequate" (Shepherd *et al*, 1966, p. 175). The second point relates to the outcome for patients with psychiatric disorders seen in general practice. *Why is it worthwhile detecting mental disorders in the general practice setting?* Johnstone & Goldberg (1976) demonstrated that recognition of 'hidden' psychiatric illnesses did reduce the length of the emotional disorder and detection significantly reduced the length of the disorder in more severe cases. But Hoepfer and his colleagues (1984) when screening with the GHQ were unable to repeat this finding. The primary care physicians' identification of disorders was not influenced by the patient's GHQ score. They did not alter their attitude toward patients with high GHQ scores. However, Goldberg (1990) (and Goldberg & Williams, 1988) suggested that there were flaws in the design of the study and that the patient would not benefit unless the general practitioner used the knowledge of a high GHQ score in a constructive way. For example, symptoms

were not discussed with or assistance offered to the patients with high scores. In addition, Freeling *et al* (1985) demonstrated that undetected depressive illness tended to last longer than detected depressive illness. These authors felt that the failure to recognise depression was not related to skills or attitudes but rather to the general practitioners knowledge of depressive symptoms.

In a review of depression in the elderly, Hendrie & Crossett (1990) cited evidence which suggested that if treatment was well after the onset of symptoms, the prognosis was the worst and "that early intervention could be effective in reducing chronicity".

The use of prescribed drugs increased with the age of the patient, whilst advice, reassurance, psychotherapy by the general practitioner or psychiatric referral became less likely with advancing age (Shepherd *et al*, 1966).

3.8.2 The decision to refer

The effect of the general practitioners' treatment on mentally disturbed patients who have been identified (second filter) is critical within the model as it determines whether or not the general practitioner refers a patient to specialist mental health care (third filter). Surveys (reviewed by Goldberg & Huxley, 1980) suggest that only 1% of up to 15%, diagnosed as a psychiatric case, were referred to a psychiatrist and that they were more likely to be chronic than acute cases. In Shepherd and his colleagues' (1966) study on psychiatric illness in general practice, they found at least 15% of the patients who consulted over a period of 12 months had consulted, at least once, for a disorder diagnosed as primarily psychological. However, only 5% (of the 15%) of these patients were referred to

a mental health specialist.

Some possible reasons for non-referral are that general practitioners:

- are dissatisfied with the lack of collaboration with psychiatrists;
- are aware of long delays for consultations (Langsley, 1982);
- are of the view that the patients would not like to be referred; and
- feel that the care of the mentally disturbed is their function (Shepherd *et al*, 1966).

There is evidence to suggest that there may be some justification to the last point. Findings by Hopkins and Cooper (1969) in a study of psychiatric referral patterns and outcomes in London found that the majority of patients did not keep their first appointment with a specialist or did not continue attending. In addition, at the termination of hospital care, a small proportion (8%) were considered to have recovered, a third were considered to be 'relieved' but almost 60% were considered to be unimproved.

It is also possible that some general practitioners avoid patients with psychological disorders and refer them to a psychiatrist. In an attitudinal survey of general practitioners and specialists carried out in New York, over half of the general practitioners avoided psychiatric patients because they lacked knowledge and patience or were unable to understand emotional suffering. It was suggested that such attitudes could be related to personality factors (Krakowski, 1973).

3.9 Summary

This chapter has examined the underlying principles and factors relating to the role and performance of general practitioners in the detection of psychological disturbances. The evidence confirms that general practitioners are the gatekeeper for mental health care (that is, they are in the optimal position open the gate at Level 2 to facilitate entry to the second filter) but that there are limitations to their ability to detect psychological disturbances. Many factors which inhibit entry to the second filter have been presented. Perhaps the most positive and pragmatic approach to improvement is to further develop general practitioners' communication and consultation techniques and in so doing enhance their performance.

It is not until patients have passed the second filter that treatment or referral can be obtained. General practitioners treat the majority of patients before they reach the third filter as relatively few patients are referred to a mental health specialist. Thus it is imperative that patients with 'conspicuous psychiatric morbidity' are treated seriously and appropriately by general practitioners. With a commonly agreed diagnostic schema for primary care, decisions on diagnosis would become more accurate, and treatment and referral would become more standardised.

3.9.1 The future of general practice

"General practitioners in the years ahead will be servicing a more demanding and discerning population with far more competition both from within the profession and without." (Andersen *et al*, 1986, p. 115) This statement is true

for people of all ages but particularly so in relation to our ageing population. They will be more demanding and discerning for a range of reasons: for example, they will probably be better educated, be more financially secure, more economically and physically independent than previous generations. And so it would be true to say that "...the ultimate survival of general practice in Australia will depend on the capacity of the individual general practitioner to project an attitude of caring whilst attending to the needs of individuals and families." (Andersen *et al*, 1986, p. 115)

Research on the detection of psychological disorders in the consulting population has shown that there is room for improvement in general practitioners' accuracy at identification. In order to improve the detection rate, general practitioners must first be convinced that the time spent in diagnosing and then treating a psychological disturbance is worth it in terms of their patient's recovery and their monetary return. Training in techniques which have been demonstrated to improve detection of psychological disorders (for example, Gask *et al*, 1987, 1988) will be successful only when general practitioners have been convinced that the detection of psychological disorders, especially in their elderly patients, is worthwhile.

CHAPTER 4

GENERAL PRACTITIONERS AND MENTAL HEALTH CARE OF THE ELDERLY

4.1 Introduction

General practitioners are in a unique position to detect, diagnose and treat mental illness within their practices, but from the evidence from research undertaken over the last three decades, it seems that this is more easily said than done. This appears to be particularly so when the aged population is studied specifically. These aspects will be reviewed in this chapter.

For elderly people to live in the community in most Western countries, they need to be independent and this hinges on three factors: physical, psychological and social.

"The various forms of handicap - chronic physical ill-health, sensory and cognitive impairment, emotional disturbance, social isolation - tend if unchecked to lead by a final common pathway to disability, dependence and institutional care. It can thus be argued that a logical first step in preventive action is the *identification* [my emphasis] of those elderly members of a population who stand at increased risk of becoming chronically disabled and dependent, and that mental disorders represent one important group of risk-factors in this context." (Cooper & Schwartz, 1982)

As general practitioners are regarded as the key to the first step to

identification of mental disorders in the elderly (Henderson, 1990), it is of particular interest to examine their performance. This Chapter examines and reviews the literature on general practitioners' recognition and diagnosis of dementia and depression in elderly patients which, for the most part, is in addition to physical disabilities. Although psychiatric disturbances in elderly people are influential in determining whether they consult a general practitioner (Brodaty *et al*, 1990), a substantial number with disturbances do not consult (Morgan *et al*, 1987). The latter authors surveyed a large sample of elderly people in Nottinghamshire regarding their mental and physical health and also regarding their contact with primary care and social services. It was found that more than half the patients assessed as 'psychiatrically ill' did not consult their general practitioners in the previous month and were not receiving treatment. In terms of Goldberg & Huxley's model, there is a substantial proportion of the aged population who remain at Level 1 and do not proceed to the first filter (Goldberg & Huxley, 1980).

General practitioners are clearly the linchpin in the mental health care of their elderly patients. Many general practitioners have had long-term involvement with elderly patients and their families; they know their medical history; and they know about their resources, attitudes, behaviours and living conditions.

Further, 91% of people over 60 years surveyed in Sydney in 1981 had consulted a general practitioner in the preceding 12 months (Gibson, 1983). In addition, elderly people consult doctors more frequently as their age increases. Fifty two percent of people between 65 and 79 years consulted a doctor at least monthly compared with 66% of those over 80 years. The frequency of home visits

by doctors also increases with the age of the patient (ACOTA, 1985).

It is commonly understood but not often documented that elderly people:

- often do not report disabilities until they are well advanced (Williamson *et al*, 1964);
- are "reluctant to bother doctors" (Freer, 1985); or
- are highly unlikely to report failing memory and reduced cognitive functioning (Henderson, 1984).

Demented people are often unaware of their own cognitive decline and are not, therefore, motivated to seek assistance. Depressed elderly people, on the other hand, are more likely to seek help from their general practitioners (O'Connor *et al*, 1990). Complaints of impaired memory can reflect depression. These authors warn, therefore, that health professionals should always be alert to complaints of impaired memory because not all depressed people complain of an impaired memory and that some people with dementia are aware of their deteriorating memory.

In a study in Melbourne (cited by Dudgeon *et al*, 1986), which examined the prevalence and incidence of confused elderly people living in the community, they found a low rate of presentation of new cases. This finding suggests that many elderly people become moderately demented before it is diagnosed and that a consultation with a doctor is sought as the result of a crisis. This interpretation supports the above suggestion (by Henderson, 1984) that elderly people are unlikely to report symptoms of dementia. Thus, it is imperative that general practitioners detect mental and physical impairments as early as possible during routine consultations in order to provide timely medical or social interventions.

4.2 Recognition of dementia and depression in elderly patients

The most frequently cited studies on the detection by general practitioners of mental illnesses in elderly patients have all been carried out in the United Kingdom (Williamson *et al*, 1964; Parsons, 1965; Macdonald, 1986). All the known studies on the recognition of psychiatric disorders in elderly people are discussed and compared in this section.

The first of the frequently cited studies, by Williamson *et al* (1964), examined records from three general practices of patients over 65 years in Scotland and randomly selected 200 of them for assessment by a geriatrician and a psychiatrist. The researchers also interviewed the general practitioners to enable them to fill in gaps or add information to the summaries of practice records which had been prepared by the researchers. They found that general practitioners missed 87% of dementia cases and 76% of depressed patients. In addition, the general practitioner was unaware of one in three physical disabilities. The poor performance of the general practitioners in this study may have been partly due to the fact that they had not seen the patients as recently as had the specialists. O'Connor *et al* (1988) and Cooper (1989) have sounded a cautionary note regarding these findings. They suggest that the semi-structured interview and a short cognitive test were inadequate, when compared with recent research standards for the diagnosis of mild dementia and that the general practitioners' diagnoses were, therefore, assessed against a spurious standard.

Despite some defects in methodology, the study by Williamson *et al* is likely to remain as a classic in this area of psychiatric and geriatric epidemiology. Its effect has been to emphasise how neither the elderly nor their

general practitioners are able to give a valid picture of the morbidity present.

The other two well-known studies reported much lower rates of non-recognition of cases. The first of these is a study by Parsons (1965) which produced comparatively low levels of prevalence and which may have contributed to the higher recognition rate. He examined the mental health of 288 people 65 years or over residing in the community in Swansea and found that the general practitioners missed only two of the eight assessed cases of dementia and one of the two cases of endogenous depression. However, only 7% of cases of previous affective disorder were recognised and three of the four cases of anxiety neurosis, which was markedly influencing the subject's behaviour and life, were missed.

Another study which found that there was only minimal disagreement between general practitioners and a depression scale was carried out on 235 elderly patients in London (Macdonald, 1986). He found that general practitioners missed only 12 out of 68 cases (18%) of depressed patients. When patients who were considered to be marginally depressed by the assessment scale were excluded, the proportion of cases missed by the general practitioners' decreased to 9%. However, in both instances specificity was relatively low, that is, the general practitioners diagnosed a high proportion of patients to be depressed when they were not. Macdonald (1986) calculated the "missed" cases in a slightly unusual manner and reported them as the "proportion of disagreement due to 'missed' depression": the proportions being 19% and 11% respectively. Nevertheless, he too observed low rates of referral and of treatment for depression in the elderly.

Several other recent studies have also shown a greater awareness of

psychiatric disorders, in particular dementia, by general practitioners than was originally found by Williamson and his colleagues (Weyerer, 1983; Philp & Young, 1988; O'Connor *et al*, 1988; Brayne & Calloway, 1990).

More recently, O'Connor *et al* (1988) in Cambridge carried out a study on the recognition of dementia in registered patients by general practitioners and community nurses. They found that 121 of the 208 cases (58%) (using the Cambridge mental disorders of the elderly examination (CAMDEX)) were correctly identified by the general practitioner as at least having possible dementia. They missed 42%. The community nurses correctly identified dementia as at least a possibility in 64 of the 74 patients with dementia known to them. Both the general practitioners and the community nurses mistakenly identified as demented several people with functional disorders, particularly depression.

In an audit in Scotland of a six-partner primary care team's knowledge of the existence of dementia in their patients over 75 years of age, 25 of the sample of 60 were identified as having a "suspected diagnosis of dementia" by the Mental Status Questionnaire (Philp & Young, 1988). When surveyed, no patient with symptomatic dementia was found who was not known to the team. However, 19 of the 21 confirmed cases of dementia were moderate to severe and many of those with mild cognitive impairment (33%) went undetected by the general practitioners and the practice nurse. The involvement of community nurses in this and the previously cited study appears to have had a beneficial effect on the recognition rate.

In an epidemiological study in Cambridgeshire on the cognitive functioning

of 365 women between 70 and 79 years of age, Brayne & Calloway (1990) found relatively high rates of agreement between general practitioners (who rated each subject) and a diagnostic instrument (CAMDEX). The MMSE is part of the CAMDEX and the Information/Orientation scale from the Clifton Assessment Procedures for the Elderly (CAPE) was also included. They found significant disagreement between the various scales especially in cases of mild dementia. Examinations using the CAMDEX detected 19 subjects as demented, while the general practitioners rated 19 subjects as demented but they were not all the same subjects. They did, however, agree on 10 of the cases having dementia.

A random sample of 295 elderly people over the age of 65 years residing in Upper Bavaria was examined by psychiatrically trained physicians who used the Clinical Psychiatric Interview as an aid to determine caseness (Weyerer, 1983). Additional information on 91% of the sample was obtained from the general practitioners and the case rate determined by the general practitioners was only slightly lower than that of the interviewers (1% less of 65 to 74 age group and 3% for the 75 and over age group). However, Weyerer also found that there were a significant number of cases which were not detected by either the interviewer or the general practitioner but he does not say how he found this out.

In addition, Weyerer found that, due to multimorbidity, the average annual usage of general practitioners by those over 65 years of age was very high in comparison with younger age groups. He then presented several hypotheses which might explain why outpatient psychiatric services are under-utilised by the over 65 year group. Hypotheses for the low referral rate included financial restrictions; lower recognition by general practitioners of mental disorders;

reluctance of the general practitioners to refer for a range of reasons; reduced access due to distance from services; and that people over 65 years were less informed of the services compared with younger people. This last point suggests that lack of knowledge regarding care and services amongst the elderly may influence not only referrals but also the provision of services.

In a more recent study presently being carried out in Mannheim (Cooper, 1989), about 6% of the 105 consulting patients assessed to date were rated as moderately or severely demented and a further 56% were considered to be suffering from mild memory deficits or mild dementia. When compared with only the moderate to severe dementia cases, assessed by the research interview which was based on CAMDEX criteria, general practitioners detected 55 of the 56 (98%). The sensitivity fell to 71% when patients with mild memory deficits only were included with the mild, moderate and severe cases. Perhaps of equal interest in this study is that the general practitioners tended to over-diagnose, with 22 false positives (55% specificity) when only the moderate and severe cases were included. Specificity improved to 98% when the mildly demented were included.

In another recent European study by Engedal *et al* (1989), about 11% of 334 elderly people residing in the community in Oslo were diagnosed as mentally impaired by a general practitioner with some experience in geriatrics. The general practitioner's ratings were compared with a psychogeriatric assessment resulting in a sensitivity of 79%. The relatively high sensitivity in this study suggests that training in geriatrics improves the recognition rate.

In one of the few American studies similar to those already reviewed, Waxman & Carner (1984) assessed the prevalence of psychiatric symptoms in 140

patients who were over 64 years of age and waiting for a consultation with a physician. Subsequently (about a week later), recognition rates and management strategies were obtained by questioning the 14 participating physicians. No fewer than fifty eight other physicians had refused to participate. Of eight patients with evidence of cognitive impairment, one had been diagnosed as *depressed*; of 18 patients with depressive symptoms, two had been diagnosed as depressed; and of six patients with evidence of both depression and cognitive impairment, one had been diagnosed as depressed. Five of the 32 patients with evidence of a psychiatric disorder were receiving treatment, four with antidepressant medication and one by counselling. As this study appears to be the only American study analogous to present one, it is important to highlight the findings of exceptionally low recognition rates and the difficulty in persuading physicians to participate in research.

Another American study is of interest, although the subjects were inpatients of a Veterans' Administration Hospital. Rapp and his colleagues (1988) assessed 150 male inpatients who were 65 years or over for depression. They had been selectively screened for dementia prior to participation. Results of a range of diagnostic and screening interviews were compared with whether or not the disorder had been detected by physicians (house staff). Two of the 23 depressed patients (9%) were identified correctly by the house staff and they concluded that all the screening instruments were much more sensitive to depressive disorders than the procedures used by the house staff.

In an evaluation of a new multidisciplinary Ambulatory Geriatric Evaluation Service (AGES), set up by the Department of Family Medicine at the

University of East Carolina, sixty patients were assessed using a range of instruments including the Short Portable Mental Status Questionnaire and psychometric testing (Kallman & May, 1989). Among their results, they found that the patients' physicians did not suspect cognitive decline in 30 of 41 affected patients. The physicians did not detect multi-infarct dementia in 5 out of 5 patients; Alzheimer's disease in 16 out of 24; and 9 out of 12 of those with impairments due to medication.

In the only similar study to be undertaken in Australia (Mant *et al*, 1988), a sample of over 200 residents⁷ of a retirement village were administered two measures of cognitive impairment: the Mini-Mental State Examination (MMSE) and the Blessed Dementia Rating Scale (informant-based data on personal and social functioning). The general practitioners missed 35 of the 77 (45%) patients rated as demented by the two screening instruments.

In a corresponding study (Pond *et al*, 1990), 133 residents⁸ 70 years and over were screened for depression using the Geriatric Depression Scale (GDS). Only four of the 19 (21%) patients who scored in the depressed range of the GDS were detected by their general practitioners. Of particular note in this study is that the general practitioners assessed 10 depressed patients to be normal. Only 4 of the 14 (29%) patients assessed to be depressed by the general practitioners scored in the depressed range on the GDS. As in the previous study, they rightly

⁷The majority (78%) of the subjects resided in an institutional setting: 57% in hostels and 21% in a nursing home. The remaining 22% resided in independent living units.

⁸Although the authors state their sample comprised "non-institutionalised aged residents", over a third of the patients (38%) resided in a hostel of the Anglican Retirement Villages in Sydney, New South Wales.

concluded that the screening instruments for dementia and depression, used in the study, would assist general practitioners to recognise dementia or depression in their elderly patients.

4.3 Comparative analysis of general practitioners' accuracy

Most of the above studies on the detection of psychiatric disorders in the elderly by general practitioners are summarised in Table 4.1. This table highlights the considerable variability between the different studies especially in the sensitivity (proportion of true cases correctly identified) and specificity (proportion of correctly identified non-cases) of the general practitioners to psychological disorders in their patients. There are several possible reasons for this variation. First, the design of each of the investigations was not the same. Second, the screening instruments used in the studies were different in most cases, although there were some common tests such as the MMSE. This point is particularly relevant when screening for dementia, as it is very difficult to detect mild dementia using screening instruments in community settings (Kay *et al*, 1985; Henderson & Jorm, 1987). Third, although over half the studies were carried out in the U.K., there was variation in the location of the general practices and the type and age of patients involved. Finally, the level of physical morbidity may have differed across studies. This may have changed the base-rate, particularly of depressive symptoms. Therefore, the studies are only indirectly comparable. It is also noteworthy that, since the original studies carried out in the mid-1960s, little work has been done in this field until the mid to late 1980s.

In an attempt to ascertain comparative levels of general practitioners'

TABLE 4.1: SUMMARY OF STUDIES ON RECOGNITION OF PSYCHIATRIC DISORDERS IN THE ELDERLY IN GENERAL PRACTICE IN CHRONOLOGICAL ORDER

AUTHORS AND ORIGIN	AGE OF PATIENT SAMPLE Years	METHOD OF COMPARISON	SAMPLE SIZE OF PATIENTS	GPs	RECOGNITION RATES			PSYCHIATRIC DISORDER sensitivity
					DEMENTIA sensitivity	DEPRESSION sensitivity	DEPRESSION specificity	
Williamson et al. (1964) U.K.	>64	Semi-structured interview & brief psychological test by psychiatrist	200	3 practices	13	-	24	-
Parsons (1965) U.K.	>64	Psychiatrist	228	Not available	60 (1) Current condition: 40 (1) Historical:	-	50 (2) 8	-
Weyerer (3) (1983) Germany	65-74 >74	Goldberg's Clinical Psychiatric Interview	295	Not available	-	-	-	99 97
Maxman & Carner (1984) U.S.A.	>64	Zung Self-Rating Depression Scale/ Kahn & Goldfarb Mental Status Questionnaire	140	14	14 (4)	-	11	-
Macdonald (1986) U.K.	>64	Semi-structured Interview & Depression Scale of Comprehensive Assessment & Referral Evaluation (CARE)	235	12	-	-	Marginal Depression excluded: 91 All cases: 82	-
Mant et al. (1988) Australia	>74	MMSE & Blessed Dementia Rating Scale	226	17	45	95	-	-
Philp & Young (1988) U.K.	>74	MSQ	60	6	100 (5)	-	-	-
O'Connor et al. (1988) U.K.	>74	Screening interview CAMDEX	444	6 group practices	65	86 (6)	-	-
Brayne & Calloway (1990) U.K.	70-79	CAMDEX	365 women	Not available	58	78 (6)	-	-
Cooper (1989) Germany	>64	Hierarchical Dementia Scale Diagnosis made using CAMDEX diagnostic criteria	105 (to date)	6	98	55	-	-
Pond et al. (1990) Australia	70-84	Geriatric Depression Scale diagnostic criteria	133	25	94	77	-	-
					71	98	-	-
					-	-	29	87

FOOTNOTES TO TABLE 4.1

- (1) 2 out of 10 and 2 out of 5 nil response from GPs respectively.
- (2) 1 out of 2 cases involved nil response from GP.
- (3) Weyerer found that there were many cases undetected by both instrument and GP.
- (4) Patients diagnosed by GP to be depressed not cognitively impaired - included as it is published.
- (5) Authors report mild cases undetected.
- (6) GPs ratings include possibly and definitely demented.

accuracy between the various studies and whether their performance has improved over time, sensitivities and specificities derived from the various papers were calculated. The specificity in several papers, especially the earlier ones, could not be calculated due to lack of information. General practitioners' level of accuracy cannot be truly assessed without specificity. An example which illustrates the necessity to provide the numbers of correctly identified non-cases is that of Cooper (1989). The general practitioners were very accurate in their detection of moderately to severely demented patients (98% sensitivity) but only correctly identified 55% of the non-demented patients. As specificity cannot be calculated for the early studies, there is insufficient information to compare all the studies to determine whether general practitioners' accuracy has improved over time.

To compare general practitioners' accuracy between studies, Receiver Operating Characteristic (ROC) analyses have been performed. ROC analyses were originally used in radar studies in World War II. More recently, this form of analysis has been used as a technique to evaluate psychiatric tests or scoring thresholds for a test (that is, clinical decision analysis). 'Sensitivity' and 'specificity' are values which are "measures of a test's ability to identify illness among the ill ... and wellness among the well ..." respectively (Murphy *et al*, 1987) (see also sections 6.7 and 6.8).

"The ROC analysis extends the evaluation of test performance beyond sensitivity and specificity by providing, in an easily comprehended format, information relevant to the full range of scores that need to be taken into account in making a decision about a threshold for separating illness from wellness."

In this particular analysis, ROC points have been used as a tool to predict

whether general practitioners will detect psychological disturbances in their patients (Figure 4.1). The area under each point (not curve in this instance) has been determined in a similar manner to the calculation of the area under a receiver operating characteristic (ROC) curve (McNicol, 1972). The area provides an indication of diagnostic accuracy. The closer the area under the curve is to 1.0, the greater degree of accuracy and 0.5 is diagnostic accuracy equivalent to chance. In all the studies which could be examined in this manner, general practitioners' accuracy was better than chance. However, only two studies appear to have high levels of accuracy: Cooper (1989) on the detection of dementia with areas under the ROC ranging from 0.88 to 0.92 and Macdonald (1986) on depression with areas from 0.82 to 0.89 (Figure 4.1). The other studies produced areas ranging from about 0.70 to 0.80. Conclusions are difficult to draw from this analysis as there are so few studies and great variability between them. Nevertheless, these two facts alone indicate that there is a pressing need to clarify these disparate results.

4.4 Significance of findings relating to recognition

The recent research reviewed above indicates that, for the most part, general practitioners recognise dementia and depression more accurately than initially reported in the early study by Williamson *et al* (1964). There remains, however, conflicting evidence on the degree to which general practitioners accurately recognise depression and dementia in their elderly patients. This is particularly so in Australia with the only recent study finding relatively low recognition rates for dementia and depression (Mant *et al*, 1988 and Pond *et al*,

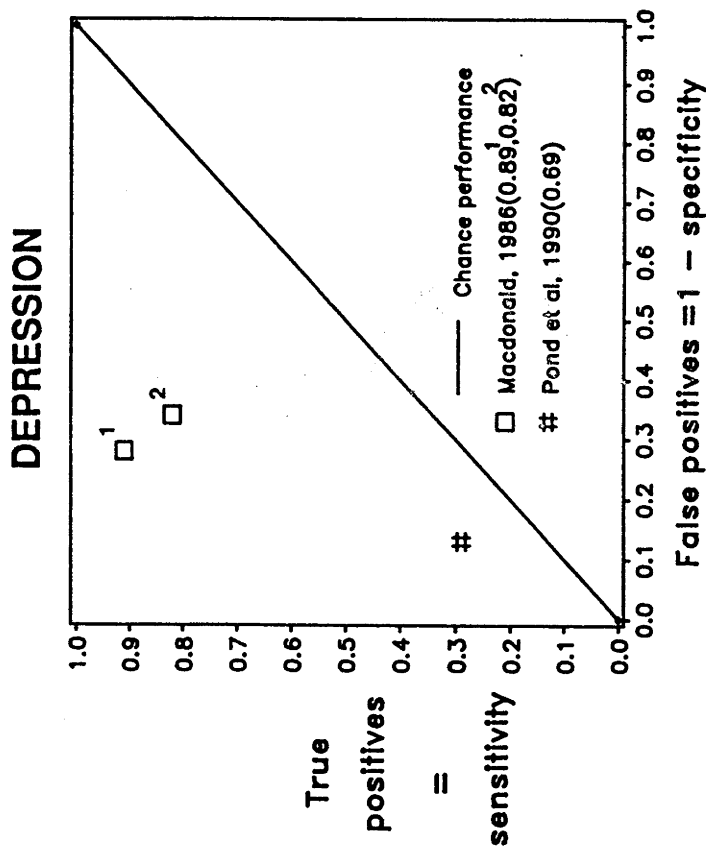
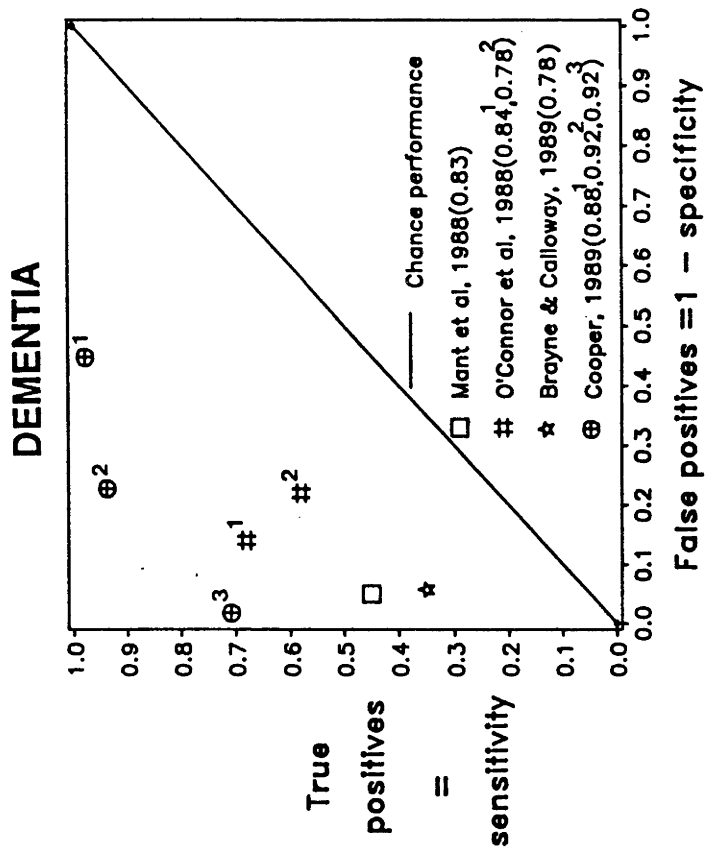


FIGURE 4.1: ROC points and areas under them (McNicol, 1972) comparing levels of accuracy in the detection of dementia and depression by general practitioners. General practitioner's ratings included (1) moderate/severe cases; (2) mild/moderate/severe cases; and (3) mild cognitive deficit/mild/moderate/severe cases.

1990). As comparatively little research has been carried out in this area, especially in Australia, in the past two decades, it is clear that further research is required to clarify and explain the reasons for the discrepancies in detection rates of psychiatric disorders in the elderly.

4.4.1 Screening for dementia and depression in general practice

There are three areas where general agreement emerges. Firstly, screening instruments are considered to be highly useful aids in the detection of psychiatric disorders and that regular screening and review, especially of the elderly most at risk, would be of significant advantage to not only the general practitioners but the patients and their relatives as well. In the study by Kallman & May (1989) mentioned above, they found the use of formal screening instruments to be beneficial for families in three ways. The results of the tests enabled families "to appreciate and accept that a significant cognitive change had indeed occurred ... [and] ... that the patient had minimal judgment and poor memory". They were then able to accept that inappropriate or abnormal behaviour was unintentional and related to their cognitive decline. This knowledge enabled families to plan for the future (for example, examine legal issues) and arrange suitable forms of care.

Bergmann (1983) suggests that "a public health approach to the psychiatric problems of the elderly with screening and assessment of vulnerable groups" would assist general practitioners in the detection of early or less severe psychiatric disorders. He defines the vulnerable group as being elderly people (over 75 years) who:

- live alone;
- have been recently bereaved or discharged from hospital;
- need home care and community services; and
- seek residential care or want to relinquish their home.

Henderson (1984) recognised the significance of Bergmann's argument, and advocated that "it is the doctor who should initiate periodic review" of elderly patients by instituting a screening procedure especially for those at greatest risk. He also suggested that all elderly people within a practice should be screened annually for unreported disorders, including cognitive impairment and depression. If such impairments are missed by the general practitioners, "the patient and his family are at a disadvantage, because they are deprived" of the treatments and services involved in the management of such conditions.

4.4.2 Benefits of detection

The second point on which agreement emerges is that there are distinct advantages in the recognition of dementia and depression for not only the patients and their families but also the general practitioner. Awareness influences the general practitioners' interpretation of the presenting ailments; prescription of drugs, as many could exacerbate cognitive impairment; ability to eliminate other potentially treatable conditions; and planning of a management strategy for patients and their caregivers (Henderson, 1984). If cognitive impairment is detected at a sufficiently early stage, the future can be discussed and planned in conjunction with the patient and family (Almind, 1985). However, to help maintain whatever autonomy remains in a patient, the general practitioner must

ascertain the types of decisions a patient is capable of participating in (Taler & Waymack, 1989). This point is critical when legal issues, such as power-of-attorney, are involved. Although there is at present no medication that can cure dementia⁹, there is a promise of memory enhancing drugs in the future. These are all compelling reasons for the screening and early detection of dementia by general practitioners.

Undetected depression can cause needless distress to patient and family especially if it is wrongly ascribed to age, physical disorders or cognitive impairment. There is a substantial range of effective treatments now available for depression including pharmacological, psychological (Johnson & Wilson, 1989) and electroconvulsive (The Quality Assurance Project, 1983). Recognition and accurate diagnosis of both depression and dementia are, however, the critical issues. Once a condition is diagnosed, prompt and effective management can be instigated in the majority of cases (Waring, 1980).

The third area of agreement is that there is insufficient emphasis placed on the treatment of elderly patients. Generally, up-to-date knowledge of drugs; access to psychogeriatricians or mental health services for consultation and/or referral; availability of support and care services are essential to the management of elderly patients. More specifically, the general practitioner has a central role to play in the management of dementia. Advice and support to caregivers; advice on a safe but stimulating environment for the patient; referral to home care services; minimal prescription of anticholinergic medication; and continuing assessment and support are the basis for effective management of dementia by

⁹Comment for footnote 5 also applies.

general practitioners (Henderson, 1984).

4.5 Factors affecting recognition

Many factors may influence the level of awareness of mental disorders and care provided to mentally ill patients in primary care settings. Fundamentally, the factors involve the general practitioner's personal attributes and attitudes, the patient's personality, the disorder and the availability of care and services. Comfort (1980) in his textbook on the *Practice of Geriatric Psychiatry* succinctly ties together a range of factors which affect general practitioners' identification of mental illness in the elderly. Geriatrics is not only a distinct speciality, but

"also an attitude of mind - one which runs, in many respects, counter to cultural indoctrination and to what one learns in medical school. One major reason to address the study of geriatric psychiatry [in general practice] lies in its effect on doctors themselves, on their capacity to examine their attitudes toward aging in themselves and others, and consequently on their entire practice of medicine with this particular age group. The wholly erroneous notions that "the old" are untreatable, and for biological reasons not worth treating, that infirmity in later life can be explained by chronology alone, and that what cannot be cured is best addressed by sympathy and benign neglect have been signally exploded in European medical education by the growth of a vigorous, curative, and supportive geriatric medicine which produces results."
(Comfort, 1980, p. vii)

More specifically, however, knowledge of symptoms and signs and aetiologic factors are essential requirements for recognition of disorders (Burns & Burke, 1985; Rapp & Davis, 1989). There is considerable variability in the detection of dementia and depression in elderly patients and in very few studies

was the detection rate close to 100% (Table 4.1). The performance of general practitioners in this regard could perhaps be improved by providing them with appropriate information regarding these conditions. However, a prerequisite to any training is to find out where the gaps are in the general practitioners' knowledge of dementia and depression.

4.5.1 Gaps in general practitioners' knowledge

Very few studies have been undertaken on general practitioners' knowledge of psychiatric disorders in elderly patients. In one recent American study, Rapp & Davis (1989) assessed 49 medical residents' knowledge of symptoms and signs of depression by administering a questionnaire which included questions on diagnostic criteria for depression, aetiologic factors, assessment practices and treatments. The investigators found that the medical residents "lacked important information that is prerequisite to proper diagnosis and care" and that "educating physicians and altering their perceptions about and practices toward comorbid depression is sorely needed".

No study has been found which specifically examined general practitioners' knowledge of dementia. However, Rubin and her colleagues (1987) carried out a study which focused on physicians' awareness of dementia. They assessed 50 family practitioners' and internists' awareness of dementing disorders and found considerable variation in the physicians' knowledge of *causes* of dementia and of diagnostic procedures. Ninety two percent of the physicians thought that "other specific causes" such as tumours, infections and subdural haematomas were the cause of dementia. Alzheimer's disease, metabolic disorders and drug toxicity

followed as the most frequently indicated causes of dementia. They also found that older physicians had less knowledge of dementing disorders than the recently graduated physicians. However, the older physicians felt more comfortable in making a diagnosis, probably because the younger physicians had fewer aged people in their practices and less experience. Although, the younger physicians had better recall of the causes of dementia, neither the young or old were more likely to routinely screen for dementia using a mental status test. Only 12% used a formal cognitive screening instrument. They concluded that recent medical graduates had better knowledge of dementing disorders than the experienced physicians and they felt that disseminating information to experienced physicians was a problem.

As there have been so few studies on general practitioners' knowledge of dementia and depression, and only in the U.S.A., there is insufficient evidence to suggest that general practitioners are poorly informed about or do not remember symptoms and signs of these conditions. However, there is sufficient evidence to suggest that further research should be carried out in this area to substantiate or refute these findings of limited knowledge.

4.5.2 Diagnostic processes

"The desired outcomes of medical education are to produce doctors who are (a) sensitive to patient and community problems, (b) able to apply basic behavioural and scientific principles to identify and treat such problems, and (c) able to make decisions under conditions of uncertainty. The attainment of these goals requires that medical students recognize the uncertain nature of scientific knowledge, while at the same time being able to use that knowledge to make important clinical decisions. Beyond and above

recall of specific facts and acquisition of scientific principles, students need to acquire behavioural, problem-solving and decision-making skills throughout the medical school curriculum." (Schiffman, 1978).

Not only is it essential that general practitioners acquire knowledge about psychological disorders but also it is of equal importance that they acquire 'problem-solving and decision-making' or 'diagnostic processing' skills (Adams *et al*, 1978). 'Diagnostic processing' is a term used to describe the diagnostic thought processes which are used to interpret the knowledge physicians have acquired during a consultation. In an examination of "the relative effects of medical education and clinical experience on the diagnostic thinking process" (p. 177), Gale & Marsden (1984) studied the contribution of different types of knowledge to the prediction of physicians' diagnostic ability and then made a comparison of their abilities in two specialities of internal medicine. The subjects included students, house-officers and registrars. The students were found to display all the cognitive processes of the experts (house-officers and registrars) but there was an increase in the frequency with which they "failed to make a specific enquiry". The authors suggest this failure in the students' 'cognitive structure' "lies in the breadth, depth, and extent of knowledge" but perhaps "More importantly, it lies in the storage structure and use value of that knowledge." (p. 151)

In summary, there is a major difference between *knowledge* and *ways of dealing with that knowledge* which together comprise the 'cognitive structure' (Gale and Marsden, 1984). Students (and recent graduates) possess the first component of cognitive structure, *knowledge*, but do not have sufficient experience to completely fulfil the second, *diagnostic processing*.

The diagnostic thinking process comprises three stages involved in a clinician's train of thought on the interpretation of information: 'initiation', 'progress', and 'resolution'. These stages are not mutually exclusive and at any time during the diagnostic thinking process the clinician may be interpreting information relating to one or all of the three stages (Gale & Marsden, 1984).

As pointed out by Barrows *et al* (1982), there must be an appreciation of these processes in any evaluation of clinical competence. These authors examined the clinical reasoning processes of 37 randomly selected physicians in general medical practice, using simulated patients and 4 standardised problems. They observed that the physician generates multiple hypotheses early in the consultation (the 'initiation' stage) which leads the 'problem-oriented' investigation to the other stages. The correct hypothesis arose between 1 and 7 minutes into the consultation. There was a transitional (or perhaps 'progress') stage which was 'devoted to establishing rapport' and a culminating stage (or 'resolution') which prepared the patient for the management of the problem and allowed the physician to gain confidence in his diagnosis by reviewing the facts.

It is clear that diagnosis is a complex problem solving process. Problem solving in general practice is not only based on recall of basic knowledge but also how that knowledge is retrieved and interpreted.

4.5.3 'Ageism' and other discriminating factors

It has often been suggested that as our society values youth and vigour, there is frequently societal bias against elderly people. This bias is also of concern in general practice and is usually discussed in some depth in textbooks (Bellak,

1976; Comfort, 1980; Tahka, 1984). It is possible that general practitioners have entered medicine with or acquired these biases; and in turn this may have affected the manner in which they interact with elderly patients. Bellak (1976) provide some examples of the complexities of doctor-patient relations, for example, "if the physician feels like a child in relation to the patient it will be difficult to maintain the gratifying feeling of authority and omnipotence that many doctors enjoy" (p. 17); or if a general practitioner fears his own ageing and death, contact with elderly people could engender such feelings; or if negative counter-transference has been derived from a parental relationship (Brodaty & Snowdon, 1989).

The general practitioner may be one of the few contacts that elderly people have and, therefore, s/he may feel even more pressured due to the patient's increasing dependency and the time required for the consultations. It is possible, then, that general practitioners, as a result of these personal biases and pressures, may have limited interest and knowledge of the emotional or psychological disorders in their elderly patients.

It is, no doubt, difficult and disheartening for some general practitioners to treat elderly people. Even though many physical and mental disorders can be successfully treated in elderly people, not all their illnesses can be cured. Elderly patients frequently present with multiple pathologies and chronic disease. Perhaps some general practitioners feel there is futility in treating elderly patients with so many problems, or perhaps some are impatient to succeed in removing symptoms. Whatever the reason, some general practitioners may experience an "undeserved sense of failure" (Bellak, 1976, p. 19) which may prevent them from having a

positive attitude to recognition, diagnosis and treatment of disorders in elderly patients.

"Doctors very rarely receive ... feedback from their patients because patients feel it may be dangerous or unwise to criticize a person in whose hands they have placed their health." (Tahka, 1984, p. 25) It is not easy to be aware of one's limitations and deficiencies and hence studies such as the present one, fulfil a crucial role in the evaluation of general practitioners' performance.

In a study entitled *Life After A Death*, which included an examination of the role of general practitioners in relation to elderly people who have been widowed, Bowling and Cartwright (1982) found that the majority of those who had reported nerves or depression since their bereavement had not brought it up with their doctor (p. 104). The ones who did discuss their depression with the doctor were patients who considered their doctor to be very sympathetic. This implies that there is something in the manner, attitude or interviewing skills of the doctor which invites or empowers elderly patients to raise their problems.

Over the last two decades, the role of the general practitioner has been changing. The patient has become more autonomous (Taler & Waymack, 1989), more involved in decision making and treatment (Cockburn *et al*, 1987) and more in control of his/her health and well-being (Rodin, 1980). Greater patient independence or, to use a very modern term, 'empowerment' (Clark, 1989), has significant ramifications for the elderly and has recently been described by Taler & Waymack (1989):

"After long centuries of essentially paternalistic practice, the medical profession is now considered ethically obliged to solicit and obey the decisions of the patient. Not only has this been a difficult change

of practice style for the majority of established physicians, it also places greater decision-making responsibilities and burdens on those patients who have been long accustomed to the paternalistic style of medical practice. Therefore, one challenge that faces the physician caring for elderly patients is finding ways to enhance the autonomy of elderly patients in a system long used to not doing so, and for patients for whom this may be a frightening and threatening experience."

It is now appropriate to consider the question: "Are physicians sensitive to the special problems of older patients?" posed by Radecki and his colleagues (1988). They reanalysed data from a national study of physician practice to examine this question and found "signs of ageism". Firstly, they observed a significant decrease in diagnostic testing for patients over 75 years. Secondly, they found that "the 'least useful' and numerous tests (routine procedures) were generally used more frequently in the elderly" and "In contrast, tests that were more likely to be particularly helpful to older patients were used less frequently and thus perhaps less appropriately." The response to their question, therefore, appears to be in the negative. The authors concluded that primary care physicians in general need more training in health care for the elderly.

In an important study, Radecki and his colleagues (1988) posed another question: "Do physicians spend less time with older patients?" and examined it in a similar manner to the report cited above. They hypothesised that elderly patients would require more of a physician's time due to possible physical or sensory deficits, longer history to record and the complexities of presenting complaints. No significant differences in the time spent on initial consultations was found and further, there was a tendency towards short consultations for older patients for follow-up visits. Elderly patients were not receiving more of the

physician's time despite their greater morbidity.

4.6 Rationale for the study

General practitioners, therefore, have a demanding task if they are to identify successfully and treat psychological disorders in elderly people. They must have positive attitudes towards the elderly, provide empathy when required, understand the multiple problems which may be both physical and psychological, provide more consulting time, involve patients in decision making if they wish and not suppress the patients verbal and vocal cues during a consultation. Perhaps all these attributes or roles are not practicable or cost-effective when considered in terms of our current health and welfare system. If this is the case, then these challenges have to be confronted if Australia is to meet effectively the mental health needs of our rapidly increasing aged population.

The above attributes and attitudes combine to provide a picture of general practitioners who may approach *gold or realistic standard* (Sanson-Fisher & Hennrikus, 1988) for detection and management of psychological disorders in elderly patients. In a pragmatic sense such a standard may be impossible and unrealistic. The underlying question to this type of study is then: *What is an appropriate standard against which to compare general practitioners performance? Is a gold standard equal to 100%? Or is it a more realistic standard and if so, what should that be?* As these questions do not have answers yet and as there is a dearth of information in Australia on the topics raised in the preceding chapters, it was timely to conduct the present study. With the rapidly ageing population soon to affect our community in many ways:

- data on issues of public health, relating especially to elderly people, enables cost-effective planning and development of services and care strategies by Governments and service providers; and
- information on the performance of general practitioners enables educators to develop courses or refine and emphasise components of courses in areas where shortcomings have been identified.

The aims and objectives of the present study were developed and explored in light of a complex range of factors relating to general practitioners and their patients. Despite the complexity of the issues and questions raised above, there are three central elements which connect the relationship of general practitioners to their elderly patients: the presentation of *symptoms and signs* of disorders, in particular, dementia and depression by patients; the *detection* of those symptoms and signs by general practitioners; and, once recognised, the general practitioners' *management* of the disorders. In addition to these three central elements there are range of variables which relate to the general practitioner and the patients. The variables which are critical to general practitioners' detection and management of psychiatric disorders include the general practitioners' knowledge of the symptoms and signs of dementia and depression, their interpretation of that knowledge and their interest in geriatrics. Variables which relate to the patients include co-morbidity; socio-demographic information; information obtained from an informant; and level of care and support. The central elements and the

variables are set out schematically in Figure 4.2. The variables are linked to the central elements by the instruments and questionnaires described in detail in the next chapter. The aims of the present study are examined by analysing the associations between the central elements and the general practitioner and patient variables. Chapter 5, therefore, describes the procedures used in the present study to explore the complex theoretical issues which have been encapsulated in the three *elements* and the range of *variables*.

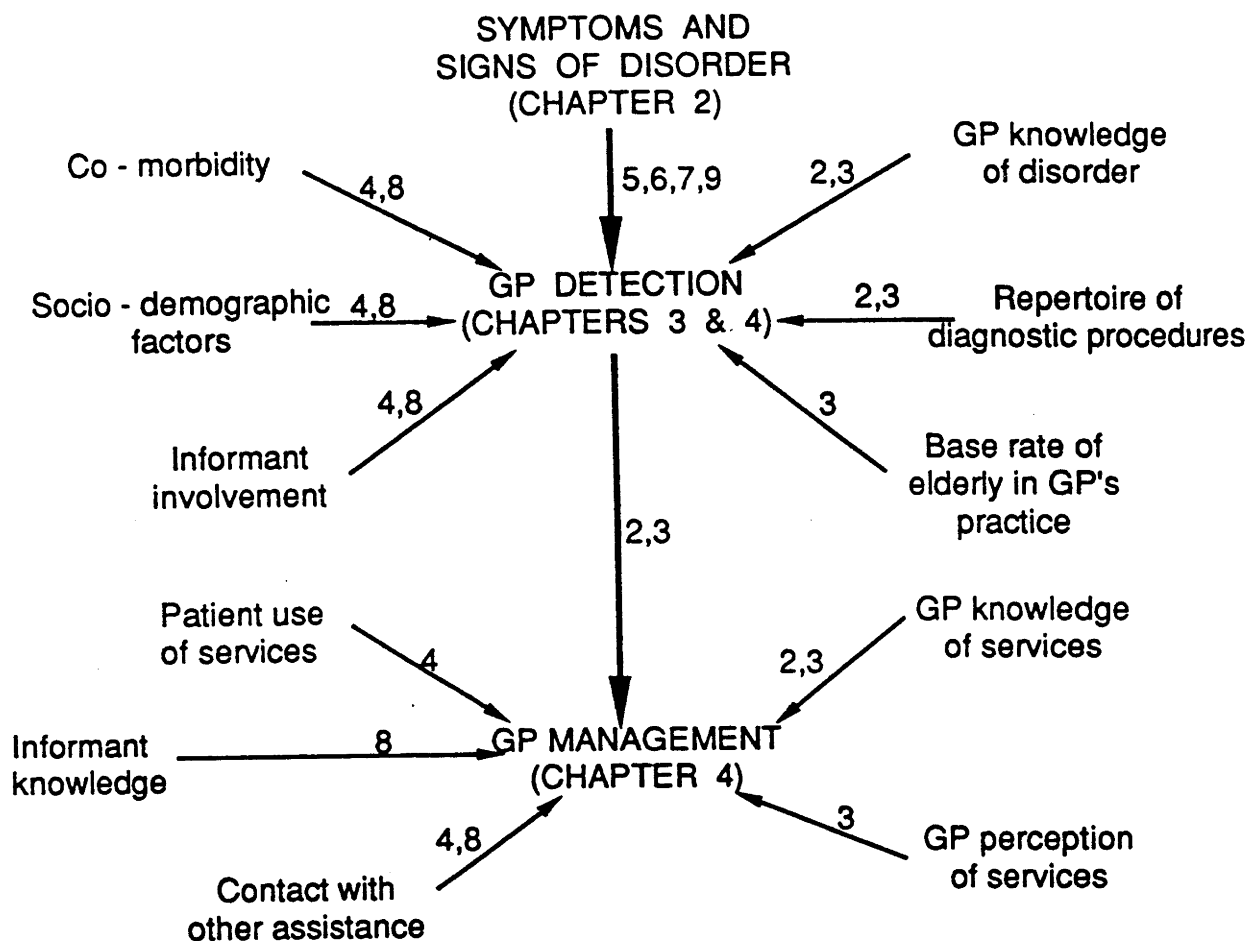


FIGURE 4.2: Schematic presentation of rationale for this study illustrating general practitioner and patient variables and their relationship to symptoms and signs, detection and management of dementia and depression. Numbers attached to arrows represent the instruments and questionnaires used to obtain data which are listed below (and attached as Appendix 5).

1. Information about GP
2. GPs rating of dementia and depression in patient and action taken
3. Structured questionnaire including symptoms and signs of dementia and depression and vignettes.
4. Demographic information about patient from patient
5. Diagnostic Interview for Depression
6. General Health Questionnaire
7. Mini-Mental State Examination and Information/Orientation scale from CAPE
8. Demographic information on patient and informant from informant
9. Informant Questionnaire on Cognitive Decline in the Elderly

CHAPTER 5

METHODS: RECOGNITION OF DEMENTIA AND DEPRESSION BY GENERAL PRACTITIONERS

5.1 Introduction

A sample of general practitioners and a consecutive sample of their elderly patients participated in this research. The patients were assessed by their general practitioner, who used four point rating scales, and JB, who used a range of instruments, to assess their level of dementia and depression. The general practitioners were also asked about symptoms and signs of dementia and depression and the management of these disorders in elderly patients.

5.2 Pilot study

A pilot study of the patient and general practitioner questionnaires (described in detail in Section 5.5.4 and 5.4/5.6 respectively below) was undertaken prior to the commencement of the research. Six elderly subjects volunteered to participate in the piloting of the questionnaires. No general practitioners were requested to recruit patients for the pilot study as it was decided that it was important to retain the general practitioners and their patients for the study proper. Three general practitioners and two psychiatrists were, however,

requested to examine the questionnaires which had to be completed by the participating general practitioners. As a result of the trials, several minor modifications were made to the respective questionnaires before the study commenced.

5.3 Recruiting of general practitioners

To achieve the aims and objectives of the research described in Chapter 1, a group of general practitioners who were either Fellows or Members of the Royal Australian College of General Practitioners (RACGP) were approached initially by Dr Peter Harris (then the State Director of the Family Medicine Programme of the RACGP and Chairman of the A.C.T. Sub-Faculty of the RACGP). All the general practitioners approached by Dr Harris agreed to participate.

Five of the general practitioners practised on the inner north side of Canberra and six of the general practitioners practised on the inner south side. Appointments were made and, at the first meeting, the objectives and procedures of the study were explained briefly to them. The meetings with general practitioners were usually short as they were within usual consulting hours, before consulting hours or at lunch time.

General practitioners practising in the inner suburbs of Canberra were selected as the aged population is up to 20 times higher in these areas than in the newer suburbs of the satellite townships in Canberra. The inner suburbs of Canberra included in this study are outlined in Appendix 5.1. In this part of the study there was not a random sample of general practitioners from the inner

suburbs of Canberra but rather a 'volunteer' or 'convenience' sample.

The selection of the inner suburbs of Canberra was important because:

- the knowledge of and interest in the health and problems of elderly was expected to be much greater in general practitioners practising in these areas; and
- the numbers of elderly patients consulting would be proportionally much higher than in the new outer suburbs, allowing the target sample of elderly patients to be recruited over a shorter period of time.

After the research was explained to the general practitioner, they were asked to complete a short questionnaire which requested information on their qualifications, age, the nature of their practice and special interests in medicine (Appendix 5.2).

5.4 Recruiting of patients

Each general practitioner was requested to ask the first ten patients over 70 years of age who consulted them, from a predetermined date, whether they would be willing to participate in the research. If the patient consented, the general practitioner addressed and signed a letter which introduced JB and briefly explained the research and gave it to the patient with a verbal, brief explanation of the study. The patients were also told that they would be contacted by telephone in the near future (if the patient had the telephone connected) to arrange an interview time. After the consultation, the general practitioner filled out a questionnaire regarding the level of depression or dementia of the patient,

whether the general practitioner had noticed depression or dementia previously and the type of action which s/he had taken if the patient was depressed or demented. The general practitioners had a choice of "not at all", "mild", "moderate" or "severe" for levels of dementia and depression, while the management question included options such as "specialist referral", "counselling", "continuation of basic health care" (Appendix 5.2.1).

This form was filled out regardless of whether or not the patient agreed to participate. However, if they did not agree to participate, the patient's name was omitted and the reason for non-participation was recorded. Also, on completion of each consultation, the patient's name, address, telephone number and date of consultation were entered on a separate schedule (Appendix 5.2.2).

When the general practitioner had 10 patients willing to participate, JB was notified by the general practitioner or his/her secretary that the schedule was complete. The name, address and telephone number of the patient was given to JB over the telephone or the completed forms were picked up from the general practitioner. Each patient was contacted by telephone (if a contact number was provided) and an appointment was made at a mutually convenient time as soon as possible after the consultation with the general practitioner. If the patient did not have a telephone, the patient was visited as soon as practicable after the consultation. If they were not at home, a calling card was left with a note explaining the visit and requesting them to ring. These patients were visited again either at a pre-arranged time or when convenient.

5.4.1 Patient interview procedure

On arriving at the patient's home, JB introduced herself to the patient (and other members of the household when appropriate). There was often considerable interest in the research not only by the patient but also other members of the household. So the interview usually commenced with a brief description of the research and the reasons for it. This was followed by a period of general discussion which often centred on the health of the patient or the patient's spouse.

After asking the patient's date of birth and marital status, the patient was asked if there was someone who had known them well for 10 years or more and who would be willing (if the patient was) to fill out an informant questionnaire on health and memory changes (Appendix 5.3). If the informant was present (usually a spouse, son or daughter), the importance of the informant questionnaire was explained to them and they were requested to either fill out the informant questionnaire during the interview or afterwards and post it in the stamped, addressed envelope provided. If, however, the informant was not present, for example, a child, sibling or friend, the informant questionnaire and a covering letter (Appendix 5.3) was either left with the patient who was requested to give it to the informant or the informant questionnaire was posted to the informant at an address provided by the patient. Immediately after each interview, an interviewer rating of the patient's ability to see, hear, write and concentrate was made (Appendix 5.4).

If the informant questionnaire had not been received within a reasonable period, either the patient or the informant were contacted by telephone or by

letter and reminded that the informant questionnaire had not been returned.

On receipt of the completed informant questionnaire, all the data for each patient were assembled and entered onto the ANU VAX/VMS computer. The data were analysed using SPSS-X (SPSS, 1983).

5.4.2 Patients' instruments (Appendix 5.5)

Three indices for dementia and depression were used to ascertain levels of psychiatric impairment in the patients. Socio-demographic information and levels of assistance required with activities-of-daily-living were also obtained. The indices for dementia were the Mini-Mental State Examination (MMSE), the Information/Orientation scale from the Clifton Assessment Procedures for the Elderly (CAPE) and the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE). The indices for depression were the Diagnostic Interview for Depression, the General Health Questionnaire (GHQ) and an indication from the informant as to whether or not s/he thought the patient had been or was depressed. A detailed description of these indices follows.

Socio-demographic information

Information was obtained on demographic characteristics which included, for example, date of birth, marital status, living arrangements and living conditions and educational level. In addition, information was obtained on services, professional care and informal assistance received by the patient.

Activities of Daily Living (ADL)

The level of assistance needed with activities of daily living was obtained from each patient. In addition, the same activities-of-daily-living questions were also asked of the informant. The daily activities measures were: showering/bathing, dressing, eating/feeding, getting around and out home/flat, walking 200m, walking up and down stairs and using public transport. They were rated on a scale which ranged from "unable to manage at all", "require help/supervision", "require no help but have difficulty" to "have no difficulty".

Dementia Instruments

Three different indices of dementia were used.

The **Mini-Mental State Examination** (Folstein *et al*, 1975) is a widely-used, brief screening instrument for dementia which tests a wide range of cognitive functions such as orientation, recall, attention and language. Its efficiency as a screening test has been demonstrated (Anthony *et al*, 1982) and it has been used extensively in community surveys (Folstein *et al*, 1985; Weissman *et al*, 1985; Kramer *et al*, 1985).

The MMSE has been demonstrated to be highly sensitive (that is, the proportion of true cases identified correctly) and specific (the proportion of non-cases identified correctly). Recently O'Connor *et al* (1989) found estimates of sensitivity and specificity in the community which were very close to those of Anthony *et al* (1982) in a hospital sample. Both studies used the recommended threshold of 23/24, where 0-23 suggests probable cognitive impairment (and this cut-point has also been employed in the present study). The sensitivities obtained

in these studies were 86% and 87% respectively, and the specificities were 92% and 82%. In another recent study which compared methods of diagnosing dementia in a population of elderly women in rural England, Brayne & Calloway (1990) came to a similar conclusion to Kay *et al* (1985) regarding the performance of the MMSE in the identification of people with mild dementia. Both studies reported poor agreement between the MMSE and the different diagnostic methods when mild dementia was included with levels of moderate and severe dementia.

MMSE scores appear to be influenced by age, level of education, ethnicity and gender (Anthony *et al*, 1982) as well as the performance of instrumental activities of daily living (Fillenbaum *et al*, 1988). O'Connor and his colleagues (1989) found in a study of 1865 general-practice patients over 75 years from Cambridge that education and social class, but not the gender of the patient, influenced the total MMSE score.

The 12-item Information/Orientation scale from the Clifton Assessment Procedures for the Elderly (CAPE) which measures cognitive impairment (Pattie & Gilleard, 1979; Pattie, 1981) was administered. This instrument is also useful in community surveys because it is brief and acceptable to the general public. It has been demonstrated to be a valid measure of dementia in field surveys (McPherson *et al.*, 1985; Morgan *et al*, 1987). A cut-point of less than or equal to 7 was employed: that is, a patient was considered cognitively impaired if the score was below or equal to 7.

Pattie & Gilleard (1976) found that the Information/Orientation scale from CAPE had a sensitivity of 92% and specificity of 92%. More recently Morgan *et*

al (1987) obtained similar results; 92% sensitivity and 95% specificity for dementia (using a threshold of less than or equal to seven) when compared with clinicians' ratings of mild, moderate or severe dementia and depression or normal. Morgan *et al* (1987) classified their survey respondents into groups: cognitively impaired with a threshold of less than or equal to 7; borderline impaired with scores of 8 or 9; and normal with scores of 10, 11 or 12. If such a scoring system was employed by general practitioners, it may provide a useful, initial indication of cognitive impairment.

The Information/Orientation scale appears to be less valid when screening for mild dementia. Brayne & Calloway (1990) report a sensitivity of only 21% and a specificity of 100% when using the Information/Orientation scale to discriminate a mildly demented elderly community sample from normals. However, sensitivity increased markedly when those with moderate to severe dementia were included: sensitivity 80% and specificity 90%.

As mentioned in Section 5.4.1 above, patients were also asked if someone who had known them well over a ten year period, such as a spouse or child, could complete an **Informant Questionnaire on Cognitive Decline in the Elderly** (Jorm & Korten, 1988; Jorm *et al*, 1989). The Informant Questionnaire correlates well with the MMSE and clearly discriminates dementing patients from normals. In addition, the Informant Questionnaire does not appear to be contaminated by the premorbid ability of the patient, unlike conventional screening instruments such as the MMSE (Jorm & Jacomb, 1989).

Depression Instruments

Three different indices of depression were used. First was a highly structured **Diagnostic Interview for Depression**, similar in style to the Composite International Diagnostic Interview Schedule (Robins *et al*, 1988). The Diagnostic Interview for Depression was the depression component of the Canberra Interview for the Elderly developed in the N.H. & M.R.C. Social Psychiatry Research Unit. It covered the symptoms listed in the DSM-III-R criteria (American Psychiatric Association, 1987) in a rigorous manner and was constructed for use by non-clinicians. However, the Interview did not use the exclusion criteria (B, C and D) because these are of little relevance in the context of general practice. The instrument has subsequently been tested in Sydney with depressed patients and found to perform satisfactorily. Formal evidence of reliability and validity is currently being produced by its authors. Appendix 5.6 sets out the questions from the Diagnostic Interview for Depression, how they relate to each DSM-III-R criterion and the algorithm used for making a diagnosis. The algorithm reached a diagnostic decision for each case and also gave a continuous score from 0 to 9 for the number of DSM-III-R depression symptoms present.

All patients who were capable were asked to complete the 12-item **General Health Questionnaire (GHQ-12)** (Goldberg, 1978). This short, self-administered screening instrument is used to measure non-psychotic mental illness in general practice settings and the community. In the present study, the GHQ-12 was used to determine whether it could be beneficially used by general practitioners during consultations as an indicator of psychiatric disturbance, particularly depression, in

elderly patients. In the present study, a cut-point of greater than 2 was used, that is, if a patient scored 3 or more they were rated as having a psychiatric disturbance.

The GHQ-12 has been used in many community surveys, has been shown to be valid and reliable and has good sensitivity (89%) and specificity (80%) when judged against a psychiatrist's diagnosis of depressive illness (Williams *et al*, 1987, cited in Goldberg & Williams, 1988).

There are two factors which have to be taken into account when selecting and later analysing the GHQ. First, it is well known that physical illness is a source of mis-classification for the GHQ (Goldberg & Williams, 1988). Finlay-Jones & Murphy (1979) found that physical illness was most common among the false positive normals than among the true negatives. In addition, Burvill *et al* (1984) found in a factor analytic profile of people's responses to the GHQ that there were distinct differences in the profiles of 'cases' and 'non-cases'. It is noteworthy that *non-cases* comprised "sub-clinical cases" as well as a group who suffered from "various degrees of physical illness and have symptoms which warrant a positive answer to ... GHQ questions". Age does not appear to have a significant effect on the GHQ score (Cavanaugh, 1983) but the score does rise in people over 75 years of age (Goldberg & Williams, 1988).

Second, prevalence rates tend to be high when the GHQ-12 is used instead of one of the longer versions (Burvill & Knuiman, 1983). In an analysis comparing the various versions of the GHQ (GHQ-60, GHQ-30, GHQ-28 and GHQ-12), Burvill & Knuiman (1983) conclude "that the 60-item GHQ is the best version to use under most circumstances, although there may be certain

situations in which the shorter version is preferable." As the GHQ was to be used (i) as a tentative indicator of non-psychotic mental disorders with a view to the potential for its use in general practice; and (ii) in conjunction with a range of other instruments, it was considered that the GHQ-12 would be the most appropriate instrument for the present study.

The informants, as part of their questionnaire, were also asked to state whether or not the patient had had a diagnosis of depression in their lifetime and whether or not they thought the patient was depressed at the time of completing the Informant Questionnaire.

5.5 Follow-up visit to general practitioners

As patient interviews were completed, a follow-up visit was made to each general practitioner. At this interview, the general practitioners were asked questions about the diagnosis of dementia and depression in their elderly patients; the percentage of people over 70 years they estimated they had in their practice and the percentage of them with dementia and depression; whether they had difficulty in diagnosing dementia or depression; and what management problems they encountered (Appendix 5.7). The method used to score and analyse the general practitioners' responses to these questions is described in Section 8.4.

On completion of the interview, the general practitioners were left with a questionnaire containing three vignettes (attached as Appendix 5.7.1 but described in detail in Section 8.3), the clinical details of which were derived from DSM-III-R criteria for a major depressive episode or dementia (APA, 1987).

General discussion on the research and any comment from the general

practitioners or their patients was sought at this meeting. Where there was comment from patients, it was generally positive and most patients recalled their interview with pleasure.

Also at this meeting, general practitioners were invited to attend a lunch at the N.H. & M.R.C. Social Psychiatry Research Unit to meet the Director and staff, to ask any questions regarding the research and to become more familiar with work carried out at the Unit.

5.6 Ethical approval

Prior to the commencement of the study, a research proposal was submitted to the Ethics in Human Experimentation Committee of The Australian National University and approval was given on 30 September 1988. In summary, the research proposal outlined the experimental design of the study, stated the purposes of the research, the foreshadowed ethical considerations relating to the study and listed the investigators. The Committee also approved a letter for the general practitioner to sign and give the patient which introduced JB and briefly explained the research (Appendix 5.8).

5.7 Summary of methods

In the manner described above, information on 101 patients who were referred by 11 general practitioners was assembled. The data on the patients provided sufficient information regarding their demographic details, physical impairments and levels of dementia and depression to compare them with the general practitioner's ratings and similar studies reported in the literature. Data

obtained from the general practitioners allowed tentative conclusions to be drawn on their level of knowledge of dementia and depression, thus suggesting that further investigation on this aspect of the study was warranted.

The flow diagram in Figure 5.1 below summarises the sequence of procedures involved in this, the first component of the study. Data obtained are listed under the relevant components of the procedure.

This component of the study on detection, which includes a summary of the methods, selected results and a condensed discussion, is summarised in a paper published recently in the Medical Journal of Australia (Appendix 5.9).

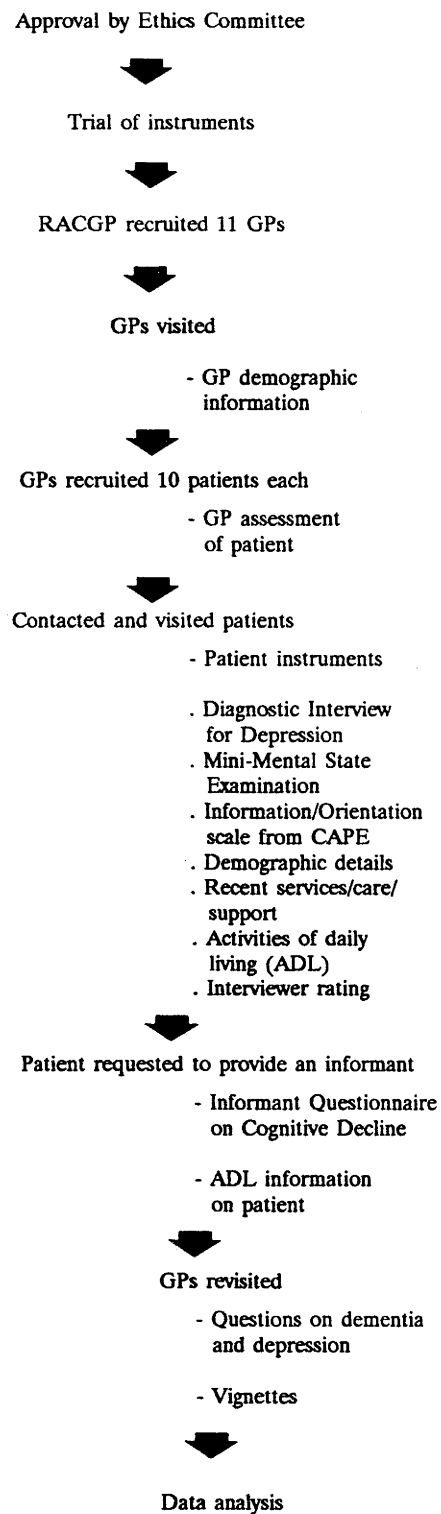


FIGURE 5.1: Flow diagram summarising methods

CHAPTER 6

RESULTS: GENERAL PRACTITIONERS' DETECTION OF DEMENTIA AND DEPRESSION

6.1 Introduction

This chapter presents the results relating to the first part of this study of which there are two major components: (i) a description of the characteristics of the general practitioners and their patients; and (ii) findings pertaining to the recognition of dementia and depression by the general practitioners.

6.2 General practitioner characteristics and participation

Of the 11 general practitioners who participated in this part of the study, five were female and six were male. Five were Fellows of the RACGP. The mean age was 46 years (range 35 to 64 years, SD=11.3). Years of practising ranged from 11 to 40, with a mean of 22 years (SD=3.3). All the general practitioners had practices in the inner suburbs of Canberra (Table 6.2 and Appendix 5.1). Four practised alone, four had one partner and the remaining three had more than one partner. Seven had studied at Australian universities, three were from Scotland and one from Northern Ireland. The general

practitioners were asked to provide the total number of current patients and an estimate of the number of patients over 70 years of age. Only one general practitioner was able to do this with any accuracy as his files were on a computer. The rest provided an estimate but the estimates ranged from 75,000 people to 1,500 family units, thereby making comparisons almost impossible. Estimates of patients over 70 years of age were given in percentages and made it easier for comparisons. The general practitioners estimated that about 30% of the patients in their practices comprised people over 70 years of age. Further information on results relating to the general practitioners is set out in Chapter 9.

6.3 Patient participation

There were a total of 115 patients who were potential subjects for inclusion in the study, as determined by the sampling method. There were, however, 109 patients referred by the general practitioners, 101 of whom were interviewed. Eight were unable to be interviewed for a range of reasons: three patients were excluded because they were below 70 years of age; two could not be contacted despite repeated visits; and three went on extended vacations almost immediately following their consultations.

Six patients were not referred by the general practitioners for participation in the study because four refused to participate (each being rated by the general practitioner as depressed) and two were considered by the general practitioners to be too difficult to be interviewed. A contact rate of 88% was thus achieved.

Ninety four percent of the sample agreed to provide the name and address of an informant. The other patients either felt they had no one who had known

them well for ten years or more, or refused to provide the name of an informant.

6.3.1 Comparison of sample with aged A.C.T. population

When the percentage of patients in the study sample are compared with the equivalent A.C.T. population, it can be concluded that 'older' people were over-represented in this study and that the 'younger' were under-represented (Table 6.1).

TABLE 6.1: Proportion of elderly people over 70 years of age in the A.C.T. at 1986 Census compared with proportion in study sample (ABS, 1988)

Age	Percentage of ACT population over 70 years	Percentage of study sample
70-74	50.5	35.6
75-79	28.9	31.7
80-84	13.8	9.9
85-89	5.2	14.9
90 +	1.6	7.9
Total	100	100

6.3.2 Interval between consultation and interview

This part of the study was designed so that the time between consultation and interview would be minimised. It was important to visit the patient as soon as practicable after his/her consultation so that a reliable comparison of the general practitioners' assessment could be made. The mean interval was 19 days with a range of 1 to 140 days (SD=22.8). The reasons for delays included

hospitalisation, 'too busy' and 'away for a few days'.

6.4 Patient characteristics

The mean age of the patients was 79 years (SD=6.9) and ranged from 70 to 99 years. There were 66 females and 35 males.

6.4.1 Where patients lived

Although the general practitioners practised in the areas within postcodes 2600 to 2604, it is of interest to note that their patients resided in a wider range of suburbs. Ten patients lived in suburbs away from their general practitioners. Most of the patients had previously resided in the inner suburbs and subsequently moved further out, but in so doing they had retained their general practitioners. (Table 6.2).

TABLE 6.2: Postcodes indicating areas in which patients resided

Postcode	Number of patients	Number of GPs
2600	17	2
2601	24	2
2602	18	3
2603	18	3
2604	14	1
2605	1	
2606	1	
2607	3	
2609	2	
2611	1	
2615	1	
2617	1	
Total	101	11

6.4.2 Living conditions of patients

The majority of patients lived in their own homes (61 patients). Many people of this generation moved to Canberra in the 1940s and 1950s to take up positions with the Commonwealth Government. They were provided with new houses to rent or buy and many of those interviewed still lived in these houses. The other patients lived in a range of dwellings and these are set out in Table 6.3.

TABLE 6.3: Types of residence of patients

Types of residence	Number of patients
Separate house	61
Flat attached to house	1
Semi-detached house	1
Terrace or townhouse	7
Low-rise flat	11
High-rise flat	3
Caravan	2
Nursing home	9
Hostel	3
Retirement village unit	3
Total	101

6.4.3 Patients' living arrangements

About one third (34) of the patients lived alone and the remaining two thirds lived with someone, primarily with a spouse (Table 6.4).

TABLE 6.4: Living arrangements of patients

Description of living arrangements	Number of patients
Alone	34
With a spouse	44
With their family	9
With non-family (nursing homes and hostels includes)	12
Other	2
Total	101

6.4.4 Marital status of patients

Almost half of the patients were married (46) and the other half widowed (47), five were divorced or separated, 2 never married and one lived in a de facto relationship.

6.4.5 Level of education

Less than one quarter (21) of the patients matriculated from high school or received any tertiary education. The majority of the patients did not reach the Intermediate level at secondary school. Table 6.5 summarises the level of education achieved by the patients.

TABLE 6.5: Highest qualification obtained by patients. (Figures in brackets provided by informants and the other by the patients.)

Level of education	Number of patients	
No schooling	0	(1)
Attended primary school	10	(7)
Completed primary school	32	(20)
Attended secondary school	17	(18)
Intermediate Certificate	21	(24)
Matriculation	10	(9)
Attended tertiary college	1	(2)
Completed tertiary college	8	(12)
Could not be ascertained (or nil response)	2	(12)
Total	101	(101)

Informants also provided the age at which they believed their friend or

relative to have left school. Forty eight percent of the patients left school at or before the age of 14 years; 27% were 15 or 16 years when they left; and 20% were between 17 and 20 years.

6.4.6 Physical health

Table 6.6 summarises the levels of assistance required by the patients to carry out activities-of-daily-living (ADL) according to the patients and their informants. It is noteworthy that, for most activities, more patients felt they had 'no difficulty' than did the informant. Additionally, more informants than patients thought that in seven of the eight activities the patients 'required no help but had difficulty' in performing their daily functions. Both these results suggest that the elderly patients did not admit to their difficulties with activities-of-daily-living or that the informants were over-cautious or over-protective of their friend or relative. Almost three-quarters of the patients reported that they had no difficulty or required no help with their daily activities and just over a quarter reported that they required assistance (Appendix 6.1).

TABLE 6.6: Percentages of patients requiring the various levels of assistance for activities-of-daily-living. (Figures in brackets provided by informants.)

Activity	Level of difficulty			
	No difficulty	Difficulty	Requires help	Unable to manage
Percentages of patients				
Showering/ bathing	69 (65)	13 (15)	9 (15)	9 (5)
Dressing	71 (67)	15 (23)	7 (7)	7 (3)
Eating/ feeding	89 (85)	9 (10)	1 (4)	1 (1)
Getting around home/ flat	71 (71)	10 (21)	16 (5)	3 (3)
Getting out of home/ flat	63 (60)	9 (13)	19 (23)	9 (4)
Walking 200m	46 (48)	25 (25)	16 (11)	13 (16)
Walking up & down stairs	43 (34)	23 (40)	20 (14)	14 (12)
Using public transport	49 (45)	16 (19)	16 (8)	19 (28)

If patients needed high levels of assistance such as requiring help with their daily activities or could not manage them at all, the patients and informants provided estimates of time that the patient had been requiring help. Most patients requiring help with activities-of-daily-living had done so for between one and three years but two smaller groups have needed help for less than a year and more than

seven years. The latter group comprises primarily hostel and nursing home residents (Appendix 6.2).

Physical changes observed by the informants indicate that the maximum deterioration had been in the patients' vision and the use of their legs. Almost half the informants reported that their friend or relative had experienced no change in their hearing, vision, ability to use their fingers and hands or ability to use their legs. On average, only about 3% improved their physical functioning. For the most part this appeared to be the result of operations, for example, the removal of cataracts. The other half deteriorated in their physical functioning; about one third became a bit worse and 20% much worse (Appendix 6.3).

The correlations between the informant's opinion and the patient's on the level of assistance required for activities-of-daily-living was very high ($r=0.92$, $p<0.001$). As would be anticipated, physical health declines with age, the level of service provision increases with age and as physical health deteriorates (Table 6.7).

TABLE 6.7: Analysis of patients' age, physical health (ADL) and service provision using Pearson Correlation Coefficients

	Physical health	Service provision
Age of patient	0.58***	0.24**
Physical health		0.28**

*** $p<0.001$, ** $p<0.01$

6.5 Community services and assistance received by patients

As over 60% of the patients live in their own homes, it is not surprising that the services most frequently received are home help and maintenance. However, it is probably even more significant that almost half of the patients receive no services and those that do require assistance receive very few services (Table 6.8). The mean number of services received by patients was 0.7 (SD=1.1) with a range from 0 to 6 types of services.

TABLE 6.8: Community services received by patients

Service type	Number of patients using service
Home help	27
Home nursing	7
Home/centre paramedical	0
Home based respite	2
Home delivered meals	3
Home maintenance	17
Day care centre	4
Transport services	5
Other services purchased	4
No services received	48

The majority of patients who needed assistance and were in receipt of services, found out about the services for themselves (48%), 25% were referred by relatives, 17% by general practitioners and 10% were referred by the home nursing service or a nursing home.

Table 6.9 presents the range of professionals from whom advice or

assistance was obtained by the patients in the month preceding their interview. Thirty seven patients consulted another doctor apart from their general practitioners in this period. The 'other doctor' was usually a specialist other than those listed. Fifteen and 12 patients consulted an optometrist or podiatrist respectively in this period. It is perhaps of more interest, however, to note the types of professionals who were rarely consulted by elderly patients. For example, only one patient sought a consultation with or advice from either a psychiatrist, nurse, social worker, psychologist or a clergyman.

TABLE 6.9: Number of patients* who received assistance or advice from a professional person in the month prior to the interview.

Type of professional	Number of patients
General practitioner	100
Psychiatrist	1
Other doctor	37
Chiropractor	0
Nurse	1**
Chemist	3
Social worker	1
Psychologist	1
Clergyman	1
Natural health practitioner	5
Physiotherapist	8
Occupational therapist	2
Optometrist	15
Speech therapist	1
Dentist	8
Podiatrist	12
Other	6

*12 patients were visited more than four weeks after their consultation. However, all but one of them had had another visit to the general practitioner prior to the interview.

**Patients underestimated nursing assistance as 7 patients indicated they were in receipt of home nursing (Table 6.8).

6.5.1 Summary of patients' characteristics

The majority of patients lived in their own homes, were physically independent, received a low level of service provision and very few sought professional advice or assistance other than that of the general practitioner.

The age of the patients was highly correlated with physical health, the number of services received and whether or not they lived with their spouse. The younger patients tended to live with their spouse; but, as expected, the older the patient, the poorer the level of physical health and the greater level of service provision. A patient was more likely to receive a higher level of service provision if his/her physical health was poor and if s/he lived alone.

6.6 Informant responses and characteristics

A 91% response rate (92/101 responses) was obtained for the Informant Questionnaire. The mean age of informants was 63.8 years and the range was from 34 to 90 years (SD=13.0). Forty-three percent (38) of the informants were 70 years or over. Seventy-six percent (70) of the informants were females and 24% (22) were male.

Forty-five percent of the informants were spouses and 37% were sons or daughters. The relationships of the informants to the patients are set out in Table 6.10.

TABLE 6.10: Relationship of informants to patients

Relationship	Percentage
Spouse	45
Son/daughter	37
Friend	11
In-law	4
Sibling	1
Other or not known	3
Total	101

6.7 General practitioners' detection of dementia

6.7.1 Patients diagnosed as demented

The general practitioners assessed a quarter of the sample of patients to have some degree of dementia. Table 6.11 sets out the general practitioners' rating of the severity of dementia in their patients.

TABLE 6.11: Rating of severity of dementia by the general practitioners

Rating	Number of patients
Not at all	76
Mild	13
Moderate	8
Severe	4
Total	101

The general practitioners stated that they noticed a degree of dementia in two of these patients for the first time during the consultation.

Of the 25 patients who were diagnosed as having some form of dementia

by the general practitioners, either at this consultation or a previous one, two were given prescriptions for medication; four were referred to a specialist; seven were referred to community support services and/or for residential care; 15 received "continuation of basic health care"; four patients and five caregivers received counselling from the general practitioner.

6.7.2 MMSE

The mean score for the MMSE was 24.9 with a range of scores from 0 to 30 (SD=6.2). The internal consistency of the MMSE was high (Cronbach's alpha=0.84). Twenty eight patients scored less than 24 on the MMSE; 20 were females (or 30% of the females) and eight were males (or 23% of the males). The prevalence of cognitive impairment in this group of consulting patients was thus 28%. (As the MMSE is a brief screening instrument and *does not diagnose* dementia, the terms 'cognitive impairment' or 'probable dementia' are used instead.)

6.7.3 General practitioners' detection of dementia measured by the MMSE

Table 6.12 compares the patients' level of cognitive impairment measured by the MMSE with the severity ratings by the general practitioners. When compared with the MMSE, the general practitioners detected dementia in 11 of the 28 cases, providing a sensitivity of 39% (proportion of true cases of dementia identified correctly). General practitioners correctly identified 72 of the 73 non-demented patients providing a specificity of 99%. When the general practitioners' ratings of mild dementia were also included as cases, their sensitivity improved to

54% against the MMSE and specificity declined a little to 86%.

TABLE 6.12: General practitioners' detection of cognitive impairment compared with the MMSE

MMSE results	GPs' assessment (includes ratings of moderate and severe dementia)	
	Not demented (n=89)	Probable dementia (n=12)
Not demented (n=73)	72	1
Probable dementia (n=28)	17	11

6.7.4 Influence of other variables on the MMSE

Age, marital status and physical health influenced the total MMSE score ($r=-0.55$, $p<0.001$; $r=0.28$, $p=0.006$; $r=-0.53$, $p<0.001$ respectively). If the patient was married, s/he was less likely to be cognitively impaired. MMSE scores were not correlated with gender, level of education or the age at which the patient left school.

6.7.5 Information/Orientation scale from CAPE

The mean score for the Information/Orientation scale was 10.6 with a range from 0 to 12 ($SD=2.7$). The reliability of the Information/Orientation scale was high (Cronbach's $\alpha=0.91$). The Information/Orientation scale identified 10 patients as having probable cognitive impairment. The prevalence of dementia using the Information/Orientation scale on this sample of patients was 10%.

6.7.6 General practitioners' detection of dementia measured against the Information/ Orientation scale

When judged against a cutoff of seven or less on the Information/Orientation scale of the CAPE, the general practitioners had a sensitivity of 80% (8 out of 10 patients correctly identified) and specificity of 96% (87 out of 91) (Table 6.13). The better performance of the general practitioners against the Information/Orientation scale compared to the MMSE reflects the well recognised but little documented fact that the Information/Orientation scale is a higher-threshold instrument which is poorer at detecting milder cases (Brayne & Calloway, 1990). When the general practitioners' ratings of mild dementia were also included as cases, their sensitivity improved to 100% against the Information/Orientation scale and the specificity, as against the MMSE, declined a little to 84%.

TABLE 6.13: General practitioners' detection of cognitive impairment compared with the Information/Orientation scale of CAPE

Information/ Orientation results	GPs assessment (includes ratings of moderate and severe dementia)	
	Not demented (n=89)	Probable dementia (n=12)
Not demented (n=91)	87	4
Probable dementia (n=10)	2	8

6.7.7 IQCODE

The mean score for the IQCODE was 3.3 (no change) with a range of

scores from 2.3 (slight improvement) to 5.0 (marked deterioration) (SD=0.6). The reliability of the IQCODE was also high (Cronbach's alpha=0.98) and similar to the alpha of 0.95 reported by Jorm & Jacomb (1989). The prevalence of dementia using an IQCODE cutoff of four is 13.5%.

6.7.8 General practitioners' detection of dementia compared with the IQCODE and informant report

When the general practitioners' assessment was compared with a cut point of four on the IQCODE, the sensitivity was 69% and the specificity was 97% (Table 6.14). When the general practitioners' rating of mild was added, sensitivity increased to 85% but specificity fell to 84%.

TABLE 6.14: General practitioners' detection of cognitive impairment compared with the IQCODE

IQCODE results	GPs assessment (includes ratings of moderate and severe)	
	Not demented (n=89)	Probable dementia (n=12)
Not demented (n=88)	85	3
Probable dementia (n=13)	4	9

Only four informants stated that the patient had been diagnosed as having dementia: two were diagnosed by a general practitioner and two by a specialist.

6.7.9 Influence of other variables on IQCODE

The informants' rating of dementia via the IQCODE was not correlated with the patient's gender, level of education, the age at which s/he left school or the level of services provided to the patient. The rating was, however, related to age ($r=0.50$, $p<0.001$) and level of physical impairment ($r=0.51$, $p<0.001$). These results are similar to those obtained in studies in which the reliability and validity of the IQCODE were examined (Jorm *et al*, 1989; Jorm & Jacomb, 1989).

6.7.10 Summary of general practitioners' detection of dementia

ROC curves have been used here (as in Section 4.3) to demonstrate whether the general practitioners will detect a psychiatric disorder in their patients. The area under the curve provides an indication of diagnostic accuracy. Figure 6.1 illustrates the general practitioners' detection of dementia (using the range of ratings from mild to mild/moderate/severe) when compared with the three dementia instruments: MMSE, Information/Orientation scale and the IQCODE. The areas under the respective ROC curves are: 0.73, 0.97 and 0.89. Detection of dementia by the general practitioners is considerably better than chance (0.5) when judged against the three instruments.

General practitioners' ratings of dementia (on the four-point scale) were highly correlated with the MMSE, the Information/Orientation scale and the IQCODE and to a lesser degree with the level of patients' physical impairments. The various instruments for detecting cognitive impairment were also highly intercorrelated with each other (Table 6.15). They were also correlated with physical impairment, reflecting the well-known association between dementia and physical disability (Milne, 1985).

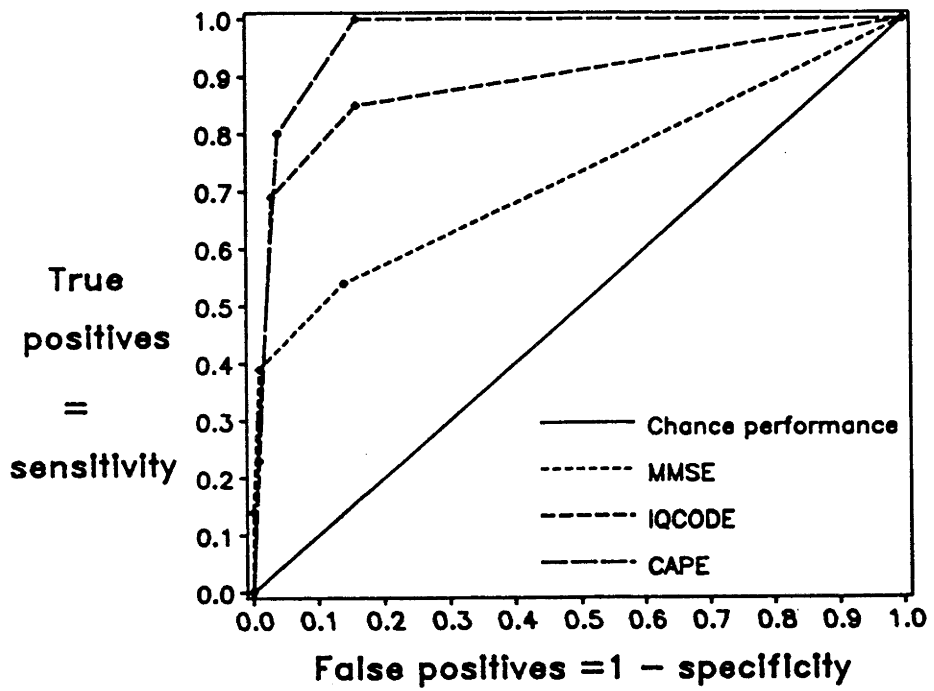


FIGURE 6.1: ROC curves comparing the general practitioners' ratings of the severity of dementia with the three dementia screening scales.

TABLE 6.15: Correlations between general practitioner ratings of dementia, dementia screening scales and physical impairment

1.	2.	3.	4.	5.
GP rating (n = 101)	Mini-Mental State Examination (n = 101)	Information/Orientation (n = 101)	Informant Questionnaire (n = 90)	Physical Impairment (n = 101)
1.	-0.76*	-0.76*	0.65*	0.42*
2.		0.90*	-0.75*	-0.53*
3.			-0.78*	0.52*
4.				0.51*

* All correlations significant at $p < 0.0001$

Negative signs are due to direction of scoring.

General practitioners' assessments of dementia were not affected by the patients' co-morbidity; the proportion of elderly people in their practice; their knowledge of dementia; or whether they were a Fellow of the RACGP. A multiple regression was carried out in order to determine whether general practitioners' ratings of dementia could be predicted by schooling, gender and age, once cognitive impairment (MMSE) was taken into account. It can be seen that the MMSE is a predictor of dementia but that schooling, gender and age have no additional predictive value (Table 6.16). In other words, general practitioners' ratings are not affected by patients' schooling, gender or age.

TABLE 6.16: Examination of socio-demographic factors on general practitioners' ratings of dementia by multiple regression

	Beta	T	Significance
MMSE	-0.78	-9.87	0.00
Level of schooling	0.11	1.69	0.09
Sex	-0.07	-1.09	0.28
Age	-0.35	-0.44	0.66

6.8 Depression and general practitioners' recognition of depression

6.8.1 Depressive symptoms in the patient sample

The mean score for the 9 items in the diagnostic algorithm was 2.2, with a minimum of 0 and a maximum of 8 (SD=1.1). Eighty five patients had scores of four or less depressive symptoms, 22 of whom had no symptoms. The remaining 16 had five or more depressive symptoms (Table 6.17).

TABLE 6.17: Number of patients with depressive symptoms

Number of symptoms	Number of patients
0	22
1	22
2	2
3	13
4	5
5	7
6	4
7	3
8	2
Total	101

Sleep disturbance, followed by having little energy, difficulty concentrating or making decisions and thoughts of death were the most frequent symptoms which scored positively (Table 6.18). The reliability of the symptom count from the Diagnostic Interview for Depression was satisfactory (Cronbach's alpha=0.70).

TABLE 6.18: Patients who scored positively on the diagnostic criteria for DSM-III-R criteria for Major Depressive Episode (MDE)

Diagnostic criteria for MDE	Number of patients
Complaints of depression (MDE1)	18
Loss of interest/interests (MDE2)	21
Weight or appetite change (MDE3)	26
Sleep disturbance (MDE4)	45
Slow/lethargic or restless/fidgety (MDE5)	9
Tired (MDE6)	39
Low self-opinion or Felt blame (MDE7)	6
Difficulty concentrating or making decisions or Mixed up thoughts (MDE8)	31
Thoughts of death/suicide (MDE9)	28

Fifteen patients (15% prevalence) were found to reach the criteria for a major depressive episode, 9 being female and 6 male. The 2-week prevalence of major depressive episode was 13% in women and 17% in men.

The symptom count from the Diagnostic Interview for Depression was highly correlated with the GHQ ($r=0.72$, $p<0.001$) and not so highly correlated with physical impairment ($r=0.38$, $p<0.001$).

6.8.2 Patients diagnosed as depressed

The general practitioners considered that 41 of the patients were depressed. Eight patients were assessed by the general practitioner as depressed

for the first time at the consultation. Table 6.19 shows the extent to which the general practitioners thought the patients were depressed.

TABLE 6.19: Rating of severity of depression by the general practitioners

Rating	Number of patients
Not at all	60
Mild	29
Moderate	11
Severe	1
Total	101

In the examination of their overall diagnostic practices, general practitioners were asked: "If you have noticed depressive symptoms, either now or in the last 4 weeks, what action has been taken?" When the general practitioners identified patients with depressive symptoms in the previous four weeks, they referred three patients to a specialist; 12 were given counselling by the general practitioner; 34 received "continuation of basic health care"; and five received other forms of assistance. Some patients received a combination of these treatments. Eleven patients had been prescribed antidepressant medication (see Section 6.8.7 for further details).

6.8.3 General practitioners' detection of depression compared with the Diagnostic Interview for Depression

The patients who were diagnosed as depressed by the Diagnostic Interview were compared firstly with the general practitioners' ratings of moderate and severe depression (Table 6.20). The general practitioners missed 12 of the 15

patients assessed as depressed by the diagnostic algorithm. Therefore, sensitivity for the detection of depression by this criterion was 20%. Specificity was 90%, as they correctly identified 77 of the 86 patients who were not depressed. When the general practitioners' ratings of mild depression were included as cases, sensitivity improved to 60%, but specificity declined to 63%.

TABLE 6.20: General practitioners' detection of depression

Results from Diagnostic Interview for Depression	GPs' assessment (includes ratings of moderate and and severe depression)	
	Not depressed (n=89)	Depressed (n=12)
Not depressed (n=86)	77	9
Depressed (n=15)	12	3

6.8.4 General practitioners' detection of depression compared with the GHQ

The recognition of depressive symptoms or a 'psychiatric disorder' by general practitioners, when compared with the GHQ, is less accurate than it is for the Diagnostic Interview. The sensitivity is 15% as they detected only 5 of the 34 patients scoring positively on the GHQ and they detected 60 of the 67 patients who were not depressed providing a specificity of 90% (Table 6.21). Sensitivity increases to 60% and specificity decreases to 69% if the general practitioners' ratings of mild are included.

TABLE 6.21: General practitioners' detection of depression compared with the GHQ-12

Results from GHQ-12	GPs' assessment (includes ratings of moderate and severe depression)	
	Not depressed (or mild) (n=89)	Depressed (n=12)
No psychiatric disorder (n=67)	60	7
Psychiatric disorder (n=34)	29	5

The mean score for the GHQ was 2.5 with a range from 5 to 10 (SD=2.9) and the reliability was satisfactory (Cronbach's alpha=0.84).

6.8.5 Informants' opinions

Eleven informants stated that the patient had been diagnosed as having had depression at some time in their lives: nine by a general practitioner and two by a specialist. The general practitioners' rating of depression compared with the informants' opinions is discussed below (Section 6.8.6).

6.8.6 Analysis of general practitioners' ratings with various continuous measures of depression

Table 6.22 shows the correlations between various continuous measures of depression and the general practitioners' ratings. The ratings of depression by general practitioners (on the four-point scale) were correlated with the symptom score from the Diagnostic Interview and with the GHQ, but the relationship was not strong. However, the general practitioners' ratings were more highly

TABLE 6.22: Correlations between general practitioner ratings of depression, depression symptom score, the opinion of an informant, whether the patient discussed depression with the general practitioner, the 12-Item General Health Questionnaire, and physical impairment.

1. GP diagnosis (includes ratings of mild, moderate, and severe) (n = 101)	2. Depression symptom score (n = 101)	3. Informant's opinion (n = 87)	4. Depression discussed (n = 101)	5. General Health Questionnaire (n = 97)	6. Physical Impairment (n = 101)
	0.36**	-0.41**	0.38*	0.25*	0.12 n.s.
		-0.45**	0.19 n.s.	0.72**	0.38*
			-0.25 n.s.	-0.28*	-0.08 n.s.
				0.04 n.s.	0.20 n.s.
					0.49**

** p < 0.0001 * p < 0.05

Negative signs are due to direction of scoring.

correlated with the informant's opinion of whether the patient was depressed and with whether or not the patients reported discussing their depressed mood with the general practitioners. If the patient talked to the general practitioners about feeling depressed, sad or irritable, the depression recognition rate increased. The GHQ correlated highly with the Diagnostic Interview and physical impairment and to a lesser degree with the informant's opinion.

The general practitioners' detection of depression (using the range of ratings) are compared with the Diagnostic Interview on Depression and the GHQ using a ROC curve (Figure 6.2). The area under the Diagnostic Interview curve is 0.63 and the area under the GHQ curve is 0.64, neither being much greater than chance (0.5).

6.8.7 Antidepressant medication

Amongst the questions to be completed at the end of the consultation (Appendix 5.2.1), the general practitioners were asked: "Has this patient had any antidepressant medication in the last 4 weeks?" Eleven patients were on antidepressant medication. Nine of the general practitioners had one or more patients in their sample on antidepressant medication. One general practitioner had four patients who were each on a different antidepressant. The most common antidepressant was doxepin. The next two most common antidepressants were trimipramine and amitriptyline. The other antidepressants prescribed were oxazepam, dothiepin, nortriptyline and imipramine.

It was considered that some patients who had been prescribed antidepressant medication in the four weeks prior to consultation could have

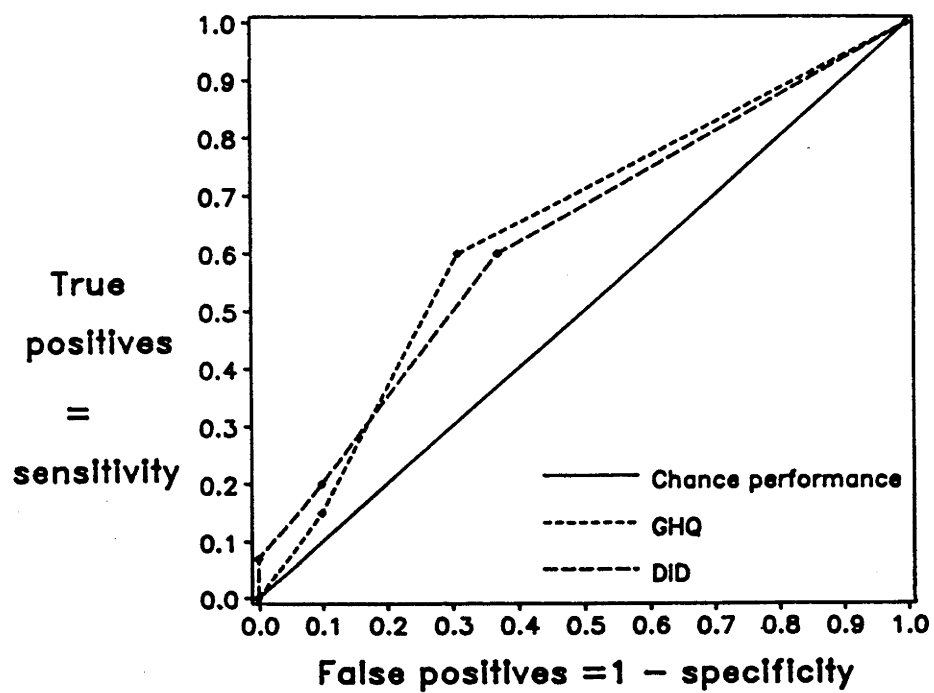


FIGURE 6.2: ROC curves comparing the general practitioners' ratings of the severity of depression with the Diagnostic Interview on Depression and the GHQ.

become less depressed as a result of the medication in the interval between the commencement of medication and the screening interview. In order to clarify this point, the data including and then excluding medicated patients were analysed using the ROC curves described in Section 6.8.6 above. Figures 6.3.1 and 6.3.2 illustrate the ROC curves comparing patients interviewed within 14 days of their consultation and more than 14 days after their consultation. There is no significant difference between these curves in either Figure 6.3.1 or 6.3.2. As the area under each curve is approximately 0.6, the general practitioners' detection in each case is not much better than chance (0.5). When the patients who had been prescribed antidepressant medication are excluded (Figure 6.3.2), there is no change to the general practitioners' detection rate.

6.9 General practitioners' detection of a combination of dementia and depression

Seven patients were diagnosed as depressed by the Diagnostic Interview and as probably demented by the MMSE. The general practitioners diagnosed both conditions in two patients and only depression in another patient.

6.9.1 Comparison of measures of cognitive impairment with those of depression

There was no correlation between the Diagnostic Interview for Depression and the three dementia screening instruments. However, the GHQ was correlated with not only physical health (ADL), ($r=0.50$, $p<0.001$) but also the IQCODE ($r=0.39$, $p<0.001$). In turn, the IQCODE was highly correlated with physical health ($r=0.51$, $p<0.001$). Physical health was correlated and the GHQ was minimally correlated with the MMSE ($r=-0.53$, $p<0.001$; $r=-0.23$, $p=0.022$

Figure 6.3.1

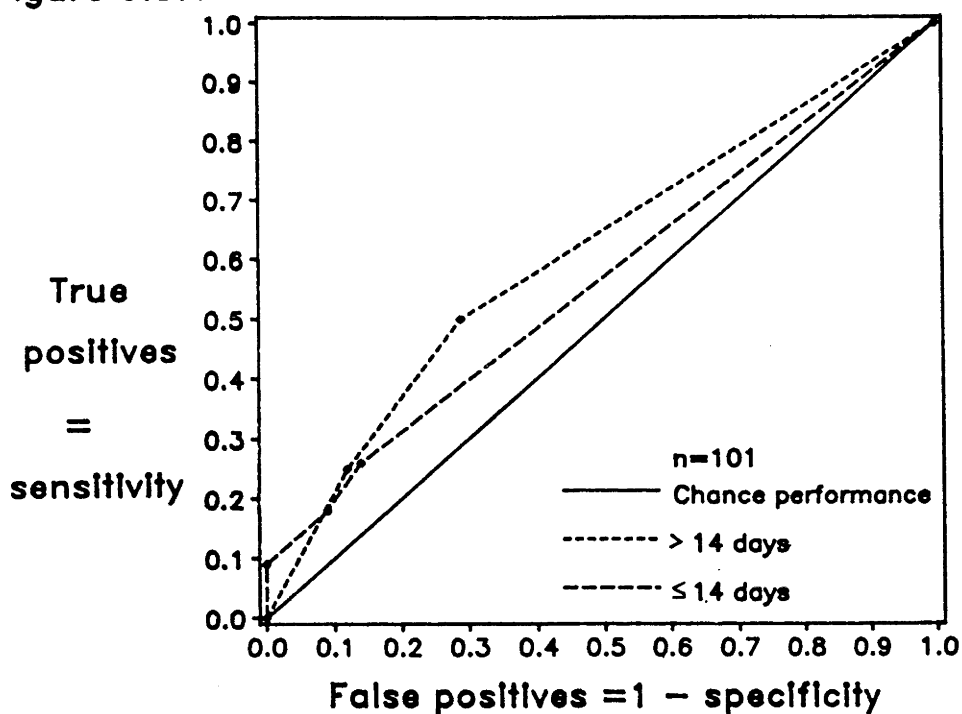


Figure 6.3.2

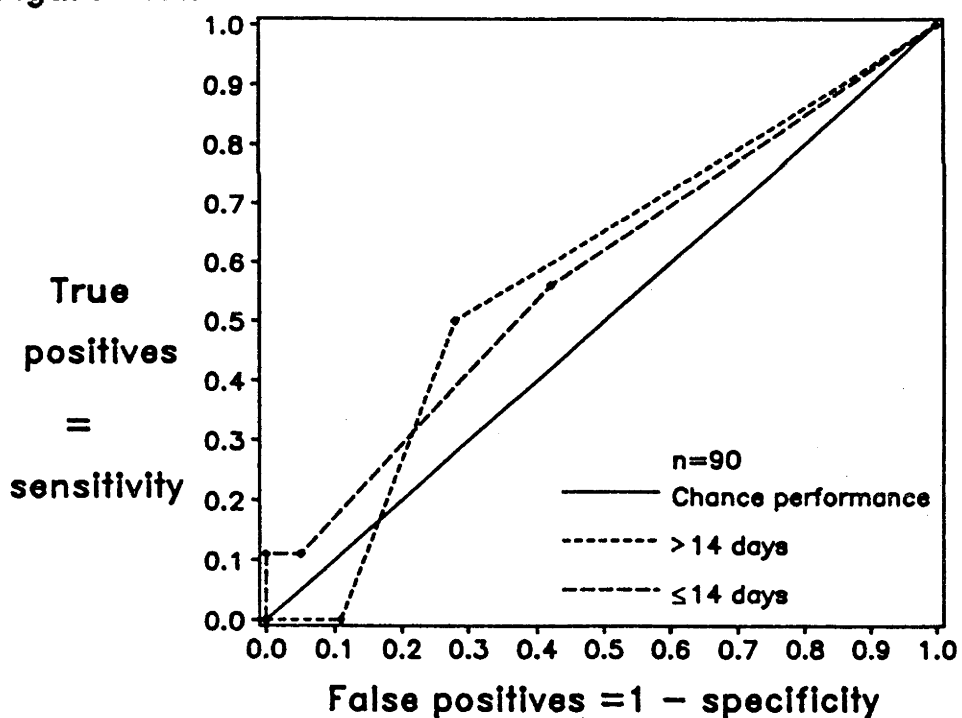


FIGURE 6.3: ROC curves illustrating general practitioners' detection of depression (severe, moderate/severe, mild/moderate/severe) with the cases of depression diagnosed by the depression diagnostic algorithm. Figure 6.3.1 includes all patients and Figure 6.3.2 excludes patients who had been prescribed antidepressant medication in the four weeks prior to the consultation.

respectively). These correlations suggest that when these instruments, particularly the GHQ, the MMSE and the IQCODE, are used within an aged population, the results are appreciably affected by physical health.

6.10 Summary

There are complex interactions between the various instruments and the general practitioners' ratings but, despite this, the results clearly indicate a low level of recognition of depression and a higher level for dementia. The factors which affected the recognition, or lack of it, and the issues which they raise, will be discussed in the next chapter.

CHAPTER 7

DISCUSSION ON RECOGNITION OF DEPRESSION AND DEMENTIA BY GENERAL PRACTITIONERS

7.1 Prevalence of depression

The 15 patients rated as depressed by the Diagnostic Interview in this study can be expected to have had an equivalent degree of depression to the 3% to 6% of those with major affective disorder observed by, for example, Copeland *et al* (1987) or Kay *et al* (1985) in community surveys. These would be reasonable comparisons due to (i) the use of a comprehensive instrument which covered DSM-III-R diagnostic criteria for major depression and (ii) greater expected prevalence of depression in a consulting sample of elderly people. Although they were not dealing with a true consulting sample of elderly people, Pond *et al* (1990) observed a very similar prevalence for depression (14%) in Sydney.

The slightly higher prevalence for depression observed in males in the present study differs from recent community and general practice studies which show that the prevalence of depression is usually higher in females than males (Blazer *et al*, 1987; Carpiniello *et al*, 1989; Blacker & Clare, 1988). It is also noteworthy that Blacker & Clare (1988) found that men were more likely to have

chronic depression than women.

7.1.1 Detection of depression

The recognition rate for depression in the present study was close to that observed in Australia by Pond *et al* (1990), in the U.K. by Williamson *et al* (1964) and the U.S.A. by Waxman & Carner (1984). It was, however, quite contrary to Macdonald's study in the U.K. on 'missed' depression in general practice (Macdonald, 1986). The general practitioners in his study tended to over-diagnose depression and, as suggested by the author, the sensitivity may have been artificially high and the specificity artificially low.

The general practitioners' poorer detection of depression in the present study may have several explanations. The first is a lack of knowledge of depressive symptoms or failure to enquire about these symptoms in their patients. When the general practitioners were asked about the symptoms they look for in diagnosing depression, many of the major *symptoms* were rarely mentioned. However, the frequency with which the general practitioners mentioned symptoms of depression corresponded reasonably well with the observed symptoms in their patients. Important exceptions were loss of energy, inability to concentrate and recurrent thoughts of death, which were rarely mentioned by the general practitioners but found in their patients (Figure 7.1). These symptoms may warrant more attention in general practice consultations with the elderly (discussed further in Chapter 9).

The second possible reason for low detection of depression might be that they seldom explicitly enquired after depressive symptoms, but relied on the

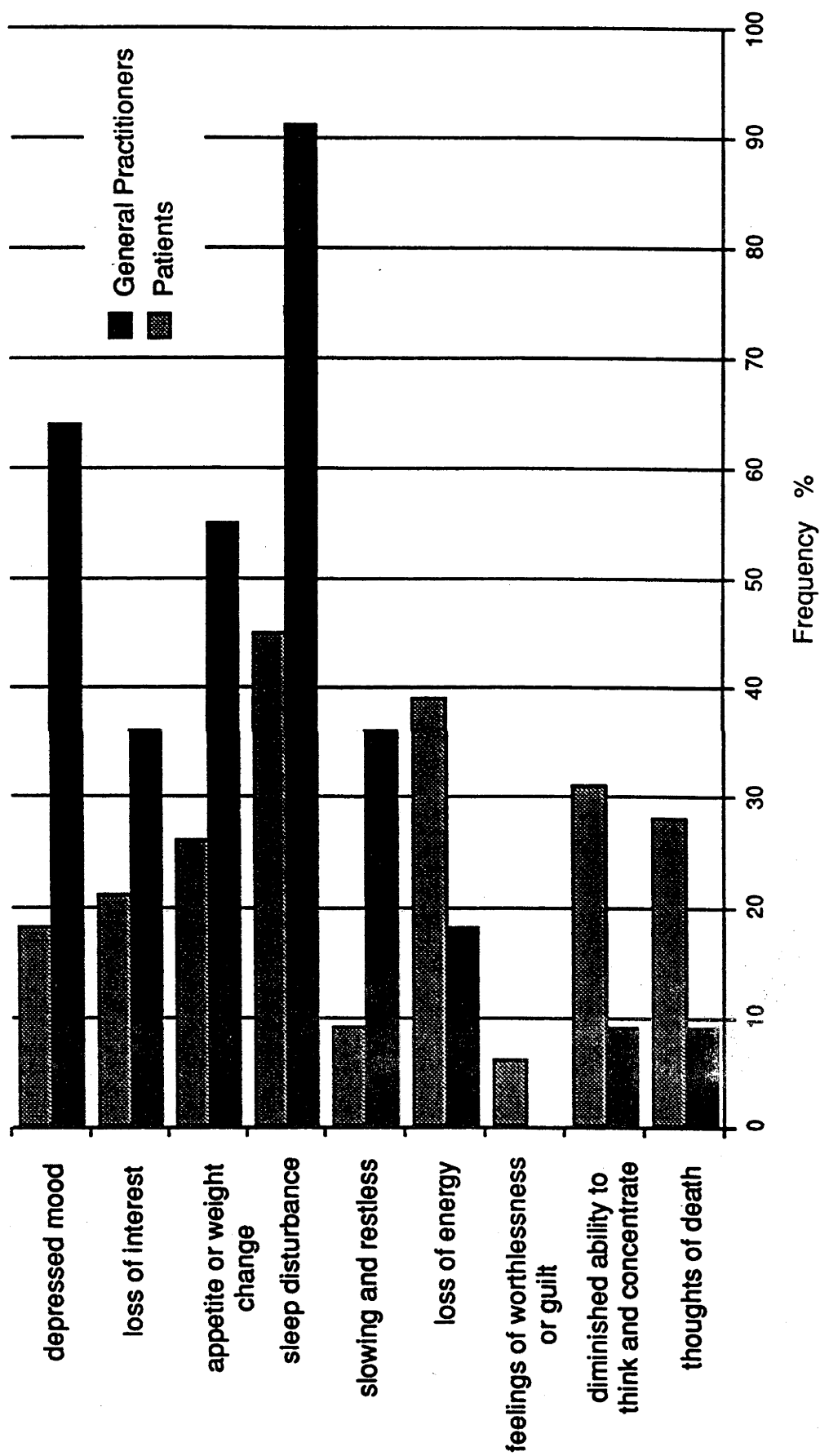


FIGURE 7.1: Frequency with which initial sample of general practitioners cited DSM-III-R criteria for major depression; and patients scored positively against these criteria.

patients spontaneously raising them. This possibility is supported by the present finding that general practitioners' diagnosis of depression improved if the patient discussed his or her depressed mood with the general practitioner.

The third factor to be taken into account is that DSM-III-R and the Diagnostic Interview for Depression constitute a very high-threshold criterion and maybe this is not realistic. It would be understandable therefore, that if the threshold was lowered to cover less demanding criteria, general practitioners would more accurately and frequently cite the *symptoms*.

Instead of relying on patients' specifically raising their depressed state with their general practitioner or hoping for improved interviewing techniques, the use of a brief instrument to screen elderly patients for psychological disturbances might be expected to increase the depression detection rate.

All the findings of similar studies, including the present one, suggest there are substantial discrepancies between general practitioners' detection rates and screening instruments for psychological disorders. The performance of screening instruments could perhaps set a standard to which general practitioners' accuracy can be compared. This standard or target would provide a more appropriate and realistic comparison thereby eliminating overly optimistic or even false expectations that general practitioners should diagnose as accurately as specialists or standard diagnostic interviews. For example, the degree of agreement between the Diagnostic Interview for Depression and the GHQ using the ROC method of comparison was very high (area under the curve of 0.93). Using the same method, the general practitioners' ratings were not much better than chance when judged against the Diagnostic Interview. The accuracy of general practitioners

could, therefore, be increased significantly with the aid of the brief GHQ.

Several other studies, especially by Goldberg and his colleagues, have demonstrated that the GHQ is a reliable and valid screen for depression in general practice. However, this study has highlighted one *proviso*. It is generally accepted that the physical health of patients negatively influences the GHQ score. However, the influence of physical health on the GHQ score in *elderly consulters* is less well documented, if at all. Mowry & Burvill (1990) recently suggested that the GHQ would be a suitable screening instrument for the elderly living in the community (especially in conjunction with the MMSE). Further, Goldberg & Williams (1988), when reviewing the literature on the GHQ relating to age, concluded that age does not influence the GHQ score markedly. But they did cite evidence which suggested GHQ scores rise in men and women over 75 years. Despite these limitations, it is clear that the GHQ could be successfully used "to identify cases where psychological distress may be making a strong contribution to the aetiology of the complaints for which help is being sought [and] ...draw the clinician's attention to this distress." (Goldberg & Williams, 1988, p. 93) Mowry & Burvill (1990) found that, as a result of a community survey of 100 people over 70 years, the GHQ (-30) was an acceptable screening instrument for the elderly. In addition, they found it particularly useful in screening for dementia when used in conjunction with the MMSE.

It would be expected that a study such as this would make general practitioners more conscious of dementia and depression in their elderly patients and would, therefore, increase sensitivity to dementia and depression. Only two new cases of dementia were noticed by the general practitioners during the 'study

consultation' but perhaps more significantly eight cases of depression were noticed for the first time, thus indicating a possible increase in alertness to depressive symptoms due to the study. It may be that the difference in the initial recognition rate is simply due to the fact that dementia is a chronic condition but that depression for the most part is not. In order to overcome the possibility of this type of sensitisation, Waxman & Carner (1984) kept the physician (and the patients) blind to the exact purpose of the study and to the reasons for questioning the physicians about selected patients. While such an approach may be effective in overcoming such sensitisation, the ethics of it are questionable as it is now incumbent upon researchers to obtain *informed consent* from all participants.

7.1.2 Treatment of depression

Of the 41 patients rated as depressed by the general practitioners, almost one third of the patients were treated non-pharmacologically by counselling and continuation of their basic health requirements. Counselling, in the a general practice setting probably equates with non-specific psychotherapy which may only be a placebo treatment. This point is important as it is well recognised that depression can be successfully treated by specific psychotherapy (combined with antidepressants) (for example, Johnson & Wilson, 1989). Non-pharmacological treatments such as counselling may be favoured due to general practitioners' concern regarding side-effects of the various antidepressant drugs; or due to general practitioners' reluctance to use drugs for minor depressive states; or due to people's reluctance to take medication. This point raises questions such as:

Is specific psychotherapy within the competence of general practitioners? Does non-specific psychotherapy given by general practitioners have any effect?

Just over a quarter of the patients rated as depressed by the general practitioners had been prescribed antidepressant medication (in the 4 weeks prior to the consultation). Depression can be treated safely and effectively with a range of antidepressant drugs but the general practitioners displayed reluctance to prescribe antidepressants. It is suggested that this was because some antidepressants, such as the tricyclics, produce side-effects in the elderly (Kim & Hershey, 1988). As outlined in the previous paragraph, 'side-effects' are not the only explanation for reluctance to prescribe. McNamara & Lewin (1989) found that general practitioners prescribed lower than recommended doses of antidepressants due to the concern over too many side-effects and because they considered low doses were effective in the general-practice setting. These beliefs are common in general practice and there is evidence which indicates they are valid. A WHO (1986) study on dose effects of antidepressant medication provides evidence that low doses seem equally effective as recommended doses, at least in some populations. On the other hand, Watts (1982) considers that antidepressants should be given in adequate doses over a period of several months.

7.2 Prevalence of dementia

Using the same cut-point on the MMSE as the only other comparable studies (Mant *et al*, 1988; Brayne & Calloway, 1990), the prevalence of cognitive impairment observed in the present study (28%) is lower than the other two

(which were 34% to 37% respectively). There are several possible reasons for the slight difference. The most obvious reason for the variation when compared with the other Australian study is that the majority of the patients were in residential care, where a high proportion of patients have some degree of dementia (discussed further in Section 7.2.1 below). Another plausible reason is that this study involved 'consulters' as opposed to a sample of patients from a register and that demented people are unaware of their condition and do not seek assistance from their general practitioner.

The prevalence of dementia based on the Information/Orientation scale from the CAPE was slightly higher (10%) than in the only other study which used this instrument (3%) (Brayne & Calloway, 1990). The latter study is only indirectly comparable to the present one because it was based on an NHS patient register rather than on consulters and because the patient sample comprised only females between 70 and 79 years of age.

As no other study has used the IQCODE in a general practice setting, the prevalence obtained (14%) has no comparison. Nevertheless, it is worth noting that the IQCODE is not related to variables such as education and could be used more widely to identify patients especially in a general practice setting. This form of screening for dementia may be particularly useful for general practitioners because, at least in this small sample, there was evidence that they would take into account information from informants.

7.2.1 Detection of dementia

The general practitioners' hit rate against the MMSE was 39% when

ratings of moderate and severe were included as cases and 54% when ratings of mild were included as cases. These results were similar to the only other study carried out in Australia in which general practitioners had a hit rate of 45% (Mant *et al*, 1988).

The general practitioners' ratings of mild to severe dementia were much more accurate when judged against the Information/Orientation scale. This finding suggests that general practitioners, when selecting a screening instrument for dementia, should look at a *slightly* lower-threshold instrument such as the MMSE for use in their practice.

More than 40% (range 42% to 87%) of cases of dementia in this and the majority of overseas studies were *missed* by general practitioners (Williamsom *et al*, 1964; Waxman & Carner, 1984; O'Connor *et al*, 1988; Brayne & Calloway, 1989) (Table 4.1). Only two studies reported almost 100% recognition but the authors (who were also the general practitioners) in one of them, qualified the high recognition rate by stating that one third of the patients not thought to be demented by them were, in fact, mildly demented (Philp & Young, 1988).

Specificity in the present study was particularly high indicating that general practitioners did not over-diagnose dementia. There is, however, one result from the present study which is intriguing when compared with that of Cooper (1989). When only moderate and severe cases are compared with the general practitioners' ratings, cases of dementia were not erroneously diagnosed (99% specificity) in the present study, but Cooper (1989) found about half to be erroneously diagnosed (55%). When cases of mild dementia were included, specificity decreased slightly in the present study and improved significantly in the

German study. It is almost impossible to interpret this finding due to the different instruments and, thus, different thresholds on the diagnostic continuum employed in the two studies. The instrument used by Cooper (1989) may have been more effective in detecting mild dementia than the screening instruments used in the present study. Nevertheless, it is clear that problems arise in the correct detection of *mild* dementia where there is room for considerably more research.

As discussed in Sections 4.6 and 7.1.1, a realistic or *gold standard* should be set to which general practitioners' accuracy in diagnosing dementia could be compared. For example, the correlation between the Information/Orientation scale and the MMSE in this study was high (0.90). The correlations between these instruments and the general practitioners' ratings were somewhat lower (-0.76). The degree of accuracy was considerably higher for cognitive impairment than for depression but with the assistance of a screening instrument, for example, the MMSE, the detection rate would improve.

The mean age of 77 years observed in this study is less than that in Mant *et al* (1988) with a mean of 85 years. Several similar studies do not provide mean ages although the minimum age is defined (Table 4.1). Comparisons between studies could be more easily made if these and other such details were provided. It is well established that (i) with increasing age, the prevalence of dementia rises and (ii) patients in residential care have high levels of cognitive impairment. To some extent, therefore, the detection rate of general practitioners could be expected to increase in line with the age of the patient, and especially those in residential care. The detection rate observed by Mant *et al* (1988) was compared with that of the present study to ascertain whether there was, in fact, such a

change. There was no statistically significant difference between the ROCs derived from the two studies (Z-test using the standard error from the present study) (Hanley & O'Neil, 1982), although the accuracy observed by Mant *et al* (1988) was slightly higher than the present study.

7.2.2 Factors influencing the MMSE

Variables such as age, marital status and physical health influenced the total MMSE score but other variables which have been reported to influence the score such as level of education had no influence in the present study. Results obtained by O'Connor *et al* (1989) in a study of general practice patients in Cambridge showed that, as well as age, level of education (and social class) influenced total MMSE scores. As in the present study, the gender of the patient did not affect the MMSE score. In addition, Holzer *et al* (1984) found that the MMSE score and age were strongly related, as was educational level. They also observed that the highly educated received higher scores but that they also experienced "less of an age-related decline than do the less educated". Unlike the above studies, the MMSE score was influenced by neither the patient's level of education nor the age they left school. This result may be attributable to the possibility that the sample population were relatively homogeneous in their level of education which, in turn, may have been above average.

7.3 Patient characteristics

There is close agreement between this study and recent surveys of the aged population reviewed in Section 1.4 on patient characteristics. The majority of the

patients considered themselves to be physically fit and considered they had no difficulty in carrying out their activities of daily living. Mobility and vision were the main problems encountered.

Eighty eight percent lived in a private dwelling and 12% lived in a hostel or nursing home which are almost the same proportions observed in the last Census (ABS Census, 1986). Similarly, the proportions of elderly people living alone and living with someone corresponded closely with the Census data. It is noteworthy that the 'younger' group were under-represented and the 'older' group were over-represented relative to the population over 70 years in the ACT. This is no doubt because the 85 years and over group are more frequent attenders at general practices.

About half the patients obtained assistance with housekeeping and home maintenance but the other half received no services. The sample of patients was active and independent: for example, several could not be interviewed because they were too busy or away for a short period and three could not be interviewed at all because they went on extended vacations, one of which was overseas. Patients were more likely to receive a greater number of services if their physical health was poor and they lived alone.

When relating these findings to the effect they may have on the role of the general practitioner, it initially appears that the impact of the elderly will not be marked, due to their high levels of independence. However, this predominantly active, healthy and independent sample of elderly people will probably live longer with the increasing concomitant chance of becoming demented. Thus, it is suggested that it is this 'old' old cohort of people who will have the most

significant impact on general practitioners during the next decade.

7.4 Patient selection

A further major difference between the studies is the method of patient selection. The majority of researchers randomly select patients from a register, for example, a practice's age/sex register in some countries with an NHS or the electoral register (Williamson, 1964; Parsons, 1965; O'Connor *et al*, 1988; Brayne & Calloway, 1990). Only one other study recruited patients who were 'attenders' for a consultation and had the general practitioner assess them at that time (Macdonald, 1986). It is suggested that this method of selection provides a more accurate reflection of the general practitioner's assessment of a patient as s/he makes a decision regarding the patient's level of dementia or depression at the time of consultation, not from memory. Waxman & Carner (1984) recruited patients at the time of consultation but the physicians were not interviewed regarding their assessment of patients until about a week later.

7.5 Summary

A sample of Australian general practitioners has been shown to be more accurate in their recognition of dementia in elderly patients than in their recognition of depression. However, the detection rates were not high for either condition in this modest series, and they appear not to have improved significantly since the early studies in the mid-1960s.

General practitioners' detection of dementia and depression in their elderly patients is not highly accurate although it is much better for dementia than

depression. *Why are the recognition rates not higher? How can they be improved?* Aims 3 and 4 (Section 1.2) were tested in a preliminary analysis of the initial 11 general practitioners' knowledge of the symptoms and signs of dementia and depression. The majority of these general practitioners mentioned only two of the possible nine features of dementia listed in the DSM-III-R criteria and three of the possible nine features of depression. These findings suggested a limited knowledge of the symptoms and signs of dementia and depression by the eleven general practitioners. It was considered that these results merited further investigation and it was decided to expand the sample to provide a clearer indication of where the gaps are in general practitioners' knowledge. The aims were:

- to assess general practitioners' knowledge of dementia and depression in elderly patients using an extended sample of general practitioners; and
- to determine whether the sample of general practitioners, who were involved in the initial study, were representative of all the general practitioners in the inner suburbs of Canberra.

All general practitioners in the inner suburbs of Canberra were requested to participate in an extension of the initial investigation. The following Chapter describes the methods used to explore the above aims.

CHAPTER 8

METHODS: GENERAL PRACTITIONERS' KNOWLEDGE ABOUT DEPRESSION AND DEMENTIA IN ELDERLY PATIENTS

8.1 Introduction

The first part of the study consisted of a sample of only eleven general practitioners. The results of the initial study indicated that there were significant limitations to the general practitioners' knowledge of dementia and depression and it was considered that the investigation should be broadened to include all general practitioners servicing the inner suburbs of Canberra to provide a clearer guide to the level of general practitioners' knowledge and to determine whether the 11 general practitioners were a representative sample. The study was, therefore, extended to the larger sample of general practitioners with the assistance of Dr P. Harris.

8.2 Recruitment of an increased sample of general practitioners

All general practitioners with practices in the inner suburbs of Canberra (with the exception of the 11 participating general practitioners) were approached by Dr Harris to seek their agreement to participate in the study. A letter

introducing the research and JB was sent by him (Appendix 8.1) to 30 general practitioners on the RACGP mailing list. (The mailing list included all general practitioners known to the RACGP, not only Members and Fellows of the College.) Five general practitioners were unable to participate, either because an interview time could not be made within the timeframe of the study (2), the general practitioner was too busy (1) or they had left the region (2). Thus, 25 general practitioners were recruited to the second part of the study providing a total sample of 36 general practitioners and a contact rate of 92% for the whole study. (The contact rate includes only those currently practising in the region).

It is estimated that 90% of general practitioners practising in the research area were assessed. Whilst visiting the various general practices, JB noted four general practitioners' names not on the RACGP mailing list. On investigation, it was found that this group had recently moved to the area and they were not approached. It is, of course, possible that there were other general practitioners, who were new to the area, unknown to the RACGP or JB.

8.3 Interview Procedure

As described above, the initial sample of eleven general practitioners had been contacted by telephone and subsequently visited to arrange their participation in the study. The other 30 general practitioners were sent the letter from Dr Harris which requested the general practitioner's co-operation. It suggested that interviews could take place outside consulting hours (for example, in lunch breaks or before consultations in the morning) so that interruption to consultation schedules would be minimal. The letter was followed up by a

telephone call by JB to make an appointment.

A structured interview was carried out with each general practitioner. The interview began with items on the general practitioner's age, qualifications and the nature of his/her practice (Appendix 5.2). The interview then followed the format described in Section 5.4 above. In brief, this component included questions on the symptoms and signs the general practitioner looked for when making a diagnosis of dementia and depression in elderly patients, and the management problems they encountered. At the end of the interview, the general practitioners were requested to complete a questionnaire containing three vignettes (Appendix 5.4.2). They were requested to tick boxes which would indicate the course of action which they might pursue or agree with.

The first vignette was a case history of an elderly female patient with typical features of Alzheimer's disease. Questions about diagnosis and case management, for example, referrals, diagnostic tests and future accommodation options, followed this vignette. The second vignette described a depressed daughter who was caring for her elderly dementing mother. The questions ranged from prescription provision to accommodation arrangements. The third vignette was a description of a depressed elderly male with a history of depression and the questions were about diagnosis, referral practice and ongoing support and care. The case histories were left with the general practitioners, together with a stamped, addressed envelope for forwarding when completed.

8.4 Scoring of the Interview

The verbal responses to the questions on the symptoms and signs general

practitioners look for when presented with a case of possible depression or dementia were recorded at the time of interview and subsequently scored by a panel comprising JB, and Dr A.F. Jorm and Professor A.S. Henderson. Each general practitioner's response was scored for the number of elements corresponding to the DSM-III-R diagnostic criteria for dementia and major depressive episode. Responses were allocated to one of the DSM-III-R diagnostic criteria for the two conditions only when the panel was in unanimous agreement. This was achieved by discussion and consensus of opinion. Thus the DSM-III-R criteria has been used primarily as a scoring system and not in a rigid manner. Scoring was very generous, with credit being given for any criterion mentioned, no matter how imperfectly described. For example, "reports from relatives" when mentioned in relation to dementia, was interpreted as meeting the DSM-III-R requirement that cognitive loss should "significantly interfere with work or social functioning or relationships with others" (APA, 1987). It was considered that, if a relative had been sufficiently concerned to consult the general practitioner regarding the patient, then by implication the patient's cognitive impairment was affecting, at the very least, 'relationships with others'. The number of symptoms and signs was totalled to provide an indication of general practitioners' reported knowledge of dementia and depression.

The data from each interview and the case histories were entered on a computer and analysed using SPSS-X (SPSS, 1983).

8.5 Summary of Methods

As described above, an additional 25 general practitioners were recruited

to the study and assessed in the same manner as the original 11 general practitioners, by a structured interview, which covered demographic information, knowledge of dementia and depression and various aspects of management, and questions relating to three case histories (summarised in Figure 8.1). This component of the study, including a summary of the methods, selected results and an abbreviated discussion, has been submitted for publication.

RACGP approached more GPs



Appointments arranged with GPs



Visited GPs



- demographic information
- questions on dementia and depression

- vignettes left with GP (returned by mail)



Scored GP responses



Data analysis

FIGURE 8.1: Summary of method for assessing general practitioners' knowledge of dementia and depression

CHAPTER 9
RESULTS: GENERAL PRACTITIONERS'
KNOWLEDGE OF DEMENTIA AND DEPRESSION

9.1 Characteristics of general practitioners

The characteristics of the 11 general practitioners who participated in the first part of this study are described in Section 6.2. The other 25 general practitioners comprised seven women and 18 men. Nine were Fellows of the RACGP. The mean age was 49 years (range 30 to 68 years SD=2.5). Years of practising ranged from seven to 46 (SD=2.5), with a mean of 23.5 years. The mean age of all the general practitioners was 48 (range 30 to 68 years SD=11.8) and the total mean years of practising was 24, ranging from 7 to 46 (SD=11.7).

To see whether the initial sample of 11 general practitioners was representative of the general practitioners practising in the inner suburbs of Canberra, the first 11 general practitioners were compared with the latter 25 in terms of age, sex, year of graduation, whether or not they were Fellows of the RACGP, the estimated proportion of elderly people in their practices, the university they attended and their knowledge of depression and dementia. There were no significant differences between the two groups on any of these variables. For the purposes of this component of the study, therefore, the two samples of general practitioners have been combined. There were also no significant

differences on any of these variables between the general practitioners who returned the vignettes and those who did not.

Twenty two of the general practitioners trained in Australia, half of whom attended Sydney University. The remainder trained at overseas universities, six of whom attended universities in Scotland. Twenty of the general practitioners had postgraduate qualifications, 14 being Fellows of the RACGP. Three mentioned they had a special interest in geriatrics and one had additional training in that specialty. However, the range of the general practitioners' special interests was very broad (29 categories) and they are listed in Appendix 9.1. The most common interests mentioned by the general practitioners were obstetrics and gynaecology followed by 'all aspects of general practice'. The general practitioners estimated that there were on average about 21% of patients over 70 years in their practices and the estimates ranged from a low 8% to as much as 70%. Fourteen of the general practitioners practised alone. The others were in group practices of up to five partners.

9.2 General practitioners' knowledge of depression

General practitioners' reported knowledge of symptoms and signs of depression was scored by comparing their responses with DSM-III-R diagnostic criteria. The most frequently cited symptoms for depression included insomnia or hypersomnia, weight or appetite change and the appearance of being depressed (Table 9.1).

TABLE 9.1: DSM-III-R Criteria for Major Depressive Episode together with numbers and percentages of general practitioners' reporting each symptom or sign in response to the question: "What are the particular symptoms and signs you look for when a patient presents with possible depression?"

DSM-III-R Criteria	Number of general practitioners reporting each symptom/sign (%)
Depressed mood, most of the day every day	19 (53)
Diminished interest or pleasure, most of the day, every day	15 (42)
Weight loss or weight increase or increase or decrease in appetite	20 (56)
Insomnia or hypersomnia nearly every day	28 (78)
Restlessness or slowed down (observed by others)	5 (14)
Fatigue or loss of energy nearly every day	10 (28)
Feelings of worthlessness or or excessive inappropriate guilt	2 (6)
Diminished ability to think, concentrate or make decisions	4 (11)
Recurrent thoughts of death or suicidal ideation	2 (6)

Thirteen of the general practitioners described three symptoms, 12 described less than three symptoms and 11 described four to six symptoms. The mean score for

reported symptoms of depression was 2.9 (SD=1.4). The general practitioners who reported more symptoms of depression were more likely to feel they had no difficulty in diagnosing depression ($t=2.17$, $p=0.037$).

Overall, unlike the findings of Rubin *et al* (1987), there was no statistically significant difference between younger and older general practitioners' knowledge. However, general practitioners who graduated from the University of Sydney, and were over the median age of 44 years, knew slightly less about depressive symptoms ($t=2.45$, $p=0.022$). On this point also it is noteworthy that the older the general practitioner, the greater the number of elderly patients the general practitioner estimated to be in his/her practice ($r=0.40$, $p=0.031$).

9.2.1 Depression and anxiety

As it has been shown that anxiety- and depression-related symptoms are the two major dimensions underlying neurotic disorders and that they are highly correlated (Goldberg *et al*, 1987), the general practitioners' responses to the question "What are the particular symptoms and signs you look for when a patient presents with possible depression?" were scanned for answers relating to anxiety. Eight (22%) of the general practitioners gave responses which included anxiety symptoms (APA, 1987) which included agitation, tension and panic episodes.

9.2.2 Depression and physical illness

As elderly people have a high prevalence of physical illness, and as illness is associated with high rates of depression in any age group, it was of interest to examine the responses to the question on depressive symptoms to ascertain the

numbers of responses which were 'physical' in nature. A quarter of the general practitioners mention 'multiple minor somatic complaints' and gave examples, such as palpitations and headaches. A further 5 (14%) mentioned that they inquired about bowel habits.

9.2.3 Contributory factors to depression

General practitioners were asked to list factors which they considered contributed to depression in their elderly patients. Geographical and social isolation were the most commonly cited factors. The other most frequently cited factors included bereavement, loss of independence and physical deterioration (Table 9.2).

TABLE 9.2: Factors which general practitioners considered contributed to depression in the elderly

Contributory Factor	Frequency (%)
Isolation	32
Bereavement	16
Loss of independence	15
Physical deterioration	13
Age	8
Financial problems	7
Poor diet	4
Medications	1

9.2.4 General practitioners' knowledge compared with depressive symptom prevalence

To a large degree the frequency with which the general practitioners mentioned the symptoms corresponded to the prevalence of the symptoms in the patients, as revealed by the Diagnostic Interview. The exceptions were loss of energy, inability to think or concentrate, feelings of worthlessness or guilt and recurrent thoughts of death (Figure 9.1)¹⁰. These symptoms were under-reported by the general practitioners.

9.3 General practitioners' knowledge of dementia

General practitioners' reported knowledge of symptoms and signs of dementia was also scored by comparing their responses with DSM-III-R diagnostic criteria for dementia. Twenty two of the general practitioners described two of the DSM-III-R symptoms or signs of dementia, the most frequent being memory impairment and a range of impairments interfering with their daily activities (Table 9.3). Eight general practitioners described one symptom or sign, while six described three or four. The mean score for the reported symptoms of dementia was 2 (SD=0.8).

¹⁰In a comparison of Figures 7.1 and 9.1, a higher proportion of the initial sample of general practitioners mentioned depressed mood, and slowing and restlessness. In the second sample, more mentioned loss of interest, appetite or weight change, sleep disturbance, loss of energy and feelings of worthlessness or guilt. These differences were not statistically significant.

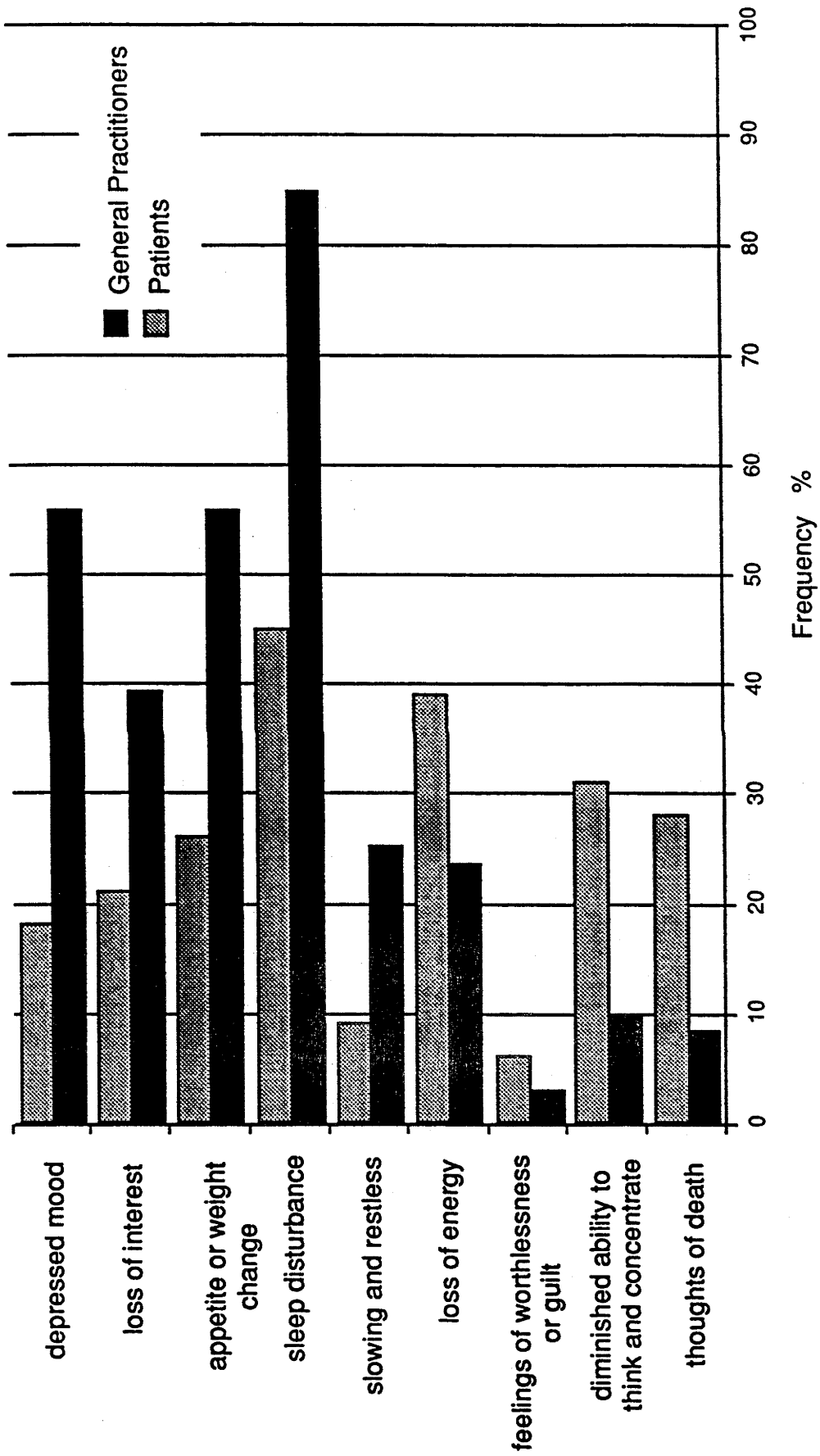


FIGURE 9.1: Frequency with which total sample of general practitioners cited DSM-III-R criteria for major depression; and patients scored positively against these criteria.

TABLE 9.3: DSM-III-R criteria for dementia together with numbers and percentages of general practitioners reporting each symptom or sign in response to the question: "What are the particular symptoms and signs you look for when a patient presents with possible dementia?"

DSM-III-R criteria	Numbers of general practitioners reporting each symptom/sign (%)
Impairment of short- and long-term memory	29 (81)
Impairment of abstract thinking	2 (6)
Impaired judgement	8 (22)
Aphasia, apraxia, agnosia, constructional difficulty	5 (14)
Personality change	11 (31)
The above impairments interfere with work or social activities	15 (42)
Evidence from history, physical examination or laboratory tests of an aetiologic organic factor	2 (6)

As with depression, the general practitioners who reported more symptoms of dementia were more likely to feel they had no difficulty in diagnosing dementia ($t=2.08$, $p=0.051$).

When asked about what type of dementia general practitioners saw most frequently, fourteen general practitioners correctly cited Alzheimer's disease as the most frequently observed form of dementia. However, the remaining 22 general

practitioners cited other forms of dementia or did not know (Table 9.4). The general practitioners who graduated from the University of Sydney were more likely to cite dementias other than Alzheimer's disease ($r=-0.47$, $p=0.004$).

TABLE 9.4: Frequency of general practitioners' responses to the question: "What type of dementia do you see most frequently?"

Type of dementia	Number of GPs (%)
Alzheimer's disease	14 (38.8)
Multi-infarct	6 (16.7)
Arteriosclerosis	6 (16.7)
Cerebral atrophy	4 (11.1)
Don't know	6 (16.7)
Total	36 (100)

The ratios of the types of dementia the general practitioners thought they saw in their practices are set out in Table 9.5. Nine of the general practitioners estimated the prevalence of Alzheimer's and multi-infarct dementia close to reported levels. Four general practitioners over-estimated the prevalence of multi-infarct dementia, leaving 23 (64%) who did not know or who stated that there was only one type of dementia (which they described as either cerebral atrophy or arteriosclerosis). The estimates of the prevalence of Alzheimer's disease within the range 60% to 75% are closest to the levels reported in neuropathological studies, as are 20% to 33% for multi-infarct dementia (Ojeda

et al, 1986; Henderson & Jorm, 1986). However, Ojeda and his colleagues found a much lower rate of multi-infarct dementia amongst the 60 cases they examined. Eighteen percent were found to have a combination of Alzheimer's disease with lacunar infarcts (11%) or only lacunar infarcts (7%).

TABLE 9.5: Ratio of types of dementia thought to be seen most frequently in general practice

Alzheimer's disease	Multi-infarct or another form	Number of GPs (%)
50	50	3 (8)
60	40	1 (3)
66	33	2 (6)
70	30	1 (3)
75	25	3 (8)
80	20	3 (8)
Did not like to guess, did not know or thought there was only one form of dementia		23 (64)
Total		36 (100)

9.3.1 Problems encountered by general practitioners

General practitioners were requested to list the problems they most frequently encountered when treating a dementing patient. The two most frequently cited problems were dealing with the patients' families and the patient not coping alone. The next two most frequently cited problems were the availability of care services (or lack of them) and danger to the patient resulting

from the dementia (Table 9.6).

TABLE 9.6: Problems encountered by general practitioners with dementing patients

Problem encountered	Frequency (%)
Problem associated with patient's families	16
Patient not coping alone	15
Availability of care services	11
Danger to patient (eg wandering)	10
Medication	9
General practitioner's time	3
Making accurate diagnoses	2
Depression	1

9.4 Responses to case vignettes

The three vignettes described case histories of an elderly female with the typical features of Alzheimer's disease; a depressed daughter caring for an elderly dementing mother; and a depressed elderly male. A 72% response rate was achieved for the return of the vignettes. (Ten of the 36 general practitioners failed to return the vignettes even though they were reminded at least once by telephone that the vignettes had not been returned. It is suggested that either these general practitioners were too busy, misplaced the vignettes or were not sufficiently interested in the research to return them.) The following three sub-

sections summarise the general practitioners' responses to the questions on the vignettes.

9.4.1 Vignette 1 - Case history of an elderly female with typical features of Alzheimer's disease

Diagnosis - The general practitioners were asked to select a multiple-choice range of conditions. Three general practitioners chose multi-infarct dementia and four thought it was a combination of dementia and depression. The remaining 19, who returned the vignettes, correctly selected Alzheimer's disease. It is noteworthy that six of the 19 were unsure about Alzheimer's disease and put a question mark in another box.

Case Management - It is of particular interest to note that about two thirds of the general practitioners would refer this patient to the Geriatric Assessment Team (GAT) but less than a quarter would suggest she enter a hostel or nursing home (Table 9.7). It is also noteworthy that almost 60% of the general practitioners would change their course of action if the patient were younger. For the most part, the general practitioners' investigations would be more intensive in a younger patient. A high proportion of the general practitioners would seek further information on the patient (65%), presumably from family and friends (85%).

TABLE 9.7: Summary of responses to management questions on Vignette 1

Management strategy	Number of GPs (% of respondents)
Seek more information	17 (65)
Provide a prescription*	1 (4)
Refer patient to geriatrician or GAT	16 (62)
Refer patient for diagnostic tests	19 (73)
Suggest hostel entry	3 (12)
Suggest nursing home entry	2 (8)
Assess her current living arrangements	18 (69)
Contact family member or friend	22 (85)
Monitor the patient's situation	16 (62)
Change the course of action if the patient was younger	15 (58)

*An antidepressant would have been prescribed.

9.4.2 Vignette 2 - Case history of a depressed daughter who is caring for her elderly dementing mother

Diagnosis - No diagnosis was required for this vignette as the conditions was stated in the vignette.

Case Management - A much smaller proportion of general practitioners would seek more information on this case (35%) but a much higher proportion would suggest the dementing mother, being looked after by a depressed daughter, enter a form of residential care (ranging from hospital (27%), nursing home (35%) or hostel (19%)).

TABLE 9.8: Summary of responses to management questions in Vignette 2

Management strategy	Number of GPs (% of respondents)
Seek further information	9 (35)
Provide a prescription for depression	10 (38)
Provide counselling for patient and family	17 (65)
Refer patient to psychiatrist	1 (4)
Arrange to see dementing mother	14 (54)
Refer mother to geriatrician or GAT	17 (65)
Add to home care services	13 (50)
Suggest mother enter a hostel	5 (19)
Suggest nursing home entry	9 (35)
Admit mother to hospital	7 (27)
Monitor situation	8 (31)
Change course of action if mother lived with daughter	3 (12)

9.4.3 Vignette 3 - Case history of depressed elderly male with a history of depression

Diagnosis - Nineteen of the general practitioners correctly identified the elderly male as depressed in this vignette but the remaining seven general practitioners thought the patient had depression which presented as dementia.

Case Management - None of the general practitioners would refer this patient to a GAT and only three to a specialist. However, the majority would provide him with medication for his depression; provide counselling; and contact a family member or friend.

TABLE 9.9: Summary of responses to management questions in Vignette 3

Management strategy	Number of GPs (% of respondents)
Seek further information	15 (58)
Provide a prescription	21 (81)
Provide counselling	20 (77)
Refer him to specialist	3 (12)
Refer him to GAT	0 (0)
Arrange for home care services	17 (65)
Suggest entry to a hostel	1 (4)
Suggest nursing home entry	0 (0)
Admit him to hospital	1 (4)
Contact a family member or friend	20 (77)
Monitor his situation	17 (65)

9.5 Summary of general practitioners' comments on care and service provision in the Australian Capital Territory (ACT)

9.5.1 Home care and community services

Four general practitioners felt that it was easier to convince Home Care and Meals on Wheels that a patient needed a service if s/he had a physical disability as opposed to depression or dementia. One also mentioned that Meals on Wheels is less eager to help if there is a family who is assisting an elderly patient.

Six general practitioners felt that the District Nursing Service was overloaded with work; had insufficient staff; and unable to supply service 24

hours a day, 7 days a week. In addition, they found having to book a service inconvenient in a crisis and that the current situation discriminates against committed caregivers. The alternative is private nursing care which is very expensive.

The following summarises the most positive comments of the general practitioners regarding community services.

- Red Cross Home Help is particularly useful for dementing patients.
- The Council on the Ageing is very helpful. The Carers Support Group and the At Home Respite Program were mentioned by one general practitioner as being particularly helpful.
- The Emergency Housekeeping Service was considered useful for all types of patients. Not only did it provide practical assistance but company for the elderly patient.
- The Northside Voluntary Service takes patients shopping, to appointments and helped one patient with the provision of firewood.
- The Southside Community Service was frequently contacted by one general practitioner who found it very co-operative.
- District nurses were considered to be particularly useful for controlling dementia patients' medication.
- Two general practitioners mentioned they contacted ethnic groups to provide support for patients at home.

9.5.2 Residential services

Eighteen of the general practitioners mentioned the difficulties associated with placing a patient in a nursing home and 12 mentioned difficulties with hostel placement. One felt there was no problem getting a patient into a hostel. Six mentioned that if a patient was over 70 years it was almost impossible to get a hospital bed. Insufficient respite accommodation at Woden Valley Hospital was considered a problem, as was the need to book so far in advance.

The GAT was considered very helpful by two general practitioners but came under criticism from three others. It was felt that the GAT repeated tests already done by the general practitioner and did not consult with the general practitioner. It was also felt that the GAT was not fully informed on the patients, thereby making it difficult for them to make decisions on care. One general practitioner said that he does not refer elderly patients to any services or specialist and only refers them to the GAT so there is no duplication of services.

Other pertinent points made by the general practitioners relating to residential care were that it is very hard to convince patients to accept help or care; and that general practitioners need to consider the quality of life for children and their families when residential care is being considered.

9.5.3 General comments on service provision

It was frequently mentioned that it was necessary to understand bureaucratic policies and procedures. But not all general practitioners knew the policies or procedures, nor indeed how to acquire basic information. This lack of information and how to obtain it led to specific questions regarding amounts of

care patients are entitled to; details of day care and transport availability; and arrangement of respite. The answers to these questions should ideally be known by general practitioners but at the very least they should know how to obtain the answers. These issues are critical because, in the absence of any fundamental cure or treatment for dementia, the main function of the general practitioner will be to maintain elderly people within the community for as long as possible and to "limit and delay dependency and deterioration." (Bergmann, 1983).

CHAPTER 10

DISCUSSION ON KNOWLEDGE OF DEMENTIA AND DEPRESSION BY GENERAL PRACTITIONERS

10.1 Introduction

The results of this second stage of the study indicate that general practitioners' knowledge of the symptoms and signs of depression and dementia is limited and, therefore, could be improved. Knowledge of the most common causes of dementia was also limited and frequently erroneous.

10.2 Knowledge of depression

Under the conditions of this study, two thirds of the general practitioners were able to cite three or fewer symptoms of depression. This finding is similar to results obtained in a recent North American study where medical residents (not experienced general practitioners) knew few of the diagnostic criteria and aetiological factors relating to depression in the elderly (Rapp & Davis, 1989). The most frequently cited symptoms for depression in both studies included changed sleep patterns and weight or appetite change. The present study also found that about half of the general practitioners mentioned the appearance of being depressed.

When the general practitioners were asked about the symptoms they look for in diagnosing depression, many symptoms were rarely mentioned. However, the frequency with which the general practitioners mentioned symptoms of depression corresponded reasonably well with the observed symptoms in the patients (Figure 9.1). Important exceptions were loss of energy, inability to think or concentrate, feelings of worthlessness or guilt and recurrent thoughts of death which were rarely mentioned by the general practitioners but found in the patients. These symptoms warrant more attention in general practice consultations with the elderly.

The present findings help account for the low recognition rate for depression in the elderly observed in this and the other recent Australian study (Pond *et al*, 1990). Greater knowledge of the symptoms and signs of depression by general practitioners may help to rectify this under-recognition.

When questioned about symptoms or signs of depression, about a quarter of the general practitioners mentioned symptoms related to anxiety as well as depression. The general practitioners seemed uncertain of the distinction between depression and anxiety. This is not surprising as anxiety and depression symptoms are frequently observed to co-exist in the general population and particularly in elderly patients in unfamiliar situations (Bergmann, 1978). In many cases the symptoms of anxiety may appear to be more disabling to the general practitioner and, therefore, anxiety is treated at the expense of the depression (Hendrie & Crossett, 1990).

10.3 Knowledge of dementia

Although the general practitioners' recognition rate was higher for dementia than depression, and similar to another recent study in Australia (Mant *et al*, 1988), their reported knowledge of symptoms and signs of dementia was limited. Thirty general practitioners described two or fewer diagnostic symptoms for dementia. The maximum number of symptoms mentioned was four. The question which arises from these findings is: *Why do general practitioners recognise dementia as well as has been reported, considering their poor knowledge of its features?* The answer to this may be that one sign of dementia, memory impairment, is such a good discriminator that a reasonably accurate diagnosis can be made using it alone. Most general practitioners mentioned memory impairment. Depression, by contrast, may require several features to be identified for accurate diagnosis.

10.4 Types of dementia

When asked about the type of dementia seen most frequently in their practice, 22 general practitioners mentioned dementias other than Alzheimer's disease or did not know. The conception that most dementias are due to multiple infarcts, cerebral atrophy or arteriosclerosis is inconsistent with neuropathological evidence (Ojeda *et al*, 1986; Henderson & Jorm, 1986). These results are not dissimilar to those in a comparable American study where causes other than Alzheimer's disease were thought by physicians to be the primary cause of dementia. The level of knowledge also appears to be similar to that mentioned by Sabin and his colleagues (1982) who observed that "Some [physicians] still

believe that all dementia is caused by hardening of the arteries and is a natural consequence of ageing" and were therefore reluctant to diagnose or treat elderly dementing patients.

At present, neuropathological evidence is the most accurate means of determining the proportions of the various dementias in the aged population. In a neuropathological survey of all demented patients who were necropsied in Perth, Western Australia, 73% had changes characteristic of Alzheimer's disease. The remaining cases were found to have miscellaneous causes of dementia (Ojeda et al, 1986). In summarising neuropathological studies from Europe, Henderson & Jorm (1986) concluded that about 70% of patients had Alzheimer's disease or Alzheimer's disease mixed with other dementing disorders; 17% had multi-infarct dementia; and 10% were found to have other disorders.

This finding of limited knowledge of dementing diseases may also help explain the general practitioners' moderate recognition rates. Perhaps it was not recognition *per se* but lack of knowledge of the dementing diseases which led to the poor identification rate. Given that a high proportion of the general practitioners were unfamiliar with the appropriate terminology and diagnostic signs and symptoms, they may have ascribed cognitive impairment to 'senility' or 'normal ageing' rather than to the effects of specific dementing diseases. Whatever the reason, these results provide an indication of a need for the dissemination of information on dementia and its causes to general practitioners.

10.5 Management of depression and dementia

When answering the questions relating to the case histories, the general

practitioners provided information on their management of dementia and depression in elderly patients and the use of specialist services. A number of interesting findings emerged.

First, GATs are seen as appropriate for demented patients but not for those with depression. This perception may be justified. GATs, under the auspice of the Commonwealth Department of Community Services and Health, have taken on the gatekeeper role for residential care in Australia and dementia is a major reason for considering this form of care. However, depression is not generally in itself a reason for considering residential care and its specialist management is more the province of psychogeriatrics. Furthermore, few GATs employ or even consult a psychogeriatrician.

Second, very few general practitioners would refer depressed patients to a specialist. In addition, it is noteworthy that only one of 101 participating patients had been referred to a psychiatrist either at the 'study consultation' or in the previous month. These findings suggests that general practitioners tend to treat common disorders such as depression themselves and refer them to a specialist only when the treatment becomes difficult, fails or is very severe. This result accords with a recent finding by Jorm & Henderson (1989) that elderly people in Australia receive a disproportionately low share of private psychiatric services. They speculated that low referral rates from general practitioners could be an important factor.

Third, the majority of general practitioners would refer an elderly patient with suspected Alzheimer's disease for diagnostic tests. This result is contrary to expectations as it was felt that general practitioners may be less likely to refer

elderly dementing patients for tests due to their age, level of cognitive deterioration and the lack of any specific diagnostic test or effective treatment for Alzheimer's disease. However, tests are no doubt undertaken so that treatable causes of dementia can be diagnosed.

Fourth, nursing homes and hostels are considered to be more appropriate for elderly patients when the carer is stressed than for dementia *per se*. The general practitioners' views on this issue are in accord with recent evidence that stress in carers is a major factor in the decision to seek residential care and that residential care is effective in relieving this stress (Jorm, 1988).

10.6 Continuing education

Based on the present findings, and if they are confirmed in future research, the need for further general practitioner training in psychological disturbances of the elderly should be a priority for medical faculties and the RACGP. Further and continuing education should be targeted at the experienced, older general practitioners who have higher proportions of elderly people in their practices and who know less about dementia and depression (Rubin *et al*, 1987). General practitioners acknowledge that they need to continue learning but that continuing education, which in Australia is at their own expense, has to compete with scarce time already consumed by practice and family commitments (Forrest *et al*, 1989)

Communication with patients (or the obtaining of information) and the processing of that information were not specifically examined in this study. These processes do, however, have direct relevance to the recognition of psychological disorders. Three patients were excluded from the present study because, at the

commencement of the interview, it was found that they were under 70 years of age. The general practitioners had referred these people for inclusion in the study because they erroneously thought the patient was over 70 years of age. This small, but not insignificant point, suggests that misunderstandings can occur during the 'initiation' component of the diagnostic process and that, perhaps, there is room for improvement in doctor-patient communication.

10.7 The future of geriatrics in general practice

Only three general practitioners stated that they had an interest in geriatric medicine, one of whom had additional training in the field. *Why is there such little interest in geriatric medicine by these general practitioners who have a substantial proportion of elderly patients in their practices?* As elderly people make up a very high proportion of patients in teaching hospitals (Byrne, personal communication), perhaps it is not surprising that young general practitioners, who have spent a considerable amount of their training time caring for elderly people in hospitals, wish to concentrate on other aspects of general practice when they graduate.

A strategy for meeting not only the problems of dementia and depression, but also of all other physical, psychological and social problems in the elderly, is required. One of the priorities should be "to have younger clinicians much more interested in the elderly, with a far higher level of competence in practice, especially general practice" (Henderson, 1983).

Perhaps one of the reasons for lack of interest or up-to-date knowledge of symptoms and signs of dementia and depression observed in this study is that over a third of the participating general practitioners graduated before the middle of

the 1950s. These general practitioners were trained during and shortly after the Second World War and it has been suggested that the dominant interest during that time in general practice was in physical illness (Thomas, 1981). Thomas (an English general practitioner) goes on to say that: "Those of us who were studying medicine in the 1940s experienced a curriculum and attitudes that concentrated on the body, and interest in and insight into things of the mind were minimal." He goes on to suggest that attitudes gradually changed after this time and that more doctors began taking an interest in and thus reported more psychological illness.

The results of this component of the study suggest that either the attitudes are still changing; or the attitudes have changed but there is minimal interest in and knowledge of psychological disorders, especially in the elderly. Whichever the case may be, attitudes, interest and knowledge can be improved through education and further training to: close gaps in factual knowledge; enhance interviewing skills (and the use of both verbal and non-verbal cues) employed to elicit information; and also enhance the diagnostic thinking processes used to interpret the information. Improvements to general practitioners' performance in these areas would not only provide substantial, long-term economic and social benefits but also reassurance to patients, their families and the community at large that accurate diagnoses and appropriate care are readily accessible.

CHAPTER 11

CONCLUSIONS

11.1 Summary of research findings

There is no dispute that a major demographic change is taking place in Australia. Equally, there is no dispute that, in later life, the chance of becoming demented increases exponentially. There also appears to be little dispute that depression is the most common psychiatric disorder and the one most frequently encountered by general practitioners. Additionally, there is no dispute that there is considerable variability in the detection of these psychiatric disorders by general practitioners and that, for the most part, detection rates have not been of a high order. Other recent Australian investigations suggest that, not only is there considerable variability in the Australian general practitioners' accuracy in the detection of psychological disorders but also, there is room for improvement in their accuracy. General practitioners are more accurate in their detection of dementia than depression. However, the detection rates were not high for either condition. The second component of the study has identified certain deficiencies in the general practitioners' knowledge about dementia and depression in the elderly. These deficiencies explain, to some degree, the inadequate recognition rates for dementia and depression. The questions arising from these findings are: *Would similar findings be obtained in larger samples of general practitioners and*

patients? Why is the detection and knowledge of dementia and depression inadequate? What can be done to improve the situation? And more specifically, how do these findings relate to the theoretical basis of the present study (outlined in Chapters 1 to 4)?

Due to the inadequate detection rates observed in the present study, the progression of patient care through the model described in the rationale for the study (Figure 4.2) from the presentation of symptoms and signs to recognition and management cannot be assumed. This finding confirms Goldberg and Huxley's (1980) theory, conceptualised in the pathway to mental health care (Figure 3.1), that general practitioners miss a substantial proportion of patients with psychological disorders (Level 2). This finding highlights two further points (i) that many elderly people are neither treated by the general practitioner nor referred to specialists (that is, they do not pass either the first or the second filter); and (ii) that one of the variables examined, knowledge about dementia and depression, may be a critical factor in general practitioners' detection of psychological and neuropsychiatric disorders.

11.2 Limitations of the study

While the results of this study have potentially important implications for general practice, there are limitations which must be pointed out.

Firstly, the sample of patients was relatively small in terms of the aged population residing in the inner suburbs of Canberra. Until a larger sample of elderly consulters can be examined in a similarly designed study, the generalised conclusions of this study should be treated with caution.

Secondly, the sample of general practitioners, whilst an expanded one, was still only small and drawn from a limited geographical area. These general practitioners were perhaps more aware of the problems of elderly people as they all practice in areas of Canberra with relatively high aged populations and all agreed to participate in a study of elderly patients. Furthermore, in the first component of the study, all but one general practitioner belonged to the RACGP. The study needs to be extended to other States so that the generality of these findings can be confirmed.

Thirdly, there are limitations in the instruments used as a standard to judge the general practitioners' performance. The measures for cognitive impairment were the MMSE, Information/Orientation scale and the IQCODE, none of which can make a diagnosis or fully covers all the DSM-III-R diagnostic criteria for dementia. Furthermore, these instruments are recognised to be accurate when screening for moderate or severe dementia but may be poor at identifying mild dementia.

However, the Diagnostic Interview for Depression was more comprehensive. It covered the DSM-III-R diagnostic criteria for Major Depression, thus providing a more thorough measure for depression than for dementia. It is conceivable that this led to the detection of cases of depression more effectively than for cases of dementia. The general practitioners nevertheless seem to be poorer at detecting depression than dementia.

Fourthly, dementia and depression are both states lying on continua from normality to severe disorders. What is a "case" represents an arbitrary cutoff on these continua, established by committees and consensus amongst research-

mindful clinicians. The general practitioners are likely to differ between themselves in where they place the threshold for defining a case and they may also differ from the thresholds used in the criterion instruments. No threshold can be considered the absolute truth in a Platonic sense; and the thresholds employed by general practitioners may be quite appropriate in general practice, even though they differ from those imposed by researchers specialising in mental disorders. To some extent, then, the present study is about the extent to which the general practitioners' concepts of depression and dementia agree with those imposed by researchers, which may not necessarily be appropriate or optimal for general practice.

Fifthly, the results relating to general practitioners' knowledge may be significant for future training of both newly graduated and experienced general practitioners. However, the mode of questioning may have underestimated the general practitioners' knowledge about dementia and depression. For example, the general practitioners' may have had 'procedural' or 'practical' knowledge of how to recognise these conditions, whereas the oral interview assessed only 'declarative' or 'reported' knowledge of symptoms and signs. Finally, some general practitioners may have been better communicators of their knowledge of these conditions than others.

11.3 Implications of findings

When dementia is present in a patient, but not diagnosed, the patients, the family and the general practitioner are each at a disadvantage. The interpretation of complaints; providing advice and counselling to the family; invoking and co-

ordinating support from community services; the management of intercurrent illnesses; the deterioration of cognitive impairment if inappropriate drugs are prescribed; and the promise of memory enhancing drugs in the future are all compelling reasons for the screening and diagnosis of dementia by general practitioners (Henderson, 1983).

When depression is present but not formally recognised, needless distress to patient and family occurs, especially if it is wrongly ascribed to age or to physical disorders or if it remains untreated, since there is a range of effective treatments now available, both pharmacological and non-pharmacological (The Quality Assurance Project, 1983; Johnson & Wilson, 1989). As Murphy (1983) concludes, depression has such a poor prognosis in the elderly that more attention should be paid to the prevention of depression. If general practitioners were to become more alert to physical and psychological problems of elderly people, especially at an early stage, they would be in a better position to prevent or at least alleviate morbidity from depression.

If, as a result of a raised awareness of psychological disorders in the elderly, general practitioners do increase their detection rate, what would be the cost implications?

Depression

Antidepressants would probably be targeted more effectively by general practitioners. Truly depressed people would be prescribed more antidepressants, but this would be counteracted by a reduction in inappropriate prescriptions.

Dementia

There could be a greater demand for residential and community services

and carer support. Perhaps more tests would be undertaken. Simple dementia screening tests would be cheap and useful, but there is a danger laboratory tests could be overused, for example, thyroid, vitamin-B₁₂, CT. These are only useful in detecting treatable causes of dementia, which Smith & Kiloh (1981) showed were rare in the elderly. Detailed investigation may only be worthwhile in younger cases. Also, Eastwood & Corbin (1981) have pointed out that the cost of testing for treatable dementia would be enormous if applied indiscriminately on a national scale.

In summary, it is highly desirable for health, economic and social reasons, that general practitioners recognise and diagnose dementia and depression early and accurately. It is frequently recommended that short screening instruments should be used as a matter of course in general practice to increase accuracy and efficiency, thereby reducing the need for referral to specialist units for expensive diagnostic testing.

11.4 Practical implications

The findings point to the need for further training in common psychiatric disorders of the elderly, particularly depression, not only for undergraduates, but for experienced general practitioners who treat a high proportion of the elderly population.

Implications for Faculties of Medicine

Attention should be paid to improvement of medical students' knowledge of psychiatric disorders in the elderly; criteria for the basis of diagnoses; skills

to make accurate diagnoses; and current management and referral practices. Perhaps, as concluded by Doyle & Ware (1977), emphasis should be placed on interpersonal skills and attitudes of prospective doctors at the time of selection and on 'the art of care' throughout their training.

Implications for Royal Australian College of General Practitioners

It is probably more difficult to identify and approach experienced, busy general practitioners with a view to enhancing their knowledge and practices or modifying their communication skills. However, two different approaches to continuing education for general practitioners have proved successful. Courses ranging from five evenings to 18 two-hour weekly sessions have succeeded in improving psychiatric interviewing skills (Andrews & Brodaty, 1980; Gask *et al*, 1987) and a personal approach to physicians succeeded in altering drug-related practices for the better (Avorn & Soumerai, 1983; Ray *et al*, 1986).

Implications for general practitioners

Firstly, participation in formal or informal continuing education on psychiatric disorders in the elderly may contribute to their knowledge and interest in this field and their psychiatric interviewing skills.

Secondly, the information provided by the screening instruments used in this study (that is, MMSE and Information/Orientation scale for dementia and the GHQ for depression) would be valuable aids to the general practitioner in diagnosis and treatment. As a high proportion of the general practitioners said that they would contact friends or relatives or relied on them for information in the actual cases and in the vignettes, the IQCODE should be further developed

for use in the general practice setting.

Although the focus of the research has been on determining how many demented and depressed patients general practitioners do not identify, the majority of the patients are not demented or depressed; are physically independent; have a person to turn to when in need (informant); and know how to seek services when necessary. To some extent this makes the general practitioners' task even more difficult as s/he has to be constantly alert to the possibility of cognitive impairment and/or depression.

11.5 Future research

Given the dearth of information and data on this topic, especially in the Australian context, and given the urgency with which it is required for timely planning and training, it is essential that research into this field not only continues but expands.

11.5.1 Direct extensions of the study

Initially, in order to confirm these findings, a study should be extended to other Australian states using the same research design but with larger samples of general practitioners and patients. In addition to this (or combined with it), a controlled trial comparing different methods of intervention aimed at improving identification, diagnosis and knowledge should be undertaken. There are a range of possible intervention strategies which could be used. Soumerai *et al* (1989) reviewed the strategies which had been directed at improving the effectiveness and efficiency of drug prescribing practice including dissemination of printed

educational material; group education, such as seminars; "academically based 'detailing'" which is a term coined by Avorn & Soumerai (1983) for one-to-one education. Similar interventions could also be developed with a view to improving general practitioners' recognition rate and knowledge. For example, the effectiveness and efficiency of printed material, group education, "academic detailing", or a combination of these interventions could be compared with a control group of general practitioners who received no intervention. Such a study could also provide information on economic aspects of accurate recognition including changes in frequency of diagnostic testing, prescribing patterns and referral practices.

All the studies cited in this thesis, including this one, have compared general practitioners' detection of disorders based on one consultation. As suggested by Blacker & Clare (1987) perhaps a more accurate measure of general practitioners' detection of 'hidden' psychiatric disorders may be achieved if diagnostic accuracy was based on more than one consultation with each patient. They proposed that three consultations may more accurately reflect general practitioners detection of psychiatric disorders. This is a particularly attractive idea but there are two drawbacks to the suggested expansion of consultations. For the most part, general practitioners agree to participate in research freely, but with some reluctance, as it is time consuming and may be intimidating. Any extension to general practitioners' involvement or participating time should be considered carefully. Additionally, in order to obtain a high participation rate for patients, the period of time required to interview patients three times could prove

impractical for research purposes¹¹.

An examination of methods to increase general practitioners' recognition rate, heighten their awareness, increase knowledge and interest, change perceptions about elderly patients, provide more information on drugs and treatment, also on the range of care and services available, strengthen and/or clarify the role of Geriatric Assessment Teams and provide general practitioners with more information on residential care options should be undertaken. Some educational options are mentioned above (Section 11.4) but careful consideration should be given to the optimal approach, for example, how the information should be delivered (personally, video, printed etc), by whom (Royal Colleges, Universities), to whom (students, which general practitioners) and how much (level of detail).

The information obtained on the management of depression and dementia by general practitioners raises more questions than are answered and would be another fruitful area for further examination with an expanded sample of general practitioners in other areas.

On a more specific level, it would be useful to explore the interaction between the physical health of elderly people and scores on screening instruments, particularly the GHQ and IQCODE. If these two instruments are to be beneficial to general practitioners, then it would be essential to know the degree to which physical health influences the scores; and how such confounding might be overcome.

¹¹It should be noted that in the present study all the patients had visited the general practitioner previously and only 17% had had a consultation the previous month, only 39% in two months and 82% in 12 months.

11.5.2 Broader issues to be covered in future work

Many broader questions arise as a result of this investigation. If recognition of psychiatric disturbances is so poor, is it only psychological disturbances that general practitioners are poor at detecting in elderly patients; how much physical illness remains undetected; how much do general practitioners understand about the elderly in general; and are they really interested? Perhaps these questions will never be fully answered but there are two possible approaches which may throw further light into this area. First, and perhaps the most obvious and researched perspective: that of targeting the general practitioners' knowledge, and identification and diagnostic processes, in relation to the treatment of psychological disturbances in the elderly. The second, and less well explored approach is that of the patient's willingness, confidence and ability to communicate effectively with a general practitioner. These aspects could be examined through a program aimed at empowering the elderly in clinical or medical settings. Philosophical principles which could form the basis of programs to assist the empowerment of elderly patients have already been laid down (Clark, 1989). The third and probably most fruitful avenue to explore, would be a combination of the two approaches. Despite these worthy intentions, it should be recognised that the demented and the depressed are the least likely to become empowered because of the very nature of their condition.

In an attempt to ascertain why there is under-recognition of psychological disorders in the elderly, answers to a range of further questions should be pursued. For example, what cues and symptoms do elderly patients display which alert general practitioners to disorders; what diagnostic thinking processes are

most effectively employed; and at what stage and why do general practitioners refer patients to specialists?

Over the coming years, it will be inevitable that general practitioners will be playing an expanded role in the community, particularly in relation to the elderly. An examination of cost-effective ways in which general practitioners can fulfil this expanded role will be essential to health and finance policy makers alike. Such an expanded role has been envisaged by the present Minister for Community Services and Health who contended that general practitioners would be expected to spend more time with their patients, become involved in community groups and develop closer links with other health professionals (Jones, 1990).

11.6 Conclusion

The diagnosis and treatment of dementia and depression in the elderly by general practitioners is a matter of considerable public health relevance. With the ageing of the Australian population, accurate and timely diagnosis and treatment will become increasingly important to the mental health and independence of the elderly. General practitioners will, therefore, have to be prepared to meet the mental health needs of the elderly over the coming years. If the findings of this thesis are confirmed on a larger sample, further and continuing education on psychological disorders in the elderly for medical students and experienced general practitioners alike will be essential if they are to meet that need.

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APPENDIX 6

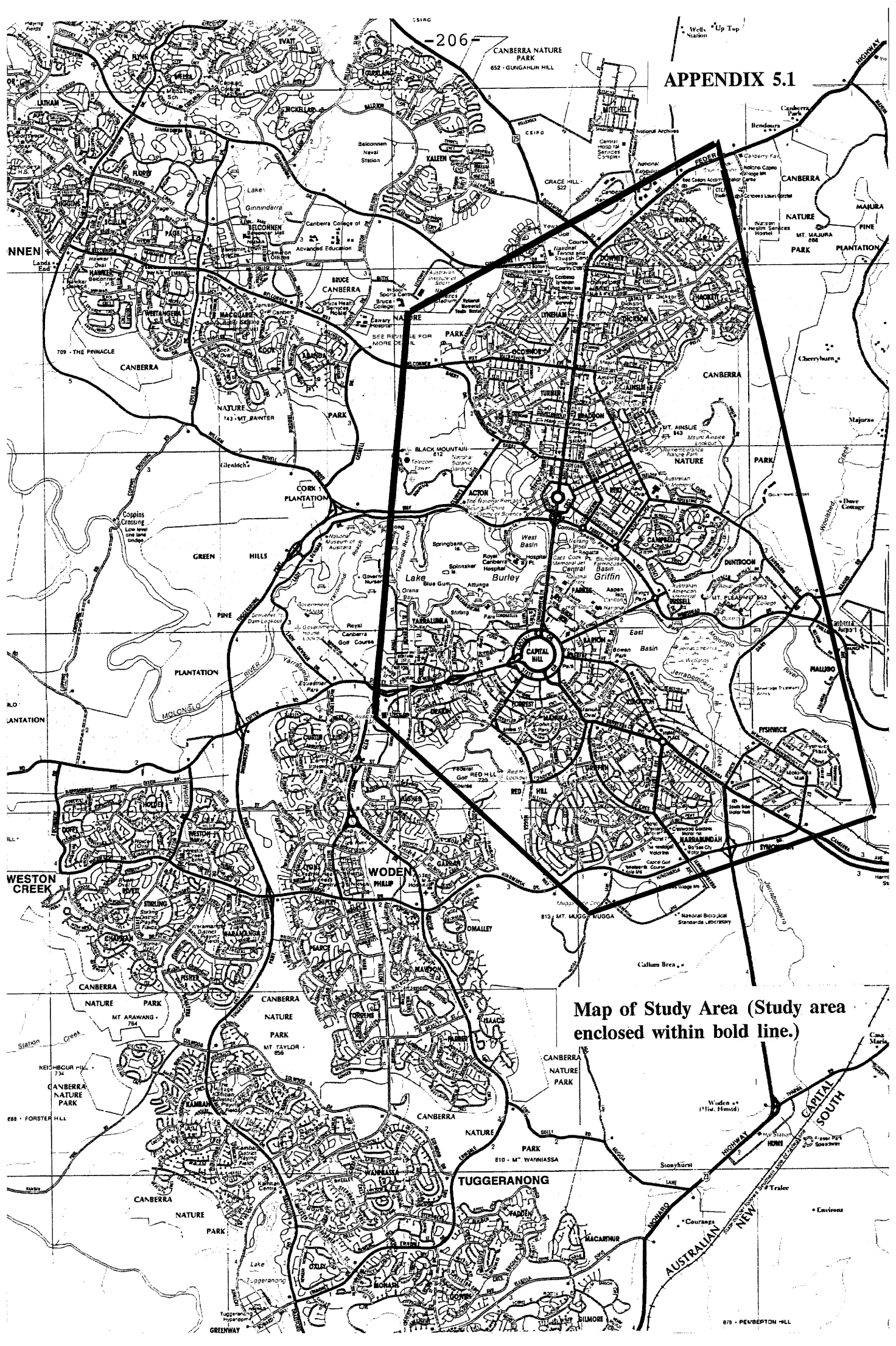
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Map of Study Area (Study area enclosed within bold line.)

GENERAL PRACTITIONER'S DEMOGRAPHIC INFORMATION

QUESTIONS TO BE COMPLETED BY GP PRIOR TO STUDY

NAME:

ADDRESS OF PRACTICE:

.....

AGE:

YEAR OF GRADUATION:

UNIVERSITY:

ACADEMIC QUALIFICATIONS:

POSTGRADUATE QUALIFICATIONS (if any), SPECIALTY AND YEAR

OBTAINED:

.....

CHARACTERISTICS OF PRACTICE:

Number of patients on register

Number of patients over 70 years on register

Number of partners

WHAT ARE YOUR SPECIAL INTERESTS IN MEDICINE?

.....

.....

GENERAL PRACTITIONER'S ASSESSMENT OF PATIENT

DATE

9	10	11	12	13	14
day		month		year	

1	2	3	7	8
ID			GP	

[031] 4-6

QUESTIONS TO BE ATTACHED TO EACH PATIENT'S FILE PRIOR TO CONSULTATION - TO BE COMPLETED AT THE TIME OF CONSULTATION BY GP

Please tick appropriate box

Did this patient agree to participate in the study? Yes 15
No

If the response is "no", would you please complete the rest of this questionnaire except for the last section.

Have you seen this patient before? Yes 16
No

If yes, how long ago? 17-18

DATE OF LAST VISIT					
day		month		year	

To what extent do you think this patient has been depressed over the past month?

not at all _____	<input type="checkbox"/>	19
mild _____	<input type="checkbox"/>	
moderate _____	<input type="checkbox"/>	
severe _____	<input type="checkbox"/>	

Is this the first time you have noticed depressive symptoms? Yes 20
No

If you have noticed depressive symptoms, either now or in the last 4 weeks, what action has been taken:

specialist referral _____	<input type="checkbox"/>	21
counselling _____	<input type="checkbox"/>	22
continuation of basic health care _____	<input type="checkbox"/>	23
other (please specify.....) _____	<input type="checkbox"/>	24

Has this patient had any antidepressant medication in the last 4 weeks? Yes 25
No

If yes, please provide:

Name of medication 26

Dosage

2.

To what extent do you think this person has some form of dementia?

not at all	_____	<input type="checkbox"/>	27
mild	_____	<input type="checkbox"/>	
moderate	_____	<input type="checkbox"/>	
severe	_____	<input type="checkbox"/>	

Is this the first time you have noticed some form of dementia?	Yes	<input type="checkbox"/>	28
	No	<input type="checkbox"/>	

If you have noticed some form of dementia either now or in the past, what action has been taken:

medication -	_____	<input type="checkbox"/>	29
specialist referral	_____	<input type="checkbox"/>	30
community support services	_____	<input type="checkbox"/>	31
residential care	_____	<input type="checkbox"/>	32
continuation of basic health care	_____	<input type="checkbox"/>	33
counselling of patient	_____	<input type="checkbox"/>	34
counselling of caregiver	_____	<input type="checkbox"/>	35
other (please specify.....)	_____	<input type="checkbox"/>	36

Does this patient have family or friends who provide support and/or care?	Yes	<input type="checkbox"/>	37
	No	<input type="checkbox"/>	

NAME OF PATIENT:.....

ADDRESS:.....

.....POST CODE.....

If the name and address is not supplied, it will be assumed you do not consider it appropriate for this patient to participate in the study. However, for the purposes of this study, it is of interest to know why. Please tick the appropriate box:

too physically disabled	_____	<input type="checkbox"/>
too mentally impaired	_____	<input type="checkbox"/>
too behaviourally disturbed	_____	<input type="checkbox"/>
unco-operative patient/caregiver	_____	<input type="checkbox"/>
other (please specify.....)	_____	<input type="checkbox"/>

DOCTOR: _____
CODE: _____

LIST OF PARTICIPATING PATIENTS

COMMENTS & DATE
OF CONSULTATION

PHONE NUMBER

ADDRESS

PATIENT'S NAME

SCHEDULE FOR PATIENTS' NAMES

1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Mrs Jennifer Bowers.

Work: 493894 or 473695 (leave message)

Home: 951629

LETTER TO INFORMANT

NATIONAL
HEALTH AND
MEDICAL RESEARCH COUNCIL



Social Psychiatry Research Unit
The Australian National University
Canberra, ACT 2601
Telephone: National (062) 47 3695 and 492741
International +61 62 473695
Telex: 62033 AA

Dear

I am carrying out a study on the illnesses of elderly people. It is hoped that the study will enable general practitioners and service providers to better recognise health problems in elderly people and thereby allow them to assist elderly people more fully than at present.

I have recently visited _____ and suggested that I could contact you and ask you to fill out the attached questionnaire. All information provided will remain completely confidential.

When you have completed the questionnaire, could you place it in the attached envelope and post it to me.

If you have any queries you can contact me at work on 493894 or 473695 or at home on 951629.

Thank you for your co-operation.

Yours sincerely,

Jennifer Bowers



INFORMANT QUESTIONNAIRE

			0	2	1	1-6
--	--	--	---	---	---	-----

ID Type

HEALTH AND MEMORY CHANGES IN THE ELDERLY

This questionnaire asks about changes you may have observed in you friend or relative over the past 10 years. But first I need to know something about him/her and a little about you. All information provided will remain completely confidential.

- 1. How old is your friend or relative right now? 7-9
- 2. How old was this person when he/she left school? 10-11

3. What is the highest qualification (or degree) obtained by your friend or relative? (Please circle one answer)

- 1. No schooling
- 2. Attended Primary School
- 3. Completed Primary School
- 4. Attended Secondary School
- 5. Intermediate, Junior or School Certificate; School Boards (Certificate) 12
- 6. Matric, Higher School or Leaving Certificate; School Boards (A and B Certificate)
- 7. Attended Tertiary College or University
- 8. Completed Tertiary College or University (two years or more)

4. What is the marital status of your friend or relative now? (Please circle one answer)

- 1. Married
- 2. De facto
- 3. Never married
- 4. Widowed 13
- 5. Divorced
- 6. Separated
- 7. Don't know/not sure

5. What is your relationship? (Please circle one answer)

- 1. Spouse
- 2. Sibling
- 3. Son/daughter 14
- 4. In-law
- 5. Friend
- 6. Other (specify)

2.

6. Has this person ever been diagnosed as suffering from dementia or Alzheimer's disease? (Please circle one answer)

- 1. Yes 15
- 2. No

A. If Yes, who made this diagnosis? (Please circle one answer)

- 1. General Practitioner
- 2. Specialist 16
- 3. Assessment Clinic
- 4. Other (please specify)

B. If No, do you think this person is suffering from severe memory loss or dementia? (Please circle one answer)

- 1. Yes 17
- 2. No

7. Has this person ever been diagnosed as suffering from depression? (Please circle one answer)

- 1. Yes 18
- 2. No

A. If yes, who made this diagnosis? (Please circle one answer)

- 1. General Practitioner
- 2. Specialist 19
- 3. Assessment Clinic
- 4. Other (please specify)

B. If No, do you think this person is depressed? (Please circle one answer)

- 1. Yes 20
- 2. No

8. You are: (Please circle one answer)

- 1. Male
- 2. Female 21

9. How old are you? 22-23

3.

Now, I would like to ask you about changes you may have observed in your friend or relative's physical health during the past 10 years and how much assistance your friend or relative needs with every day activities.

10. Compared to 10 years ago, how is his/her: (Please circle one answer)

		1	2	3	4	5	
A.	Hearing	Much better	A bit better	Not much change	A bit worse	Much worse	24
B.	Vision	Much better	A bit better	Not much change	A bit worse	Much worse	25
C.	Ability to use his/her fingers and hands	Much better	A bit better	Not much change	A bit worse	Much worse	26
D.	Ability to use his/her legs	Much better	A bit better	Not much change	A bit worse	Much worse	27

11. What level of assistance does your friend or relative require to perform the following everyday activities? (Please circle one answer for each item)

		1.	2.	3.	4.	5.	
A.	showering/bathing	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	28
B.	dressing	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	29
C.	eating/feeding	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	30
D.	getting around home/flat etc.	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	31
E.	getting out of home/flat etc.	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	32
F.	walking 200 m	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	33
G.	walking up and down stairs	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	34
H.	using public transport	unable to manage at all	requires help/ supervision	requires no help but has difficulty	has no difficulty	don't know/ not sure	35

4.

12. If you have circled a response in column 1 or 2 above, how long have you or another person been assisting your friend or relative to do those activities? Please insert years and/or months next to the corresponding activities and leave blank if not applicable.

	Years and/or months		
A. showering/bathing	_____	_____	36-7
B. dressing	_____	_____	38-9
C. eating/feeding	_____	_____	40-1
D. getting around home/flat etc.	_____	_____	42-3
E. getting out of home/flat etc.	_____	_____	44-5
F. walking 200 m	_____	_____	46-7
G. walking up and down stairs	_____	_____	48-9
H. using public transport	_____	_____	50-1

13. Have you been the primary provider of assistance for your friend or relative?

- | | |
|--------|----|
| 1. Yes | 52 |
| 2. No | |

INFORMANT QUESTIONNAIRE ON

COGNITIVE DECLINE IN THE ELDERLY

			0	2	2
ID			Type 1-6		

Now I want you to remember what your friend or relative was like 10 years ago and to compare it with what he/she is like now. 10 years ago was in 1979. Below are situations where this person has to use his/her memory or intelligence and we want you to indicate whether this has improved, stayed the same, or got worse in that situation over the past 10 years. Note the importance of comparing his/her present performance with 10 years ago. So if 10 years ago this person always forgot where he/she had left things, and he/she still does, then this would be considered "Hasn't changed much". Please indicate the changes you have observed by circling the appropriate answer.

Compared with 10 years ago how is this person at:

	1	2	3	4	5	
1. Recognizing the faces of family and friends	Much better	A bit better	Not much change	A bit worse	Much worse	7
2. Remembering the names of family and friends	Much better	A bit better	Not much change	A bit worse	Much worse	8
3. Remembering things about family and friends e.g. occupations, birthdays, addresses	Much better	A bit better	Not much change	A bit worse	Much worse	9
4. Remembering things that have happened recently	Much better	A bit better	Not much change	A bit worse	Much worse	10
5. Recalling conversations a few days later	Much better	A bit better	Not much change	A bit worse	Much worse	11
6. Forgetting what he/she wanted to say in the middle of a conversation	Much better	A bit better	Not much change	A bit worse	Much worse	12
7. Remembering his/her address and telephone number	Much better	A bit better	Not much change	A bit worse	Much worse	13
8. Remembering what day and month it is	Much better	A bit better	Not much change	A bit worse	Much worse	14
9. Remembering where things are usually kept	Much better	A bit better	Not much change	A bit worse	Much worse	15
10. Remembering where to find things which have been put in a different place from usual	Much better	A bit better	Not much change	A bit worse	Much worse	16
11. Adjusting to any change his/her day-to-day routine	Much better	A bit better	Not much change	A bit worse	Much worse	17
12. Knowing how to work familiar machines around the house	Much better	A bit better	Not much change	A bit worse	Much worse	18

PLEASE GO ON TO THE NEXT PAGE

6

13. Learning to use a new gadget or machine around the house	Much better	A bit better	Not much change	A bit worse	Much worse	19
14. Learning new things in general	Much better	A bit better	Not much change	A bit worse	Much worse	20
15. Remembering things that happened to him/her when he/she was young	Much better	A bit better	Not much change	A bit worse	Much worse	21
16. Remembering things he/she learned when he/she was young	Much better	A bit better	Not much change	A bit worse	Much worse	22
17. Understanding the meaning of unusual words	Much better	A bit better	Not much change	A bit worse	Much worse	23
18. Understanding magazine or newspaper articles	Much better	A bit better	Not much change	A bit worse	Much worse	24
19. Following a story in a book or on TV	Much better	A bit better	Not much change	A bit worse	Much worse	25
20. Composing a letter to friends or for business purposes	Much better	A bit better	Not much change	A bit worse	Much worse	26
21. Knowing about important historical events of the past	Much better	A bit better	Not much change	A bit worse	Much worse	27
22. Making decisions on everyday matters	Much better	A bit better	Not much change	A bit worse	Much worse	28
23. Handling money for shopping	Much better	A bit better	Not much change	A bit worse	Much worse	29
24. Handling financial matters, e.g. the pension, dealing with the bank	Much better	A bit better	Not much change	A bit worse	Much worse	30
25. Handling other everyday arithmetic problems, e.g. knowing how much food to buy, knowing how long between visits from family or friends	Much better	A bit better	Not much change	A bit worse	Much worse	31
26. Using his/her intelligence to understand what's going on and to reason things through	Much better	A bit better	Not much change	A bit worse	Much worse	32

PLEASE GO ON TO THE NEXT PAGE

7

27. Recently, has your friend or relative seemed particularly lethargic and slowed down, so that her/his movements have been very much slower or her/his speech has become slow or monotonous?

- 1. Yes 33
- 2. No

A. If yes, is she/he still like this? About how long has it lasted?

- 1. No 34
- 2. Yes, just for one or two odd days
- 3. Yes, nearly every day for at least 2 weeks

28. Recently, has your friend or relative been particularly restless and fidgety, so that she/he had trouble sitting still and would, for example, pace up and down?

- 1. Yes 35
- 2. No

A. If yes, is she/he still like this? Has it been going on for long?

- 1. No 36
- 2. Yes, just for one or two odd days
- 3. Yes, nearly every day for at least 2 weeks

THANK YOU FOR YOUR ASSISTANCE

INTERVIEWER RATING

(To be completed by Interviewer)

How well did he/she seem to hear you?

- Very well.....1
- Quite well, though occasionally missed a word.....2 31
- Somewhat impaired. Had to repeat many questions.....3
- Not well at all.....4
- Profoundly deaf. Had to read questions.....5
- Not rated.....9

How well was he/she able to read the papers given to him/her?

- Very well.....1
- Quite well, though had some trouble with small print.....2
- Somewhat impaired. Had to study some pages.....3 32
- Not well at all.....4
- Blind. Interviewer had to read aloud or omit questions requiring sight.....5
- Not rated.....9

How well was he/she able to write on the sheets he/she was given?

- Very well.....1
- Quite well, though had some trouble with motor control.....2 33
- Somewhat impaired, wrote with great difficulty.....3
- Not well at all.....4
- Unable to write (no movement in limb).....5
- Not rated.....9

Overall, how well did he/she seem to see?

- Very well.....1
- Quite well, though some limitations in near vision.....2
- Somewhat impaired. Movement limited to some extent.....3 34
- Not well at all. (Unable to move about in unfamiliar surrounds without help.)..4
- Blind.....5
- Not rated.....9

How well was he/she able to use his/her finger(s) and hand(s)?

- Very well..... 1
- Quite well, though had some impairment 2
- Somewhat impaired, Control/movement limited to some extent..3 35
- Not well at all. Unable to hold things or control movements..4
- Unable to move hand or fingers 5
- Not rated..... 9

How often did you have to repeat questions because his/her attention wandered?

Not at all.....	1	
Occasionally.....	2	36
Many times.....	3	
Constantly.....	4	
Not rated.....	9	

How often did he/she repeat answers to previous question?

Not at all.....	1	
Occasionally.....	2	
Many times.....	3	37
Constantly.....	4	
Not rated.....	9	

Was he/she muddled or confused as indicated by rambling or incoherent speech?

Yes.....	1	
No.....	2	
Not rated.....	9	38

Did he/she drop off to sleep during the interview?

Yes.....	1	
No.....	2	
Not rated.....	9	39

APPENDIX 5.5

PATIENTS' INSTRUMENTS

Patients' Demographic Information	222
General Health Questionnaire	228
Diagnostic Interview for Depression	229
Mini-Mental State Examination combined with the Information/Orientation Scale from the Clifton Assessment Procedures for the Elderly	240

PATIENT'S DEMOGRAPHIC INFORMATION

0	1	1
---	---	---

4-6

Type

--	--	--	--	--	--

7-12

Date

GP STUDY - CLIENT

Name

Address

Postcode

Doctor

* Questions to be completed by interviewer

1. * Client Code Number

1-3

[011] 4-6

2. * Client's postcode

[date] 7-12

13-16

3. * Sex 1. Male
2. Female

17

4. What is your date of birth

Day Month Year

18-25

5. What is your marital status?

- 1. married
- 2. de facto
- 3. never married
- 4. widowed
- 5. divorced
- 6. separated
- 7. don't know/not sure

26

6. Asks this question if no spouse, friend, relative or caregiver available at time of interview to fill in informant questionnaire.

I WOULD LIKE TO KNOW IF THERE IS SOME PERSON WHO HAS KNOWN YOU FOR TEN YEARS OR MORE AND WHO WOULD BE ABLE TO DESCRIBE YOUR PRESENT CIRCUMSTANCES AND PAST LIFE. THE QUESTIONS, WHICH I WOULD POST, WOULD BE SIMILAR TO BUT NOT AS MANY AS THE ONES I HAVE BEEN ASKING YOU TODAY. THE QUESTIONS SHOULDN'T TAKE LONGER THAN A FEW MINUTES TO COMPLETE.

DO YOU HAVE A RELATIVE OR FRIEND WHOM YOU THINK WOULD BE WILLING TO ANSWER THESE QUESTIONS - QUESTIONS MAINLY ABOUT YOU, NOT HIM/HER?

YES

27

NO

If respondent seems reluctant, do not push, but reassure them that I appreciate the help they have given.

(If yes)

COULD I HAVE HIS/HER NAME AND ADDRESS? IN CASE WE GET NO RESPONSE OR CANNOT CONTACT HIM/HER, COULD YOU TELL ME HIS/HER PHONE NUMBER AND IS THERE ANYONE ELSE WHO KNOWS YOU WELL WHO YOU THINK WOULD BE WILLING TO ANSWER THESE QUESTIONS ABOUT YOU IF I DO NOT SUCCEED IN CONTACTING THE FIRST PERSON?

NAME

ADDRESS

PHONE

.....
.....

WILL YOU PLEASE LET HIM/HER KNOW THAT I WILL BE CONTACTING HIM/HER AND THAT I HAVE YOUR PERMISSION TO ASK HIM/HER THESE QUESTIONS ABOUT YOU.

7. Do you live:

- 1. alone
- 2. with spouse/partner only
- 3. with spouse/partner and other family members
- 4. with family member(s) only
- 5. with non-family member (e.g. group home, boarding house)
- 6. other (specify.....)

28

8. * What are the living conditions of client?

- 1. separate house
- 2. flat attached to separate house
- 3. semi-detached house
- 4. row/terrace/villa/townhouse
- 5. 'low-rise' flat/unit (2 or 3 storeys)
- 6. 'high-rise' flat/unit (4 or more storeys)
- 7. caravan/houseboat/mobile dwelling
- 8. converted garage
- 9. nursing home
- 10. hostel
- 11. retirement village/unit
- 12. other (specify.....)

29-30

9. What is the highest qualification you have obtained?

- 1. no schooling
- 2. attended primary school
- 3. completed primary school
- 4. attended secondary school
- 5. Intermediate, Junior or School Certificate;
School Boards (C Certificate)
- 6. Matric, Higher School or Leaving Certificate; School Boards (A and B Certificates)
- 7. attended tertiary college or university
- 8. completed tertiary college or university (two years or more)

	31
--	----

10. What level of assistance do you need with these everyday tasks?

- 1. unable to manage at all
- 2. require help/supervision
- 3. require no help but have difficulty
- 4. have no difficulty
- 9. don't know/not sure

	1.		2.	
	Place 1-5 in box		months	
. showering/bathing		32		33-34
. dressing		35		36-37
. eating/feeding		38		39-40
. getting around home/flat		41		42-3
. getting out of home/flat		44		45-6
. walking 200 m		47		48-9
. walking up and down stairs		50		51-2
. using public transport		53		54-5

11. If any answers to question 10 above are 1 or 2, then how long has assistance at this level been provided. (See column 2 above)

12. Over the last month, from whom have you received assistance and who has helped you the most? (Place numbers in order of level of assistance or 0 if not applicable)

- 1. other people in household (specify.....)
- 2. other relatives (specify.....)
- 3. other friends/neighbours
- 4. organisations/services, e.g. church, Rotary (specify.....)
- 5. other (specify.....)
- 9. don't know/not sure

	56
	57
	58
	59
	60
	61

[ID] 1-3
[012] 4-6

13. In the past month have you received services from:

Place a 0 for no service
or 1 for service
in each box

- 1. home help _____
- 2. home nursing _____
- 3. home paramedical _____
- 4. home-based respite care/sitter service _____
- 5. home delivered meals _____
- 6. home maintenance/modification _____
- 7. centre paramedical services _____
- 8. day care centre _____
- 9. transport service _____
- 10. support and information (specify by whom.....) _____
- 11. co-ordination of family/friends (specify by whom.....) _____
- 12. purchase services other than above (specify type.....) _____
- 13. other (specify.....) _____
- 14. no services received _____
- 15. not applicable _____

	7
	8
	9
	10
	11
	12
	13
	14
	15
	16
	17
	18
	19
	20
	21

14. Who referred you to the services you mentioned? (Make a note of service type against referral source where possible).

- 1. self
- 2. relative/friend
- 3. GP
- 4. hospital
- 5. home care service
- 6. home nursing service
- 7. meals on wheels
- 8. GAT
- 9. community information/neighbourhood centre
- 10. local government
- 11. hostel (name.....)
- 12. nursing home (name.....)
- 13. other (specify.....)
- 99. no services/no other referee

		22-3
		24-5

15. In the last month, have you received advice or help for yourself from any of the following?

- | | | |
|-----|---|----|
| 1. | GP _____ | 26 |
| 2. | Psychiatrist _____ | 27 |
| 3. | Other doctor (specialist) _____ | 28 |
| 4. | Chiropractor _____ | 29 |
| 5. | Nurse _____ | 30 |
| 6. | Chemist, Pharmacist _____ | 31 |
| 7. | Social Worker _____ | 32 |
| 8. | Psychologist (counsellor, therapist) _____ | 33 |
| 9. | Clergyman _____ | 34 |
| 10. | Natural health practitioner _____ | 35 |
| 11. | Physiotherapist _____ | 36 |
| 12. | Occupational Therapist (OT) _____ | 37 |
| 13. | Optometrists _____ | 38 |
| 14. | Speech Pathologists (Speech Therapists) _____ | 39 |
| 15. | Dentist _____ | 40 |
| 16. | Podiatrist _____ | 41 |
| 17. | Any other person (specify.....) | 42 |

GENERAL HEALTH QUESTIONNAIRE (GHQ)

I would like to know how you have been feeling over the past few weeks.

[ID] 1-3

[013] 4-6

Please circle your response

HAVE YOU RECENTLY:		1	2	3	4	
1.	Been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual	7
2.	Lost much sleep over worry?	Not at all	no more than usual	Rather more than usual	Much more than usual	8
3.	Felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful	9
4.	Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable	10
5.	Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual	11
6.	Felt that you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual	12
7.	Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual	13
8.	Been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able	14
9.	Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual	15
10.	Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual	16
11.	Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual	17
12.	Been feeling reasonably happy, all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual	18

DIAGNOSTIC INTERVIEW FOR DEPRESSION

[ID] 1-3

[014] 4-6

HERE IS A LIST OF QUESTIONS ABOUT HOW SOME PEOPLE FEEL FROM TIME TO TIME. THESE ARE STANDARD QUESTIONS WHICH I AM ASKING EVERYONE. MANY OF THEM WILL NOT APPLY TO YOU BUT I WOULD LIKE YOU TO ANSWER ALL OF THEM, TO MAKE SURE I DON'T MISS ANYTHING.

NOW I'D LIKE TO ASK YOU ABOUT HOW YOU'VE BEEN FEELING WITHIN YOURSELF.

1. IN THE LAST 2 WEEKS, HAVE YOU BEEN FEELING DEPRESSED OR SAD AT ALL?

- Yes.....1
- No (Go to Q. 2.).....2
- No codable reply.....8
- Not asked.....9

(If Yes)

A. HAS THIS BEEN:

- MOST OF THE DAY AND NEARLY EVERY DAY1
- ONLY FROM TIME TO TIME (Go to Q. 1B).....2
- No codable reply.....8
- Not asked.....9

(If code 1 in Q. 1A)

1) IS THIS USUAL FOR YOU?

- Yes.....1
- No.....2
- No codable reply.....8
- Not asked.....9

2) HOW LONG HAVE YOU BEEN FEELING THIS WAY?

Months _____

- Most of my life..... 777
- No codable reply..... 888
- Not asked..... 999



B. DURING THIS PERIOD OF FEELING SAD OR DEPRESSED, HAVE THE THINGS YOU'VE DONE SUFFERED, OR HAVE YOU ALWAYS BEEN ABLE TO GET YOUR JOBS DONE?

Things did not suffer.....	1	
Things suffered.....	2	13
No codable reply.....	8	
Not asked.....	9	

C. WHEN YOU ARE FEELING LIKE SAD, DEPRESSED OR IRRITABLE, CAN ANYTHING CHEER YOU UP?

No.....	1	
Yes (Go to Q. 2).....	2	14
No codable reply.....	8	
Not asked.....	9	

(If No)

1) DO YOU FEEL THIS WAY ALL THE TIME, DAY AFTER DAY, OR ARE THERE DAYS WHEN YOU FEEL ALRIGHT?

Almost always feel sad.....	1	
Days when feel alright.....	2	15
No codable reply.....	8	
Not asked.....	9	

2) IS THERE ANY PARTICULAR TIME OF DAY WHEN YOU FEEL WORSE?

No.....	1	
Yes (Go to Q. 2a).....	2	16
No codable reply.....	8	
Not asked.....	9	

(If Yes)

a) WHEN IS THAT?

Morning.....	1	
Midday.....	2	
Afternoon.....	3	17
Evenings.....	4	
No codable reply.....	8	
Not asked.....	9	

(If code 1)

b) DO YOU FEEL BETTER AS THE DAY GOES ON?

No.....	1	
Yes.....	2	18
No codable reply.....	8	
Not asked.....	9	

IN THE LAST TWO WEEKS, HAVE YOU BEEN FEELING IRRITABLE AT ALL?

Yes.....	1	
No (If Q. 2 is also code no. 2, go to Q. 4 Go to Q. 3).....	2	19
No codable reply.....	8	
Not asked.....	9	

(If Yes)

A. HAS THIS BEEN:

MOST OF THE DAY AND NEARLY EVERY DAY.....	1	
OR ONLY FROM TIME TO TIME (Go to Q. 3.).....	2	
No codable reply.....	8	
Not asked.....	9	20

(If code 1)

1) IS THIS USUAL FOR YOU?

Yes.....	1	
No.....	2	
No codable reply.....	8	
Not asked.....	9	21

2) HOW LONG HAVE YOU BEEN FEELING THIS WAY?

Years.....	_____	
or		
Months	_____	22-24
or		
Weeks	_____	
No codable reply.....	888	
Not asked.....	999	

3. HAVE YOU TALKED TO A DOCTOR OR OTHER PROFESSIONAL ABOUT FEELING DEPRESSED, SAD OR IRRITABLE?

No (Go to Q. 4.).....	1	
Yes.....	2	
No codable reply.....	8	
Not asked.....	9	25

(If Yes)

A. WHAT DID THE DOCTOR SUGGEST YOU DO ABOUT IT? (Record answer)

B. HAVE YOU TAKEN MEDICINE FOR IT?

No (Go to Q. 4.).....	1	
Yes.....	2	
No codable reply.....	8	
Not asked.....	9	26

(If Yes)

1) WAS THIS PRESCRIBED BY A DOCTOR?

Yes.....	1	
No.....	2	
No codable reply.....	8	
Not asked.....	9	27

4. IN THE LAST TWO WEEKS, HAVE YOU BEEN TEARFUL OR CRYING A LOT?

- No.....1
 - Yes.....2
 - No codable reply.....8
 - Not asked.....9
- 28

NOW I'D LIKE TO ASK YOU SOME QUESTIONS ABOUT YOUR WEIGHT AND APPETITE?

5. HOW MUCH DO YOU WEIGH?

(If in kilograms, enter here)..... _____

- Stones..... _____
 - lbs (code number in addition to stones only)..... _____
 - Don't know, no codable reply..... 88
 - Not asked..... 99
- 29-30

6. AND HOW TALL ARE YOU?

- Feet..... _____
 - and
 - Inches (code number in addition to feet only)..... _____
 - Don't know, no codable reply..... 888
 - Not asked..... 999
- 31-33

7. WHAT HAS YOUR APPETITE BEEN LIKE IN THE LAST 2 WEEKS? HAVE YOU:

- HAD LITTLE APPETITE.....1
 - BEEN ABOUT THE SAME (Go to Q. 8.).....2
 - BEEN OVEREATING.....3
 - No codable reply.....8
 - Not asked.....9
- 34

(If little appetite or always overeating)

A. IS THIS USUAL FOR YOU OR HAS THERE BEEN A RECENT CHANGE?

- Usual.....1
 - Recent change.....2
 - No codable reply.....8
 - Not asked.....9
- 35

8. RECENTLY, HAVE YOU LOST OR GAINED WEIGHT, OR STAYED AT ABOUT THE SAME?

- Gained weight.....1
 - Stayed about the same (Go to Q. 9.).....2
 - Lost weight.....3
 - No codable reply.....8
 - Not asked.....9
- 36

(If lost or gained weight)

A. APPROXIMATELY HOW MUCH HAVE YOU LOST/GAINED?

(If in kilograms, enter here)..... _____

- Stones..... _____
 - lbs (code number in addition to stones only)..... _____
 - No codable reply..... 88
 - Not asked..... 99
- 37-38



B. WHY DO YOU THINK YOU'VE LOST/GAINED WEIGHT? (Record response)

THE NEXT FEW QUESTIONS ARE ABOUT SLEEP

9. HAVE YOU HAD TROUBLE SLEEPING OVER THE PAST 2 WEEKS?

No (Go to Q.10.).....	1	
Yes.....	2	39
No answer, no codable reply.....	8	
Not asked.....	9	

(If Yes)

A. HAS THIS BEEN:

NEARLY EVERY NIGHT.....	1	
or		
ONLY SOME TIMES?.....	2	40
No codable reply.....	8	
Not asked.....	9	

B. IN THE LAST 2 WEEKS, HOW LONG EACH NIGHT WOULD YOU USUALLY LIE AWAKE?

Hours (if less than 1 hour, code 0).....		41
No answer, no codable reply.....	8	
Not asked.....	9	

C. IF YOU WAKE UP DURING THE NIGHT, CAN YOU GET BACK TO SLEEP?

Yes (Go to Q. 9D.).....	1	
Cannot return to sleep after waking up.....	2	42
No answer, no codable reply.....	8	
Not asked.....	9	

(If cannot get back to sleep):

1) HOW LONG IS THIS BEFORE YOU NORMALLY WAKE UP?

Hours (if less than 1 hour, code 0).....		43
No codable reply.....	8	
Not asked.....	9	

D. HAVE YOU BEEN TAKING ANYTHING TO HELP YOU SLEEP?

No (Go to Q.10.).....	1	44
Yes.....	2	
No codable reply.....	8	
Not asked.....	9	

(If Yes)

1) HAS THIS BEEN:?

NEARLY EVERY NIGHT.....	1	45
or		
ONLY SOMETIMES.....	2	
No codable reply.....	8	
Not asked.....	9	

10. IN THE LAST 2 WEEKS, HAVE YOU FELT YOU WERE SLEEPING TOO MUCH?

- No (Go to Q. 11).....1 46
- Yes.....2
- No codable reply.....8
- Not asked.....9

(If yes)

A. HAS THIS BEEN:?

- NEARLY EVERY NIGHT.....1 47
- or
- ONLY SOMETIMES.....2
- No codable reply.....8
- Not asked.....9

11. IN THE LAST 2 WEEKS, HOW OFTEN HAVE YOU BEEN WORN OUT OR HAD TOO LITTLE ENERGY, EVEN WHEN YOU HAVEN'T BEEN DOING A LOT? HAS THIS OCCURRED:

- NEVER.....1
- SOME OF THE TIME.....2 48
- MOST OF THE TIME.....3
- ALL THE TIME.....4
- No codable reply.....8
- Not asked.....9

12. IN THE LAST 2 WEEKS, HAVE YOU TALKED OR MOVED MORE SLOWLY THAN IS NORMAL FOR YOU?

- No (Go to Q. 13).....1 49
- Yes.....2
- No codable reply.....8
- Not asked.....9

(If Yes)

A. HAS THIS BEEN:?

- NEARLY EVERY DAY.....1 50
- or
- ONLY SOMETIMES.....2
- No codable reply.....8
- Not asked.....9

13. IN THE LAST 2 WEEKS, HAVE YOU HAD TO BE MOVING ALL THE TIME - THAT IS, YOU WERE SO RESTLESS THAT YOU COULDN'T SIT STILL?

- No (Go to Q. 14).....1 51
- Yes.....2
- No codable reply.....8
- Not asked.....9

(If Yes)

A. HAS THIS BEEN:?

- NEARLY EVERY DAY.....1 52
- or
- ONLY SOMETIMES.....2
- No codable reply.....8
- Not asked.....9

14. LATELY, HAVE YOU LOST INTEREST AND PLEASURE IN ALMOST EVERYTHING THAT YOU USUALLY CARE ABOUT, OR DO SOME THINGS STILL GIVE YOU PLEASURE?

- Lost interest.....1 53
- Still some interest.....2
- No codable reply.....8
- Not asked.....9

15. IN THE LAST 2 WEEKS, HOW INTERESTED HAVE YOU BEEN IN THINGS YOU USUALLY LIKE TO DO SUCH AS JOBS OR HOBBIES?

- Have you been more interested than usual.....1 54
- About the same.....2
- Less interested.....3
- Completely uninterested.....4
- No codable reply.....8
- Not asked.....9

16. IN THE PAST 2 WEEKS, HOW HAVE YOU FELT ABOUT BEING WITH OTHER PEOPLE: HAVE YOU WANTED TO BE WITH THEM MORE OR LESS THAN USUAL, OR HAS THERE BEEN NO CHANGE?

- More than usual.....1 55
- About the same.....2
- Less than usual.....3
- No codable reply.....8
- Not asked.....9

17. HOW WELL DO YOU FEEL YOU CAN COPE WITH DAY-TO-DAY THINGS? CAN YOU COPE:

- VERY WELL.....1 56
- REASONABLY WELL.....2
- NOT VERY WELL AT ALL.....3
- No codable reply.....8
- Not asked.....9

18. WHAT IS YOUR OPINION OF YOURSELF IN COMPARISON TO OTHER PEOPLE? DO YOU FEEL YOU ARE AS GOOD AS, BETTER, OR WORSE THAN OTHER PEOPLE YOUR AGE?

- Better (Go to Q. 19).....1 57
- As good as/the same (Go to Q. 19).....2
- Worse.....3
- No codable reply.....8
- Not asked.....9

(If worse)

A. HOW OFTEN IN THE LAST 2 WEEKS HAVE YOU FELT INFERIOR, OR EVEN WORTHLESS?

- Very seldom.....1 58
- Sometimes.....2
- Almost all the time.....3
- No answer, no codable reply.....8
- Not asked.....9

[ID] 1-3
[015] 4-6

19. IN THE LAST 2 WEEKS, HOW OFTEN HAVE YOU FELT THAT YOU WERE TO BLAME FOR THINGS EVEN WHEN OTHER PEOPLE SAID THEY WEREN'T IMPORTANT OR THAT THEY WEREN'T YOUR FAULT? HAVE YOU FELT THIS WAY:

- NEVER.....1
 - SOMETIMES.....2
 - ALMOST ALL THE TIME.....3
 - No codable reply.....8
 - Not asked.....9
- 7

20. IN THE PAST 2 WEEKS, HOW FREQUENTLY HAVE YOU FELT LACKING IN SELF-CONFIDENCE OR FELT INADEQUATE?

- NEVER.....1
 - SOME OF THE TIME.....2
 - MOST OF THE TIME.....3
 - ALL OF THE TIME.....4
 - No codable reply.....8
 - Not asked.....9
- 8

21. HOW DO YOU SEE THE FUTURE? DO YOU THINK THINGS WILL WORK OUT WELL OR DO THINGS SEEM QUITE HOPELESS FOR YOU?

- Work out well.....1
 - It depends.....2
 - Quite hopeless.....3
 - No codable reply.....8
 - Not asked.....9
- 9

22. IN THE LAST 2 WEEKS, HAVE YOU EVER THOUGHT THAT SOMETHING TERRIBLE WAS ABOUT TO HAPPEN?

- No, never.....1
 - Occasionally.....2
 - Often.....3
 - No codable reply.....8
 - Not asked.....9
- 10

23. WE ASK THIS QUESTION OF EVERYONE AND WOULD LIKE TO ASK YOU. DO YOU EVER SEEM TO HEAR VOICES WHEN THERE IS NOBODY ABOUT AND NO ORDINARY EXPLANATION SEEMS POSSIBLE?

- No (Go to Q. 24).....1
 - Yes.....2
 - Don't know, No codable reply.....8
 - Not asked.....9
- 11

(If yes)

A. DO THESE VOICES MAKE FUN OF YOU, SAY CRITICAL THINGS ABOUT YOU OR SAY YOU ARE BAD?	
Yes.....1	
No.....2	12
No codable reply.....8	
Not asked.....9	

24. DOES ANYONE SEEM TO BE TRYING TO HARM YOU? (TRYING TO POISON YOU OR KILL YOU?)

- No (Go to Q. 25).....1
- Yes.....2
- Don't know, No codable reply.....8
- Not asked.....9

13

(If Yes):

A. ARE THEY PARTICULARLY SINGLING YOU OUT?	
No.....1	
Yes.....2	14
Don't know, No codable reply.....8	
Not asked.....9	

25. DO YOU THINK ANYONE DELIBERATELY TAKES YOUR POSSESSIONS?

- No.....1
- Yes.....2
- Don't know, No codable reply.....8
- Not asked.....9

15

26. DO YOU EVER FEEL THAT SOMEONE IS SPYING ON YOU?

- No.....1
- Yes.....2
- No codable reply.....8
- Not asked.....9

16

27. IN THE LAST TWO WEEKS, HAS YOUR THINKING BEEN MUCH SLOWER THAN USUAL?

- No.....1
- Yes.....2
- No codable reply.....8
- Not asked.....9

17

28. IN THE LAST 2 WEEKS, HAVE YOU HAD TROUBLE CONCENTRATING?

- No (Go to Q. 29).....1
- Yes.....2
- No codable reply.....8
- Not asked.....9

18

(If Yes)

A. HAS THIS BEEN:?	
NEARLY EVERY DAY.....1	
or	
ONLY SOMETIMES.....2	19
No codable reply.....8	
Not asked.....9	

29. IN THE LAST 2 WEEKS, DO YOUR THOUGHTS SEEM TO GET MIXED UP SO THAT YOU CANNOT GET THEM SORTED OUT?

- No.....1
- Sometimes.....2
- Severe, frequent or persistent muddling.....3
- No codable reply.....8
- Not asked.....9

20

30. IN THE LAST 2 WEEKS, HOW OFTEN HAVE YOU HAD DIFFICULTY MAKING DECISIONS?

- Never (Go to Q. 31).....1
 - A few times (Go to Q. 31).....2
 - Frequently.....3
 - Almost all the time.....4
 - No codable reply.....8
 - Not asked.....9
- 21

(If frequently or almost all the time)

- | | | |
|---------------------------|---|----|
| A. IS THIS USUAL FOR YOU? | | |
| Yes..... | 1 | |
| No..... | 2 | |
| No codable reply..... | 8 | |
| Not asked..... | 9 | 22 |

31. IN THE LAST 2 WEEKS, HAVE YOU FOUND YOURSELF THINKING ABOUT UNPLEASANT OR PAINFUL THINGS IN THE PAST?

- No (Go to Q. 32).....1
 - Yes.....2
 - No codable reply.....8
 - Not asked.....9
- 23

(If Yes)

- | | | |
|--|---|----|
| A. CAN YOU EASILY TURN OFF THESE WORRYING THOUGHTS ABOUT THE PAST? | | |
| No..... | 1 | |
| Yes..... | 2 | |
| No codable reply..... | 8 | |
| Not asked..... | 9 | 24 |

32. HOW OFTEN HAVE YOU FELT LONELY IN THE PAST 2 WEEKS. HAVE YOU FELT LONELY:

- SELDOM OR NEVER.....1
 - SOMETIMES.....2
 - OFTEN.....3
 - ALL THE TIME.....4
 - No answer, no codable reply.....8
 - Not asked.....9
- 25

33. IN THE LAST TWO WEEKS, HOW OFTEN HAVE YOU THOUGHT ABOUT DEATH - EITHER YOUR OWN, SOMEONE ELSE'S, OR DEATH IN GENERAL. HAVE YOU THOUGHT ABOUT IT:

- CONSTANTLY.....1
 - A LOT.....2
 - OCCASIONALLY.....3
 - HARDLY AT ALL.....4
 - No answer, no codable reply.....8
 - Not asked.....9
- 26

34. IN THE LAST TWO WEEKS HAVE YOU FELT AS IF YOU WANTED TO DIE?

No	1	
Yes.....	2	
No codable reply.....	8	27
Not asked.....	9	

(If Yes)

A. HAVE YOU HAD SUCH THOUGHTS REPEATABLY?

Yes.....	1	
No.....	2	28
No codable reply.....	8	
Not asked.....	9	

B. HAVE YOU THOUGHT OF COMMITTING SUICIDE?

Yes.....	1	
No	2	29
No codable reply.....	8	
Not asked.....	9	

(If yes)

1. DID YOU ACTUALLY ATTEMPT IT?

Yes.....	1	
No.....	2	30
No codable reply.....	8	
Not asked.....	9	

18. Now I would like you to take away 7 from 100 and tell me what you would get. Now take 7 away from that number. Now keep subtracting 7 and tell me the answers until I tell you to stop.

COUNT ONLY 1 ERROR IF SUBJECT MAKES SUBTRACTION ERROR BUT SUBSEQUENT ANSWERS ARE 7 LESS THAN THE ERROR

(93)	<input type="text"/>	26
(86)	<input type="text"/>	27
(79)	<input type="text"/>	28
(72)	<input type="text"/>	29
(65)	<input type="text"/>	30

19. Now I am going to spell a word forwards and I want you to spell it backwards. The word is WORLD. W-O-R-L-D. Spell "WORLD" backwards. REPEAT SPELLING IF NECESSARY.

<input type="text"/>	<input type="text"/>	31-35		
D	L	R	O	W

20. Now what were the 3 objects I asked you to remember?

Apple	<input type="text"/>	36
Table	<input type="text"/>	37
Penny	<input type="text"/>	38

21. INTERVIEWER: SHOW WRIST WATCH

What is this called?	<input type="text"/>	39
----------------------	----------------------	----

INTERVIEWER: SHOW PENCIL

What is this called?	<input type="text"/>	40
----------------------	----------------------	----

22. I'd like you to repeat a phrase after me:

"No if's, and's or but's"	<input type="text"/>	41
---------------------------	----------------------	----

ALLOW ONLY 1 TRIAL. CODE 1 REQUIRES AN ACCURATELY ARTICULATED REPETITION.

23. Read the words on this page and then do what it says:

INTERVIEWER: HAND CARD B



42

CODE "1" IF RESPONDENT CLOSES EYES

24. INTERVIEWER: READ FULL STATEMENT BELOW AND THEN HAND RESPONDENT A BLANK PIECE OF PAPER.

DO NOT REPEAT INSTRUCTIONS OR COACH.

I am going to give you a piece of paper. When I do, take the paper in your right hand, fold the paper in half with both hands, and put the paper down on your lap.

Takes paper in right hand



43

Folds in half

44

Puts paper down on lap

45

25. Write any complete sentence on that piece of paper for me.

SENTENCE SHOULD HAVE A SUBJECT AND A VERB AND MAKE SENSE.
SPELLING AND GRAMMATICAL ERRORS ARE OK.



46

26. Here's a drawing. Please copy the drawing on the same paper.

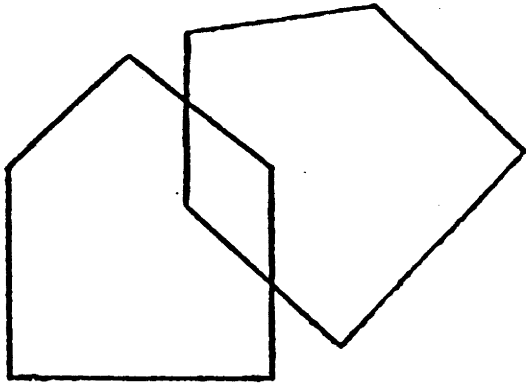
INTERVIEWER; HAND CARD



47

CORRECT IF 2 CONVEX FIVE-SIDED FIGURES AND INTERSECTION MAKES A FOUR-SIDED FIGURE.

C L O S E Y O U R E Y E S



RELATIONSHIP OF DIAGNOSTIC CRITERIA FOR DEPRESSION TO
DIAGNOSTIC ALGORITHM

Diagnostic criteria for depression (top left hand corners of each page) related to Diagnostic Interview for Depression (centre of page) and Diagnostic Algorithm written in SPSS-X (lower right hand of page).

Diagnostic Criteria for Major Depressive Episode

("Diagnostic and Statistical Manual of Mental Disorders" (3rd edition - revised) DSM-III-R, American Psychiatric Association: Washington, 1987)

At least five of the following symptoms have been present during the same two-week period and represent a change from previous function; at least one of the symptoms is either (1) depressed mood, or (2) loss of interest or pleasure. (Do not include symptoms that are clearly due to a physical condition, mood-incongruent delusions or hallucinations, incoherence, or marked loosening of associations.)

Diagnostic Criteria for Major Depressive Episode

(1) Depressed mood (or can be irritable mood in children and adolescents) most of the day, nearly every day, as indicated either by subjective account or observation by others.

Diagnostic Interview for Depression

1. IN THE LAST 2 WEEKS, HAVE YOU BEEN FEELING DEPRESSED OR SAD AT ALL?
 Yes.....(1)
 No (Go to Q. 2.).....2
 No codable reply.....8
 Not asked.....9

7

(If Yes)
 A. HAS THIS BEEN:
 MOST OF THE DAY AND NEARLY EVERY DAY.....(1)
 ONLY FROM TIME TO TIME (Go to Q. 1B.).....2
 No codable reply.....8
 Not asked.....9

8

(If code 1 in Q. 1A)
 1) IS THIS USUAL FOR YOU?
 Yes.....1
 No.....(2)
 No codable reply.....8
 Not asked.....9

9

Diagnostic Algorithm based on DSM-III-R Criteria for Depression written in SPSS-X

```

recode      dep1 (1=1) (2=0)
compute    mdel=0
           (dep1 eq 8 or dep1 eq 9) mdel=9
           (dep1 eq 2) mdel=1
    
```

(2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated either by subjective account or observation by others of apathy most of the time).

14. LATELY, HAVE YOU LOST INTEREST AND PLEASURE IN ALMOST EVERYTHING THAT YOU USUALLY CARE ABOUT, OR DO SOME THINGS STILL GIVE YOU PLEASURE?

- intst1 Lost interest..... ① 53
- Still some interest..... 2
- No codable reply..... 8
- Not asked..... 9

15. IN THE LAST 2 WEEKS, HOW INTERESTED HAVE YOU BEEN IN THINGS YOU USUALLY LIKE TO DO SUCH AS JOBS OR HOBBIES?

- intst2 Have you been more interested than usual..... 1 54
- About the same..... 2
- Less interested..... 3
- Completely uninterested..... ④
- No codable reply..... 8
- Not asked..... 9

recode intst1 (1=1)(2=0)
recode intst2 (1=0)(2=0)(3=0)(4=1)

compute mde2=0
if (intst1 eq 8 or intst2 eq 9)mde2=9
if (intst1 eq 1 or intst2 eq 1)mde2=1

7. WHAT HAS YOUR APPETITE BEEN LIKE IN THE LAST 2 WEEKS? HAVE YOU:

- HAD LITTLE APPETITE.....① 34
- BEEN ABOUT THE SAME (Go to Q. 8.).....2
- BEEN OVEREATING.....③
- No codable reply.....8
- Not asked.....9

(If little appetite or always overeating)

A. IS THIS USUAL FOR YOU OR HAS THERE BEEN A RECENT CHANGE?

- app1
- Usual.....1
 - Recent change.....② 35
 - No codable reply.....8
 - Not asked.....9

```

recode
compute
compute
if
if
compute
if
if

app (1=1)(2=0)(3=1)
wtchg=0
wtchl=0
(wtch eq 1)wtchg=.05*(wt-wtchl)
(wtch eq 3)wtchl=.05*(wt+wtchl)
mde3=0
(app eq 8 or app eq 9 or wtch eq 8 or
 wtch eq 9)mde3=9
((app eq 1 and app1 eq 2) or
 (app eq 3 and app1 eq 2) or
 (wtch eq 1 and wtchl gt wtchy) or
 (wtch eq 3 and wtchl gt wtchl))mde3=1

```

(4) Insomnia or hypersomnia nearly every day.

9. HAVE YOU HAD TROUBLE SLEEPING OVER THE PAST 2 WEEKS?

slp1

No (Go to Q.10.) 1

Yes 2

No answer, no codable reply 8

Not asked 9

39

(If Yes)

A. HAS THIS BEEN:

slp1a

NEARLY EVERY NIGHT 1

OR

ONLY SOME TIMES? 2

No codable reply 8

Not asked 9

40

D. HAVE YOU BEEN TAKING ANYTHING TO HELP YOU SLEEP?

slp1d

No (Go to Q.10.) 1

Yes 2

No codable reply 8

Not asked 9

44

(If Yes)

1) HAS THIS BEEN:?

slp1d1

NEARLY EVERY NIGHT 1

OR

ONLY SOMETIMES 2

No codable reply 8

Not asked 9

45

10. IN THE LAST 2 WEEKS, HAVE YOU FELT YOU WERE SLEEPING TOO MUCH?

OVTS11 No (Go to Q. 11).....1 46
 Yes.....(2)
 No codable reply.....8
 Not asked.....9

(If yes)

A. HAS THIS BEEN:?

OVTS11a NEARLY EVERY NIGHT.....(1) 47
 or
 ONLY SOMETIMES.....2
 No codable reply.....8
 Not asked.....9

```

recode      slp1 (1=0)(2=1)
recode      slpid (1=0)(2=1)
recode      ovrsl1 (1=0)(2=1)

compute    mde4=0
if          (slp1 eq 8 or slp1 eq 9 or ovrsl1 eq 8
or ovrsl1 eq 7)mde4=9
if          (slp1a eq 1 or slpid1 eq 1 or
ovrsla eq 1)mde4=1

```

(5) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).

12. IN THE LAST 2 WEEKS, HAVE YOU TALKED OR MOVED MORE SLOWLY THAN IS NORMAL FOR YOU?

slow	No (Go to Q. 13.)	1	49
	Yes	2	
	No codable reply	8	
	Not asked	9	

(If Yes)

A. HAS THIS BEEN:?

slova	NEARLY EVERY DAY	1
	OR	
	ONLY SOMETIMES	2
	No codable reply	8
	Not asked	9

50

13. IN THE LAST 2 WEEKS, HAVE YOU HAD TO BE MOVING ALL THE TIME - THAT IS, YOU WERE SO RESTLESS THAT YOU COULDN'T SIT STILL?

rstls	No (Go to Q. 14.)	1	51
	Yes	2	
	No codable reply	8	
	Not asked	9	

(If Yes)

A. HAS THIS BEEN:?

rstlsa	NEARLY EVERY DAY	1
	OR	
	ONLY SOMETIMES	2
	No codable reply	8
	Not asked	9

52

27. Recently, has your friend or relative seemed particularly lethargic and slowed down, so that her/his movements have been very much slower or her/his speech has become slow or monotonous?

- leth ① Yes
- 2. No

A. If yes, is she/he still like this? About how long has it lasted?

- letha 1. No
- 2. Yes, just for one or two odd days
- ③ Yes, nearly every day for at least 2 weeks

28. Recently, has your friend or relative been particularly restless and fidgety, so that she/he had trouble sitting still and would, for example, pace up and down?

- fidg ① Yes
- 2. No

A. If yes, is she/he still like this? Has it been going on for long?

- fidga 1. No
- 2. Yes, just for one or two odd days
- ③ Yes, nearly every day for at least 2 weeks

```

recode
recode
compute
if
if
slow (1=0)(2=1)
rstls (1=0)(2=1)
mde5=0
(slow eq 8 or slow eq 9 or rstls eq 8
or rstls eq 7)mde5=0
(slow eq 1 and letha eq 3 or
rstlsa eq 1 and fidga eq 3)mde5=1

```

(6) Fatigue or loss of energy nearly every day.

11. IN THE LAST 2 WEEKS, HOW OFTEN HAVE YOU BEEN WORN OUT OR HAD TOO LITTLE ENERGY, EVEN WHEN YOU HAVEN'T BEEN DOING A LOT? HAS THIS OCCURRED:

- NEVER.....1
- SOME OF THE TIME.....2
- MOST OF THE TIME.....3
- ALL THE TIME.....4
- No codable reply.....8
- Not asked.....9

48

tired

recode tired (1=0)(2=0)(3=1)(4=1)

compute mde6=0
 if (tired eq 8 or tired eq 9)mde6=9
 if (tired eq 1)mde6=1

(7) Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).

18. WHAT IS YOUR OPINION OF YOURSELF IN COMPARISON TO OTHER PEOPLE? DO YOU FEEL YOU ARE AS GOOD AS, BETTER, OR WORSE THAN OTHER PEOPLE YOUR AGE?

- ego Better (Go to Q. 19).....1
- As good as/the same (Go to Q. 19).....2
- Worse.....3
- No codable reply.....8
- Not asked.....9

(If worse)

A. HOW OFTEN IN THE LAST 2 WEEKS HAVE YOU FELT INFERIOR, OR EVEN WORTHLESS?

- egoa Very seldom.....1
- Sometimes.....2
- Almost all the time.....3
- No answer, no codable reply.....8
- Not asked.....9

19. IN THE LAST 2 WEEKS, HOW OFTEN HAVE YOU FELT THAT YOU WERE TO BLAME FOR THINGS EVEN WHEN OTHER PEOPLE SAID THEY WEREN'T IMPORTANT OR THAT THEY WEREN'T YOUR FAULT? HAVE YOU FELT THIS WAY:

- blame NEVER.....1
- SOMETIMES.....2
- ALMOST ALL THE TIME.....3
- No codable reply.....8
- Not asked.....9

recode ego (1=0) (2=0) (3=1) 8
 recode blame (1=0) (2=0) (3=1)
 compute mde7=0 or ego eq 9 or blame eq 8
 if (ego eq 8 or blame eq 9) mde7=9
 if (egoa eq 3 or blame eq 1) mde7=1

(8) Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).

28. IN THE LAST 2 WEEKS, HAVE YOU HAD TROUBLE CONCENTRATING?

CONC	No (Go to Q. 29).....	1	18
	Yes.....	2	
	No codable reply.....	8	
	Not asked.....	9	

(If Yes)

A. HAS THIS BEEN:?

CONCA	NEARLY EVERY DAY.....	1	19
	OR		
	ONLY SOMETIMES.....	2	
	No codable reply.....	8	
	Not asked.....	9	

29. IN THE LAST 2 WEEKS, DO YOUR THOUGHTS SEEM TO GET MIXED UP SO THAT YOU CANNOT GET THEM SORTED OUT?

mixup	No.....	1	20
	Sometimes.....	2	
	Severe, frequent or persistent muddling.....	3	
	No codable reply.....	8	
	Not asked.....	9	

30. IN THE LAST 2 WEEKS, HOW OFTEN HAVE YOU HAD DIFFICULTY MAKING DECISIONS?

- Never (Go to Q. 31).....1
- A few times (Go to Q. 31).....2
- Frequently.....3
- Almost all the time.....4
- No codable reply.....8
- Not asked.....9

(If frequently or almost all the time)

- A. IS THIS USUAL FOR YOU?
- Yes.....1
 - No.....2
 - No codable reply.....8
 - Not asked.....9

recode	conc (1=0)(2=1)
recode	mixup (1=0)(2=0)(3=1)
recode	decns (1=0)(2=0)(3=1)(4=1)
compute	mde8=0
if	(conc eq 8 or conc eq 9 or mixup eq 8
	or mixup eq 9 or decns eq 8 or
	decns eq 9)mde8=1
if	(conca eq 1 or mixup eq 1 or
	decnsa eq 2)mde8=1

(9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

33. IN THE LAST TWO WEEKS, HOW OFTEN HAVE YOU THOUGHT ABOUT DEATH - EITHER YOUR OWN, SOMEONE ELSE'S, OR DEATH IN GENERAL. HAVE YOU THOUGHT ABOUT IT:

death

CONSTANTLY.....1

A LOT.....2

OCCASIONALLY.....3

HARDLY AT ALL.....4

No answer, no codable reply.....8

Not asked.....9

26

34. IN THE LAST TWO WEEKS HAVE YOU FELT AS IF YOU WANTED TO DIE?

die

No.....1

Yes.....2

No codable reply.....8

Not asked.....9

27

(If Yes)

A. HAVE YOU HAD SUCH THOUGHTS REPEATABLY?

diea

Yes.....1

No.....2

No codable reply.....8

Not asked.....9

28

B. HAVE YOU THOUGHT OF COMMITTING SUICIDE?

dieb

Yes.....1

No.....2

No codable reply.....8

Not asked.....9

29


```
recode  
recode death (1=1)(2=1)(3=0)(4=0)  
dfe (1=0)(2=1)  
  
compute  
if (death eq 0 or death eq 9 or die eq 8  
or die eq 9)mde9=9  
if (death eq 1 or die eq 1  
or die eq 1)mde9=1
```

```
missing values  
compute mde1 to mde9(9)  
compute mdetot=sum(mde1 to mde9)  
compute depdiaq=0  
if (mde1 eq 1 or mde2 eq 1) and  
mde1 ge 5)depdiaq=1
```

GENERAL PRACTITIONERS' STRUCTURED QUESTIONNAIRE

GENERAL QUESTIONS TO BE DISCUSSED WITH GPs ON
COMPLETION OF PART 1 OF STUDY

To be completed by JB

What are the particular symptoms and signs you look for when a patient presents with possible depression?

.....
.....
.....
.....
.....

Do you have difficulty in deciding whether a patient is depressed?

.....

What percentage of persons 70+ do you see who have clinically significant depression?

.....

What do you consider to be the major contributory factors?

.....
.....
.....
.....

What are the particular symptoms and signs you look for when a patient presents with possible dementia?

.....
.....
.....
.....

Do you have difficulty in deciding whether a patient has dementia?

.....

What percentage of persons 70+ do you see in your practice who have dementia?

.....

What are some of the problems you encounter?

.....
.....
.....

What type of dementia do you see most frequently, and what percentage of patients with dementia would that be?

.....

What are the major difficulties in arranging

- home care services.....
.....

- residential care.....
.....

- other services (specify service).....

How helpful are each of the services?

. for dementing patients.....

. for patients with physical disabilities.....

. for depressed patients.....

. If yes, how.....
.....

Case B is a 50 year-old married woman who has teenage children and who feels exhausted, depressed and at the end of her tether. The family has consulted you for many years. For the last three years she has been the primary caregiver for her 78 year old dementing mother (who also is your patient and who lives nearby). As caring for her mother has become more demanding, she has had to give up her much loved part-time job and devote all her spare time to keeping an eye on her mother who has begun to wander at any time of day or night. Her mother is unable to remember where she lives, and neighbours or the local shopkeepers frequently ring the daughter to let her know where her mother is. Many saucepans have been ruined because her mother left the stove on. The family have arranged for meals-on-wheels during the week and they provide the weekend meals. The mother goes to a day care centre twice a week for 4 hours each day and the family have arranged the occasional week of respite so that they can go away. These latter two services are more trouble than they are worth as the mother appears to be more agitated and unsettled on returning home. Despite these support services and an understanding family, the patient says she cannot sleep and appears anxious and tense.

Would you:

- seek further information
- . if so, please specify.....
- provide a prescription
- for which condition(s).....
- provide counselling for patient and family
- refer patient to a psychiatrist
- arrange to see the dementing mother
- refer her mother to a psychogeriatrician or geriatric assessment unit
- enquire whether additional home care services are possible for her mother and arrange
- suggest her mother enter a hostel and arrange this as soon as possible

- suggest her mother enter a nursing home and arrange this as soon as possible
- admit her mother to geriatric ward at hospital
- monitor situation
 - other (please specify)
- change your course of action if the mother lived with her daughter

. If yes, what would you do?.....

.....

Case C is a retired 70 year old widower who has recently been forced to retire. You have not seen him for some time, since his wife died, in fact. You remember him as being a robust, active, capable and outgoing man who appeared to be many years younger than he really was. He is consulting you because he is having trouble sleeping and is complaining of a poor memory. He now presents as withdrawn and looks every bit his age. On further questioning you find that he has not been eating or sleeping well. He appears vague, forgetful and lost but was able to find his way to your surgery. During the consultation, it emerges that some thirty years ago he went through a "difficult period" when he was in-between jobs. During that period he was referred to a psychiatrist.

Do you think this patient is suffering from:

- dementia . Alzheimer's disease
- . Multi-infarct
- depression
- depression which presents as dementia
- dementia and depression

Would you:

- seek further information
- . if so, please specify.....
- provide a prescription
- . for which condition(s).....
- provide counselling

NATIONAL
HEALTH AND
MEDICAL RESEARCH COUNCIL.



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LETTER FROM GENERAL PRACTITIONERS
TO PATIENT SEEKING CO-OPERATION

Dear

I am co-operating with Mrs Jennifer Bowers from the Australian National University who is studying the illnesses of elderly people.

She would like to visit you at home and ask you some questions about your health and well-being soon. The information you provide will remain completely confidential.

It is hoped that the study will enable us to better recognize health problems in elderly people and thereby allow us to assist them more fully than at present.

I fully support the study and hope you will agree to participate.

Yours sincerely,



studies.³

Even though evening primrose oil toxicity does not seem to be a problem,¹¹ dose schedules of Efamol of up to eight capsules daily are expensive. Thus, it is important to establish the therapeutic effectiveness of the medication, even though it appears to be based on a sound hypothesis, in well designed trials before large-scale use. We await further studies to confirm or deny our findings.

Acknowledgements

The assistance of Paul Normie, Carmel Bhai, Lyndal Barion and John Duncan of the Pharmacy Department, Royal Women's Hospital is gratefully acknowledged. We thank Dr D Horrobin and Efamol Research Inc., Nova Scotia, Canada, for the supply of the capsules for the trial.

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General practitioners' detection of depression and dementia in elderly patients

Jennifer Bowers, Anthony F Jorm, Scott Henderson and Peter Harris

ABSTRACT In a study of 11 general practitioners' detection of dementia and depression in 101 elderly patients it was found that general practitioners were more accurate in their detection of dementia than depression. The general practitioners did not identify 12 of the 15 patients assessed as depressed by a Diagnostic Interview for Depression, but their assessments of dementia corresponded quite well with the results of dementia tests. The general practitioners' knowledge of the symptoms and signs of dementia and depression was limited. If the patient talked to the general practitioner about feeling depressed, sad or irritable, the depression recognition rate increased. (*Med J Aust* 1990; 153: 192-196)

general practitioners of mental illnesses in elderly patients have all been carried out in the United Kingdom.¹⁻⁴ The first of these studies, by Williamson et al., examined three general practitioners' records of 200 patients in Scotland.⁴ Before this examination the patients were assessed by a geriatrician and a psychiatrist. They found that general practitioners missed 87% of cases of dementia and 76% of depressed patients. The poor performance of the general practitioners in this study may have been partly due to the fact that they had not seen the patients as recently as had the specialists.

The other two studies reported a much lower rate of non-recognised cases. Parsons, in a study of the mental health of 288 people over 65 years in Swansea, found that the general practitioners missed only two of the eight assessed cases of dementia and one of the two cases of endogenous depression.⁵ Macdonald, in a

study of the prevalence of depression in 235 elderly patients in London, found that general practitioners missed only 9% of depressed patients.⁶ Several other recent studies have also shown a greater awareness of mental disorders, in particular dementia, by general practitioners than was originally found by Williamson et al.⁷⁻¹⁰

In the only comparable study to be undertaken in Australia,⁹ over 200 residents of a retirement village were assessed by two measures of cognitive impairment and were also rated by their general practitioners. The general practitioners missed 35 of the 77 (45%) patients rated as demented by the Mini-Mental State Examination. As Sanson-Fisher and Hennrikus have pointed out:⁹

The general practitioner . . . is in an advantageous position to detect disturbance, and there are a number of potential benefits of accurate detection . . . [but] there is evidence to suggest that the first component of treatment, that is, detection, is not adequately carried out.

This study examined the detection of dementia and depression in an elderly group of patients. The aims were to determine how well general practitioners detect

Although there have been a number of investigations in Australia of general practitioners' detection of psychological disorders in their patients,^{1,2} very few have been undertaken specifically in regard to the aged population.³ The most frequently cited studies on the detection by

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these two most common psychiatric disturbances in an Australian aged population and the level of knowledge that general practitioners have in relation to dementia and depression.

Methods

General practitioners and procedure

A sample of 11 general practitioners, all but one of whom were Fellows or Members of the Royal Australian College of General Practitioners (RACGP), was approached through the RACGP and agreed to participate in this study. All general practitioners were approached through the Family Medicine Programme and were selected because they practised in the inner suburbs of Canberra where a high proportion of the city's aged population reside.

One of us (JB) visited each general practitioner to explain the study and his or her role in it. Each general practitioner was required to: complete a questionnaire regarding his/her age, qualifications, the nature of his/her practice and special interests; seek the consent of 10 consecutive patients over the age of 70 years to participate in the study, starting from a predetermined time, and record their name, address and telephone number; provide a brief explanation of the study to the patient and give the patient a letter introducing one of us (JB); complete a brief questionnaire on each patient after consultation stating whether they assessed the patient as depressed or demented (on a 4-point scale ranging from "not at all" to "mild to moderate" to "severe"), whether this was the first time they had noticed depression or dementia and what form of management had been instigated; and notify one of us (JB) when 10 patients had been recruited.

Ten patients were regarded by us to be the maximum number of patients we could expect a general practitioner to recruit without overburdening him or her.

General practitioner follow-up procedure

After each group of patients had been interviewed by one of us (JB) the general practitioners were revisited and asked questions about the diagnosis of dementia and depression in all of their elderly patients; the percentage of people over 70 in their practice whom they thought had dementia and depression; whether they thought they had difficulty in diagnosing dementia or depression; and what management problems they encountered. Finally, the general practitioners were requested to read and select answers to questions based on three vignettes which were constructed on the basis of *The diagnostic and statistical manual of mental disorders* (DSM-III-R) criteria for depression and dementia."

Patients and assessment instruments

As soon as possible after the consultation, one of us (JB) made an appointment with each patient. The following information was obtained during a home interview.

Sociodemographic information

Information was obtained on demographic characteristics, and on what professional care, services and informal assistance had been received.

Dementia

Three different indices of dementia were also used. The Mini-Mental State Examination (MMSE) is a widely used, brief screening instrument for dementia which tests a wide range of cognitive functions such as orientation, recall, attention and language." It is also an efficient screening test for dementia" and has been used extensively in community surveys." "Patients who scored less than 24 out of 30 were considered to be probable dementia cases. Its sensitivity for detecting mild dementia is much lower than for moderate or severe impairment."

In addition, the 12-item Information/Orientation Scale from the Clifton Assessment Procedures for the Elderly (CAPE), which measures cognitive impairment," was administered. This instrument is also useful in community surveys because it is brief and acceptable to the general public. It has been demonstrated to be a valid measure of dementia in field surveys," but its sensitivity in detecting mild dementia is lower than the MMSE." Patients with scores of 7 or less were considered to have cognitive impairment indicative of probable dementia.

Patients were also asked if someone who had known them well over a 10-year period, such as a spouse or child, could complete an Informant Questionnaire on Cognitive Decline in the Elderly on their behalf." The Informant Questionnaire correlates well with the MMSE and clearly discriminates dementing patients from normal ones. In addition, the Informant Questionnaire does not appear to be affected by the premorbid ability of the patient, unlike conventional screening instruments such as the MMSE."

If the patient provided the name of an informant, an Informant Questionnaire was either mailed to the person or was left with the patient to give to the informant (for example, a spouse). A covering letter which briefly explained the study to the informant and a self-addressed, stamped envelope were attached to the questionnaire.

Depression

Three different indices of depression were used. A highly structured Diagnostic Interview for Depression, similar in style to the Composite

International Diagnostic Interview Schedule," was designed to cover the symptoms listed in the DSM-III-R diagnostic criteria for major depressive disorder." The data from each interview were entered into a computer and scored by a diagnostic algorithm written in SPSS-X." This algorithm implemented the DSM-III-R criteria in a rigorous manner, but did not use the exclusion criteria (B, C and D) because these are not of much relevance in the context of general practice. The algorithm reached a diagnostic decision for each case and also gave a continuous score from 0 to 9 for the number of DSM-III-R depression symptoms present.

All patients completed the 12-item General Health Questionnaire (GHQ-12)." This is a short self-administered screening instrument used to measure non-psychotic mental illness in general practice settings and the community. In spite of its brevity, the GHQ-12 has been used in many community surveys, particularly in Australia," has been shown to be valid and reliable and has good sensitivity in detecting depressive illness."

The informants were also asked to state whether or not the patient had ever had a diagnosis of depression and whether or not they thought the patient was depressed at the time of completing the Informant Questionnaire.

Activities of daily living

The level of assistance needed with activities of daily living was obtained from each patient. In addition, the same questions on activities of daily living were asked of the informant. The daily activities measured were: showering/bathing; dressing; eating/feeding; getting around and out of home/flat; walking 200 m; walking up and down stairs; and using public transport. They were rated on a scale which ranged from "unable to manage at all", "require help/supervision", "require no help but have difficulty" to "have no difficulty".

Ethics approval and consent

Approval for the research was obtained from the Ethics in Human Experimentation Committee of The Australian National University. Each patient gave consent to be interviewed.

Results

General practitioner participation

Eleven general practitioners participated in the study, five of whom were women and six men. Five were Fellows of the RACGP. The mean age was 46 years (range, 35 to 64 years). Years of practising ranged from 11 to 40, with a mean of 22 years.

Patient participation

Of the 109 patients referred by the general

practitioners, 101 were interviewed. Three patients were excluded because they were below 70 years of age; two could not be contacted in spite of repeated visits; and three went on extended vacations almost immediately after their consultations. Six patients were not referred by general practitioners: four refused to participate (each being rated by the general practitioner as depressed) and two were considered by the general practitioners to be too difficult to be interviewed. A contact rate of 88% was thus achieved. Of the sample 94% agreed to provide the name and address of an informant.

Informant responses

A 90% response rate was obtained for the Informant Questionnaire. The mean age of informants was 63.8 years and the range was from 34 to 90 years. Thirty-eight of the informants were over 70 years. Sixty-nine informants were female and 22 male, the majority of whom were spouses (41%) and children (34%). Nine informants were friends and the remainder included in-laws and siblings.

The detection of dementia by general practitioners

Table 1 compares the patients' levels of dementia measured by the MMSE with the severity ratings by the general practitioners. Twenty-eight patients (20 women and 8 men) were classified as having probable dementia by the MMSE. The prevalence of dementia in this group of patients was thus 28%. When compared with the MMSE, the general practitioners detected dementia in 11 of the 28 patients, providing a sensitivity of 39% (proportion of true cases of dementia identified correctly). General practitioners correctly identified 72 of the 73 non-demented patients providing a specificity of 99%.

TABLE 1: General practitioners' detection of dementia

Dementia test results	General practitioners' assessment*	
	Not demented (n=89)	Demented (n=12)
MMSE		
Not demented (n=73)	72	1
Demented (n=28)	17	11
CAPE		
Not demented (n=91)	87	4
Demented (n=10)	2	8

*Includes ratings of moderate and severe dementia.

TABLE 2: Correlations between general practitioners' ratings of dementia, dementia scales and physical impairment*

General Practitioners' rating (n=101)	Mini-Mental State Examination (MMSE) (n=101)	Information/Orientation scale (n=101)	Informant Questionnaire (n=90)	Physical Impairment (n=101)
1	-0.76	-0.76	0.65	0.42
2		0.90	-0.75	-0.53
3			-0.78	-0.52
4				0.51

*All correlations significant at P<0.01 level

When judged against a cut-off score of 7 or less on the Information/Orientation Scale of CAPE, the general practitioners showed a detection rate of 80% sensitivity and 96% specificity (Table 1). The better performance of the general practitioners against the CAPE compared with the MMSE reflects the fact that the CAPE is a higher-threshold instrument which is poorer at detecting milder cases.¹⁴ When the general practitioners' ratings of mild dementia were also included, their sensitivity improved to 100% against the CAPE and 54% against the MMSE. Specificity continued to remain high when the mild dementia ratings were included (84% against the CAPE, 86% against the MMSE).

General practitioners' ratings of dementia (on the 4-point scale) were highly correlated with the MMSE, the Information/Orientation Scale and the Informant Questionnaire (Table 2) and also with the level of patients' physical impairments, but to a lesser degree. The various dementia scales are also highly intercorrelated with each other. They are also correlated with

physical impairment, reflecting the well-known association between dementia and physical disability.¹⁴ Only four informants stated that the patient had been diagnosed as having dementia: two were diagnosed by a general practitioner and two by a specialist.

General practitioners' detection of depression

The results of patients who were diagnosed as depressed by the Diagnostic Interview were compared with the general practitioners' ratings of moderate and severe depression (Table 3). The general practitioners missed 12 of the 15 patients assessed as depressed by the diagnostic algorithm. Therefore, sensitivity for the detection of depression was 20%. Specificity was 90%, as they correctly identified 77 of the 86 patients who were not depressed. When the general practitioners' ratings of mild depression were included, sensitivity improved to 60%, but specificity declined to 63%.

Table 4 shows the correlations between various continuous measures of depression and the general practitioners' ratings. The ratings of depression by general practitioners (on the 4-point scale) were correlated with the symptom score from the Diagnostic Interview and with the GHQ-12, but the relationship was not strong. However, the general practitioners' ratings were more highly correlated with the informant's opinion of whether the patient was

TABLE 3: General practitioners' detection of depression

Results from Diagnostic Interview for Depression	General practitioners' assessment*	
	Not depressed (n=86)	Depressed (n=12)
Not depressed (n=86)	77	9
Depressed (n=15)	12	3

*Includes ratings of moderate and severe depression.

TABLE 4: Correlations between general practitioners' ratings of depression, depression symptom score, the opinion of an informant, whether the patient discussed depression with the general practitioner, the 12-item General Health Questionnaire, and physical impairment

General practitioners' rating (n=101)	Depression symptom score (n=101)	Informant's opinion (n=87)	Depression discussed (n=100)	General Health Questionnaire (n=97)	Physical Impairment (n=101)
1	0.36*	0.41*	0.34*	0.25†	0.12
2		0.45*	0.26*	0.72*	0.38*
3			0.28*	0.29*	0.08
4				0.12	0.17
5					0.49*

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physical impairment, reflecting the well-known association between dementia and physical disability. Only four informants stated that the patient had been diagnosed as having dementia: two were diagnosed by a general practitioner and two by a specialist.

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5					0.49*

*P < 0.01. †P < 0.05.

depressed and with whether or not the patients reported discussing their depressed mood with the general practitioners. If the patient talked to the general practitioners about feeling depressed, sad or irritable, the depression recognition rate increased. The GHQ-12 correlated highly with the Diagnostic Interview and physical impairment and to a lesser degree with the informant's opinion. Eleven informants stated that the patient had been diagnosed as having had depression at some time: nine by a general practitioner and two by a specialist.

General practitioners' detection of dementia and depression combined

Seven patients were diagnosed as depressed by the Diagnostic Interview and as probably demented by the MMSE. General practitioners diagnosed both conditions in two patients and depression only in another patient.

General practitioners' knowledge of dementia and depression

General practitioners' knowledge of symptoms and signs of dementia and depression were compared with those specified in the DSM-III-R diagnostic criteria. When asked what they look for when diagnosing dementia, 91% of the general practitioners cited memory loss or forgetfulness and 55% cited "reports from relatives" as an important factor. The latter was interpreted by us as meeting the DSM-III-R criterion of "loss of intellectual abilities which would significantly interfere with work or social functioning or relationships with others".¹¹ Two general practitioners mentioned apraxia, two mentioned personality change and one mentioned aphasia. No general practitioners mentioned an impairment of abstract thinking or judgement or "evidence from the history, physical examination, or laboratory tests of a specific organic factor". Of the nine features of dementia listed in the DSM-III-R criteria, the majority of general practitioners mentioned only two.

When asked what they looked for in diagnosing depression, most general practitioners cited depressed appearance, sleep disturbance and weight or appetite change. Fewer mentioned lack of interest, slowed movements or loss of energy. One general practitioner mentioned recurrent

thoughts of death and one mentioned diminished ability to concentrate, but no general practitioners mentioned feelings of worthlessness or inappropriate guilt. To a large degree the frequency with which the general practitioners mentioned the symptoms corresponded to the prevalence of the symptoms in the patients, as revealed by the Diagnostic Interview. The exceptions were loss of energy, inability to concentrate and recurrent thoughts of death, which were found in over a quarter of the patients, but rarely mentioned by the general practitioners (Figure).

Discussion

In this study, a sample of Australian general practitioners has been shown to be more accurate in recognition of dementia in elderly patients than in recognition of depression. The general practitioners' recognition rate for dementia was similar to other studies carried out in Australia³ and overseas.¹² The recognition rate for depression was close to that observed by Williamson et al. in their early study on the health of elderly people living at home⁴ and quite contrary to Macdonald's more recent study of the prevalence of depression in general practice.⁵

The general practitioners' poorer detection of depression may be due to a lack of knowledge of depressive symptoms or failure to enquire about these symptoms in their patients. When the general practitioners were asked about the symptoms they looked for in diagnosing depression,

many symptoms were rarely mentioned. However, the frequency with which the general practitioners mentioned symptoms of depression corresponded reasonably well with the observed symptoms in their patients. Important exceptions were loss of energy, inability to concentrate and recurrent thoughts of death which were rarely mentioned by the general practitioners but found in their patients. These symptoms warrant more attention in general practice consultations with the elderly.

The other possible reason general practitioners did not detect a higher proportion of cases of depression may be that they seldom explicitly enquired after depressive symptoms, but, relied on the patients spontaneously raising them. This possibility is supported by the present finding that general practitioners' diagnoses of depression improved if the patient discussed his or her depressed mood with the general practitioner.

While the present study has potentially important implications for general practice, there are limitations which must be pointed out. Firstly, the sample consisted of only 11 general practitioners in one city. These general practitioners were perhaps more aware of the problems of elderly people as they all practise in areas of Canberra with high aged populations and all agreed to participate in a study of elderly patients. Furthermore, all but one belonged to the RACGP.

Secondly, there were limitations in the instruments used as a standard to judge the general practitioners' performance.

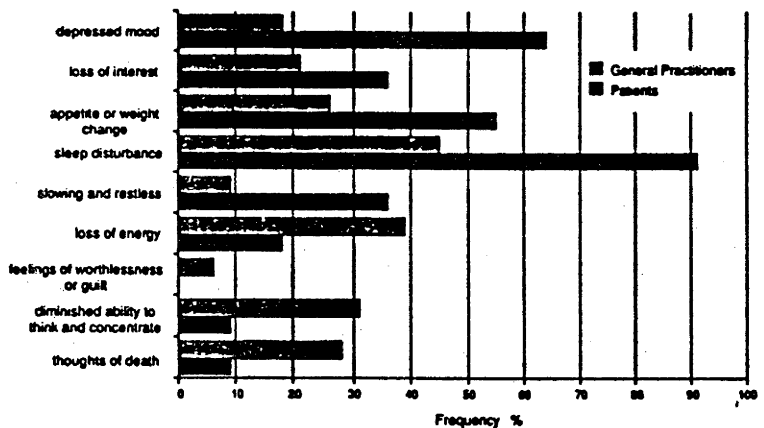


FIGURE: Frequency with which general practitioners cited DSM-III-R criteria for depression in patients and frequency with which DSM-III-R criteria were found in patients.

The measures for dementia were the MMSE, Information/Orientation Scale and the Informant Questionnaire, none of which can make a diagnosis or fully covers all the DSM-III-R diagnostic criteria for dementia. Furthermore, these instruments are recognised to be accurate when screening for moderate or severe dementia but are poor at distinguishing a case of mild dementia.

However, the Diagnostic Interview for Depression was more comprehensive. It covered the DSM-III-R diagnostic criteria for major depression, thus providing a more thorough measure for depression than for dementia. It is conceivable that this led to the detection of cases of depression more effectively than for cases of dementia. The general practitioners, nevertheless, seem to be poorer at detecting depression than dementia.

Finally, dementia and depression are both states lying on continua from normality to severe disorders. What is a "case" represents an arbitrary cut-off on these continua. General practitioners are likely to differ among themselves in where they place the threshold for defining a case and they may also differ from the thresholds used in the criterion instruments. No threshold can be considered the absolute truth; and the thresholds employed by general practitioners may be quite appropriate in general practice, even though they differ from those imposed by researchers specialising in mental disorders. To a degree, then, the present study is about the extent to which general practitioners' concepts of depression and dementia agree with those imposed by researchers, which may not necessarily be optimal for general practice.

While we acknowledge these limitations there are broader implications of the present results. When dementia is present in a patient, but not diagnosed, the patient, the family and the general practitioner are each at a disadvantage. The interpretation of complaints, providing advice and counselling to the family, the management of intercurrent illnesses, the deterioration of cognitive impairment if inappropriate drugs are prescribed, and the promise of memory-enhancing drugs in the future are all compelling reasons for the screening and diagnosis of dementia by general practitioners.²⁰ When depression is present but not formally recognised needless distress to patients and families occurs, especially if it is wrongly ascribed to age or to physical disorders or if it remains untreated, since there is a range of effec-

tive treatments now available, both pharmacological and psychological.²⁰⁻²¹ For these reasons it is desirable that general practitioners diagnose dementia and depression accurately.

The diagnosis and treatment of dementia and depression in the elderly by general practitioners is a matter of considerable public health relevance, not only now but particularly in the coming years as Australia's population ages. To confirm these findings larger samples of general practitioners and patients in other areas are now required. If these findings are confirmed, the need for further general practitioner training in psychological disturbances of the elderly, particularly depression, is clearly a priority.

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What is a medical editor's essential role, as distinct from the multitude of small activities which clutter up the twenty-four hour working day that he shares with the rest of his professional colleagues? To some extent it depends on the type of journal that he edits, and on how much he is an editor and how much something else. But if he has a hand in this business at all, one thing that must be said humbly, albeit clearly, is that he has an inalienable duty to truth, to scientific integrity and to medicine's ultimate role, which is the service of men. — Winton R. *From the Sidelines of Medicine*. Sydney: Australasian Medical Publishing Co, 1988: 3.

APPENDIX 6

6.1 Mean total scores for activities-of-daily-living	275
6.2 Numbers of patients who had difficulty performing activities-of-daily-living and the years of assistance which had been rendered to them as estimated by the informants	276
6.3 Physical changes observed in patients by informants over the preceding 10 years	277

APPENDIX 6.1

Mean total scores for activities of daily living
Minimum level of dependency = 8, maximum dependency = 32
(Informant responses are in brackets)

Total score	Number of patients	
8	42	(23)
9 to 16	30	(41)
17 to 24	16	(20)
25 to 32	13	(8)
Nil response	0	(9)
Total	101	(101)

APPENDIX 6.2

Numbers of patients who had difficulty performing activities of daily living and the years of assistance which had been rendered to them, as estimated by the informants

Activity	Years					Total
	<1	1-3	3-5	5-7	>7	
Showering/bathing	3	10	3	3	1	20
Dressing	3	5	1	0	0	9
Eating/feeding	2	2	1	0	1	6
Getting around home/flat	1	5	1	1	1	9
Getting out of home/flat	6	7	5	1	3	22
Walking 200m	6	8	3	0	4	20
Walking up and down stairs	3	8	5	0	4	20
Using public transport	9	8	5	0	5	27

APPENDIX 6.3

Physical changes observed in patients by informants over the preceding 10 years

Physical function	Number of patients experiencing degree of change						Total
	Much better	A bit better	Not much change	A bit worse	Much worse	Missing	
Hearing	1	0	45	27	19	9	92
Vision	4	0	32	33	22	10	92
Ability to use fingers and hands	4	0	52	27	9	9	92
Ability to use legs	3	0	29	35	25	9	92

APPENDIX 8

APPENDIX 8.1: Letter from Dr Peter Harris requesting co-operation in the extended survey.

LETTER FROM DR PETER HARRIS TO GENERAL PRACTITIONERS

1 November 1989

Dear

Over the last few months we have been involved with the Social Psychiatry Research Unit at ANU in a study of depression and dementia in the elderly in Canberra.

A number of GPs in the inner suburbs have been interviewed for this study already.

I am writing to seek your assistance in completing our work.

The researcher from the Unit, Jennifer Bowers, will contact you by telephone before the end of November to seek a 20 minute appointment (e.g. during lunch time) to interview you about aspects of dementia and depression.

Your co-operation in this survey is important.

The questionnaire has been approved by GP researchers from the RACGP.

Thank you in anticipation of your assistance.

Kind regards

Peter Harris
State Director/Medical Educator
Family Medicine Programme.

APPENDIX 9

APPENDIX 9.1: Summary of responses to the question "What are your special interests in medicine?"

APPENDIX 9.1

Summary of responses to the question "What are your special interests in medicine?" (Some general practitioners had more than one area of interest.)

Special Interest	Number of GPs
All aspects of general practice	6
Obstetrics, gynaecology, family planning	1
Diabetes	1
Manipulation	1
Acupuncture	1
Nutrition	2
Geriatrics	3
Terminal care	2
Women's health	2
Social problems	1
Occupational health	1
Clinical epidemiology	1
Internal medicine	2
Dermatology	1
Family/community medicine	3
Practice management	1
Aviation medicine	2
Epilepsy	1
Depression	1
Counselling	4
Prevention	1
Psychiatry	2
Paediatrics	3
Underwater medicine	1
Naturopathy, homeopathy	2
Sexually transmitted diseases	1
Migrant problems	1
Menopause	1
Hyponosis	1